COMP421: Unix Environment for Programmers
Fall 2006 Syllabus

Contact Information:

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Lectures:

Course	Ticket Number	Days	Time [Begin – End]	Room
COMP421	11623	MW	1100 – 1215	JD2215

Required Textbooks:

Advanced Programming in the UNIX Environment, W. Richard Stevens and Stephen A. Rago

(You will mortally wound your instructor should you choose to sell this book back at the end of the semester for less than lunch at McDonalds)

Topics:

A non-comprehensive list of topics that is scheduled to be covered this semester includes:

- History of Unix.
- Architecture and basic operating system organization/configuration.
- Process control and relationships.
- System calls and kernel features.
- Shared Libraries.
- Shell programming.
- Regular expressions.
- Unix filter utilities: sed, awk, grep, find, xargs, sort, wc, uniq, cut, test, etc.
- Programming with files and directories.
- Introduction to Perl.
- Command line argument processing (manual, getopt[_long] and argp)
- Online manual pages.
- Daemonizing processes.
- POSIX signals.
- POSIX threads (pthreads).
- Interprocess Communication (Semaphores, Shared memory, Pipes, sockets).
- Revision Control Systems (cvs, svn).
- Makefiles and auto configuration environments.
- X Windows protocol and widget toolkits.

Unix:

Although, in the past, Unix was the name of a particular operating system manufactured and distributed by a single company it is now used as a term to describe an entire server system running on a unix-like operating system (such as Linux, OpenBSD, FreeBSD or Solaris).

There are many careers available based on unix skills and experience but the breadth and depth of skills is enormous. As such it is impossible to predict what areas of unix you find interesting or confusing. You are **highly** encouraged to ask **any** questions you may have in class. It will allow the instructor to help you and to ellucidate upon more subtle, related material for the benefit of the class.

basically, the instructor does not mind if every lecture degenerates into nothing more than a focus questions and answer investigation of the unix environment as this "hands on" approach is very useful for learning unix.

Lab Projects:

Students will be responsible for completing a variety of programming projects. (Approximately five in total.) Athough the typical complexity of any one project will be less than a difficult COMP282 project (given by the same instructor) students are warned not to take the projects lightly. The projects will be done in unfamiliar languages such as Perl and shell and will use a wide variety of concepts inherent to the Unix programming environment. Thus students can expect to encounter a lot of different learning curves and should allocate enough time to compensate for this fact. Projects are to be completed by individual effort.

Although it is not required that you own and maintain a Unix (openBSD, FreeBSD, Linux, Solaris) machine you will be at a serious disadvantage in this course if you do not have your own machine running one of these Unix-like distributions. Your instructor can help you install a suitable system on your laptop or workstation.

Assignments:

Short assignments will be given on a periodic basis and are due the following lecture period. Assignments are to be completed by individual effort.

Late Assignments, Projects and Tests:

Assignments submitted late will NOT be accepted. no exceptions.

"Make-up" exams and Quizzes will not be given.

All projects are to be submitted via e-mail and possible request for demonstration. Assignments are to be submitted via written report in the "CSUNmemo" format. Projects are graded out of 20 points each. You may submit a single project up to two weeks late. No other projects will be accepted late.

Anything slipped under office doors or otherwise not delivered properly will be disposed of and ignored entirely and will receive a grade of 0.

Grading Criteria:

Assignments, Projects, Quizzes and Exams will be evaluated and graded individually.

Final grades will be computed according to the weighted average of all assignments, projects and tests as follows:

Participation:	5%
Assignments:	10%
Projects:	20%
Midterm Exam:	30%
Final Exam:	35%

Exams will be closed book. Collaboration on assignments, exams, quizzes and projects is not permitted unless allowed for by the instructor as part of the assignment.

Participation is a subjective evaluation given by the instructor and is almost always less favorable than the student believes is fair. Perfect attendance is not participating; it is simply supplying a reliable, temporary thermal source for the lecture room.

A side note on participation: There is good news and there is bad news. Your instructor knows Unix very, very well. He adopted Unix as his main operating system when you were in grammar school and has held employment positions with the responsibility of deploying, configuring and maintaining Unix systems to process millions of dollars of commerce per month. The bad news is that in order to cover the wealth of information and techniques available the pace of this course will be fast. You will need to engage in active participation and questions to keep up with the course. The good news is that should you find particular areas of the class interesting, or if you have additional insight or experiences to share with the class, you are encouraged to ask questions or provide information. It is not unreasonable to side track the class into areas of Unix that the instructor did not think to include in the course material. basically, You are entering a world filled with tradition, controversy, capabilities, opportunities and humor. Feel free to explore the content and have fun in the class.

