



CAMOSUN COLLEGE
Trades and Technology
Electronics and Computer Engineering

ELEX 133B
Routing and Switching – Routing
Winter 2021

COURSE OUTLINE

The calendar description is available on the web @ Camosun.ca

1. Instructor Information

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|-------------------------|--------------------------|---------------------|
| (a) Instructor | Trevor Curtis | |
| (b) Office hours | Email for an appointment | |
| (c) Location | CBA 122 | |
| (d) Phone | 250 370 4431 | Alternative: |
| (e) E-mail | curtis@camosun.bc.ca | |
| (f) Website | | |

2. Intended Learning Outcomes

Switching, Routing, and Wireless Essentials (SRWE) covers the architecture, components, and operations of routers and switches in small networks and introduces wireless local area networks (WLAN) and security concepts. Students learn how to configure and troubleshoot routers and switches for advanced functionality using security best practices and resolve common issues with protocols in both IPv4 and IPv6 networks.

Students will be able to:

- Configure VLANs and Inter-VLAN routing applying security best practices.
- Troubleshoot inter-VLAN routing on Layer 3 devices.
- Configure redundancy on a switched network using STP and EtherChannel.
- Troubleshoot EtherChannel on switched networks.
- Explain how to support available and reliable networks using dynamic addressing and first-hop redundancy protocols.
- Configure dynamic address allocation in IPv6 networks.
- Configure WLANs using a WLC and L2 security best practices.
- Configure switch security to mitigate LAN attacks.
- Configure IPv4 and IPv6 static routing on routers.

3. Required Materials

- Access to Cisco CCNA Intro – Online Curriculum. → www.netacad.com
- Access to Camosun College D2L Site → <https://online.camosun.ca>

4. Course Content

Routing Course

1. Basic Device Configuration
2. Switching Concepts
3. VLANs
4. Intra-VLAN Routing
5. STP Concepts
6. Etherchannel
7. DHCPv4
8. SLAAC and DHCPv6
9. FHRP Concepts
10. LAN Security Concepts
11. Switch Security Configuration
12. WLAN Concepts
13. WLAN Configuration
14. Routing Concepts
15. IP Static Routing
16. Troubleshooting Static and Default Routes

5. Basis of Student Assessment (Weighting)

(a) Labs	=	20%
(b) Assignments and Exams		
Assignments	=	20%
Module Group Exams	=	20%
(c) Final Exams		
Skills Exams	=	30%
Final Exam	=	10%
	=	100%

A mark of 0% will be given for any late submissions.

Upload the assignments to the correct location by **Friday 11:55pm** of the current week.

A mark of 0% will be given for any late submissions.

There will be several Packet Tracer Skills based assessments throughout the course.

Chapter Exams will consist of the Cisco Online Chapter Exams and will be completed during classes.

1. A grade of 50% or better is required in all assessment items above to be able to pass the course.
2. A grade of 60% or better is required in all assessment items above to qualify as a prerequisite.
3. Labs are due at the end of the lab period. No late materials will be accepted past the end of the lab

4. No opportunity will be available to write missed quizzes.
5. Attendance and completion of all lab material is mandatory to pass the course.

You should keep a bound journal for any information relating to this course such as terminology, lab exercises, observations, and procedures.

6. Grading System

- Standard Grading System (GPA)
- Competency Based Grading System

7. 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>

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.