

COURSE SYLLABUS



COURSE TITLE: Software Engineering Process
CLASS SECTION: ICS-125-X01AB, ICS-125-X02AB
TERM: Winter 2024
COURSE CREDITS: 3
DELIVERY METHOD(S): On Site

Camosun College campuses are located on the traditional territories of the Ləkʷəŋən and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here.
Learn more about Camosun's [Territorial Acknowledgement](#).

For COVID-19 information please visit <https://legacy.camosun.ca/covid19/index.html>.

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable explanation in advance, you will be removed from the course and the space offered to the next waitlisted student.

INSTRUCTOR DETAILS

NAME: Zahra Jana Behfarshad
EMAIL: behfarshadj@camosun.bc.ca
OFFICE: Tec 240
HOURS: Monday 3:30 – 5:30 PM

As your course instructor, I endeavour to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me. Camosun College is committed to identifying and removing institutional and social barriers that prevent access and impede success.

CALENDAR DESCRIPTION

The calendar description is available on the web at <http://camosun.ca/learn/calendar/current/web/ics.html>

PREREQUISITE(S): ICS-124
CO-REQUISITE(S): None
EXCLUSION(S): None

COURSE LEARNING OUTCOMES / OBJECTIVES

Upon successful completion of this course a student will be able to:

- Explain the practices that are key components of various process models for software development such as waterfall, agile, scrum, and spiral;
- Use software development tools to troubleshoot and debug the programming code in an application;
- Apply the basic principles of software project management in a team environment;
- Compare a variety of strategies to test simple programs including white-box test, black-box test, top-down and bottom-up tests;
- Identify methods that will lead to the creation of reusable software components and templates;
- Use software design patterns to help build and maintain a working 3-tier software application;

- Apply software development scripting tools to build and manage application development cycles using a version control framework;
- Think critically to evaluate information, solving problems, and making decisions as they relate to the use of software tools for software development;
- Apply accepted standards to ensure security, privacy, and integrity of software while recognizing the ethical, legal, and social implications of software development.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

(a) **Mandatory**

Course Slides (Lecture Slides & Lab Manuals) provided in D2L

(b) **Optional**

Software Engineering by Rod Stephens, Wrox publisher.

The Unified Modeling Language User Guide by Grady Booch, James Rumbaugh, Ivar Jacobson

COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY

The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

WEEK or DATE RANGE	ACTIVITY or TOPIC	LABS	QUIZZES
1	Lecture 1: Course Introduction; Java review: class, static, inheritance etc. Lecture 2: Introduction to Software Engineering	Lab 0	
2	Lecture 3: Software Engineering concepts Lecture 4: Software Project Management	Lab 1	
3	Lecture 5: Software Project Requirements Lecture 6: High Level Design	Lab 2	
4	Lecture 7: Introduction to UML Lecture 8: UML Continued	Lab 3	
5	Lecture 9: Java Swing and LayoutManagers Lecture 10: Java Stack class	Lab 4	
6	Lecture 11: Midterm Exam Lecture 12: Software Control Architecture Models	No Labs	
7	Reading Break		
8	Lecture 13: Low Level Design Lecture 14: Object oriented development	Lab 5	
9	Lecture 15: XML + JSON Lecture 16: Building systems for software applications	Lab 6	Quiz1 In class
10	Lecture 17: Software Testing Introduction Lecture 18: Software Bug Tracking	Lab 7	
11	Lecture 19: Software Deployment Introduction Lecture 20: Reviews		Quiz2 In class
12	Lecture 21: Software Monitoring + Lab 8 Lecture 22: Continuing Software Monitoring	Lab 8	Quiz3 In class
13	Lecture 23: Software Development Models Lecture 24: Reviews		

WEEK or DATE RANGE	ACTIVITY or TOPIC	LABS	QUIZZES
14	Lecture 25: Agile Models Lecture 26: Final Exam Review	Practical Exam	Quiz4 In class

Students registered with the Centre for Accessible Learning (CAL) who complete quizzes, tests, and exams with academic accommodations have booking procedures and deadlines with CAL where advanced notice is required. Deadlines can be reviewed on the [CAL exams page](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

COURSE GUIDELINES & EXPECTATIONS

a) Attendance

To get the most out of this course, students are expected to attend all classes and be on time. It is your responsibility to acquire all information given during a class missed, including notes, hand-outs, changed exam dates etc.

b) Labs

Lab manuals provide practical experience of the material covered in the lectures, especially the MVC pattern and using Git version control system. Students will be asked to demo and explain their lab assignment to gain marks for that lab assignment. Failure to demo and explain will lead to zero.

c) Quizzes

Quizzes are used to evaluate your knowledge of the content covered. You are required to be prepared for the quiz and to be on time. Failure to attend without prior notice, will contribute to zero.

Online references to the Java documentation and class notes will be provided through D2L.

EVALUATION OF LEARNING

DESCRIPTION	WEIGHTING
Lab Assignments (8 Lab assignments)	32%
Quizzes	14%
Midterm Exam	10%
Practical Exam	14%
Final Exam (date and location TBD)	30%
	TOTAL
	100%

If you have a concern about a grade you have received for an evaluation, please come and see me as soon as possible. Refer to the [Grade Review and Appeals](http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf) policy for more information. <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>

To pass this course, the following is required:

- **Labs**
 - Must complete all labs.
 - Must achieve a minimum average of **55%** on the overall labs.
 - Late labs are subjected to a 40% penalty, except by the instructor’s prior written permission or in the presence of a dire and documented short-term medical or family emergency.
- **Quizzes**
 - Must complete all labs.
 - Must achieve a minimum average of **55%** on the overall quizzes.
- **Midterm Exam**
 - Must achieve a minimum average of **55%** on the midterm exam.
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- **Practical Exam**
 - Must achieve a minimum average of **55%** on the exam.
- **Final Exam**
 - Must achieve a minimum average of **55%** on the final exam.

