

Unix/Linux Networking Administration

Computer Information Systems 2440:388:801

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Location: Polsky M167
Time: T-Th 8:10 PM – 9:25 PM
Syllabus: <https://github.com/dougstanley/unix-net-admin>

Course Description:

This course provides students with the necessary knowledge and skills to perform basic system administration tasks on a network operating system.

Prerequisites:

2440:338 System Administration I

Co-requisites:

None.

Rationale

This course moves beyond just the basics of Linux installation and administration into a broader study of managing various types of network servers and the security required.

Course Goals/Objectives

Core Abilities

1. Model lifelong-learning through application of new knowledge.
2. Acquire, evaluate, and synthesize necessary information.
3. Utilize common terminology.
4. Exhibit professionalism.
5. Use sound theory in troubleshooting.
6. Cooperate with others.
7. Exhibit high self-esteem through positive communication.
8. Accept responsibility for learning process.
9. Acquire, evaluate, and synthesize necessary information

Competencies

1. TCP/IP
2. Network Configuration
3. The Linux Firewall
4. Local Security
5. Network Security
6. DNS
7. FTP
8. Apache Web Server
9. SMTP
10. POP and IMAP
11. The Secure Shell
12. Network File System/Network Information Service
13. Samba
14. LDAP
15. Documentation Writing

Course Outline:

See schedule on separate handout.

Text:

Wale Soyinka (2008). **Linux Administration: A Beginner's Guide**. 5th ed.

New York: McGraw-Hill Osborne Media. ISBN: 978-0-07-154588-4

Additional Materials:

Additional materials for the course may be found at: <https://github.com/dougstanley/unix-net-admin>

Additional References:

- <http://docutils.sourceforge.net/docs/user/rst/quickstart.html>
- <http://docutils.sourceforge.net/docs/user/rst/quickref.html>

Grades:

Assessment	Points Possible	Percentage
Midterm Exams Written 3 Exams 100 points possible	300	31%
Homework Assignments 13 Assgn. 10 points possible	130	13%
Final Exam Written 1 Exam 200 points possible	200	21%
Final Exam Practical 1 Exam 100 points possible	100	10%
Lab Assignments 12 Labs 20 points possible (*Includes Lab and Lab Report)	240	25%

**Attitude and Attendance	*	*
Total Possible Points	970	100%

Note

* See the attached rubric (scoring guide) for details of lab and lab reports. LAB REPORTS WILL BE SUBMITTED VIA THE SPRINGBOARD DROPBOX BY THE DUE DATE.

** Attitude and attendance points are at the discretion of the instructor. **EXCESSIVE ABSENCES AND POOR ATTITUDE WILL AFFECT YOUR FINAL GRADE.**

*** **NO LATE HOMEWORK WILL BE ACCEPTED.** When the date for the homework quizzes on Springboard closes it will not be re-opened.

**** Tests **CANNOT** be made up!

Total points for the course will be calculated and a percentage calculated for a letter grade.

Letter Grade	Percentage
A	100-93%
A-	92-90%
B+	89-86%
B	85-83%
B-	82-80%
C+	79-76%
C	75-73%
C-	72-70%
D+	69-66%
D	65-63%
D-	62-60%
F	Below 60%

Student Ethics and Other Policy Information

University Policies

Academic Dishonesty

Students at The University of Akron are an essential part of the academic community, and enjoy substantial freedom within the framework of the educational objectives of the institution. The freedom necessary for learning in a community so rich in diversity and achieving success toward our educational objectives require high standards of academic integrity. Academic dishonesty has no place in an institution of advanced learning. The University community is governed by the policies and regulations contained with the Student Code of Conduct available in the Office of Student Conduct, (330) 972-7021.

