

COURSE SYLLABUS



COURSE TITLE: Algorithms and Programming

CLASS SECTION: X03

TERM: Winter 2023

COURSE CREDITS: 3.0

DELIVERY METHOD(S): In Person

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](#).

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: Mr. Stephen Lang

EMAIL: langs@camosun.ca

OFFICE: Tech 252

HOURS: Tuesday 10:00-11:30, Thursday 2:00-4:00

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

PREREQUISITE(S): N/A

CO-REQUISITE(S): N/A

EXCLUSION(S): N/A

COURSE LEARNING OUTCOMES / OBJECTIVES

Learn how to design and implement algorithms to solve problems using object-oriented programming. You will start to practice the foundational skills, tools and methods to produce and maintain quality software systems.

The course is an introduction to programming and problem-solving using the C# programming language. The basic programming concepts presented can be applied to other languages.

Specific course topic coverage includes:

- Introduction to Computing and Application Development
- Creating a Programming Project
- Introduction to Computing and Application Development
- Data Types and Expressions
- Methods and Behaviors
- Creating Your Own Classes
- Making Decisions
- Repeating Instructions
- Arrays
- Advanced Collections
- Introduction to Windows Programming
- Programming Based on Events
- Advanced Object-Oriented Programming Features
- Debugging and Handling Exceptions
- Working with Files

Lab assignments will involve programming in C# using an integrated development environment (IDE) specifically Visual Studio, and Git.

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

- Design and code a medium-complexity (non-database, non-web form) C# program;
- Understand the language syntax rules for the C# programming language;
- Write statements that call methods and to write their own class methods;
- Test, troubleshoot, and debug issues associated with C# programming;
- Describe how to declare and perform compile-time initialization of array elements;
- Define and code object-oriented classes, methods, and objects;
- Create, open, close, read, and write files;
- Understand the language syntax rules for the C# programming language;
- Think critically to evaluate information, solving problems, and making decisions as they relate to the use of software tools for software development; and
- 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

N/A

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 or DATE RANGE	ACTIVITY or TOPIC	OTHER NOTES
1	chapter 1 Introduction to Computing and Application Development	
2	chapter 2 Data Types and Expressions	
3	chapter 3 Methods and Behaviours	
4	chapter 4 Creating your own classes	
5	chapter 5 Making Decisions	
6	chapter 6 Repeating Instructions	
7	chapter 7 Arrays	
8	chapter 8 Advanced Collections	
9	chapter 9 Introduction to Windows Programming	
10	chapter 10 Programming Based on Events	
11	chapter 11 Advanced Object-Oriented Programming Features	
12	chapter 12 Debugging and Handling Exceptions	
13	chapter 13 Working with Files	
14	review	
15	Written exam and practical exam – date TBD	

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%

DESCRIPTION	WEIGHTING
Midterm Exam (tentative Oct 12)	20%
Quizzes (10)	10%
Final – Practical Exam	20%
Final – Written Exam	20%
	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>

COURSE GUIDELINES & EXPECTATIONS

Must complete all labs.

Must achieve a minimum average of 55% on the labs.

Late assignments and/or labs are subjected to a 10% penalty, except by the instructor's prior written permission or in the presence of a dire and documented short-term medical or family emergency.

Must complete all required quizzes. At the end of each chapter there is a required quiz. There are practice quizzes throughout each chapter—these are self-evaluation quizzes and not required quizzes.

Must achieve a minimum average of 55% on required quizzes.

Must achieve a minimum average of 55% on the Final exam (the written and practical averaged together) to pass the course.

No leaving during any examination unless an accommodation is in place.

SCHOOL OR DEPARTMENTAL INFORMATION

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

Academic Integrity Violations:

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, 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: The school's policy regarding electronic devices is that any student who has a cell phone or other unauthorized electronic device (ie. 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.

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.

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](#) (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.