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Linux Administration I

CNS 131 I51

Number of Credits: 3

Class ONLINE Only: 1/10/2022 -2/27/2022

Instructor: Timothy Waskiewicz

Contact Phone: 734-368-0390

Contact Email: WaskiewTimothyJ@jccmi.edu

Online Office Hours: Available by appointment

Course Description

This course introduces Linux to experienced computer users and to those with a basic knowledge of computers. Students will install and configure a multiple distribution of Linux. They will learn to use a command line shell and a GUI to manage the file system, create user and groups accounts, and manage file permissions. This course will cover how to set up a Linux system on a TCP/IP network, bash shell concepts, configure a firewall and installing programs Linux.

The **CNS131.XXX - Linux Administration I** course is online via the https://NetAcad.com portal.   The bookstore has your NDG Access Code that you will use to log into the portal. If you are having any difficulties, please do not hesitate to contact me.

All of the course reading, labs and exams are on the https://NetAcad.com portal.

Prerequisite(s)
None

Course Goals
Through reading, forum discussions, quizzes, and an individual project, we will obtain our course objectives.

The GEOs and course objectives addressed in this class include the following:

- Understand the fundamentals of relational, object-oriented, noSQL, and distributed database systems
- Demonstrate an understanding of normalization theory
- Design, implement, query, and manage a database
- Use querying languages, primarily SQL, to create solutions of query and data update problems

Course Objectives

- Install and configure multiple Linux distributions
- Manage the filesystems using both a GUI and a command line interface
- Develop, run and troubleshoot basic administrative bash scripts
- Create and manage user and group accounts
- Assign IP addressing and connect to a TCP/IP network
- Configure and test a host-based firewall with iptables
- Configure Linux as a NAT router
- Learn how to use a text editor

Required Equipment:

Portable USB powered hard drive (500 GB or bigger)

Methods to achieve objectives: discussion, lecture, team problem solving, homework, quizzes, examinations, and lots of hands-on lab projects.

Textbook

The Linux Command Line – Fourth Internet Edition

- Authors: William Shotts

- Licensed under the Creative Commons

- October 19, 2017

☒ **Digital Format:** This text is available in a digital format to rent or purchase through the JC Bookstore. Please see the links posted on your class JetNet site.

☒ **Open Educational Resources (OER):** OERs are teaching, learning, and research materials that are either (a) in the public domain or (b) licensed in a manner that provides everyone with _free permission_ to:

- Retain – make, own, and control a copy of the resource
- Reuse – use your original, revised, or remixed copy of the resource publicly
- Revise – edit, adapt, and modify your copy of the resource
- Remix – combine your original or revised copy of the resource with other existing material to create something new
- Redistribute – share copies of your original, revised, or remixed copy of the resource with others

Please review the cost of your required materials to determine the best option for you to purchase your materials.

Please note, your opt out selection is for your *entire* semester schedule. You cannot opt out/opt into individual courses. And you must opt out by the due date of your first class, which is the 3rd day after the start of your earliest course.

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Grading Procedure

Method employed for evaluating student performance. Testing format (essay, objective, portfolio, etc.) and the relative weight each evaluative tool has upon the final grade are helpful explanations for students.

Activity	Total
Hands-on-Labs	250
Final Exam	750
Total Points	1000

Grading Scale

GPA	GRADE RANGE
4.0	940 – 1000
3.5	880 – 939
3.0	820 – 879
2.5	760 – 819
2.0	700 – 759
1.5	640 – 699
1.0	580 – 639

Failure

Any circumstances under which a student could be dismissed from or failed in the course that is not covered in other college publications. In pass/fail courses, a listing of minimal competencies.

Academic Honesty Policy

Academic Honesty is defined as ethical behavior that includes student production of their own work and not representing others' work as their own, by cheating or by helping others to do so.

Plagiarism

Plagiarism is defined as the failure to give credit for the use of material from outside sources. Plagiarism includes but is not limited to:

- Submitting other's work as your own
- Using data, illustrations, pictures, quotations, or paraphrases from other sources without adequate documentation
- Reusing significant, identical or nearly identical portions of one's own prior work without acknowledging that one is doing so or without citing this original work (self-plagiarism)

Cheating

Cheating is defined as obtaining answers/material from an outside source without authorization. Cheating includes, but is not limited to:

- Plagiarizing in any form
- Using notes/books/electronic material without authorization
- Copying
- Submitting others' work as your own or submitting your work for others
- Altering graded work
- Falsifying data
- Exhibiting other behaviors generally considered unethical
- Allowing your work to be submitted by others

Accessibility

Jackson College understands that cultivating a broadly diverse community is crucial to our educational mission and to our foundational commitment to leadership and service. Jackson College is fully committed to ensuring our courses are accessible to everyone including those with disabilities. We are currently working to increase accessibility and usability of our course materials in order to meet or exceed the requirements of Section 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1991 and Web Content Accessibility Guidelines (WCAG) 2.0. For more information about Jackson College's efforts to ensure accessibility please visit the [Jackson College accessibility web page](#).

