

COURSE SYLLABUS



COURSE TITLE: COMP 166 - Programming 1 for Engineers

CLASS SECTION: COMP-166-X01A, COMP-166 -X01B, COMP-166-X02A,
COMP-166-X02B and COMP-166 -X03

TERM: Winter 2024

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 Lək̓ʷəŋən 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 pm – 14:30 pm, Thursday 14:30 pm – 15:30 pm
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): None

CO-REQUISITE(S): None

EXCLUSION(S): None

COURSE LEARNING OUTCOMES / OBJECTIVES

As students are taught principles of structured programming, they will see concepts illustrated with examples and do problems from science and engineering disciplines. Topics include: elementary features of the programming language used, such as data types and structures, control flow, input/output, functions; the programming environment; problem solving process.

Upon completion of the course, students will be able to:

1. prepare an algorithm for solving a problem;
2. use functions and parameters appropriately and correctly;
3. define, reference and modify one-dimensional arrays correctly;
4. access, define and modify character string arrays correctly;
5. read, write and calculate with integer and real data items;
6. use functions from selected libraries;
7. use effectively the computer environment for program development;
8. write program documentation appropriately;
9. write a 200-line program of some logical complexity involving input and output, and using a disciplined style; and
10. test and debug code.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

Textbooks (Textbooks are not required and most introductory textbooks cover the same material.)

Stephen Prata. *C Primer Plus (6th Edition)*. Addison-Wesley Professional, 2013.

Kernighan, Brian W., and Rob Pike. *The practice of programming*. Addison-Wesley Professional, 1999.

Reema Thareja, *Programming in C*, Oxford, 2018.

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	Reference	Labs & Exams
1	Jan 8	Motivation, Algorithms, C, CPU, Compilation, IDE	Ch 1, 2	
2	Jan 15	Data Types, Arithmetic Operators, Expressions, Precedence, Logical Operators, Console I/O	Ch 3, 4, 5	Lab 1
3	Jan 22	Selection, Repetition, Library Functions	Ch 6, 7	Lab 2, Quiz 1
4	Jan 29	Software Complexity, Modular Programming, Functions	Ch 9	Lab 3
5	Feb 5	Multi-File Programs, Header Files, File I/O, Command-Line Arguments	Ch 8, 13	Lab 4, Quiz 2
6	Feb 12	Arrays, C Strings, ASCII, Pointers, Arrays and Memory Addresses	Ch 10, 11	Lab 5, Quiz 3
7	Feb 19	Reading Break		
8	Feb 26	Midterm Review		Lab 6, Midterm
9	Mar 4	Typedef, Structures, Arrays	Ch 14	Lab 7
10	Mar 11	Storage Classes, Stack and Heap, Recursion	Ch 17	Lab 8, Quiz 4
11	Mar 18	Complex Variables, Bitwise operators, Bitfields	Ch 15	Lab 9
12	Mar 25	Dynamic Memory Allocation, Dynamic Data Structures Good Friday	Ch 12	Lab 10, Quiz 5
13	Apr 1	Linked Lists	Ch 17	

Week	Date	Activity or Topic	Reference	Labs & Exams
14	Apr 8	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 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>

EVALUATION OF LEARNING

DESCRIPTION	WEIGHTING
Lab Assignments	30%
Quizzes	10%
Midterm	20%
Final Exam (date and location TBD)	40%
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

Finish each lab before next lab starts. A late lab is subjected to an 20% penalty for each day after its due date. Your weighted average on quizzes and exams must be at least 50%.

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

Support Service	Website
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.