



**CAMOSUN COLLEGE**  
**School**  
**Department**

**ELEX 137**  
Workstation Security  
Fall 2019

**COURSE OUTLINE**

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The calendar description is available on the web @ Online.camosun.bc.ca

*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.*

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**1. Instructor Information**

(a) Instructor	Ian Cameron	
(b) Office hours	TBA	
(c) Location	TEC 211	
(d) Phone	250 370 4432	Alternative: _____
(e) E-mail	cameron@camosun.bc.ca	
(f) Website		

**2. Intended Learning Outcomes**

*Upon successful completion of this course a student will be able to:*

- Identify the fundamental components of information security.
- Analyze risk.
- Identify various threats to information security.
- Conduct security assessments to detect vulnerabilities.
- Implement security for hosts and software.
- Implement security for networks.
- Manage identity and access.
- Implement cryptographic solutions in the organization.
- Implement security at the operational level.
- Address security incidents.
- Ensure the continuity of business operations in the event of an incident.

**3. Required Materials**

- (a) Texts - GTS Learning Study Guide / Lab Manual for purchase  
GTS Learning CompTIA Security + eBook for download
- (b) Access to ELEX 137 Camosun D2L online course materials as required

## **4. Course Content and Schedule**

### **Week 1 - Introduction**

- **1.1 Security Overview**
- **1.2 Accessing Course Material**
- **Introduction / Lab Prep**

### **Week 2 – Module 1 - Threats, Attacks, and Vulnerabilities**

- **Unit 1 – Indicators of Compromise**
- **Unit 2 – Critical Security Controls**
- **VM Configuration / Module 1 Labs – Lab 1**

### **Week 3 – Module 1 - Threats, Attacks, and Vulnerabilities Cont.**

- **Unit 3 – Security Posture Assessment Tools**
- **Unit 4 – Incident Response**
- **Module 1 Labs – Lab 2, Lab 3**
- **Summary**

### **Week 4 – Module 2 – Identity and Access Management**

- **Unit 1 – Cryptography**
- **Unit 2 – Public Key Infrastructure**
- **Module 2 Labs – Lab 4, Lab 5, Lab 6**

### **Week 5 - Module 2 – Identity and Access Management Cont.**

- **Unit 3 – Identification and Authentication**
- **Unit 4 – Identity and Access Services**
- **Module 2 Labs – Lab 7, Lab 8**

### **Week 6 - Module 2 – Identity and Access Management Cont.**

- **Unit 5 – Account Management**
- **Summary**
- **Module 2 Labs – Lab 9, Lab 10**

### **Week 7 - Module 3 – Architecture and Design 1**

- **Unit 1 – Secure Network Design**
- **Unit 2 – Firewalls and Load Balancers**
- **Unit 3 – IDS and SIEM**

- **Term Exam #1 – Modules 1 and 2**

**Week 8 – Module 3 – Architecture and Design 1 Cont.**

- **Unit 4 – Secure Wireless Access**
- **Unit 5 – Physical Security Controls**
- **Module 3 Labs – Lab 11, Lab 12, Lab 13**
- **Summary**

**Week 9 - Module 4 – Architecture and Design 2**

- **Unit 1 – Secure Protocols and Services**
- **Unit 2 – Secure Remote Access**
- **Module 4 Labs – Lab 14, Lab 15**

**Week 10 - Module 4 – Architecture and Design 2 Cont.**

- **Unit 3 – Secure Systems Design**
- **Unit 4 – Secure Mobile Device Services**
- **Module 4 Labs – Lab 16**

**Week 11 - Module 4 – Architecture and Design 2 Cont.**

- **Unit 5 – Secure Virtualization and Cloud Services**
- **Summary**

**Week 12 – Module 5 - Risk Management**

- **Unit 1 – Forensics**
- **Unit 2 – Disaster Recovery and Resiliency**
- **Unit 3 – Risk Management**
- **Term Exam #2 – Modules 3 and 4**

**Week 13 - Module 5 - Risk Management Cont.**

- **Unit 4 – Secure Application Development**
- **Unit 5 – Organizational Security**
- **Module 5 Labs – Lab 17, Lab 18**
- **Summary**

**Week 14 - Exam Prep**

- **Exam Objectives**
- **Practice Exams**
- **Final Content**

## 5. Basis of Student Assessment (Weighting)

Evaluation for this course will be a combined total of theory and lab marks. Students must obtain at least 60% to pass the course. Attendance and completion of all lab material is mandatory to pass the course. **Late assignments/lab exercises will not be graded.**

Marking Criteria:

Weekly Quizzes -----	10%
D2L Assignments -----	15%
Term Tests -----	30%
Final Exam -----	30%
Lab Exercises -----	15%

**Weekly quizzes** Based on the assignment material for each week.  
One quiz per week on each Friday.

**D2L Assignments** will be weekly assignments from the GTS Learning courseware submitted to D2L by Sunday midnight of the corresponding week. Check the D2L website for weekly assignments. Only MS WORD documents will be accepted. Illegible documents will receive a mark of zero. Late submissions will not be graded.

**Term Tests.** There will be two term tests completed during the lab class for that week based on the material covered up to that week.

**Final Exam.** There will be a three hour final exam based on the entire course content given during exam week at the end of the term.

**Lab exercises** should be completed by the end of the lab period on Friday. Any submitted work to dropboxes must be completed and submitted to the dropbox no later than midnight on the Sunday of that week. Lab exercises will be from the GTS Learning Labs with supplements from the D2L site.

Please note the following:

1. A grade of 50% or better is required in all assessment items above to be able to pass the course.
2. No late materials will be accepted past midnight of the last day of the course.
3. No opportunity will be available to write missed quizzes.
4. Attendance and completion of all lab material is mandatory to pass the course.

## 6. Grading System

*(If any changes are made to this part, then the Approved Course description must also be changed and sent through the approval process.)*

*(Mark with "X" in box below to show appropriate approved grading system – see last page of this template.)*

Standard Grading System (GPA)

Competency Based Grading System

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

None

## 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>

### 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://camosun.ca/about/policies/index.html>

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.
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## 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://camosun.ca/about/policies/index.html> 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.