If you have an accessibility need in any of our classes please e-mail the Center for Student Success at JCCSS@jccmi.edu or visit the [Center for Student Success web page](#).

At the Center for Student Success (CSS), we are committed to providing all students the opportunity to achieve academic success by providing a variety of support services free of charge to Jackson College students. This includes, but is not limited to, peer and faculty tutoring, mental health referral, temporary assistance with transportation, various workshops/seminars, and the TRIO program.

In addition, the CSS staff is committed to adapting the College's general services to meet the individual needs of otherwise qualified students with disabilities, for the purpose of providing equal access to all programs and facilities.

Course Management

Ways that students can manage their enrollment in a course for special circumstances. Includes withdrawal, and audit and incomplete grading procedures.

Makeup Policy

Ways that students can manage their enrollment in a course for special circumstances. Includes withdrawal, and audit and incomplete grading procedures.

Help

Available learning services or opportunities for students seeking help with their course work. May include information about tutors, learning centers, reserved library materials, counseling services.

Academic Advising

It is important to contact a Center for Student Success professional prior to the start of the semester in order to receive accommodations in a timely manner. While we will make every effort to coordinate accommodations in a timely manner, failure to self-identify prior to the start of the semester may delay notification to instructors and timeliness of acquiring accommodations. Accommodations do not automatically carry over to the next semester. Please e-mail JCCSS@jccmi.edu or visit the [Accommodations for Students with Disabilities](#) web page

Student Responsibilities

Requirements beyond scheduled classes or laboratories, e.g., clinicals, extra credit assignments, TBA sessions, field placement, special project instructions, contract learning conditions, study hours required outside class, unscheduled class meetings, attendance at concerts or other required events.

Attendance- Participation Policy

Regular class participation and keeping up on the reading and assignments is strongly correlated with survival in college. It is my recommendation that you plan to do your assignments and take your exams BEFORE the last day they are due. If problems occur, there is time to fix them before the deadline.

In compliance with Federal Title IV funding requirements, as well as college initiatives, I will be monitoring student participation on a regular basis and officially reporting student activity throughout the term to assure compliance with college policy and federal regulations. It is imperative that you log in to the course and actively participate *within the first couple of days of the term* to validate your enrollment in the course. After that, not actively participating in class may result in you being withdrawn from the course. Being withdrawn from a course can have an impact on financial aid, billing, athletic eligibility, and housing status. As a college student you are responsible for how your participation impacts your academic progress; the accountability lies with you.

Caveat

Please note: The format and timing of this course may need to change due to unforeseen circumstances.
In particular: school closings, instructor illness, weather, or other situations that may arise.
If you are taking an in -person class, you will be required to complete a Reintegration Video Training course in JetNet prior to being admitted to campus.

All COVID safety protocols in place are based on current guidelines and will be enforced while students are on campus.

Calendar

A partial or complete list of dates or class periods for the course. Within the calendar on specific days are: Assignments, readings, homework, exercised, performances, quizzes, topics, subject matter, skills, chapter titles, discussion topics, tests, comprehensive exams, due dates for major papers or performances. Add or remove columns as necessary to suit your course.

Important Dates:

MONDAY 01/10/2022	CLASSES BEGIN
MONDAY 02/27/2022	7 WEEK COURSE END

Course Calendar:

	Start	Due Date	Assignments
Week 1	1/10/2022	1/17/2022	Module 1: Getting Started Module 2: Basic File Management
Week 2	1/17/2022	1/24/2022	Module 3: Working With Text
Week 3	1/24/2022	1/31/2022	Module 4: Advance File Management Midterm Exam
Week 4	1/31/2022	2/7/2022	Module 5: Booting the System
Week 5	2/7/2022	2/14/2022	Module 6: Partitioning
Week 6	2/14/2022	2/21/2022	Module 7: Administration of Filesystems
Week 7	2/21/2022	2/27/2022	Module 8: System Software Final Exam

Note: This syllabus is not a contract: it is a plan for the course. Each course and each group of students is unique. We may do more or less work than is outlined above. Total points in the course will be altered to reflect the dynamics of your and our class.