

COURSE SYLLABUS



COURSE TITLE:	ICS 226 - Network and Server-Side Programming
CLASS SECTION:	X01 (A and B)
TERM:	Fall 2024
COURSE CREDITS:	3
DELIVERY METHOD(S):	On-campus

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:	Michael Horie
EMAIL:	horiem@camosun.bc.ca
OFFICE:	TEC 246
HOURS:	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.

CALENDAR DESCRIPTION

Explore various topics and issues involved in networks and server programming. You will develop and deploy networked programs using current communication trends including socket programming, secure socket layer certificates and data encryption and compression.

PREREQUISITE(S):	C+ in ICS 124, C+ in ICS 126
CO-REQUISITE(S):	ICS 228 (C, if already taken)
EXCLUSION(S):	N/A

COURSE LEARNING OUTCOMES / OBJECTIVES

- *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.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

A Pi-compatible MicroSD card with Raspberry Pi OS

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	Python overview	No labs
2	Python overview	Lab 1 due
3	TCP/IP overview	Work on Lab 2
4	Sockets and data encoding	Lab 2 due
5	Midterm #1	Work on Lab 3
6	Multithreading	Lab 3 due
7	Asynco	Lab 4 due
8	Encryption and TLS	Lab 5 due
9	Django	Lab 6 due
10	Midterm #2	Lab 7 due
11	Deployment, caching, message queues, long-term connections, and IPv6	Lab 8 due
12	Java networking	Lab 9 due
13	Java networking	Lab 10 due
14	Review	
TBA by the College	Final Exam	

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>) **Failure to follow CAL booking procedures and deadlines can cause Camosun to be unable to provide accommodations.**

EVALUATION OF LEARNING

DESCRIPTION		WEIGHTING
Lab Work	Must complete all lab work. Marks are generally deducted for arriving late to a lab, failing to bring required materials to the lab, or working on something other than ICS 226 labs. <u>Late work results in a 0</u>	20%
Midterms	A minimum total average of 55% must be achieved. <u>A missed midterm exam results in a 0</u>	40%
Final Exam	A minimum average of 55% must be achieved. <u>A missed final exam results in an "F" in the course</u>	40%
	TOTAL	100%

If you are going to miss a deadline (lab, quiz, final) because of an [illness, emergency, or other extenuating circumstance](https://camosun.ca/sites/default/files/2022-11/e-1.17.1.pdf) (see <https://camosun.ca/sites/default/files/2022-11/e-1.17.1.pdf>), email me right away. Documentation may be required.

If you have a concern about a grade you have received for an evaluation, please come and see me within 7 days of the mark being posted on D2L. Refer to the [Grade Review and Appeals Policy](http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf) (<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>) for more information.

SCHOOL OR DEPARTMENTAL INFORMATION

Academic Integrity Violations:

1st violation: A 0 for the deliverable and a note on your departmental file

2nd violation: An "F" in the course

3rd violation: See the [Academic Integrity Policy](https://camosun.ca/sites/default/files/2021-09/e-1.13.pdf) (<https://camosun.ca/sites/default/files/2021-09/e-1.13.pdf>) and [Policy-Informed Practice: A Guide to Academic Misconduct and How to Address It](https://camosun.ca/sites/default/files/2021-05/e-1.13.5.pdf), especially Category 3 (<https://camosun.ca/sites/default/files/2021-05/e-1.13.5.pdf>)

Electronic Devices: Following School policy, students who have a cell phone or other unauthorized electronic device (e.g., tablet, laptop) on their person or around their desk during an exam will be deemed guilty of cheating and will receive an "F" in 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.

COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

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" at <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 <http://camosun.ca/sexual-violence>. To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-370-3841

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 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 notice of the changes.