

WOOD TOBÉ-COBURN SCHOOL

8 East 40th Street
New York, NY 10016-0190
(212) 686-9040 (phone)
(212) 686-9171 (fax)

COURSE SYLLABUS

COURSE / SECTION NUMBER: CA 102 Unix Resources

SEMESTER: FALL SEMESTER – TERM II

DAY(S) / HOURS: M-F 11:00AM – 11:50AM

ROOM: 210

INSTRUCTOR: Professor D. Safonte

Email: safonte.wtcs@gmail.com (Preferred)

Email: dsafonte@woodtobecoburn.edu

Office Phone: (212) 897-0169

OFFICE HOURS: Conference Room C

Wednesday 12:00 PM – 12:50 PM

COMPUTER APPLICATIONS *NIX (UNIX) COURSE OUTLINE

COURSE DESCRIPTION: This course will introduce you to the *NIX operating system and file systems. In this class we will discuss shells, command line syntax, and basic UNIX scripting. You will also be introduced to X-Windows throughout the term.

PREREQUISITE(S): None

CREDITS: 2 Semester Credits

HOURS: 22 Lecture / 16 Lab

INSTRUCTIONAL MATERIALS AND REFERENCES

Required Text:

Sarwar and Koretsky. Unix: The Textbook (2nd Edition). Pearson, 2014

ISBN-978-0-32-122731-7

Additional Requirements:

- A loose leaf binder or notebook to keep notes.
- A flash drive is suggested to keep your data files and programming projects on, so you can take them with you between class and home.
- -OR- Use of a Google Drive folder where you save your items DAILY!

There will be assignments that may be started in class, but need to be completed at home. This will be the easiest way for you to do that. If you do not have a flash drive and cannot obtain one, then you are responsible for compressing your files into a single ZIP file and emailing it to yourself daily, so you have access to them at home. You will then have to download the zip file from your email and extract it to your hard drive before you can begin working again. This is why a flash drive is easier, faster and better.

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COURSE POLICIES AND GUIDELINES

COURSE POLICIES: To successfully complete the course, students are expected to follow these classroom policies:

- A. Bring the textbook to every class session. The book may be needed to complete labs.
 - B. Maintain regular attendance at all class sessions. If you are absent, it is your responsibility to complete all required lessons and assignments. It is also your responsibility to turn in work due on the date of the absence via email to the professor. Late work may only be accepted at the discretion of the instructor with an excused absence (court date with written proof, or doctors' note). No one is guaranteed acceptance of late work.
 - C. Complete your own work. Submission of someone else's work as your own will result in a 0 for that assignment and possible failure of the course.
 - D. Demonstrate professional courtesy in speaking and behavior shown towards the instructor and classmates.
 - E. All cell phones and electronic devices **MUST** be **OFF** during class!
 - F. No Instant Messaging, Tweeting, Facebook Usage, Web Surfing, or anything of the sort in the classroom, whether on the school computers or your own devices.
 - G. No eating or drinking allowed in class.
 - H. You are required to be in dress code to every class session. If you are not, you will be asked to leave and see the Director of Education.
 - I. **Homework and Lab Work count for 40% of your grade!** Homework will be counted as 100% when handed in on time. There will be a 5% deduction for each DAY that assignment is late. If you are absent from class, you are required to get the day assignment from either myself or a classmate.
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ATTENDANCE AND LATE ARRIVAL POLICY

- A. All Classes being on the hour.
- B. Attendance will be taken at the beginning of each class (within first 5 minutes).
- C. Arrival after last name is called is LATE!
- D. Three late arrivals will equate to one absence and will be recorded as such in our school attendance records.
- E. **Students who arrive 20 minutes or more late to class will be considered absent.** Students are encouraged to enter the class at this time as long as they do not disrupt the class, so they can at least benefit from the lesson for the day.
- F. Regular class attendance is essential. Regular and punctual attendance is extremely important while in school and makes it considerably easier to satisfy employers who demand this behavior. Development of professional conduct at Wood Tobé-Coburn School is just as important as the development of skills
- G. Absence from class, regardless of reason involves a loss to both the student and to other members of the class. Wood Tobé-Coburn School policy requires students to attend all classes. While it is recognized that certain reasons beyond the control of the student may make it impossible to attend class, excessive absenteeism may result in a lowered grade or other administrative action. An absence rate in excess of 10% of the classes scheduled may result in dismissal from school. A student who accumulates ten consecutive days of absence is considered to have withdrawn from school
- H. Attendance is expected and is taken each day. If you will not be able to attend class, email me at Safonte.wtcs@gmail.com within class hours. Also call a classmate to obtain the homework assignments. You are responsible for the content covered during your absence; this includes all assignments, class work, and work due on the day of your absence

