

Course Number	CS 300	Course Title	Introduction to Linux			
Semester Hours	3	Course Coordinator	Norman Carver			
Catalog Description	A gentle introduction to the Linux operating system. Computer programming experience is not required. Students will gain the knowledge and hands-on experience needed to install, configure, and use Linux. Emphasis will be placed on administration skills and security. Software for Linux will be surveyed, particularly to identify replacements for standard Windows applications. Prior experience with Windows or Macintosh operating systems is assumed.					
Textbooks						
Open Educational Resources used for this course.						
References						
Course Learning Outcomes						
<ul style="list-style-type: none"> • Ability to use Linux operating system in different environments. • Ability to install Linux on a personal computer. • Ability to use Linux effectively. • Ability to secure their Linux installation. 						
Assessment of the Contribution to Student Outcomes						
Outcome →	1	2	3	4	5	6
Assessed →						
Prerequisites by Topic						
No prerequisite.						
Major Topics Covered in the Course						
<ol style="list-style-type: none"> 1. Linux vs. UNIX vs. Windows vs. DOS vs. MAC operating systems: operating system basics, history, differences, proprietary vs. free and open source software 2. GUIs vs. CLIs: graphical and command-line interfaces tradeoffs, Linux shells, the Linux GUI (X windows and the KDE and Gnome window managers) 3. Linux basics: the file system, permissions, processes, etc. 						

Major Topics Covered in the Course, Continued

4. Shell commands: using the Linux CLI effectively.
5. Distributions: what is a Linux distribution, choosing a distribution?
6. Installation: partitioning disks, installing Linux, dual booting
7. Linux configuration and Administration: customization, security, maintenance tasks, administration tools.
8. Network installation and configuration
9. Software installation: RPMs vs. compiling from source
10. Software updating and patching
11. The Linux kernel: custom configuration, compilation, installation
12. Application software: file managers, browsers, email clients, editors, word processing/office suites, software development, etc
13. Linux and Windows interoperability issues: file formats, fonts, etc
14. Network security: firewalls, security audits, intrusion detection, viruses, etc.