The University of Akron considers academic integrity as essential part of each student's personal and intellectual growth. Instances of academic dishonesty are addressed consistently. All members of the

community contribute actively to building a strong reputation of academic excellence and integrity at The University of Akron. It is each student's responsibility to know what constitutes academic dishonesty and to seek clarification directly from the instructor if necessary. Examples of academic dishonesty include, but are not limited to:

- Submission of an assignment as the student's original work that is entirely or partly the work of another person.
- Failure to appropriately cite references from published or unpublished works or print/non-print materials.
- Unauthorized copying of an assignment in computer programming, or the unauthorized examination or view of the computer, specifically during examinations.
- Possession and/or unauthorized use of tests, notes, books, calculators or formulas stored in calculators not authorized by the instructor during an examination.
- Providing and/or receiving information from another student other than the instructor, by any verbal or written means.
- Observing or assisting another student's work.
- Violation of the procedures prescribed by the professor to protect the integrity of the examination.
- Cooperation with a person involved in academic misconduct.
- CUTTING AND PASTING FROM THE INTERNET, INCLUDING GRAPHICS, SCREEN CAPTURES, OR PREVIOUSLY EXISTING EXAMPLES OF ANY KIND.
- Cheating of any kind will result in failure of the assignment/test and possibly the course. The student may also be subject to The University Policy on Academic Misconduct.

A student who has been accused of academic dishonesty will be asked to meet with the course instructor. The matter can be resolved informally at the College level and/or an academic sanction can be imposed. If the student opposes the decision, he/she may appeal to the College Dean. If the matter is referred to the Office of Student Conduct, an informal meeting will occur and, if substantial evidence exists, the office has the authority to take formal action against the student including, but not limited to, suspension or dismissal from the University. A more detailed discussion of these procedures can be found in the Student Code of Conduct.

ADA Statement

Any student who has a disability that substantially limits learning in a higher education setting may contact the office of Accessibility (formerly known as Services for Students with Disabilities) for information regarding their eligibility for reasonable accommodations. The office is located in Simmons Hall #105 and the office telephone number is 972-7928 (Voice) or 972-5764 (TDD).

Adding Courses—Registration

A student must register for a course before the end of the fifth day of a fall or spring term or the second day of a summer session. Additions to the student's official schedule may be made after that date, but before the 15th calendar day, only with the permission of the student's adviser, instructor, and dean or dean's designate. Students who have not registered and paid by this deadline may not attend classes to receive credit for the course.

This deadline applies to all regular 15-week courses offered in the fall and spring semesters as well as to regular courses in Summer I and II. For all other courses, such as those in intersession or those, which have flexibly scheduled, courses must be added, with appropriate permission, by the date when 20% of the course has been completed.

Withdrawal Policy

A student may withdraw from a course without an advisor's or course instructor's signature through the 15th day of a semester or comparable dates during summer sessions, intersession, etc. After the 15th day of a semester, and up to the midpoint of a semester, a student may withdraw from a course with the signature of the student's adviser.

After the midpoint of a semester, a student may have the signature of both the course instructor and the adviser. Such authorization must be dated and processed through the office of the Registrar no later than the last day of the 12th week of classes or comparable dates during summer session, intersession, etc.

An approved withdrawal after the 15th day of the term will be indicated on the University official academic record by a "WD." A student who leaves a course without going through the withdrawal procedure will be given an "F" in the course.

Diversity

Together, we maintain an intellectual culture that is accessible, disciplined, free, safe, and committed to excellence. By our behavior with one another we endorse a cultural of diversity, celebrating the uniqueness of the individual and developing our understanding and tolerance of differences in gender, ethnicity, age, spiritual belief, sexual orientation, and physical and mental potential. We take responsibilities for sustaining a caring culture, nurturing growth and fulfillment in one another and in the larger communities of which we are a part. We insist on a culture of civility, united in our rejections of violence, coercion, deceit, or terrorism. We work to increase collaboration, cooperation, and consensus within rational dialogue characterized by mutual respect and consideration.

This is a responsible culture. We expect each member of our community to carry out responsibly his or her duties for preserving the integrity, quality, and decency of our environment and our discourse.

In order to accomplish the above-mentioned expectations and responsibilities, everyone must engage in certain specific behaviors. Inside the classroom, the students are expected to respect the sanctity of the teaching/learning process by expressing respect for the faculty member as the organizer and guide through this learning experience, as well as for fellow students. Disruptive, disrespectful, discriminatory, harassing, violent and/or threatening behavior is explicitly prohibited. Students are expected to be responsible for their own learning and, in return, can expect responsible teaching from the faculty member.

