



**CAMOSUN COLLEGE**  
**Trades and Technology**  
**Electronics and Computer Engineering**

**ELEX 138**  
**PC Workstation**

**Fall 2018**  
**COURSE OUTLINE**

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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.*

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### 1. Instructor Information

(a) Instructor	Phil Vreugdenhil
(b) Office hours	Mon-Fri @12:30-13:20 or Make an Appointment
(c) Location	CBA 122A
(d) Phone	250 370 4622 <b>Alternative:</b> _____
(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 6 – Online Curriculum. → [www.netacad.com](http://www.netacad.com)
- Access to Camosun College D2L Site → <https://online.camosun.ca>
- Bound journal for lab exercises (recommended)

### 4. Course Content & Schedule

- This is a blended course with a combination of online and in-class instruction.
- 09-04-2018 → 12-08-2018
  - Seminar W 10:30AM - 12:20PM, Centre Business & Access Bldg, Room 124
- 09-04-2018 → 12-08-2018
  - Laboratory Th 10:30AM - 12:20PM, Centre Business & Access Bldg, Room 124
- 09-04-2018 → 12-08-2018
  - Online (~1 hr per week)

#### Chapter 1: Introduction to the Personal Computer

- 1.1 Personal Computer Systems
- 1.2 Select Computer Components
- 1.3 Configurations for Specialized Computer Systems

#### Chapter 2: Lab Procedures and Tool Use

- 2.1 Safe Lab Procedures
- 2.2 Proper Use of Tools

#### Chapter 3: Computer Assembly

- 3.1 Assemble the Computer
- 3.2 Boot the Computer
- 3.3 Upgrade and Configure a Computer

#### Chapter 4: Overview of Preventative Maintenance and Troubleshooting Process

- 4.1 Preventive Maintenance
- 4.2 Troubleshooting Process

#### Chapter 5: Windows Installation

- 5.1 Modern Operating Systems
- 5.2 Operating System Installation

#### Chapter 6: Windows Configuration and Management

- 6.1 Windows Desktop, Tools, and Applications
- 6.2 Client-Side Virtualization
- 6.3 Common Preventative Maintenance Techniques for Operating Systems

#### Chapter 7: Network Concepts

- 7.1 Principles of Networking
- 7.2 Network Standards
- 7.3 Physical Components of a Network
- 7.4 Basic Networking Concepts and Technologies

## **Chapter 8: Applied Networking**

- 8.1 Computer to Network Connection
- 8.2 ISP Connection Technologies
- 8.3 Internet Technologies
- 8.4 Common Preventative Maintenance Techniques Used for Networks
- 8.5 Basic Troubleshooting Process for Networks

## **Chapter 9: Laptops and Mobile Devices**

- 9.1 Laptop Components
- 9.2 Laptop Configuration
- 9.3 Laptop Hardware and Component Installation and Configuration
- 9.4 Mobile Device Hardware: Overview
- 9.5 Common Preventive Maintenance Techniques for Laptops and Mobile Devices
- 9.6 Basic Troubleshooting Process for Laptops and Mobile Devices

## **Chapter 10: Mobile, Linux, and OS X Operating Systems**

- 10.1 Mobile Operating Systems
- 10.2 Methods for Securing Mobile Devices
- 10.3 Network Connectivity and Email
- 10.4 Linux and OS X Operating Systems
- 10.5 Basic Troubleshooting Process for Mobile, Linux, and OS X Operating Systems

## **Chapter 11: Printers**

- 11.1 Common Printer Features
- 11.2 Installing and Configuring Printers
- 11.3 Sharing Printers
- 11.4 Maintaining and Troubleshooting Printers

## **Chapter 12: Security**

- 12.1 Security Threats
- 12.2 Security Procedures
- 12.3 Common Preventive Maintenance Techniques for Security
- 12.4 Basic Troubleshooting Process for Security

## **Chapter 13: The IT Professional**

- 13.1 Communication Skills and the IT Professional
- 13.2 Ethical and Legal Issues in the IT Industry
- 13.3 Call Centre Technicians

## **Chapter 14: Advanced Troubleshooting**

- 14.1 Computer Components and Peripherals
- 14.2 Operating Systems
- 14.3 Networks
- 14.4 Security

## 5. Basis of Student Assessment (Weighting)

(a) D2L Assignments		1% x 14	=	14%
(b) Chapter Quizzes		1% x 14	=	14%
(c) Exams				
	ITE Mid Term	1 Hour	18% x 1	= 18%
	ITE Final	3 Hours	30% x 1	= 30%
(d) Labs		2% x 12	=	24%
			TOTAL =	100%

D2L Assignments are questions based on the current chapter material and are to be submitted to the correct D2L Dropbox by **Friday Midnight** of the current week.

Chapter Quizzes will start at the beginning of the Wednesday classes (45 minutes each).

There will be a one hour Term Exam during Week 8 of the course based on Chapters 1 – 8 of the ITE curriculum.

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

Labs are hands-on, practical-based activities which are to be completed “in-class” and are to be submitted by **End of Lab Class** of the current week.

Laboratory evaluation will be based on a 2% grade per lab period with the following breakdown:  
 1% given for attendance, cleanliness, deportment  
 1% given for completion of lab activities

\*\*\*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.