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- I. Please do not ask to leave the class early. If you are late or leave class early, you will not earn credit for attending class that day. If you are late to class, wait until after class to tell me. It is your responsibility to inform me that you were in class and see that it is marked on my attendance sheet
 - J. Professional behavior is expected of all students. You are expected to abide by the Wood Tobé-Coburn School Academic Catalog and the student handbook for conduct, ethical behavior, and other rules/regulations
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ACADEMIC DISHONESTY POLICY

Academic dishonesty includes, but is not limited to, using unauthorized aids to complete an exam or project, submitting another student's work, sharing data via the network or diskette/flash drive, and copying from another student with or without their permission.

The Director of Education will suspend students who are caught cheating from school for a minimum of 24 hours. In addition, the students will not receive any credit for the work in question or any other work missed during the period of suspension.

DRESS CODE POLICY

Students are required to dress in appropriate professional attire. The Wood Tobé-Coburn School student is expected to maintain the same high standard of appearance and grooming that are expected by the business, design, and health care communities.

Students who are not in compliance with the dress code will be sent home. Faculty members may send students home from class or may elect to send them to the Director of Education to be sent home. Students will not be allowed to make up work missed during the period of suspension.

ASSIGNMENTS

In order to achieve the course objectives, you will use the textbook and other reference sources to complete in-class and homework exercises, as well as a final project. Completing all homework and in-class assignments will help you maximize your achievement on the tests and other writing assignments.

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METHODS OF EVALUATION: Course grade is determined as follows*:

* Professor Reserves the Right to Eliminate/Recalculate Any Assessment.

GRADING SYSTEM:

A = 95 < 100 A- = 90 < 94 B+ = 87 < 89 B = 84 < 86 B- = 80 < 83 C+ = 76 < 79 C = 72 < 75 C- = 68 < 71 D+ = 64 < 67 D = 60 < 63 F = 0 < 59

Attendance	5%
Participation	5%
Homework/Labs	40%
Mid Term Exam	15%
Quizzes	10%
Final Exam	20%
Final Project	5%

All Assignment Submissions

All Homework and class work assignment submissions MUST include Your Name, Course Number and Section, Assignment Name in the email subject line; *eg: Email Subject:, CA102, Homework 1 Review Questions*

ALL SUBMISSIONS MUST BE SUBMITTED VIA Shared Google Drive or email to

Safonte.WTCS@gmail.com

****NO PRINTED SUBMISSIONS! ****

Homework/Labs

You may be given various classroom hands-on labs and/or homework assignments to be completed individually throughout the term, in addition to hands-on exercises we complete as a class together during lectures. These assignments are to solidify your programming skills in preparation for the final project and exams. They do need to be handed in, and will be graded. The professor may float the room and inspect progress.

Regular completion of classroom labs and homework also count toward classroom participation.

Assignments have **DUE DATES** that need to be met for full credit. Any late assignment, if approved by the instructor, will be subject to a **5% PENALTY PER DAY against the grade of that assignment**, up to 10 days late. Thereafter, the assignment **will not be accepted**. You are responsible for checking the course website daily for new homework assignments, as I may post them at ANY time, whether or not discussed in class.

YOU WILL NOT PASS THIS CLASS IF YOU DO NOT SUBMIT YOUR HOMEWORK AND LABS!

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Attendance/Participation

EACH STUDENT STARTS WITH 5 POINTS EACH FOR ATTENDANCE/PARTICIPATION ON DAY ONE!

It's up to you to work hard to keep them. Your participation encompasses a lot of work. Labs, Reading Assignments, Homework Assignments, Classroom Discussions, Quizzes, Attendance, Punctuality and Classroom Etiquette all fall under this part of your grade. Your participation is graded on completion, as well as attendance and punctuality. If you do ALL the work, including quizzes, respect the policies and classroom etiquette, and you are never absent or late, then you will keep the full 10 points. Miss any work and points may be deducted as discussed earlier. One Point may also be deducted for each absence, and ½ point for lateness. If you are more than 20 minutes late, a full point will be deducted as if you were absent. Make no mistake; participation heavily affects your grade! A loss of all participation points means you will likely NOT earn better than a "B+" in this class!

