

COURSE SYLLABUS



COURSE TITLE: COMP 139E - Data Structures and Applications

CLASS SECTION: COMP-139E-X01A, COMP-139E -X01B, COMP-139E -X02A
and COMP-139E -X02B

TERM: Fall 2023

COURSE CREDITS: 3

DELIVERY METHOD(S): On Site

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

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](#).

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: W Mao

EMAIL: maow@camosun.ca

OFFICE: TEC 236

HOURS: Wednesday 13:30 – 14:20 Thursday 13:30 -15:20

or by appointment via email

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): COMP 166

CO-REQUISITE(S): None

EXCLUSION(S): None

COURSE LEARNING OUTCOMES / OBJECTIVES

Disciplined development using a high-level programming language, including an introduction to software engineering topics such as program design, modular testing, and maintenance. Topics will include object-oriented programming; indirection using pointers; error handling; data structures; and floating-point arithmetic, all with an emphasis on scientific and engineering applications.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

(a) Texts

Gary J. Bronson, C++ for Engineers and Scientists, 4th Edition, Cengage/Nelson, ISBN-10: 1133187846 ISBN-13: 978-1133187844 , 2012.

Daniel Liang, Revel for Introduction to C++ Programming and Data Structures, 5th edition, Pearson, 2022
Algorithms and Data Structures

COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY / EVALUATION

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

Week	Date	Activity or Topic	Labs & Exams
1	Sept 4	Introduction to C++	
2	Sept 11	Functions (passing by value and reference)	Lab 1
3	Sept 18	Pointers and Dynamic Memory Management Objects and Classes	Lab 2
4	Sept 25	Objects and Classes continue Files and Exception Handling	Lab 3
5	Oct 2	National Day for Truth and Reconciliation Stacks and Queues	Lab 4
6	Oct 9	Thanksgiving Day Linked Lists and Tree	Lab 5
7	Oct 16	Templates and Vectors	Lab 6
8	Oct 23	Midterm Review	Midterm
9	Oct 30	MATLAB	Lab 7
10	Nov 6	Integration	Lab 8
11	Nov 13	Remembrance Day Differential Equations, Finite Differences, and Interpolation	Lab 9
12	Nov 20	Testing and Testability	Lab 10
13	Nov 27	UML Class and Object Diagrams	
14	Dec 4	Review	

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 noticed is required. Deadlines scan be reviewed on the [CAL exams page](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

EVALUATION OF LEARNING

DESCRIPTION	WEIGHTING
Lab Assignments	30%
Midterm	25%
Final Exam (date and location TBD)	45%
	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>

Late work will not be accepted, except by the instructor's prior written permission or in the presence of a dire and documented short-term medical or family emergency. Mark appeals must be made within 7 days of the mark being posted.

Camosun Grading Systems

Camosun has two grading systems: the standard 9-point system for most academic, technical and career-based programs, and a competency-based system for skills-based programs. There are also temporary grades that can be assigned for specific circumstances. Refer to <https://camosun.ca/registration-records/student-records/camosun-grading-systems> for more information.

COURSE GUIDELINES & EXPECTATIONS

Online references to the Matlab documentation, class notes provided through D2L.

Finish each lab before next lab starts. A late lab is subjected to an 20% penalty for each day after its due date. Must achieve a minimum of 55% on the midterm. Must achieve a minimum of 55% on the Final exam to pass the course.

SCHOOL OR DEPARTMENTAL INFORMATION

Grade review: You have 7 days after marks are posted to review them 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 Misconduct Policy E-2.5](#) is applied

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, Councilor, 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: A student who has a cell phone or other unauthorized electronic device (e.g., iPad, laptop, playbook) on their person or around their desk during an exam will be guilty of cheating and will receive a grade of "F" in the course

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
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 (physical, depression, learning, etc.). If you have a disability, the [Centre for 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 https://camosun.ca/sites/default/files/2021-05/e-1.1_0.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 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 will be 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 <http://camosun.ca/sexual-violence>. To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-370-3841

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 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.