

## CAMOSUN COLLEGE School of Trades and Technology Department of Computer Science

# ICS 113 – Operating Systems and Architecture Fall 2020

### **COURSE OUTLINE**

The calendar description is available on the camosun.ca/learn/calendar/current/web/comp.html web@  $\Omega$  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 Kevin Belanger (b) Office hours By Appointment (c) Location Technology Building 263 (d) Phone 250.370.3853 250.589.0118 Alternative: (e) E-mail belangerk@camosun.bc.ca

#### 2. Intended Learning Outcomes

D<sub>2</sub>L

(f) Website

At the end of this course, students will be able to:

- Use network services including public drives and computer resources (Weeks 1 14)
- Install, manage, and explain an operating system, including storage management, memory management, and process scheduling (Weeks 1 14)
- Implement and evaluate a computer-based system, process, component, or program to meet desired needs through a hardware interface (Weeks 1 3, 7, 8, 14)
- Troubleshoot basic networking issues (Weeks 1, 2, 13, 14)
- Evaluate information, solve problems, and make decisions as they relate to ethics and security of computer systems (Weeks 1 4, 14)

Week numbers relate to the schedule listed in Course Content and Schedule below.

#### 3. Required Materials

- (a) ICS 113 Lab Manual, Raspberry Pi (pre-assembled in the labs)
  - (i) as described in the ICS 113 Lab Manual, you will require:
    - (1) a MicroSD card of minimum 8 GB and ideally 16 GB capacity
    - (2) a USB adapter / card reader for the MicroSD card
- (b) webcams are not required but may assist in the efficiency of online collaboration.
- (c) Optional Textbooks

Mark G. Sobell and Matthew Helmke, A Practical Guide to Linux Commands, Editors, and Shell Programming, 4th Edition, Addison-Wesley, 2018

1	Course	Content	and	Sch	ملييلم
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- Week 01: (Labour Day); Operating Systems Overview
- Week 02: UNIX/Linux; No Lab due (begin first lab Centos)
- Week 03: Windows (cont'd); Lab 1: CentOS Installation Lab due
- Week 04: Computer Architecture; Lab 2: Raspbian Customization Lab due
- Week 05: Memory Management; Lab 3: Remote Access Lab due
- Week 06: (Thanksgiving Day); Lab 4: Windows 10 Installation Lab due
- Week 07: Python (cont'd); Lab 5: Windows 10 Customization Lab due
- Week 08: Python (cont'd), Intro to Operating Systems; Lab 6: File Operations due
- Week 09: Device Management; Lab 7: Pi Hat Lab 2 due
- Week 10: Networking; Lab 8: Device Management Lab due
- Week 11: (Remembrance Day); Networking Technology
- Week 12: Networking Security; Lab 9: Networking Lab due
- Week 13: Scheduling; Lab 10: Troubleshooting Lab due
- Week 14: Final Exam Review;

Final Exam: TBA

This schedule is subject to change.

## 5. Basis of Student Assessment (Weighting)

(a) Assignments

Lab + Home Components 15%

Must complete all labs to pass the course

(b) Quizzes

Quizzes 30%

Must have a passing quiz average to pass the course

(c) Exams

Final Exam 50%

Must pass the final to pass the course

(d) Other (e.g. Project, Attendance, Group Work)
Lab Participation (Attendance and Punctuality, Presence of Lab Manual and Pi, No Food or Uncovered Drink)

5%

Late work will not be accepted, except by the instructor's prior written permission or in the presence of a dire and documented short-term medical or family emergency. Mark appeals must be made within 7 days of the mark being posted.

#### 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.)

X	Standard Grading System (GPA)		
	Competency Based Grading System		

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

Richard Blum and Christine Bresnahan, Sams Teach Yourself Python Programming in 24 Hours, 2<sup>nd</sup> Edition, Sams, 2016

### 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 @ <a href="http://camosun.ca/services/sexual-violence/get-support.html#urgent">http://camosun.ca/services/sexual-violence/get-support.html#urgent</a>

#### **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 <a href="http://camosun.ca/">http://camosun.ca/</a>

#### **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 <a href="http://camosun.ca/about/policies/">http://camosun.ca/about/policies/</a>. 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://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	Α		8
80-84	A-		7
77-79	B+		6
73-76	В		5
70-72	B-		4
65-69	C+		3
60-64	С		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
СОМ	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 <a href="http://www.camosun.bc.ca/policies/E-1.5.pdf">http://www.camosun.bc.ca/policies/E-1.5.pdf</a> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	Incomplete: 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	Compulsory Withdrawal: 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.