



CAMOSUN COLLEGE
Trades and Technology
Computer Science

Algorithms and Programming, ICS 114
Fall, 2022

COURSE OUTLINE

The calendar description is available on the web @ _____

Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

1. Instructor Information

(a) Instructor	Stephen Lang	_____
(b) Office hours	Friday 10:30 AM to 12:30 PM	_____
(c) Location	Tech 252	_____
(d) Phone	250-370-4454	Alternative: _____
(e) E-mail	langs@camosun.ca	_____
(f) Website	D2L: ICS-114-X03 Algorithms and Programming	_____

2. Intended Learning Outcomes

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.

3. Required Materials

(a) Texts

C# Programming, Barbara Doyle, Cengage Learning 5th Edition (recommended)

(b) Other

N/A

4. Course Content and Schedule

		lecture	lab
week 1	Sept 2 - 6	chapter 1 Introduction to Computing and Application Development	lab 1
week 2	Sept 9 - 13	chapter 2 Data Types and Expressions	lab 2
week 3	Sept 16 - 20	chapter 3 Methods and Behaviours	lab 3
week 3	Sept 23 - 27	chapter 4 Creating your own classes	lab 4
week 4	Sept 30 - Oct 4	chapter 5 Making Decisions	lab 5
week 5	Oct 7 - 11	chapter 6 Repeating Instructions	lab 6
week 6	Oct 14 - 18	chapter 7 Arrays midterm (Friday Oct 18)	lab 7
week 7	Oct 21 - 25	chapter 8 Advanced Collections	lab 8
week 8	Oct 28 - Nov 1	chapter 9 Introduction to Windows Programming	lab 9
week 9	Nov 4 - 8	chapter 10 Programming Based on Events	lab 10
week 10	Nov 11 - 15	chapter 11 Advanced Object-Oriented Programming Features	lab 11
week 11	Nov 18 - 22	chapter 12 Debugging and Handling Exceptions	lab 12
week 12	Nov 25 - 29	chapter 13 Working with Files	lab 13
week 13	Dec 2 - 6	review	
week 14	Exam period	Written exam and practical exam – date TBD	

5. Basis of Student Assessment (Weighting)

- 30% Lab Assignments (see below)
- 20% Midterm Exam (Friday October 18)
- 10% Quizzes
- 20% Final Practical Exam - (date and location TBD)
- 20% Final Written Exam - (date and location TBD)

In addition, in order to pass this course a minimum score of 55% is required on the total of the lab assignments portion and all lab assignments have been submitted. Also a minimum score of 55% is required on the combined final written exam and practical exam is required. For example, if the final practical has 50 marks and the final written has 50 marks, then the combination of the two is 100 marks. You will need to make at least 55/100 to pass. If you do not pass the written exam (say you got 20/50) but you do much better on the practical (35/50), you pass the course.

Failure to write an exam as scheduled earns an automatic grade of F unless an acceptable medical reason is given accompanied by a physician's signed note.

(a) Labs

Unless otherwise stated in the lab write-up, lab submissions are done through D2L. Late labs are subjected to a 10% per day penalty (including weekends and holidays), except by the instructor's prior written permission or in the presence of a dire and documented short-term medical or family emergency.

(b) Quizzes

The quizzes in this course are designed to help the student understand the subject material.

(c) Exams

No leaving during any examination unless an accommodation in place.

6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

7. Recommended Materials to Assist Students to Succeed Throughout the Course

Review the online material of lectures, quizzes, and labs on the D2L course web site.

8. College Supports, Services and Policies



Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @

<http://camosun.ca/about/mental-health/emergency.html> or

<http://camosun.ca/services/sexual-violence/get-support.html#urgent>

Department Policies:

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.

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.

College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <http://camosun.ca/>

College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at <http://camosun.ca/about/policies/>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

A. GRADING SYSTEMS <http://www.camosun.bc.ca/policies/policies.php>

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.

B. 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.