



CAMOSUN COLLEGE
Trades and Technology
Electronics and Computer Engineering

ELEX 138
PC Workstation

Fall 2018
COURSE OUTLINE

The calendar description is available on the web @

Camosun.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.

1. Instructor Information

(a) Instructor	Phil Vreugdenhil
(b) Office hours	Please Make an Appointment
(c) Location	CBA 122A
(d) Phone	250 370 4622 Alternative:
(e) E-mail	VreugdenhilP@camosun.bc.ca
(f) Website	

2. Intended Learning Outcomes

This course covers topics relating to PC Workstation maintenance, upgrading, and repair. Topics include the fundamentals of PC systems, hardware components such as microprocessors, system boards, memory, disk storage, power supplies, and peripherals including keyboards, pointing devices, displays, printers, application software and operating systems. The student will be prepared to complete the CompTIA A+ certification.

This course is only open to students enrolled in Computer Network Electronics Technician Program.

Students successfully completing this course will have gained a basic understanding of computer systems. They will be able to:

- identify and describe the various components that make up a personal computer.
- define information technology as it relates to PC workstations;
- demonstrate the disassembly and assembly of a personal computer;
- describe preventive maintenance and basic troubleshooting steps;
- demonstrate the processes used to install, upgrade, configure, and optimize a computer operating system, and apply preventive maintenance and troubleshooting techniques; and
- describe the process for replacing or upgrading personal computer components and apply preventive maintenance and troubleshooting techniques.

3. Required Materials

- Access to Cisco ITE 7 – Online Curriculum. → www.netacad.com
- Access to Camosun College D2L Site → <https://online.camosun.ca>
- Bound journal for lab exercises (recommended)

4. Course Content – Based on Cisco's ITE 7.0 & CompTIA's A+ Objectives and Topics

- This is a blended course with a combination of online and in-class instruction.
- Holidays: Thanksgiving = Monday, October 14th (week #7) & Remembrance Day = Monday, November 11th (week #11)
 - Content / Assessments will work around the holidays and will require students to make up the missed classes
- 09-03-2019 → 12-06-2019
 - Laboratory W 9:30AM - 11:20PM, Centre Business & Access Bldg, Room 124
 - Seminar M 8:30AM - 10:20PM, Centre Business & Access Bldg, Room 124
 - Online (~1 hr per week)

Chapter 1: Introduction to the Personal Computer

- 1.1 Personal Computer Systems
- 1.2 Select Computer Components
- 1.3 Computer Disassembly

Chapter 2: PC Assembly

- 2.1 Installing Components
- 2.1 Installing Cables

Chapter 3: Advanced Computer Hardware

- 3.1 Boot the Computer
- 3.2 Electrical Power
- 3.4 Computer Configuration

Chapter 4: Preventative Maintenance and Troubleshooting

- 4.1 Preventive Maintenance
- 4.2 Troubleshooting Process

Chapter 5: Network Concepts

- 5.1 Network Components & Types
- 5.2 Network Standards, Protocols, & Services
- 5.3 Network Devices & Cables

Chapter 6: Applied Networking

- 6.1 Device to Network Connection
- 6.2 Basic Troubleshooting Process for Networks

Chapter 7: Laptops and Mobile Devices

- 7.1 Characteristics of Laptop and Mobile Devices
- 7.2 Laptop Configuration
- 7.3 Laptop Hardware and Component Installation and Configuration

- 7.4 Mobile Device Hardware: Overview
- 7.5 Network Connectivity & Email
- 7.6 Common Preventive Maintenance & Troubleshooting Process for Laptops and Mobile Devices

Chapter 8: Printers

- 8.1 Common Printer Features
- 8.2 Printer Type Comparison
- 8.3 Installing & Configuring Printers
- 8.4 Sharing Printers
- 8.5 Maintaining and Troubleshooting Printers

Chapter 9: Virtualization & Cloud Computing

- 9.1 Virtualization
- 9.2 Cloud Computing

Chapter 10: Windows Installation

- 10.1 Modern Operating Systems
- 10.2 Disk Management
- 10.3 Operating System Installation & Boot Sequence

Chapter 11: Windows Configuration

- 11.1 Windows Desktop & File Explorer
- 11.2 Configure Windows with Control Panels
- 11.3 System Administration
- 11.4 Command-Line Tools
- 11.5 Windows Networking
- 11.6 Preventative Maintenance & Troubleshooting

Chapter 12: Mobile, Linux, and macOS Operating Systems

- 12.1 Mobile Operating Systems
- 12.2 Methods for Securing Mobile Devices
- 12.3 Linux and macOS Operating Systems
- 12.4 Basic Troubleshooting Process for Mobile, Linux, and OS X Operating Systems

Chapter 13: Security

- 13.1 Security Threats
- 13.2 Security Procedures
- 13.3 Securing Windows Workstations
- 13.4 Wireless Security

Chapter 14: The IT Professional

- 14.1 Communication Skills and the IT Professional
- 14.2 Operational Procedures
- 14.3 Ethical and Legal Issues in the IT Industry
- 14.4 Call Centre Technicians

5. Basis of Student Assessment (Weighting)

(a) Chapter Quizzes	0.5% x 14	=	7%
(b) Chapter Exams	1% x 11	=	11%
(c) Labs	1% x 12	=	12%
(d) Major Exams			
ITE Mid-Term	(Mon. Oct. 28 th)	=	20%
ITE Final (Theory)	(During Finals Week)	=	30%
ITE Final (Practical)	(Week #14 Lab)	=	20%
	TOTAL	=	100%

Chapter Quizzes are questions answered on Netacad ITE course site and based on the current chapter material. It is up to students to complete the quizzes on time. See the deadlines on Netacad.

Chapter Exams will start at the beginning of the Monday classes. Multiple chapter exams may be written on the same day and students should be prepared according the ELEX 138 Fall 2019 schedule.

Labs are hands-on, practical-based activities which are to be completed “in-class” and are to be submitted by **Sunday Midnight** of the weekend following the lab period.

There will be a one hour Mid-Term Exam during Week 9 of the course based on chapters #1-9 of the Cisco ITE curriculum.

There will be a three hour theory-based Final Exam during the Exam Week based on all chapters of the Cisco ITE curriculum.

There will be a two hour skills-based Final Exam during the Week#14 based on all chapters of the Cisco ITE curriculum.

***A mark of 0% will be given for any late submissions (instructor’s discretion).

6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

GRADING SYSTEMS <http://www.camosun.bc.ca/policies/policies.php>

The following two grading systems are used at Camosun College:

I. 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

II. 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.

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.

7. 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.