

CS 3710 : INTRODUCTION TO UNIX

<i>Semester Hours:</i>	1.0	<i>Contact Hours:</i> 1
<i>Coordinator:</i>	CS Systems Administrator	
<i>Text:</i>	Learning the bash Shell (3rd edition)	
<i>Author(s):</i>	NEWHAM & ROSENBLATT	
<i>Year:</i>	2005	

SPECIFIC COURSE INFORMATION

Catalog Description:

The Unix operating system; utilities, file structure; pipes; filters; shell programming. Prerequisite: CS 1010 or CS 2010. Graded S/U.

Course type: **ELECTIVE**

SPECIFIC COURSE GOALS

- I can navigate the UNIX filesystem using basic system commands.
- I can work with files and directories, including know how to use a text editor.
- I have a basic understanding of security and file permissions.
- I understand how to use a login shell, what environment variables are and how to customize my UNIX environment.
- I know how to do basic file searching and handling using filters and regular expressions.
- I have the ability to write a basic shell script using arguments and variables, decision and loop statements and input and output.

LIST OF TOPICS COVERED

- Unix fundamentals
 - Basic environment
 - Kernel and Shell mode
 - Basic commands

- vi Editor
 - Command mode vs. Text Mode
 - Adding, deleting, substitution, undo, saving
- Unix Filesystem
 - File types – text, binary, links, special types
 - Directories – directory structure, path names, special directories
 - File and Directory operations – move, copy, locate, link
- Security and File Permissions
 - Users and Groups
 - Permissions – chmod, chown, chgrp, umask, symbolic versus octal
- Shells
 - Standard shells – Bourne, Korn, C, Bourne again
 - Shell sessions – Parent versus child, login shell, environment variables, customized session
 - Standard streams – input, output, error
 - Command execution – grouped, chained and conditional commands, quoting, escape characters, substitution
 - Job control, aliases, shell variables
- Filters
 - Pipes, file content display, concatenating, cut, paste, find, sorting, translating, diff, count
- Regular Expressions and grep
- Shell Programming
 - Input, Output and Redirection
 - Arguments and positional parameters
 - Expressions and operators
 - Decision statements – if-then, if-then-else
 - Loop statements – while, until, for
 - Variable evaluation and substitution
 - Functions