

Course Abstract

If you need accommodations due to a disability, contact Disability Services in Edison Hall Room 100, 732.906.2546.

To foster a productive learning environment, the College requires that all students adhere to the Code of Student Conduct which is published in the college catalog and website.

Course ID and Name: CSC245- Unix and Shell Programming

Department: Business and Computer Science

Chairperson or Course Coordinator: Dr. Aslihan Cakmak

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Prerequisites: CSC133 or CSC161

Co-requisites: None

Course Description:

This course introduces the basic concepts of the UNIX operating system including the UNIX file system, shell programming and process management. Features of the UNIX shell are explored, including: input and output redirection, pipes, variable and filename substitution, and shell and environmental variables. Regular expressions are covered. Students learn a POSIX compliant shell and develop the ability to use shell utilities and editors and create shell programs of moderate difficulty.

General Education Status: N/A

Credits: 4 **Lecture Hours:** 3 **Lab Hours:** 3

Learning Outcomes:

Upon successful completion of this course, a student will be able to:

1. Understand and use the LINUX/UNIX command line interface.
2. Describe the LINUX/UNIX hierarchical file system and organize files into directories.
3. Modify ownership and permissions on files and directories.
4. Use a screen editor like VI or VIM to create text files.
5. Write command language (Bash Shell) programs of moderate difficulty for the LINUX/UNIX operating system.
6. Understand and use regular expressions.

7. Use pipes, filters and I/O redirection effectively.
8. Use LINUX/UNIX utilities such as grep and sort.
9. Describe process handling under LINUX/UNIX including foreground and background processing and signals and traps.
10. Understand and customize the LINUX/UNIX environment.

Course Content Areas:

- Linux/Unix/OS X Basics
- The Shell
- Regular Expressions
- Command Files/Comments, Variables/Arithmetic
- Quotes
- Passing Arguments
- Decisions
- Loops
- Reading/Printing Data
- The Environment
- Parameters
- Loose Ends (Additional commands)