Incompletes

Incompletes indicate that the student has done passing work but that some part of the work is, for good and acceptable reason, not complete at the end of the term. Failure to make up the omitted work satisfactorily by the end of the following term, not including summer sessions, converts the "I" to an "F." When the work is satisfactorily completed within the allotted time the "I" is converted to whatever grade the student has earned.

In-Progresses

In-progresses indicate that the student has not completed the scheduled course work during the term because the nature of the course does not permit completion within a single term, such as work toward a thesis.

University Closing Policy

The president, or designee, upon the recommendation of the Director of Public Safety and Chief of Police, will determine when conditions--such as severe weather or a state of emergency--necessitate closing the entire University or canceling classes at the main campus and/or Wayne College in Orrville.

The Director of Public Safety and Chief of Police will promptly notify other designated University officials and members of the Department of University Communications, who will contact area media. University colleges/departments are encouraged to establish a method for communicating the closing decisions to

department personnel. Closing information will be announced as early and as simply as possible to avoid confusion. Cancellation of classes and closure announcements will be made as early as possible in the day and will clearly state the affected campus (es). Call 972-SNOW or 972-6238 (TDD/Voice) for updated information.

For information concerning cancellation of campus based classes and web-based courses (those closing and cancellations that only affect your particular scheduled class), see course policies.

Course Policies

Absences

There may be 5 points deducted for every absence. If it is necessary to miss class for any reason, contact the instructor prior to the class session. Tests and Labs are to be taken on time. If you are unable to take a test or do a Lab during the regularly scheduled class time, you must contact the instructor before the test and have a valid excuse. There are NO make-up tests or Labs!

Course Concerns

If you have any concerns, regarding anything related to the course, please contact the instructor.

Deadlines

It is your responsibility to meet all of the deadlines for every class session, assignments, and assignment task. Assignments will be given deadlines--ANY assignments not turned in on the designated due dates and times, will be considered late and counted as a zero(0) for that assignment.

Ethics

Students are expected to display ethical behavior at all times. Cheating, plagiarism, etc., will not be tolerated. The consequences of dishonest behavior will be commensurate with the activity to include, but not be limited to, an 'F' for the class, dialogue with administrators, and dismissal from the college.

Grades

Student grades will be submitted to the appropriate department at the end of the semester (due dates for grades are determined by The University of Akron). Students can obtain their grades via the automated telephone grade inquiry line (258-2300 as listed in the schedule of classes), or via the Internet/Web from The University of Akron's Home Page (<http://www.uakron.edu>). Grades cannot be obtained from your instructor.

Note

Students whose names do not appear on the University's official class roster by the tenth day of the semester will not be permitted to participate (participate in discussions, turn in homework, or receive credit).

Note

All cell phones, pagers, and other devices must be set to vibrate or turned off during class. The sound on laptop or other computers must be turned off during class. Students are expected to not interrupt when another person is talking and to not disrupt the class by talking to others when

someone is presenting. Students are not to use computers, PDAs, etc. for any purpose other than authorized class-related activities when class is in session.

Misc

STUDENTS ARE REQUIRED TO FOLLOW ALL LAB, DEPARTMENTAL, COLLEGE, AND UNIVERSITY RULES AND REGULATIONS AND ALL LAWS. It is the student's responsibility to know, understand, and obey these rules, regulations, and laws. Some of them include:

- All course prerequisites must be met.
- No food or drinks in the labs.
- Only registered students may attend class (no friends or children).
- No plagiarism.
- The University of Akron is committed to maintaining an environment free of sexual and other forms of harassment and discrimination.

Students may not alter UA computers, including lab computers, by changing the desktop, installing software not authorized by the instructor, deleting or shutting down software or files placed there by a representative of the University, or any other form of alteration or destruction. Unauthorized alteration of a computer may result in failure of the course, dismissal from the Cisco Networking Academy and/or referral to student judicial review for further disciplinary action.

PRINTING: Printing of material unrelated to the course or printing of material that should be printed in a homework lab or at home is not permitted in the classroom labs. This is true regardless of whether a class is in session or not. This will result in confiscation of the material printed and may result in additional disciplinary action.

Note

This Syllabus is subject to change at the instructor's discretion. Please check <https://github.com/dougstanley/unix-net-admin> for the most recent version.