

## Course Outline

### CPSC 1280: Unix Tools and Scripting

Year and semester: 2025, spring

Course Format: 4 hour lecture, 2 hour lab

Credits: 3

Transfer Credit: For information, visit [bctransferguide.ca](http://bctransferguide.ca)

#### Course Description:

Introduction to concepts and practices in operating systems, software engineering tools, system and network administration. Scripting languages, utilities, tools and techniques. Topics include command line interface, filters, pipelines, file organization, reusable utilities, software configuration management, simplifying programming tasks, System/Network configuration, administration, and security issues.

#### Prerequisites:

A minimum "C" grade in one of CPSC 1150 or CPSC 1155; or permission of department. Prerequisites are valid for only three years.

#### Learning Outcomes:

- Upon successful completion of this course, students will be able to:
  - explain the basic concepts of operating systems, such as files, directories, processes
- use the Unix design philosophy and Unix tools to solve computing problems
- implement scripts in Unix shell
- implement scripts other languages such as AWK, Perl or Python
- effectively use a command line interface such as Bash
- use regular expressions to search and manipulate text
- explain the use of configuration management tools such as Subversion or Git

#### Instructor(s):

Office: B019k

Phone: Disconnected

Email: [ofeng@langara.ca](mailto:ofeng@langara.ca)

Office Hours: Tue/Wed 11:00-12:00

#### Textbook and Course Materials:

- Sumitabha Das. 2013. Your UNIX/Linux: The Ultimate Guide, (3rd ed.). McGraw-Hill, New York, NY.

#### Assessments and Weighting:

Assessment	Weighting
Assignments	25%
Quiz Worksheet	20%

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Midterm	25%
Final Exam	30%
Total	100%

### Grading:

Range	Letter Grad
90 to 100	A+
85 to 89	A
80 to 84	A-
76 to 79	B+
72 to 75	B
68 to 71	B-
64 to 67	C+
60 to 63	C
55 to 59	C-
50 to 54	D
0 to 49	F
Missing significant course work or final exam	N

### Detailed Course Schedule:

Week	Topic	Reading
1	Intro to Linux and operating systems	Chapter 1 and 2
2	File Systems and File Attributes	Chapter 3 and 4
3	The Shell	Chapter 6
4	Filter and processes	Chapter 9 and 7
5	Grep and regular expressions	Chapter 10
6	Sed and regular expressions (maybe awk, TBD)	Chapter 10
7	Springbreak	
8	Midterm	
9	Shell Scripting	Chapter 13
10	Shell Scripting	Chapter 13
11	Python - Syntax	
12	Python – Operating System	
13	Python – Instructor's choice of topic	

## Policy

As a student at Langara, you are responsible for familiarizing yourself and complying with the following policies:

### College Policies:

- [Student Code of Conduct - E1003](#)
- [Academic Integrity - F1004](#)
- [Academic Standing - Academic Probation and Academic Suspension - E2008](#)
- [Appeal of Final Grade - E2006](#)
- [Concerns about Instruction - F1002](#)
- [Withdrawal from Courses and Deferred Standing - E2011](#)

### Departmental Policies:

From <https://langara.ca/programs-and-courses/courses/CPSC/>, as of January 1st, 2019

#### ***Prerequisites***

- Prerequisites for courses in computer science are valid for only three years. Students wanting to register in a course for which the prerequisite was taken more than three years ago will require departmental permission. Students may be required to write a diagnostic test or to “upgrade” the prerequisite. A computer science course may only be used as a prerequisite if completed with a minimum "C" grade.

#### ***Repeating a course***

- A computer science course may be taken only twice, regardless of the grade earned in the first enrolment. The department chair, or delegate, will decide on exceptions to this rule, usually on the basis of documented evidence of upgraded prerequisites.
- Students with a substantial background in computer programming may be exempted from CPSC 1050 and/or 1150. See a faculty advisor for further information.

#### ***Attendance***

- Students will receive a failing mark if they miss 20% of the course components including lectures, seminars, and labs, unless there is verifiable evidence of an acceptable excuse.

#### ***Grading***

- In order to get a minimum "C" grade in a computer science course, a student must achieve a minimum 50% average in the exam components of the course.
- In courses which involve programming, students are required to hand in an attempt at solving every assignment in order to pass a course. In addition, students are required to obtain a satisfactory programming mark.

### Course Policies:

- In order to pass the course, students must attempt 80% of the assignments and score and overall, of 60% or above. Partially completed assignments or assignments that does

not attempt to solve the problem in the assignment will not be considered completed for the purposes of this policy. Assignments found to be substantively plagiarized will also not be considered completed for the purposes of this policy.

- The student shall attempt
  - Labs
  - Be responsible for the materials covered and notices given in all lectures and labs
  - Attend lab sessions
  - DO THE worksheets, labs and assignments
  - Frequently check the course's Brightspace page and their Langara e-mail
- For questions about your own work:
  - please see me during my regularly scheduled office hours
- Cheat and Plagiarism:
  - It is not tolerated
  - if you are discussing an assignment with someone, you should not write/type anything about it for an hour after talking, AND you must acknowledge him or her as a source
  - If you are using an AI chatbot, never simply copy the code and submit it. That is considered cheating.
  - Do not submit solutions you have obtained from a friend, colleague or ***"cousin"***
- Any plagiarized work automatically receives a grade of zero and is referred to the Office of Student Conduct and Judicial Affairs, which could result in a reduced overall grade, a failing grade for the course, or the student being suspended or expelled from the College.