

Clackamas Community College

Online Course/Outline Submission System

Section #1 General Course Information

Department: Computer Science

Submitter

First Name: Richard

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Course Prefix and Number: CS - 140L

Credits: 4

Contact hours

Lecture (# of hours): 44

Lec/lab (# of hours):

Lab (# of hours):

Total course hours: 44

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Linux for Programmers

Course Description:

Introduction to the Linux command line and software development tools. Covers how to use the command line and build tools, including VIM, GCC/G++, make, gdb, and others. Students will gain experience with the build tools by writing and debugging relatively complex programs in both C and C++.

Type of Course: Lower Division Collegiate

Reason for the new course:

Students transferring to PSU (as well as potentially other universities) need to be fluent in using Linux and the associated software build tools. Currently, we teach those alongside the content in CS201, but this only gives them limited exposure. Having a course dedicated to this content will allow the material to be covered in more depth, and give the students more time and experience with the tools, which will make them more prepared to transfer and more successful at PSU.

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

No

Are there prerequisites to this course?

Yes

Pre-reqs: CS-162

Have you consulted with the appropriate chair if the pre-req is in another program?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

No

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: No

When do you plan to offer this course?

✓ Spring

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

Upon successful completion of this course, students should be able to:

1. use command line commands to interact with the shell, files, and processes;
2. navigate the file system and manipulate files and directories;
3. efficiently edit source files using VIM;
4. configure their shell, vim, and other tools to make software development more efficient;
5. use gcc and c++ to compile programs and be able to explain the common options used with each;
6. configure makefiles to automate the building of executables;
7. debug programs using gdb and valgrind;
8. explain and use regular expressions;
9. write basic shell scripts to automate tasks.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Basic command line commands and usage
2. File system navigation, manipulation, and security
3. Text editing with vim
4. Environment configuration
5. Compiling tools (gcc, g++, makefiles)
6. Debugging tools (gdb and valgrind)
7. Using regular expressions
8. Basic shell scripting

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|-----------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

Section #2 Course Transferability

Concern over students taking many courses that do not have a high transfer value has led to increasing attention to the transferability of LDC courses. The state currently requires us to certify that at least one OUS school will accept a new LDC course in transfer. Faculty should communicate with colleagues at one or more OUS schools to ascertain how the course will transfer by answering these questions.

1. Is there an equivalent lower division course at the University?
2. Will a department accept the course for its major or minor requirements?
3. Will the course be accepted as part of the University's distribution requirements?

If a course transfers as an elective only, it may still be accepted or approved as an LDC course, depending on the nature of the course, though it will likely not be eligible for Gen Ed status.

Which OUS schools will the course transfer to? (Check all that apply)

Identify comparable course(s) at OUS school(s)

How does it transfer? (Check all that apply)

:

First term to be offered:

Specify term: Spring 2019
