

COP 2341 Learning Outcomes -- DRAFT

L0: Install and run Linux

General Background

<http://www.linfo.org/newbies.html>
http://www.linfo.org/how-to_index.html

Linux Distributions

<http://www.ubuntu.com/>
<http://www.ubuntu.com/desktop/get-ubuntu/windows-installer>
<http://fedoraproject.org/>
<http://www.redhat.com/>
<http://www.gentoo.org/>
<http://www.debian.org/>
<http://www.slackware.com/>

L1: Understand and describe the history and philosophy of the UNIX and Linux Operating Systems

You will be able to Explain the history of UNIX and Linux

http://www.unix.org/what_is_unix/history_timeline.html
<http://www.bell-labs.com/history/unix/>
<http://en.wikipedia.org/wiki/Unix>
http://en.wikipedia.org/wiki/History_of_Linux
http://www.linux.org/info/linux_timeline.html
<http://www.youtube.com/watch?v=7FjX7r5icV8>
<http://www.youtube.com/watch?v=WVTWCPoUt8w&feature=related>

You will be able to Describe operating systems in general and the terms time- sharing and multi-tasking

<http://www.youtube.com/watch?v=Q07PhW5sCEk>
<http://www.youtube.com/watch?v=7NpczzIsnLU&feature=fvw>
http://en.wikipedia.org/wiki/Computer_multitasking

You will be able to Describe the major components of the Linux Operating System

<http://www.go2linux.org/components-GNU-Linux-operating-system>
<http://www.linux.com/learn/resource-center/376-linux-is-everywhere-an-overview-of-the-linux-operating-system?start=3>
http://en.wikipedia.org/wiki/Linux_%28kernel%29#Technical_features

You will be able to Explain the Linux philosophy

http://en.wikipedia.org/wiki/Unix_philosophy
<http://linuxgazette.net/issue37/pennington.html>

<http://linuxgazette.net/issue39/pennington.html>
<http://www.brainyquote.com/quotes/quotes/l/linustorval63637.html>
http://bid.ankara.edu.tr/yardim/linux_install_guide/node22.html
<http://broadcast.oreilly.com/2009/04/an-interview-with-brian-kernig.html>

L2: Demonstrate proficiency using basic shell commands and perform file processing

You will be able to Enter commands and explain basic command syntax

<http://www.gnu.org/software/bash/manual/bashref.html>
http://linuxsig.org/files/bash_scripting.html
http://en.wikipedia.org/wiki/Bash_%28Unix_shell%29
<http://www.ibm.com/developerworks/library/l-bash.html>
<http://www.linfo.org/index.html>

You will be able to Explain and use piping and I/O redirection

<http://tldp.org/HOWTO/Bash-Prog-Intro-HOWTO-4.html>
<http://tldp.org/LDP/abs/html/io-redirection.html>
<http://www.dsj.net/compedge/shellbasics1.html>
http://dsl.org/cookbook/cookbook_5.html#SEC48

You will be able to Describe how to find assistance and related information

At the bash command prompt, type: *man man*
At the bash command prompt, type: *man info*

<http://linuxpakistan.net/man.php?query=man§ion=1>
<http://www.raybenjamin.com/linux-help-how-to/ar01s04.html>
<http://linuxmanpages.com/>
http://en.wikipedia.org/wiki/Man_page
<http://www.cs.mcgill.ca/~guide/help/man.html>
<http://www.google.com/coop/profile?user=006335557234340235827>

You will be able to Use scripting languages such as awk, perl or python to select, manipulate and format information from shell scripts

Awk

<http://www.gnu.org/manual/gawk/gawk.html>
<http://en.wikipedia.org/wiki/AWK>
<http://www.gnu.org/manual/gawk/gawk.pdf>
<http://www.catonmat.net/blog/awk-one-liners-explained-part-two/>
<http://www.scribd.com/doc/985350/AWK-Aho-Kernighan-and-Weinberger-NAWK-and-GAWK-Programming-Language-Cheat-Sheet>

