**NORTHEAST IOWA COMMUNITY COLLEGE**

**Calmar/Peosta**

Course Guide For: **UNIX**

**1.0 COURSE TITLE:** UNIX

**2.0 CATALOG NUMBER:** NET:453

**3.0 SEMESTER HOUR CREDIT:** 3

**4.0 LECTURE HOURS:** 32

**5.0 LAB HOURS:** 32

**6.0 COURSE DESCRIPTION:**

This course is about using UNIX, a computer system that is used throughout the world and runs on virtually all types of computers. This course will teach the basic skills required to get started in UNIX: starting and stopping a work session, entering commands, and using the keyboard. The course also covers the use of the VI editor, sending and receiving messages, and creating, displaying, and manipulating directories and files. An introduction to configuring UNIX as a server and shell scripting is also covered.

6.1 Prerequisites: A minimum grade of C- in CIS:142 or NET:725

**7.0 GENERAL COURSE GOAL(S):**

The main goal of this course is to instill in a student an ease and confidence in navigating the UNIX operating system and the motivation to continue learning in the UNIX environment.

**8.0 MAJOR UNITS OF INSTRUCTION:**

8.1 Introduction to UNIX.

8.2 UNIX File Systems and File Security.

8.3 UNIX Command Line Editors.

8.4 File Processing.

8.5 Advanced File Processing.

8.6 Shell Scripting.

8.7 Advanced Shell Scripting.

8.8 UNIX Utilities.

8.9 UNIX as a Web Server.

8.10 Introduction to Server Scripts.

**9.0 UNIT OBJECTIVES:**

9.1 Unit One Objectives.

At the end of this unit, the student will be able to:

9.1.1 Explain the purpose of an Operating System.

9.1.2 Install a UNIX workstation with GUI.

9.1.3 Compare the UNIX GUI with other OS GUIs.

9.1.4 Explain the purpose of a Shell.

9.1.5 Implement a SSH session.

9.1.6 Describe the difference between user versus root access.

9.1.7 Use basic directory browsing commands in the shell.

9.1.8 Create a file in the shell using redirection.

9.2 Unit Two Objectives.

At the end of this unit, the student will be able to:

9.2.1 Discuss UNIX file systems, partitions, and inodes.

9.2.2 Browse the root hierarchy in the shell.

9.2.3 Mount a file system in UNIX.

9.2.4 Copy and delete files.

9.2.5 Configure file permissions.

9.3 Unit Three Objectives.

At the end of this unit, the student will be able to:

9.3.1 Explain the differences between ASCII, Binary, and Executable files.

9.3.2 Compare the types of UNIX editors.

9.3.3 Create/edit a file using VI editor.

9.3.4 Create/edit a file using EMACS editor.

9.4 Unit Four Objectives.

At the end of this unit, the student will be able to:

9.4.1 Cut, paste, rearrange, and sort information in a UNIX flat file.

9.4.2 Create a shell script.

9.4.3 Use the join command.

9.4.4 Use the AWK command.

9.5 Unit Five Objectives.

At the end of this unit, the student will be able to:

9.5.1 Use the pipe operator.

9.5.2 Use the Grep command to find a pattern in a file.

9.5.3 Use the uniq, comm, and diff commands.

9.5.4 Count words/lines/characters in a file.

9.5.5 Use sed, tr, and pr commands.

9.5.6 Create a file processing application.

9.6 Unit Six Objectives.

At the end of this unit, the student will be able to:

9.6.1 Create a shell script using variables, operators, and wildcard characters.

9.6.2 Implement shell logic structures.

9.6.3 Develop a menu based application.

9.7 Unit Seven Objectives.

At the end of this unit, the student will be able to:

9.7.1 Modify login and louout shell scripts.

9.7.2 Create scripts for record management in a flat file.

9.8 Unit Eight Objectives.

At the end of this unit, the student will be able to:

9.8.1 Classify the types of UNIX utilities.

9.8.2 Create a UNIX boot disk.

9.8.3 Use UNIX utilities to manage and monitor processes.

9.9 Unit Nine Objectives.

At the end of this unit, the student will be able to:

9.9.1 Install the Apache Web Server.

9.9.2 Create a home page for the Apache Server.

9.9.3 Add a simple script to a HTML page.

9.10 Unit Ten Objectives.

At the end of this unit, the student will be able to:

9.10.1 Understand the basics of Perl.

9.10.2 Create and use a Perl script on the Apache Web Server.

**10.0 INSTRUCTIONAL METHODOLOGIES:**

10.1 Lectures.

10.2 Discussions/labs.

10.3 Demonstrations (e.g. video, computer instructional aids, software demonstrations by instructor).

**11.0 GRADING CRITERIA:**

11.1 The instructor will provide the grading criteria to students at the beginning of the course.

11.2 Grades will be assigned for work completed using the letter grades A-F as identified in the college catalog.

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