



COMP139 – Applied Computer Programming
Summer 2019

COURSE OUTLINE

The calendar description is available on the web @ <http://camosun.ca/learn/calendar/current/web/comp.html>

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/s:	Shohreh Hadian	
(b) Office hours	TBA and by appointment	
(c) Location	Ewing 302 (Lansdowne Campus)	
(d) Phone	250-370-3971	
(e) E-mail	shadian@camosun.bc.ca	
f) Website	Use D2L course site!	Alternative:

2. Course Objectives

This course is an introduction to techniques, methods, and tools for systematic development and maintenance of software systems. Basic algorithms and data structures will be explored using fundamental concepts of object-oriented programming. Topics include control and data abstraction, modularization, abstract data types, layers of abstraction, information hiding, separation of concerns, type checking, program design, separate compilation, software libraries, techniques for the development of high-quality software components.

Students will be introduced to:

- Inheritance
- Problem Solving Techniques
- Algorithms (searching, sorting, etc.) and Algorithm analysis
- Data Structures (linear, linked, trees, etc.)
- Abstract Data Types
- Collections
- Object-oriented techniques
- Generics
- String processing

4. Required Materials

Textbook: Java Software Structures, Designing and Using Data Structures, 4th edition, Lewis and Chase
Software: NetBeans IDE 8.0.2 or higher

5. Labs

Labs are intended to give practical experience in the material covered in the lectures. The lab sessions provide an opportunity for you to discuss with the instructor your progress or problems in solving the lab assignments. You should have made some attempts or progress in the assignment before coming to lab session. Labs must be submitted on their due date. Late labs will be downgraded by 5% per day late on the first late lab and 10% on the second late lab. Third and subsequent late labs will not be accepted.

Students throughout the semester must keep copies of all submitted labs. **Labs must be submitted in the form of both electronic and hard copy** (when required) by the due date.

6. Basis of Student Assessment (Weighting)

Participation	5%
Midterm	20%
Final exam (mandatory)	50%
Lab work	25%

7. Grading System

<input checked="" type="checkbox"/>	Standard Grading System (GPA)
<input type="checkbox"/>	Competency Based Grading System

8. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College Calendar, Student Services or the College web site at <http://www.camosun.bc.ca>

STUDENT CONDUCT POLICY

There is a Student Conduct Policy. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section.

<http://www.camosun.bc.ca/policies/policies.html>

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.

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.

COMP 139 - Applied Computer Programming
Tentative Schedule
Summer 2019

Week #	Topics	Labs - Deliverable
1	Introduction and overview of the course Java Basics, Object Oriented Concepts Review (Classes, Objects, Inheritance), User Defined Classes Polymorphism, Exceptions , Interface	Lab 1- Netbeans/OO Review/Inheritance
2	Software Engineering and SDLC, Problem Solving Techniques Abstract Data Type	Lab 2 - ADT
3	Analysis of Algorithms (Complexity) , Algorithms (Search, Sort, etc.) Linked Structures Generics	Lab 3 - Stacks
4	Introduction to Collections Stacks and Recursion Midterm	Lab 4- Linked List/ Sort
5	Queues Sort, String processing Iterators	Lab 5 – Multiple Implementation/ Collections/ Use of Java libraries
6	Non Linear Data Structures I Non Linear Data Structures II	Final Project
7	Binary Search Tree, Hashing Review	
8	Final Exam	