

Hagerstown Community College Syllabus

CSC109 UNIX/Linux Operating System

Course Information

CSC109 UNIX/Linux Operating System

3 Credits

Semester Year Spring 2018

Instructor Information

Instructor:

Phone:

Email:

Office:

Office hours:

Course Description

Using RedHat Linux, this course covers the basic concepts and commands used in the UNIX/Linux operating systems. The shells examined are the C, Bourne, and Korn. Because UNIX/Linux is a very extensive operating system, this course introduces students to the basic elements, such as utilities, electronic mail, Visual Editor, directories, messaging, shell programming, permissions, system security, on-line help, controlling user processes, printing, sed, and awk. The course is recommended for users with an operating systems background and will cover all that is needed to start using the UNIX/Linux operating systems. Laboratory fee required. Prerequisite: IST 102 or consent of instructor.

Textbook and Course Materials

[Guide to Using Linux](#), Michael Palmer, 4th ed., Course Technology, ISBN978-1-4188-3723-5 or pdf version:

[Guide to UNIX Using Linux](#)

Student Learning Outcomes

On successful completion of this course, students should be able, at entry level, to:

- Choose appropriate UNIX operating system commands to make effective use of the environment
- Solve problems using shell programming techniques
- Demonstrate limited system administration functions

Course Content Objectives

On successful completion of this course, students should be able, at entry level, to:

- Create and access files
- Move around in a file effectively
- Add lines, words, and characters to files
- Delete characters, lines, block of text
- Change characters, lines, and blocks of text
- Cut and paste lines of text
- Undo changes
- Move back and forth between the two editor modes

- Make global changes to a file
- Count the words, lines, and characters in a file
- Sort the contents of a file
- Identify and remove duplicate lines in a file
- Compare two files by identifying lines common to both
- Translate or remove characters in a file
- Search through files for a string of characters
- Select a portion of each line in a file
- Concatenate files and splice lines together
- Create directories
- Change to a directory use the complete pathname for a file
- Identify the role of inodes, datablocks, and directories when maintaining files
- Perform math calculations
- Combine basic utilities to accomplish complex tasks
- Create shell scripts that use utilities to output formatted, relational data from more than one file
- Create a script that filters and modifies data
- Identify errors in scripts and repair them
- Delete/Add users
- Change passwords
- Delete directories
- Backup directory/file
- Change login shell

Definition of Credit Hour: Classroom Courses

To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute academic hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours in the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit. For most classes, students should expect to complete at least 2 hours of coursework outside of class for each hour of in-class coursework.

	DIRECT Faculty Instruction In-class 37.5 h required	Student Work Out of Classroom 75 h required
In-class "lecture"	37.5 h	
Reading chapters		15 h
Netlabs/Quiz/activities assigned by instructor for each chapter	Included in lecture time	47.5 h prep
Research project		20 h
3 lecture exams		9 h exam prep
Cumulative final exam	Included in lecture time	3 h exam prep

SERVICES FOR STUDENTS WITH DISABILITIES: Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as

possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.