CYBR225: Linux Administration

College of Graduate and Continuing Studies, Norwich University

Course Description

3 credits

This course provides students with the necessary knowledge and skills to install, configure, upgrade and manage a Linux operating system in an enterprise network. Additionally, students will learn to perform normal business operations using the Linux Operating system.

Course Outcomes

The goal of the course is to provide students with the practical knowledge of the Linux Operating system.

Upon successful completion of this course students will be able to:

- Install, configure, upgrade and manage a Linux operating system
- Manage user accounts and user level security
- Configure network adapters
- Use the Linux operating system to complete normal business functions

Weekly Outline

The week-by-week breakdown of topics is as follows:

Week	Topic	Readings	Assignments
Week 01	Introduction to Linux, Installation and Usage	Week 1 lecture; Ch 1&2	Week 1 discussion - introductions; Cengage lab 1 for chapters 1&2; Written Assignment 1; Quiz #1
Week 02	Exploring Linux File Systems and File System Management	Week 2 lecture; Ch 3 & 4	Week 2 discussion; Cengage lab 2 for chapters 3&4; Written Assignment 2; Quiz #2
Week 03	Linux File System Administration and Server Deployment	Week 3 lecture; Ch 5&6	Week 3 discussion; Cengage lab 3 for chapters 5&6; Written Assignment 3; Quiz #3
Week 04	Working with the BASH Shell	Week 4 lecture; Ch 7	Week 4 discussion; Cengage lab 4 for chapters 7; Written Assignment 4; Quiz #4; Mid-Term Exam
Week 05	System Initialization, X Windows, and Managing Linux Processes	Week 5 lecture; Ch 8&9	Week 5 discussion; Cengage lab 5 for chapters 8&9; Written Assignment 5; Quiz #5
Week	Common Administrative Tasks,	Week 6	Week 6 discussion; Cengage lab 6 for

06	Compression, System Backup, and Software Installation	lecture; Ch 10 &11	chapters 10&11; Written Assignment 6; Quiz #6
Week 07	Network Configuration and Configuring Network Services	Week 7 lecture; Ch 12&13	Week 7 discussion; Cengage lab 7 for chapters 12&13; Written Assignment 7; Quiz #7
Week 08	Troubleshooting, Performance and Security	Week 8 lecture; Ch 14	Week 8 discussion; Cengage lab 8 for chapters14; Written Assignment 8; Quiz #8; Final Exam

Required Textbooks

The required textbooks are:

- **Eckert, J. W. (2018).** *CompTIA Linux+ guide to Linux certification (5th ed.).* **Cengage Publishing.**

You will also be accessing *Cengage MindTap* website for your weekly labs. Please refer to the *Lab Exercises* section below for more information.

In lieu of a writing handbook, we strongly recommend that students use the *Purdue Online Writing Lab* as a primary writing resource. Your instructor will provide additional writing guidance.

Discussions

In this course, you will be assigned to a small discussion group (if class size permits). Each week your group will discuss at least one question; all questions will be graded. You are expected to contribute *a minimum of at least three posts* to each question every week. The quality of your posts and those of your fellow students will create a lively discussion and ensure that a high level of learning takes place.

Your **first** post should be substantive (approximately 150-250 words) and it should be made by **Tuesday** (the earlier you make your initial posts, the more your classmates, and you, will have to work with). Your deadline for first post is Wednesday night after which time you will loose points for the week. It should answer the question using your own experience, if appropriate, and, very importantly, it should refer to the readings of that week, using correct APA citations. You should all conduct additional readings and research beyond the readings and resources provided for each week in order to completely answer the discussion question.

Your **second** two posts should be responses to posts made by your fellow group members. This is a minimum requirement as you are expected to respond to more posts in order to have a lively discussion. Responses such as, "Good point," or, "I agree," are not sufficient. Your response posts should be substantive –ask questions, point out additional thoughts, spur deeper insights and thoughts, etc. Posts should build on the course content and add momentum to our collective learning. Disagreement and critical feedback are part of an academic classroom, as is respect for the diversity of opinion. Above all, respect for each other as learners is paramount. Challenging, disrespectful, abusive, or profane language will not be tolerated in any form.

For more information about what is expected in regard to discussion postings, please review the Weekly Discussion Rubric and Discussion Guidelines in the Resource area of this classroom.

Assignments

Weekly written assignments are to be submitted in a single Word document. All parts of the assignment are expected to be addressed within the submission. Sources must be cited using the APA format.

