COURSE SYLLABUS

COURSE TITLE:	ICS 114—Algorithms and Programming
CLASS SECTION:	X01
TERM:	2024W
COURSE CREDITS:	3
DELIVERY METHOD(S):	Lecture, Lab

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 updates please visit https://camosun.ca/about/covid-19-updates.

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:	Gordon Broom (he/him)
EMAIL:	BroomG@camosun.ca
PHONE/TEXT:	250-818-6452
OFFICE:	TEC 233, or via Zoom
HOURS:	anytime I'm not teaching, or by appointment

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. I have unconscious biases and assumptions, as we all do, please help me discover and remove them.

I was raised in southern Ontario of Scots/Swedish ancestry but I culturally identify as Canadian (second generation), there are no kilts or horned helmets in my heritage. I moved to Victoria in 1992 after graduating from university and now consider myself "almost" a local. I am grateful to live and work in the traditional territories of the Lək̓ʷəŋən and W̱SÁNEĆ peoples. I recognize that learning is a lifelong journey and we are all on different paths, and at different points along these paths. As an educator I want to guide and support all learners in their journeys so I endeavour to not hinder or distract you from your full potential. I would like to be seen as a facilitator rather than a subject expert. Please drop by my office to discuss the course, or just for a chat.

CALENDAR DESCRIPTION

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. Restricted course. Open to students enrolled in the Information and Computer Systems program or Interactive Media Developer program.

PREREQUISITE(S):	none
CO-REQUISITE(S):	none
EXCLUSION(S):	none

COURSE LEARNING OUTCOMES / OBJECTIVES

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

- Apply and explain object-oriented techniques including the creation of objects, application of inheritance, information hiding, encapsulation, scope and pass-by-value and pass-by-reference;
- Design, implement, test and debug simple programs in an object-orientated language using appropriate arithmetic and logical operations, conditions and iterative control structures, and data types;
- Apply problem-solving skills and provide a foundation for advanced programming courses.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

Text: *Think Java: How To Think Like a Computer Scientist - 2e* https://open.umn.edu/opentextbooks/textbooks/think-java-how-to-think-like-a-computer-scientist

Software: NetBeans IDE 18 or higher

In addition, I will post a variety of additional required readings and documents online, either as external links or as PDF files on the D2L site for the course. You can read these materials online or print them out, but they will be required, unless specifically marked as optional. All readings should be done by the beginning of that week.

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 RANGE	LECTURE TOPIC	EVALUATION	NOTES
1	Jan 8 – 12	Course overview. History and context.	Quiz 0.	
2	Jan 15– 19	Language structure, writing a simple program.	Quiz 1	
3	Jan 22 – 26	Selection (if, else, switch), logical operators, conditional expressions.	Quiz 2	
4	Jan 29 – Feb 2	Repetition (for, while, do-while), arrays.	Quiz 3	
5	Feb 5 – 9	Methods.	Quiz 4	

WEEK	DATE RANGE	LECTURE TOPIC	EVALUATION	NOTES
6	Feb 12 – 16	Objects and classes, class abstraction, scope, modifiers.	Quiz 5	
7	Feb 19 – 23	Reading Week. No Classes or Labs		
8	Feb 26 – Mar 1	Visibility, ownership, encapsulation.	**Midterm**	
9	Mar 4 – 8	Class abstraction, thinking in objects.	Quiz 6	
10	Mar 11 – 15	Inheritance.	Quiz 7	
11	Mar 18 – 22	Polymorphism.	Quiz 8	
12	Mar 25 – 29	Protected data and methods. Exception handling.		
13	Apr 1 – 5	Review.		April 1 = Easter Monday
14	Apr 8 – 12	Review.		
EXAM	Apr 15 – 26	Exams April 15 – 26		

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

EVALUATION OF LEARNING

DESCRIPTION	WEIGHTING	DETAILS
Labs/Assignments	25%	Students are expected to complete lab exercises during their assigned lab times.
Midterm Test	25%	The midterm test will be held in the lab period during the week of February 26.
Quizzes	10%	Eight quizzes throughout the term
Final Exam	40%	The final exam is scheduled by Camosun College. Be sure to check the date before making travel arrangements.
TOTAL	100%[1]	

COURSE GUIDELINES & EXPECTATIONS

Lecture 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. Lecture participation is essential to the course objectives, and largely involves discussion of the weekly topic and assigned readings or activities.

Lab Attendance

Lab participation is essential to the course objectives, an opportunity for students to ask questions and learn from each other.

Advice

1. Keep up to date with the lecture materials daily.
2. If you are having difficulties with the course, please contact your instructor sooner rather than later.
3. Programming is a skill. To become a good programmer you must practice, practice, practice every day.
4. It is strongly suggested that students create their own glossary of terms. This will be very helpful for reviewing for tests.
5. Be sure to do your own work. This course utilizes automated and manual checking mechanisms for plagiarism. Pleas see Camosun's academic honesty policy: https://camosun.ca/sites/default/files/2021-09/e-1.13.pdf

Due Dates and Late Assignments

The due dates are established in accordance with the course and term duration. The purpose of the due dates is to help both you and I to get the assignments assessed in a timely manner. Just as you need time to complete the

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1. [1] A weighted average of 60% or greater must be achieved on the quizzes, midterm, and final exam to pass the course.

assignments, I need enough time to grade them. As such, it is expected that students will hand in assignments on time. Assignment marks, comments, and feedback will be returned to students in a timely manner.

Please submit assignment by the due date indicated (on the assignment, or on D2L). This allows me to provide feedback on your work, which will enhance your learning and guide you in subsequent assignments. Submitting assignments by the due dates will provide the best learning experience. Assignments will be accepted up to the last day of classes for full marks. Late assignments will receive full marks but no instructor feedback.

Exam Procedures

All exams must be written at the scheduled times with the exception of students requiring an accommodation by CAL. It is understood that emergency circumstances do occur (e.g. severe illness or family emergency); for such circumstances accommodation may be offered at the discretion of the instructor, provided the student notifies the instructor in advance. 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 policy for more information.

http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf

SCHOOL OR DEPARTMENTAL INFORMATION

Department: Computer Science Department

- Chair is Saryta Schaerer, TEC 239.
- See the chair if you need:
    - program help such as working out a part-time schedule
    - help with transfer credits
    - info on services from other departments.
- See your instructor if you need help with the course.

School: School of Trades and Technology. Office TEC 169

- Dean is Eric Sehn
- Associate Dean is Ken Kosik
- Both are in TEC 169
- Student issues are looked after by the Associate Dean. However, if you need anything, go to the department chair first.

Equity, diversity, and inclusion (EDI) are central to Camosun's culture and values. The Camosun community and the engineering community at large commit to pursuing equity in education regardless of race, heritage, religion, gender or gender identity, and ability. We learn best when we feel safe. Inappropriate, hateful or demeaning comments or actions will not be tolerated. Your suggestions on how to make your experience here better are encouraged and appreciated. Please let me or the department chair know ways to improve your experience at Camosun. If you wish to know more about Camosun's EDI policy, please see the EDI page on the college's website:
http://camosun.ca/about/policies/equity-diversity-inclusion.html

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 Integrity

Students are expected to comply with all College policy regarding academic integrity; which is about honest and ethical behaviour in your education journey. The following guide is designed to help you understand your responsibilities: https://camosun.libguides.com/academicintegrity/welcome

Please visit http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf for Camosun's Academic Integrity policy and details for addressing and resolving matters of academic misconduct.

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 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.

Looking for other policies?

The full suite of College policies and directives can be found here: https://camosun.ca/about/camosun-college-policies-and-directives

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.