

# COURSE SYLLABUS



COURSE TITLE: COMP 276 – Data Security  
CLASS SECTION: 0X01  
TERM: 2021F  
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 information please visit <https://legacy.camosun.ca/covid19/index.html>.

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*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

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NAME: Stephen Lang  
EMAIL: [langs@camosun.bc.ca](mailto:langs@camosun.bc.ca)  
OFFICE: Tech 252  
HOURS: Wednesday from 11:00am – 12:00pm  
Also 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

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Students will learn fundamental tools necessary to identify and secure potential data vulnerabilities in software and on hardware. Information and system security areas and methods will be explored through a combination of tools to secure computerized data processing, data storing, and communication, including ethical hacking techniques, risk analysis, vulnerability testing, auditing, and security management.

PREREQUISITE(S): C in ICS 211  
CO-REQUISITE(S): None  
EXCLUSION(S): None

## COURSE LEARNING OUTCOMES / OBJECTIVES

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Upon completion of this course the student will be able to:

1. Describe techniques required for safe Internet usage

2. Implement basic secure software construction practices for applications
3. Define key terms and concepts in cyber crimes, cyber law, intellectual property, privacy, and trademarks
4. Secure both clean and corrupted systems, protect personal data, and secure simple computer networks
5. Select computer technologies for use in digital evidence collection and evidentiary reporting in forensic acquisition
6. Secure and maintain firewalls, intrusion detection systems, and intrusion prevention systems
7. Implement and apply principles of web security to a web application
8. Describe various aspects of risk management including risk identification, risk control, risk mitigation, and risk assessment

#### REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

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(a) Texts

- None, online notes provided. I will post a variable 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

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The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

Lectures: Monday 8:30am-10:20am Tech 186  
 Lab: Wednesday 12:30pm-3:20pm Tech 186

WEEK	ACTIVITY or TOPIC	OTHER NOTES
1	Introduction to Security, Windows Security, Windows Lab	
2	Networking Fundamentals, Linux Security, Linux Lab	
3	Cyberlaw, Node and Docker Lab	
4	NodeJS Security, OWASP ZAP Lab	
5	Host Security, Malware, OpenVAS and nmap Lab	

WEEK	ACTIVITY or TOPIC	OTHER NOTES
6	Network Security, Wireshark and HTTPS Lab	
7	Incident Response and Forensics, Security Benchmarks and Forensics Lab	
8	Risk Management, Wazuh Lab	
9	Application Security, Rate Limiting Lab	
10	Cryptography and the PKI, Fail2Ban Lab	
11	Authentication and Authorization, SonarQube and Passport Lab	
12	Software Security and Monitoring	
13	Security Policies and Cyber Stalking, Fraud, and Abuse	
14	Review	
	Final Exam : Date and Time TBA	

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>

## EVALUATION OF LEARNING

DESCRIPTION	WEIGHTING
Assignments and Lab – must complete all labs to pass the course	40%
Midcourse tests (3) – each worth 15% - must have a passing average to pass the course	45%
Final exam – must pass the final to pass the course	15%
	<b>TOTAL</b>
	<b>100%</b>

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](http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf) policy for more information. <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>

## 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.

### Lab Attendance

Lab participation is essential to the course objectives, and largely involves discussion of the weekly topic and assigned readings or activities. It is also an opportunity for students to ask questions and learn from each other. The participation grade is assigned based on the level of your constructive engagement in the weekly seminars.

### **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 done so that they can be assessed in a timely manner. Just as you need time to complete the assignments, I need enough time to grade them. As such, the due dates are fixed (unless you have an approved academic accommodation through CAL) and 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, usually within 1-3 weeks, depending on the length of the assignment. All assignments must be handed in by the time indicated (on the assignment, or on D2L). Late assignments may be graded but marks equivalent to 10% of the total value of the assignment will be deducted for each day, inclusive of days on the weekend, past the deadline. If assignments have already been marked and returned, a late assignment will not be accepted. Assignments will not be accepted that are late more than three days, inclusive of days over the weekend.

### **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:

- a) notifies the instructor in advance of the exam (not after), and
- b) provides documented evidence of the circumstance (e.g. medical certificate).

If an exam is missed with an excused absence, it is up to the instructor's discretion as to how the mark will be made up. In most cases, an oral exam will be scheduled for the student as soon as possible.

Be sure not to make travel plans for the end of semester until the final exam schedules are finalized and posted. Please ask any family members who might make travel plans on your behalf to consult you before booking tickets.

Please note: the use of cell phones during a test or quiz is not allowed and may result in a zero for that assessment.

### **Study Habits**

Good and regular study habits are essential to do well in this course. You should plan on a weekly minimum of 6 hours outside of scheduled class time for the completion of readings, assignments and for general studying. Joining a study group can help make this more achievable.

Lecture presentations will be uploaded to the course website. These should be used as a study guide, not as your sole source of information. You will need to write down additional key words for examples and explanations given during lecture and review text and videos to support your understanding. It is also recommended practice to transform lecture notes into a study-friendly format after each lecture, incorporating additional information from your textbook. Study these notes before the next class to prepare yourself for new material, which will often build on previously covered material.

Please take advantage of office hours if you need extra clarification and help.

## STUDENT RESPONSIBILITY

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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

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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	<a href="http://camosun.ca/advising">http://camosun.ca/advising</a>
Accessible Learning	<a href="http://camosun.ca/accessible-learning">http://camosun.ca/accessible-learning</a>
Counselling	<a href="http://camosun.ca/counselling">http://camosun.ca/counselling</a>
Career Services	<a href="http://camosun.ca/coop">http://camosun.ca/coop</a>
Financial Aid and Awards	<a href="http://camosun.ca/financialaid">http://camosun.ca/financialaid</a>
Help Centres (Math/English/Science)	<a href="http://camosun.ca/help-centres">http://camosun.ca/help-centres</a>
Indigenous Student Support	<a href="http://camosun.ca/indigenous">http://camosun.ca/indigenous</a>
International Student Support	<a href="http://camosun.ca/international/">http://camosun.ca/international/</a>
Learning Skills	<a href="http://camosun.ca/learningskills">http://camosun.ca/learningskills</a>
Library	<a href="http://camosun.ca/services/library/">http://camosun.ca/services/library/</a>
Office of Student Support	<a href="http://camosun.ca/oss">http://camosun.ca/oss</a>
Ombudsperson	<a href="http://camosun.ca/ombuds">http://camosun.ca/ombuds</a>
Registration	<a href="http://camosun.ca/registration">http://camosun.ca/registration</a>
Technology Support	<a href="http://camosun.ca/its">http://camosun.ca/its</a>
Writing Centre	<a href="http://camosun.ca/writing-centre">http://camosun.ca/writing-centre</a>

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

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### 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"

(<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](http://camosun.ca/sexual-violence). To contact the Office of Student Support: [oss@camosun.ca](mailto: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.

**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.