The quizzes and exams are timed and will automatically submit when the time runs out - even if the student is not finished. Each quiz and exam will be open for 2 days and the student will have one attempt.
If the student has any trouble with the quizzes or exams (scheduling, amount of time, etc.) make sure to contact the instructor immediately. If the student has any problem with any of the questions in the quizzes or exams they should note the question number and copy the **entire** text of the question and send the instructor an email explaining the problem. For example, if there is a spelling mistake that would make an otherwise correct answer wrong or the textbook not agreeing with the answers.

Lab Exercises

Lab activities will be completed using the Cengage MindTap website. This allows for much broader access to resources and the ability to learn more.

Students will use MindTap links to automatically access lab materials. The grades in MindTap will automatically be reported to Moodle classroom.

Students must register with Cengage MindTap once at the beginning of the course using the access code they purchased. This will uniquely identify them to Mindtap so their grades will transfer back into Moodle automatically .

The Cengage MindTap registration instructions are located at the top of classroom page and provide more details on how to register and log into the lab environment.

Submission Deadlines

Discussions officially close on Saturday of each week at 11:55 PM Eastern time. Posts submitted after that time will not be graded.

Exams and quizzes are due on their assigned dates at 11:55 PM Eastern time.

Labs and written assignments are due on their assigned dates at 11:55 PM Eastern time.

Research papers and the Final Paper are due on their assigned dates at 11:55 PM Eastern time.

Late Paper Submission

It is important that writing assignments and discussion posts be completed on time. Extensions of deadlines will be given only for serious extenuating circumstances. In the absence of such extensions, assignments may be downgraded for lateness at the discretion of the instructor.

Extra Credit Submissions

Extra credit submissions and the length of such submissions require advanced approval by your instructor. Instructors are not required to use the grading rubric, or provide rubric scores. Instructors do not have to provide the same level of formal feedback on extra credit submissions as they do on essay assignment, but should provide whatever level of useful feedback is appropriate.

The **maximum** grade based on word-count is 0.005 credit/word, or 5 points per 1,000 words. Thus a student who agrees to submit a 2,000-word essay on a specific topic approved in advance may have **up to** 10 points added to the "Extra Credit" column in the gradebook. These points are added to the total points accumulated.

Extra credit assignments cannot be used as a substitute for missed labs. The way to obtain credit for missed labs is to submit the paper late and receive a grade based on the late lab policy.

Grades

The following table shows the graded assessment types contained within this course and the assigned weighting to determine the final course grade.

Graded Activity	Number Required	Percentage
Written Assignments	8	15%
Labs	8	15%
Discussions	8	20%
Quizzes	8	10%
Mid-Term Exam	1	20%
Final Exam	1	20%
	TOTAL	100%

Letter grades for the course will be based on the following grading scale:

Letter Grade	Percentage	Grade Point
A	93-100%	4.0
A -	90-92.9%	3.7
B +	87-89.9%	3.3
B	83-86.9%	3.0
B -	80-82.9%	2.7
C +	77-79.9%	2.3
C	75-76.9%	2.0
C -	73-74.9%	1.7
D +	70-72.9%	1.3
D	67-69.9%	1.0
D-	63-66.9%	0.7
F	0-62.9%	0.0

For complete information on the Grading Policy for Bachelor Degree students, please refer to the CGCS Online Catalog (Sub-Section of Catalog on "Grades.")

Academic Honesty and the Norwich University Honor Code

A student must submit work that represents the student's own original analysis and writing. Copying another's work is not appropriate. If the student relies on the research or writing of others, the student must cite those sources. Words or ideas that require citations include, but are not limited to all hardcopy or electronic publications, whether copyrighted or not, and all verbal or visual communication when the content of such

communication clearly originates from an identifiable source. While students are encouraged to seek editing feedback, extensive revisions of one's work by another person is considered a lack of academic honesty, as it is representing another student's work as one's own.

For more information see:

[Academic Dishonesty](#)
[Academic Integrity](#)
[Norwich University Honor Code](#)

Copyright Notice

The content of this seminar contains material used in compliance with the U.S. Copyright Law, including the TEACH Act and principles of "fair use." Materials may not be downloaded, saved, revised, copied, printed or distributed without permission other than as specified to complete seminar assignments. Use of these materials is limited to class members for the duration of the seminar only.

Section 504 of the Rehabilitation Act of 1973/ADA

Please consult [Appendix H: University Policy - Section 504 of the Rehabilitation Act of 1973/Americans with Disabilities Act (ADA)](#) for instructions on obtaining an accommodation.

Disclaimer: Please note the specifics of this Course Syllabus are subject to change. Students are responsible for abiding by any such changes. Your instructor will notify you of any changes.