



**CAMOSUN COLLEGE**  
**Trades and Technology**  
**Computer Science**

**ICS 226**  
**Network and Server-Side Programming**  
**Fall 2020**

**COURSE OUTLINE**

The calendar description is available on [camosun.ca/learn/calendar/current/web/ics.html](https://camosun.ca/learn/calendar/current/web/ics.html)  
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	Michael Horie	_____
(b) Office hours	By appointment	_____
(c) Location	Please email	_____
(d) Phone	Please email	Alternative: _____
(e) E-mail	horiem@camosun.bc.ca	_____
(f) Website	D2L	_____

**2. Intended Learning Outcomes**

*Implement specific network programming constructs to create robust real-world sockets-based applications;*  
*Design, implement, test and deploy client/server programs in a variety of languages and platforms;*  
*Describe and apply a variety of network and server-side concepts such as multitasking, multithreading, inter-process communication and network communications;*  
*Describe the difference between long-term and short-term communication sessions; and*  
*Apply accepted standards to ensure security, privacy, and integrity of data while recognizing the ethical, legal, and social implications of network programming.*

### 3. Required Materials

(a) Texts

ICS 226 Lab Manual

(b) Other

Raspberry Pi or a Pi-compatible MicroSD card with Raspbian OS

### 4. Course Content and Schedule

Week 1: Python review, Lab introduction

Week 2: TCP/IP review, Python sockets, data encoding, and compression, Lab 0 due

Week 3: Python multithreading, Lab 1 due

Week 4: TLS, Python encryption, Lab 2 due

Week 5: Advanced Python network programming, Lab 3 due

Week 6: Interactions in Python with established protocols, no labs due to Thanksgiving Day

Week 7: Testing and deployment of Python programs, Lab 4 due

Week 8: Java sockets, Lab 5 due

Week 9: Java data encoding and compression, Lab 6 due

Week 10: Java multithreading, no labs due to Remembrance Day

Week 11: Java encryption, Lab 7 due

Week 12: Advanced Java network programming, Lab 8 due

Week 13: Testing and deployment of Java programs, Lab 9 due

Week 14: Review, Lab 10 due

Quizzes almost every week, with each quiz being scheduled at the beginning of lab

This schedule is subject to change

### 5. Basis of Student Assessment (Weighting)

See Department Policy section for additional details

(a) Assignments

N/A

(b) Labs

15%

Must complete all labs.

Late labs are subject to a 100% penalty, **unless you are feeling unwell and have emailed your instructor prior to the lab, to arrange an alternative date. Do NOT come to campus if you are feeling unwell.**

(c) Quizzes

80%

One lowest quiz mark will be dropped. A minimum average of 55% must be achieved on quizzes. **Missed quizzes receive a 0, unless you are feeling unwell and have emailed your instructor prior to the quiz, to arrange an alternative date. Do NOT come to campus if you are feeling unwell.**

(d) Exams

N/A

(e) Other (e.g. Project, Attendance, Group Work)

5%

Lab attendance and participation (specifically, arriving on time with the required materials). **If you are feeling unwell, do not come to campus, but email your instructor prior to the lab to receive an exemption for the affected lab.**

## 6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

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

B Rhodes and J Goerzen, Foundations of Python Network Programming, 3<sup>rd</sup> ed, Apress, 2014

## 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 them with your instructor.

### Academic Dishonesty:

1<sup>st</sup> violation: Minus the weight of the deliverable and a note on your departmental file.

2<sup>nd</sup> violation: F in the course

3<sup>rd</sup> violation: [Student Conduct Policy E-2.5](#) is applied

**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 receive 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.