CS 252 Syllabus

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1 Course Description

CS 252 is an introduction to Unix with emphasis on the skills necessary to be a productive programmer in Unix, Linux, and related environments.

The focus of this course is on learning enough Unix for students to function productively in CS courses at the 300 level and beyond. Because working directly from a workstation console in a CS Dept lab is no longer the dominant mode of interacting with our Unix systems, this course will emphasize connecting via the internet from a remote PC to our Unix systems. Both text-based (telnet) and window-based (X) connections will be covered.

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This is a self-paced course delivered via the internet and may be taken for P/F grades only. There are no regularly-scheduled class meetings. Students will be able to work through the material at any time, including taking automatically graded assignments. At the end of any semester in which they had actually registered for the course, a check will be made to see if they have successfully completed the assignments. If so, a grade of P will be issued.

2 Basic Information

2.1 Instructor

2.1.1 Office Hours

Students may meet with the instructor in person or via internet-conferencing. A week-by-week schedule of available meeting times can be found by going to the instructor’s home page (http://www.cs.odu.edu/ zeil) and clicking on “Office Hours and Appointments”.

2.2 Location

This course is hosted at http://www.cs.odu.edu/cs252.

2.3 Text

In addition to the readings at the above-listed course web site, the textbook for this course is: An Introduction to Unix with X and the Internet, Paul S. Wang, 1997, PWS Publishing Company, ISBN 053494768-9

2.4 Course Prerequisites

- CS 150 (Introduction to Programming), or the equivalent

Students are also expected to be familiar with the use of standard Internet-based tools including

- e-mail
- web browsers

2.5 Hardware and Software Requirements

Because this course is hosted on the internet, you will need to make sure that you have access to the appropriate computing equipment and software to participate in the course activities.

Hardware requirements are pretty straightforward.

- Almost any Pentium-class Windows 95, 98, 2000, or NT machine should do. Equivalently powered Unix or Macintosh machines are also acceptable, though these may introduce other limitations regarding software (below).

- Whatever the machine, a good Internet connection is essential. You should be able to connect to your Internet Service Provider (ISP) at 56k or better. Perhaps more importantly, your ISP must be able to actually feed you information at that rate during the time periods when you will be logged in. It’s not unheard of for people to invest in very fast modems only to find that their net access stays the same -

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1Although there are no deadlines associated with CS 252 itself, other CS courses may list CS 252 as a co-requisite, and instructors in those other courses may impose their own deadlines as to when they expect portions of CS 252 to have been completed.

For example, a CS 250 instructor may want to give an assignment on October 15 in which the g++ compiler will be used, and so may inform CS 250 students that they must have completed the CS 252 assignment on compiling using g++ by a October 7.
because their ISP was too overloaded to serve up the information as fast as their modem could accept it. Unfortunately, this is not an easy thing for individuals to determine (and few ISP’s will have the candor to admit when they have too many customers for their own good).

Software requirements are more specific:

Required:  
- Web browser: Acceptable are Internet Explorer 5.0 or better, and Netscape Navigator 6.0 or better. Older versions of these browsers may also be acceptable, but cannot be guaranteed so as the course materials are not tested with older browsers.  
  The AOL browser is not acceptable. If you use AOL as your internet service provider, you will need to install Internet Explorer or Netscape Navigator in addition to the AOL browser.  
- e-mail: Any MIME-compliant e-mail program should do.  
- telnet, ftp: Any program should do, including the ones that come with MS Windows. More details may be found in the related lessons and on the course’s Library page.  
- X server: Recommended servers for MS Windows machines are StarNet’s XWin32 or Hummingbird’s Exceed. If you have installed the CygWin package and are experienced at installing software, you might want to try the CygWin XFree server. More details may be found in the related lessons and on the course’s Library page.

Optional:  
- Microsoft Netmeeting: This program, available for free from Microsoft, allows students to participate in internet conferences via audio and/or video or typed “chat”. Its big advantage over a conventional internet-chat tool or even over internet-based phone programs is that the participants in a conference can show each other (and even share control of) almost any Windows-based tool. Students can use Netmeeting to meet with the instructor during “office hours”, call up their assignment code in an editor, and show it directly to the instructor. If you plan on using Netmeeting, you will may want to have a microphone on your system. A digital video camera would also be nice, but is certainly not required (and might overtax your internet connection).

