SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number:	CSET-256	Department:	Computer Systems Eng. Tech.		
Course Title:	Linux Command Line and Shell Programming	Semester:	Spring	Year:	2007

Objectives/Competencies

Course Objective	Competencies
1.) Students will understand and have a basic hands-on understanding the Linux command line interface.	1.) Ability to securely log in and log out and determine the remote computer's basic configuration. 2.) Ability to choose and install the required Windows programs to access the remote Linux server. 3.) Ability to change and update the encryption keys used by the logon process when necessary. 4.) Choose and maintain complex passwords required by secure applications. 5.) Securely move files between the workstation and the server using SFTP and TLS. 6.) Access and understand the basic format of the Linux online documentation. 7.) Access information about the Bourne shell (BASH).

Course Objective	Competencies
2.) Manipulate text files using the standard Linux editor and Linux commands.	1.) Create and manipulate text files using the standard Linux editor; vi. 2.) Change modes between command mode and insert modes in vi. 3.) Change text, insert and append text, copy and paste text, delete lines using vi. 4.) Search and replace text strings in vi. 5.) Use the Linux commands cat, more, grep.
3.) Understand the Linux filesystem and directory navigation.	1.) Locate the login directory and find the user's configuration files. 2.) Create and remove subdirectories. 3.) Hide and unhide files. 4.) Determine the default filesystem types used by the server. 5.) Navigate to and from the user's logon directory to any other directory in the filesystem. 6.) Locate and understand the servers's configuration files. 7.) Understand absolute and relative paths. 8.) Moving and renaming files and directories. 9.) Use the linux commands ls, mkdir, cd, df. 10.) Handle file and directory names with spaces and unusual characters. 11.) Filename globbing and wildcards.

Course Objective	Competencies
4.) Understand standard I/O and pipes.	1.) Standard input and outputs. 2.) Redirecting input and output. 3.) Use the standard error stream. 4.) Use pipes to connect multiple processes.
5.) Understand users, groups, and permissions.	1.) Identify the components of the Linux permissions model. 2.) Change the Linux permissions to secure files and directories. 3.) Change the Linux permissions to allow access to files and directories. 4.) Changing permissions using symbolic and numeric values. 5.) Use the Linux commands chmod and chgrp.
6.) Understand bash scripting.	1.) Create bash shell scripts. 2.) Enter and use basic Perl and Python scripts. 3.) Set the permissions to enable execution. 4.) Manipulate and record system information using scripting. 5.) Create and use backup scripts.
7.) Use the techniques and knowledge of the BASH shell on other platforms.	1.) Use BASH scripting on Apple Macintosh OS X. 2.) Start and use the Applescript programming environment. 3.) Use Applescript to script GUI applications. 4.) Use Applescript to call and use BASH scripts.

Course Objective	Competencies
	5.) Use DOS/Windows scripting.
	6.) Understand the filesystem differences between the Linux filesystem and the OS X filesystem.
	7.) Understand the filesystem differences between the Linux filesystem and the Windows FAT and NTFS filesystem