Missed Examinations/Quizzes: If a student misses a quiz, project or an exam, a mark of zero will be assigned unless there are extenuating circumstances. You must provide a note from a medical practitioner (Doctor, Nurse, Psychologist, Counsellor, etc.) In such cases, the proportion of grade assigned to the missed quiz or exam will be added to the proportion assigned to the final exam. The final exam will be held during exam week. NO consideration will be given to any student wishing to write the exam at any other time than that assigned.

Electronic Devices: The school’s policy regarding electronic devices is that any student who has a cell phone or other unauthorized electronic device (i.e. iPad, laptop, playbook, etc.) on their person or around their desk during an exam will be guilty of cheating and will a grade of “F” for the course.

GRADING SYSTEM

We will be using the following grading system:

X	Standard Grading System (GPA)
	Competency Based Grading System

The following two grading systems are used at Camosun College:

1. Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://www.camosun.bc.ca/policies/E-1.5.pdf> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description

I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

SCHOOL OR DEPARTMENTAL INFORMATION

Grade review: You have 7 days after marks are posted to review with your instructor.

Academic Dishonesty:

1st violation: minus the weight of the deliverable and a note on your departmental file.

2nd violation: F in the course

3rd violation: Student Conduct Policy E-2.5 is applied

Missed Examinations/Quizzes: If a student misses a quiz or an exam, a mark of zero will be assigned unless there are extenuating circumstances. In such cases, the proportion of grade assigned to the missed quiz or exam will be added to the proportion assigned to the final exam. The final exam will be held during exam week. NO consideration will be given to any student wishing to write the exam at any other time than that assigned.

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STUDENT RESPONSIBILITY

Enrolment at Camosun assumes that the student will become a responsible member of the College community. As such, each student will display a positive work ethic, assist in the preservation of College property, and assume responsibility for their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting expectations concerning attendance, assignments, deadlines, and appointments.

SUPPORTS AND SERVICES FOR STUDENTS

Camosun College offers a number of services to help you succeed in and out of the classroom. For a detailed overview of the supports and services visit <http://camosun.ca/students/>.

Support Service

Website

Academic Advising

<http://camosun.ca/advising>

Support Service	Website
Accessible Learning	http://camosun.ca/accessible-learning
Counselling	http://camosun.ca/counselling
Career Services	http://camosun.ca/coop
Financial Aid and Awards	http://camosun.ca/financialaid
Help Centres (Math/English/Science)	http://camosun.ca/help-centres
Indigenous Student Support	http://camosun.ca/indigenous
International Student Support	http://camosun.ca/international/
Learning Skills	http://camosun.ca/learningskills
Library	http://camosun.ca/services/library/
Office of Student Support	http://camosun.ca/oss
Ombudsperson	http://camosun.ca/ombuds
Registration	http://camosun.ca/registration
Technology Support	http://camosun.ca/its
Writing Centre	http://camosun.ca/writing-centre

If you have a mental health concern, please contact Counselling to arrange an appointment as soon as possible. Counselling sessions are available at both campuses during business hours. If you need urgent support after-hours, please contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.

COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

Academic Accommodations for Students with Disabilities

The College is committed to providing appropriate and reasonable academic accommodations to students with disabilities (i.e. physical, depression, learning, etc). If you have a disability, the [Centre for Accessible Learning](http://camosun.ca/services/accessible-learning/) (CAL) can help you document your needs, and where disability-related barriers to access in your courses exist, create an accommodation plan. By making a plan through CAL, you can ensure you have the appropriate academic accommodations you need without disclosing your diagnosis or condition to course instructors. Please visit the CAL website for contacts and to learn how to get started:

<http://camosun.ca/services/accessible-learning/>

Academic Integrity

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf> for policy regarding academic expectations and details for addressing and resolving matters of academic misconduct.

Academic Progress

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf> for further details on how Camosun College monitors students' academic progress and what steps can be taken if a student is at risk of not meeting the College's academic progress standards.

Course Withdrawals Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <http://camosun.ca/learn/fees/#deadlines>.

Grading Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf> for further details about grading.

Grade Review and Appeals

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

Mandatory Attendance for First Class Meeting of Each Course

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable reason in advance, you will be removed from the course and the space offered to the next waitlisted student. For more information, please see the "Attendance" section under "Registration Policies and Procedures" (<http://camosun.ca/learn/calendar/current/procedures.html>) and the Grading Policy at <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf>.

Medical / Compassionate Withdrawals

Students who are incapacitated and unable to complete or succeed in their studies by virtue of serious and demonstrated exceptional circumstances may be eligible for a medical/compassionate withdrawal. Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.8.pdf> to learn more about the process involved in a medical/compassionate withdrawal.

Sexual Violence and Misconduct

Camosun is committed to creating a campus culture of safety, respect, and consent. Camosun's Office of Student Support is responsible for offering support to students impacted by sexual violence. Regardless of when or where the sexual violence or misconduct occurred, students can access support at Camosun. The Office of Student Support will make sure students have a safe and private place to talk and will help them understand what supports are available and their options for next steps. The Office of Student Support respects a student's right to choose what is right for them. For more information see Camosun's Sexualized Violence and Misconduct Policy: <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.9.pdf> and camosun.ca/sexual-violence. To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-3703841

Student Misconduct (Non-Academic)

Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College's Student Misconduct Policy at <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf> to understand the College's expectations of academic integrity and student behavioural conduct.

Changes to this Syllabus: Every effort has been made to ensure that information in this syllabus is accurate at the time of publication. The College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.