You do not need to have all of the required software on your own PC. The PC’s in the CS Dept laboratory, the PC’s in the ODU laboratories in Norfolk and Virginia Beach all provide the software required. In addition, each ODU Teletechnet site should provide at least one PC for use by ODU distance students that meets the course requirements.

3 Course Policies

3.1 Meeting Times

This is a self-paced internet-delivered course. There are no regularly scheduled class meetings.

3.2 Computer Access

All students taking this course must have activated a login and e-mail account on the CS Dept’s Unix network. The account setup and password can be obtained at http://www.cs.odu.edu/ by clicking on “Account Creation”.  

After obtaining this account, students must “sign in” to the course to get full access to the course materials. Instructions for doing this are available on the “General Info” page of the course web site.

Students at the Norfolk campus will have access to the Dept’s local network of Unix workstations and PC’s in Educ 245. Students taking the course elsewhere may connect to the machines on this network via the internet. Many Teletechnet sites, particularly those hosted at the ODU regional centers and at Virginia Community Colleges, will have available equipment consistent with the requirements of this course.
3.3 Communications

Because this course does not have traditional lectures, most communication between instructor and students will need to be conducted electronically. Questions and discussion are encouraged, but students should read the “Communications Policy” on the “General Info” page of the course web site to see the available options.

3.4 Academic Honesty

Everything turned in for grading in this course must be your own work. The instructor reserves the right to question a student orally or in writing and to use his evaluation of the student’s understanding of the assignment and of the submitted solution as evidence of cheating. Violations will be reported to the Honor Council for consideration for punitive action.

By CS Dept. policy, students found to be in violation of this rule will, at the very least, receive a failing grade in the course and may be subject to stiffer penalties. Students who contribute to violations by sharing their code/designs with others are subject to the same penalty.

This policy is not intended to prevent students from providing legitimate assistance to one another. Students are encouraged to seek/provide one another aid in general issues relating to the course subject matter. Student discussions should avoid, however, explicit discussion of approaches to solving a particular assignment.

3.5 Grading

All assignments are automatically graded. Students must complete all assignments to achieve a grade of "P" for the course. These should be completed before the start of the semester’s exams, though assignments submitted after that but before the instructor turns in grades may, at the instructor’s option, be counted as complete.

Students who have not completed all of the assignments, but have completed at least 80% of them, will be given a grade of "I" (Incomplete). This will become a "P" if the student completes the remaining assignments.

Students who have not completed at least 80% of the assignments will receive an "F".

Students who receive an "I" or "F" may continue to submit the remaining assignments, with a change of grade issued during subsequent semesters. See “Incomplete Work”, below, for the details.

Students can check their grade status at any time by using the Grades button on the course home page.

3.5.1 Fourth-Week Grade Report

University regulations require that all instructors of 100 or 200-level courses provide students with an interim grade report by the end of the 4th week of the semester. Obviously, such a report is of questionable utility in a self-paced course like this one.

Students may obtain this report by using the Grades button on the course home page. If, by the end of the 4th week of the semester, they have completed at least 4 assignments, they are "on a pace" to successfully finish the course by the end of the semester.

3.5.2 Incomplete Work

An "I" grade that is not resolved during the following semester is automatically changed to an "F" by the University.

A student with a grade of "I" or "F" (including expired "I" grades) may still achieve a "P" by completing the missing assignments during subsequent semesters.

Information on which assignments have been completed by students and student permission to access password-protected areas of the course will be maintained for at least one year after the last 'activity" (completed assignment) by the student.

\[2\] In practice, this depends on when the instructor turns in the grades. This might be early or late in the exam week, at the convenience of the instructor. If you want to be certain that something will be counted, get it done before exams start.
4 Course Outline

Students may tackle the topics in this course in different orders. The diagram below shows how the topics that make up this course are related to one another. An arrow from one topic to another means that students should complete the first topic before attempting the second. For example, before looking at "Program Development (via X)" one must have completed both "Program Development (via telnet)" and "Editing Files (via X)". On the other hand, one could do "Shell Scripts" either before or after doing "X Windows".