Quizzes

There will be 5 quizzes throughout the term. Quizzes will generally be every week, except on the week of the Midterm Exam and Final Exam. They may be given on different days during the week. Quizzes cannot be made up if you are absent, regardless of reason or note.

Midterm Exam

There WILL be a multi-chapter, cumulative written exam at the Midterm Point. This assessment will be graded on a 100% scale and will include True/False and Multiple Choice questions. There will also be critical thinking questions in the form of desk-checking, debugging and writing of code.

The date of this exam will be: Thursday, November 22th, 2013

Final Exam and Final Project

There WILL be a multi-chapter, cumulative written exam at the Final Point. This assessment will be graded on a 100% scale and will include include True/False and Multiple Choice questions. There will also be critical thinking questions in the form of desk-checking, debugging and writing of code.

The date of this exam will be: Thursday, December 19th, 2013

There will be a Final Project in this class. Students will be responsible for working individually to create a comprehensive working application based on the skills learned throughout the term. Students will be permitted to choose from two projects from the text book.

The due date will be Wednesday December 18rd, 2013.

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TOPICAL OUTLINE: This is a tentative Outline/Schedule. Some chapters may need more than one week. That will be determined as we progress through the semester.

Week	Topics	Chapter Readings	Exams/Labs/HW
Wk. 1 10/28 - 11/01	<ol style="list-style-type: none"> 1. To practice identifying parts of a UNIX command. 2. To identify and describe your method of connecting to a UNIX system. 3. To practice using file maintenance commands. 4. To build and manipulate simple file structures in your home directory. 5. To further examine man pages for file maintenance commands. 6. To practice using various utility commands for the beginner. 	<p>Chapter 1</p> <p>Chapter 2</p>	<p>Quiz #1 - TBA Classwork: Lab #1 – Ch. 1 Lab #2 – Ch1. Lab #3 – Ch. 2 Lab #4 – Ch. 2</p> <p>Homework: Chapter 1: Review Questions Due: Wednesday Chapter 2: Review Questions Due: Friday</p>
Wk. 2 11/04 – 11/08	<ol style="list-style-type: none"> 1. To practice the use of a few commonly used UNIX commands 2. To learn about the history UNIX and a few other operating systems 3. To learn about the popularity of UNIX and other contemporary operating systems 4. To learn about the various components of a contemporary computer system 5. To learn about the structure of UNIX 6. To learn about some important system setups 7. To examine your search path and the value of the path variable. 8. To practice ways of changing your shell. 9. To practice using shell startup files and shell environment variables. 10. To practice using shell metacharacters. 	<p>Chapter 3</p> <p>Chapter 4</p>	<p>Quiz #2 - TBA Classwork: Lab #1 – Ch. 3 Team Exercise Lab #2 – Ch 3. Ethics Project Lab #3 – Ch. 4 Team Exercise Lab #4 – Ch. 4 Ethics Project</p> <p>Homework: Chapter 3: Check Your Understanding Exercises Due: Wednesday Chapter 4: Check Your Understanding Exercises Due: Friday</p>

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Wk. 3

11/11 – 11/15

1. To practice editing text files in pico
2. To practice editing text files in vi
3. To practice editing text files in emacs
4. To give a brief exercise on UNIX mail program.
5. To give practice exercises on KMail.
6. To give practice exercises on pine.
7. To learn how to create a UNIX file structure (i.e., directory hierarchy)
8. To learn about absolute and relative pathnames
9. To learn about home directory, login directory, and present working directory (also known as the current directory)
10. To learn how to effectively navigate the UNIX directory hierarchy
11. To learn about file types and hidden files
12. To learn about the file attributes

Chapter 5

Chapter 6

Quiz #3 – TBA

Classwork:

Lab #1 – Ch. 5

Team Exercise

Lab #2 – Ch 5. Ethics Project

Lab #3 – Ch. 6

Team Exercise

Lab #4 – Ch. 6 Ethics Project

Homework:

Chapter 5: Check Your Understanding Exercises

Due: Wednesday

Chapter 6: Check Your Understanding Exercises

Due: Friday

Wk. 4

11/18 – 11/22

1. To learn concept of file access permissions/privileges in UNIX, i.e., types of users and types of file privileges
2. To learn how to determine access privileges for a file
3. To learn how to set or change access privileges for files that you own
4. To learn what kinds of access privileges are needed for various file operations such as copy and move
5. To learn how to set default access permissions for newly created files and directories
6. To learn how to set and reset special access privileges bits: Set-User-ID bit, Set-Group-ID bit, and Sticky bit.
7. To learn how to display contents of 'text' files
8. To learn how to copy, append, move, and remove files

Chapter 7

MIDTERM Exam:
Chapters
1 – 7

MIDTERM 11/22

Classwork:

Lab #1 – Ch. 7

Team Exercise

Lab #2 – Ch 7. Ethics Project

Homework:

Chapter 7: Check Your Understanding Exercises

Due: Wednesday

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Wk. 5
11/25 – 11/27

THANKSGIVING
BREAK

1. To learn how to combine files
2. To learn how to determine the size of a file
3. To learn how to compare 'text' files
4. To learn to use the various printer related commands
5. To learn how to use regular expressions
6. To learn how to compress and decompress files
7. To learn how to sort 'text' files
8. To learn how to search 'text' files for expressions, strings, and patterns and how to search for the locations of commands in a UNIX system
9. To learn how to use database operations of cutting and pasting fields in 'text' files
10. To learn how to uuencode and uudecode files
11. To learn how to encrypt and decrypt files
12. To learn how hard and soft links are created and used

Chapter 8

Chapter 9

Quiz #4 – TBA

Classwork:

Lab #1 – Ch. 8

Team Exercise

Lab #2 – Ch. 8 Ethics Project

Lab #3 – Ch. 9

Team Exercise

Lab #4 – Ch. 9 Ethics Project

Homework:

Chapter 8: Check Your Understanding Exercises

Due: Wednesday

Chapter 9: Check Your Understanding Exercises

Due: Friday

Wk. 6
12/02 – 12/06

1. To learn what impact do creation of hard and soft links have on the file system structure
2. To learn about the relationship between links and file access permissions
3. To learn about the contents of hard and soft links
4. To learn how to use UNIX I/O redirection and pipe operators
5. To learn to use the I/O redirection and pipe operators to perform complex tasks which cannot be performed by individual commands
6. To learn how to use UNIX FIFOs
7. To learn how to use the UNIX I/O operators, pipes, and FIFOs to perform challenging tasks which are not possible with individual commands

Chapter 10

Chapter 11

Quiz #5 – TBA

Classwork:

Lab #1 – Ch. 10

Team Exercise

Lab #2 – Ch. 10 Ethics Project

Lab #3 – Ch. 11

Team Exercise

Lab #4 – Ch. 11 Ethics Project

Homework:

Chapter 10: Check Your Understanding Exercises

Due: Wednesday

Chapter 11: Check Your Understanding Exercises

Due: Friday

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Wk. 7
12/09 – 12/13

1. To learn the basic concept of shell scripting (programming) in C shell
2. To learn how shell programs can be executed Chapter 12
3. To learn what shell variables are and how to use them Chapter 13
4. To learn how to pass command line arguments to a C shell script
5. To learn the concept of command substitution and its use in C shell scripts
6. To learn some fundamental coding principles and their use in C shell scripts
7. To practice C shell scripting by writing a few small size scripts
8. To learn how to process numeric data in C shell scripts
9. To learn how to use the here document facility of C shell in a script
10. To learn how to process arrays in C shell scripts
11. To learn how to use the signal/interrupt process facility of Bourne shell
12. To learn how to debug a Bourne shell script

Quiz #6 – TBA
Classwork:
Lab #1 – Ch. 13
Team Exercise
Lab #2 – Ch. 13 Ethics Project

Homework:
Chapter 13: Check Your Understanding Exercises
Due: Wednesday

Wk. 8
12/16 – 12/20

1. To learn how files and directories can be archived in UNIX.
2. To learn how to recover a subset of archived files Exam:
Ch. 8-13
3. To learn how to copy directories
4. Final Exam Review
5. Final Project
6. Final Exam

Classwork:
Wednesday 10/23:
Review for Final

Final Exam – Thursday 12/19