Perl

<http://www.perl.com/pub/2000/10/begperl1.html>
<http://www.perltutorial.org/>
<http://johnbokma.com/perl/perl-quick-reference-card.html>
<http://www.wellho.net/forum/Perl-Programming/Short-Perl-Tk-example.html>

Python

<http://www.python.org/>
<http://docs.python.org/tutorial/>
http://en.wikipedia.org/wiki/Python_%28programming_language%29
<http://wiki.python.org/moin/SimplePrograms>
<http://www.amk.ca/python/simple/>

You will be able to Use regular expressions including metacharacters, special characters and quote characters

<http://www.regular-expressions.info/tutorial.html>
<http://zytrax.com/tech/web/regex.htm>
<http://perldoc.perl.org/perlretut.html>
http://www.math.utah.edu/docs/info/gawk_5.html

L3: Understand and utilize multitasking

You will be able to Move a process between foreground and background

<http://www.linuxforums.org/forum/programming-scripting/50096-moving-processes-background-foreground.html>
http://dsl.org/cookbook/cookbook_5.html#SEC59
<http://www.linux.com/archive/feature/113623>

You will be able to Check on current process information and memory usage

<http://www.linux.ie/newusers/beginners-linux-guide/ps.php>
http://linux.about.com/od/commands/l/blcmdl1_ps.htm
<http://www.devdaily.com/unix/edu/examples/ps.shtml>

<http://www.thegeekstuff.com/2010/01/15-practical-unix-linux-top-command-examples/>
<http://www.devdaily.com/linux/unix-linux-top-command-cpu-memory>
<http://www.go2linux.org/htop-linux-command-line-to-monitor-linux-systems>

<http://www.linfo.org/df.html>
<http://www.linfo.org/du.html>

You will be able to Terminate or change the status of a process

http://www.comptechdoc.org/os/linux/usersguide/linux_ugprocesses.html
<http://linux.byexamples.com/archives/157/kill-process-with-care/>
http://en.wikipedia.org/wiki/Nice_%28Unix%29
<http://www.computerhope.com/unix/unohup.htm>

L4: Understand and use Linux editors

You will be able to Use a file editor to create, edit, search and save files

You will be able to Identify several visual and line editors

You will be able to use ftp and sftp capabilities of editors hosted on Windows to open, edit and save files on Linux.

L5: Describe the basic functions that the shell provides and work with shells

You will be able to Describe how login shells, shells and child shells work

You will be able to Describe and compare features of common shells

You will be able to Use tab completion and aliases

You will be able to Use and set environmental variables

You will be able to Work with command history

L6: Write, run and debug shell scripts

You will be able to Invoke a shell to run a shell script

You will be able to Use standard shell variables, user-created variables, and read-only variables in shell scripts

You will be able to Use arithmetic operations in shell scripts

You will be able to Use control structures in shell scripts

http://articles.techrepublic.com.com/5100-10878_11-1062258.html

You will be able to Make files of shell scripts executable

You will be able to Debug shell script logic and syntax errors

You will be able to incorporate modest awk, perl or python elements to extend and enhance shell scripts.

L7: Understand and use Linux graphical windowing systems

You will be able to Recognize and describe the varying graphical desktop environments such as KDE and Gnome available under Linux.

You will be able to Understand the difference between working on the command line and in a Windowing environment.

You will be able to appreciate the varieties of Linux distributions

http://en.wikipedia.org/wiki/Linux_distribution

L8: Understand the Linux file system and file security

You will be able to Describe the standard Linux hierarchical tree structure

You will be able to Navigate the Linux file system

You will be able to Describe relative and absolute pathnames

You will be able to Describe different types of files

You will be able to Create, list, copy, move, find and delete files and directories
You will be able to Set and change file permissions and modes

L9: Describe and use common Linux utilities

<http://www.linfo.org/index.html>

You will be able to Use file processing utilities

You will be able to Use system status utilities

You will be able to Use miscellaneous utilities

You will be able to Describe programming utilities available in Linux