UNIVERSITY OF TEXAS AT DALLAS
DEPARTMENT OF COMPUTER SCIENCE
CS 3375 Principles of UNIX
COURSE SYLLABUS Spring 2005
Instructor Rafael Lacambra

CATALOG DESCRIPTION: Design and history of the UNIX operating System. Detailed study of process and file system data structures. Shell programming in UNIX. Use of process-forking functionality of UNIX to simplify complex problems. Inter-process communication coordination. Device drivers and streams as interfaces to hardware features. TCP/IP and other UNIX inter-machine communication facilities.

INSTRUCTOR:	Rafael Lacambra	
E-MAIL	Use WebCT e-mail tool **only**	
WWW	It is important to visit the course web page and WebCT frequently to check announcements, homework, activities, tips, FAQ, links, etc. http://www.utdallas.edu/~Rafael.Lacambra http://webct.utdallas.edu	
OFFICE:	ECSS 3.704 (972)883-4724	
OFFICE HOURS:	Wednesday 2:00 – 5:00 PM (in my office. East side of building, 3rd floor) Monday and Friday 2:00– 4:00 PM OUGA ECS South (this building) - Suite 2.502 (NW entrance)	
PREREQUISITE:	CS2315 (C/C++) or CS3333 or CS3335 or equivalent programming experience, including knowledge of C.	
TEXTBOOK:	**Your Unix, The Ultimate Guide** by Sumitabha Das McGraw Hill ISBN: 0072405007	
OBJETIVES:	After successful completion of this course, the student will be able to: - Use Unix operating system as a user - Use Unix programming tools as a developer - Understand and use the concept of system calls and sockets - Demonstrate a good level in the use of Unix Utilities - Use the UNIX OS as server (programming and configuration)	
METHOD OF EVALUATION:	Homework: 30% Project (including presentation): 20% Exam1: 15% Exam2: 15% Exam3: 10% Quizzes 5% Labs 5%	
LETTER GRADES:	(97-100 A+) (92-96 A) (90-91 A-) (88-89 B+) (82-87 B) (80-81 B-) (78-79 C+) (72-77 C) (70-71 C-) (68-69 D+) (62-67 D) (60-61 D-) Below 60 F.	
AUDITING COURSES:	No auditing of courses is allowed in the School of Engineering and Computer Science.	
DATES Spring 2005 Semester:	Classes Begin: MLK day: Spring Break: Classes End: Final examinations:	January 10 January 17 (University Closed) March 7–12 (Classes Suspended/University Open) April 25 Tuesday, April 26 - Monday, May 2

CLASS POLICIES	**HOMEWORK and ACTIVITIES** - Read the rules and specifications in the web page for every homework and activity. - You must upload and submit your homework using WebCT. - Homework is due on the specified date no later than 11:00 PM (WebCT time). - Homework will be accepted one day late (24 hours) with a 10% penalty. - After one day (24 hours), if not submitted, assignments will receive a **grade of zero**. - Every time you submit homework through WebCT, WebCT will send you an e-mail acknowledgement. You must keep this e-mail for your records until the end of the semester and the final grade has been assigned. You will use it in case any homework submittal issue arises. **Note: If you do not receive an acknowledge e-mail, WebCT has not received your homework and it will be considered as not submitted. The e-mail address requested by WebCT for confirmation is your own, not the professors'** - **No extra homework/projects for bonus points.** **EXAM** - **Exam dates are fixed**. I will not change these dates for any circumstance. I will not move up any exam date. **No makeup exams** at a later/earlier date will be scheduled for any student unless a written medical note is provided. - The student must have a 60% average between the two exams and final project. If the student fails to meet this requirement, the student will receive a grade of F in the class even if he/she has a passing grade (including homework, quizzes and labs). **GENERAL** I expect the student to **come to class**, study the materials and textbook and do the homework, activities and exams. It is the **student's responsibility** to check what we covered in class and the announcements during class if he or she did not attend. The best way of learning a UNIX is by practicing it. You can acquire a good programming level by doing all examples from the textbook. The course is very **time demanding**. **Plan ahead** all your activities and if you have any problem with your homework or your study, do not hesitate to ask questions to the TA or the Instructor. Do not wait until you have a bad grade. It is important to read The University of Texas System Policy on Academic Honesty that appears in the Regents Rules and Regulations. *, Part One, Chapter VI, Section 3, Paragraph 3.22. "*Any student who commits an act of scholastic dishonesty is

	subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another, any act designed to give unfair advantage to a student or the attempt to commit such acts".

Important dates

Homework	Due Dates
WebCT Test. (**no credit for this assignment**)	Friday, January 21st
Homework 1: Chapters 1, 2 and 3	Friday, January 28th
Homework 2: Chapters 6, 7, 8 and 18 (intro)	Friday, February 13th
Homework 3. Chapters 8, 9, 10, 15,16, 17 and 18	Friday, March 4th
Homework 4. Chapters 8, 9, 10, 15,16, 17 and 18	Friday, March 11th
Homework 5. Chapters 8, 9, 10, 15,16, 17 and 18	Friday, March 18th
Homework 6 Programming tools (notes provided)	Friday, April 1st
Homework 7 Perl and Python	Friday, April 15th
Exams	**Dates**
1st EXAM. Chapters 1,2,3,6,7,8, and 18 (intro)	Wednesday, February 16th
2nd EXAM. Chapters 8, 9, 10, 15,16, 17 and 18	Wednesday, March 23rd
3rd EXAM. Programming tools, Unix Internals, Python (notes provided), Chapter 20	11:00am Friday, April 29th Verify date at: http://www.utdallas.edu/student/class/spring/final.htm
Final Project	**Dates**
Project (live presentation required) Chapters 19, 20, portions of chapters 21 and 22 and notes provided	Due: Monday, April 25th Presentations: Friday, April 29th (set appointment)

Important: The dates in this schedule may change due to the class level. If the class needs more time and examples to understand a concept I will modify the schedule. If the class is ready to skip a chapter or go faster I will modify the schedule. Therefore, it is the student's responsibility to check what we covered in class and the changes in the schedule announced during class.

Sequence of topics

1. Syllabus review
   Intro/overview of course
2. Getting started - Chapter 1
3. Understanding the UNIX cmd (Chapter 2)
4. General Purpose Utilities (Chapter 3)
5. Lab session
6. The File System (Chapter 6)
7. File Attributes (Chapter 7)
8. vi lab session
   (read chapter 4 before class)
9. The Shell (Ch 8 and intro ch 18)
10. Simple Filters (Ch 9)
11. Shell programming(Ch 18)
12. TCP/IP Networking Tools (Chapter 11)
13. Filters using regular expressions (grep and sed, Ch 15)
14. The Process (Ch 10)
15. Advanced shell programming
    Chapter 19
16. Customizing the environment
    Chapter 17
17. Programming tools
    Notes provided
18. Perl, the master manipulator
    Chapter 20
19. CGI Scripting using Perl
    Notes provided
20. Python Basics
    Notes provided
21. Unix Internals
    Notes provided
22. Topics on System and Network Administration
    Chapters 21, 22 and 23