Final grades will be reported to the Office of Admissions and Records using the "plus/minus" format. Letter grades will be assigned according to the weighted average grade as follows (These limits may be lowered at the discretion of the instructor):

		A:	93	A-	90
B+	87	B	83	B-	80
C+	77	C	73	C-	70
D+	67	D	63	D-	60
		F	0		

Best efforts will be made to return graded materials during the second lecture following the date the materials were due.

Final Exam Schedule:

(This information is also available in your CSUN Course Schedule. Information published in the course schedule supersedes information published by the intructor. Any discrepenacies in times or locations should be brought to the attention of the intructor as soon as possible.)

Ticket Number	Days	Date	Time [Begin – End]	Room
11623	M	Monday 12/18/2005	1015 – 1215	JD2215

Contesting Grades

Any student who believes that an error was made regarding grading of any Exam, Project, Assignment or Quiz may contest the grade during office hours. Any evidence and arguments must be presented within

7 calendar days following the availability of the graded material in question. Request for a grading correction will subject the entire work for re-evaluation. This may result in an overall lower grade even if the original arguments are valid as any other mistakes, oversights or omissions will also be corrected, possibly to the disadvantage of the student.

Student Evaluations:

At some point, to be determined, during the end of the semester all enrolled students will be given the opportunity to fill out and return an evaluation of the Course and Instructor's abilities and effectiveness. Your evaluation is important. These evaluations help the University tailor programs to better suit your needs and are used to provide the best instructors possible to serve you. These evaluations really do have a strong impact on the department and are the primary tool for the evaluation of the instructors. It is strongly encouraged that you participate in this process and provide your honest opinions.

Add/Drop Policies:

Class size is limited to 28 students per lecture. No students will be added to any lecture unless a seat in that lecture becomes available. Seats can become available by:

- Students voluntarily electing to drop the class.
- Students who are deficient in prerequisites will lose their seats for administrative reasons.
- Students who have their seat given away as outlined in the Initial Absence Policy section.

If you intend to drop the class please notify the instructor so that actions can be taken to fill the seat.

A sign-up sheet is provided for tracking those students who wish to add should seats become available. In the presence of empty seats students will be added with the following priority:

1. Students graduating this semester will be given the highest priority.
2. Regular students in the Computer Science or Computer Engineering department.
3. Regular Students NOT in Computer Science and "PBU" students.
4. Open University Students will be given the lowest priority and will not be considered until the third week of classes.

Procedures and requirements for dropping or withdrawing from the course are dependent on the academic calender. Students should consult with the Computer Science department personnel to determine the proper procedures for dropping the course if they wish to do so. It is easier and more economical to drop or withdraw from the class the earlier it is attempted.

Initial Absence Policy:

Students who miss the first **AND** second lecture of class without sufficient reason and prior notification to the instructor will have their seats given away if there are students waiting to add the class. Students who lose their seat will be asked to voluntarily drop the class; failure to drop the class will result in a grade of "F" or "U" being reported to the Office of Admission and Records at the end of the semester regardless of continued attendance or performance.

Academic Integrity:

Instances of plagiarism, copying, cheating or any other acts of academic dishonesty will not be tolerated. Soliciting others for assistance with academic dishonesty or facilitating the academic dishonesty of others are in themselves forms of academic dishonesty. Students who are found to have committed such will automatically receive a grade of "F" for the course and will also be prosecuted according to the disciplinary regulations as provided for in the Student Conduct Code. Rules, definitions and procedures concerning academic dishonesty are documented in the Course Catalog under the index heading "Academic Dishonesty". Do not test this policy; it is not worth it.

Disturbance Policy:
Disruptive or Threatening Behavior during Lecture will not be tolerated. This includes issues of harassment and hazing (which is a violation of the Student Conduct Code.) Anyone attempting to engage in such behavior will be removed from the classroom and may face further disciplinary action as provided for in the Student Conduct Code as stated in Section 41301 of Title 5 of the California Code of Regulations.

Examples of unacceptable conduct include, but are not limited to, the following:

- Inappropriate, disrespectful or uncivil responses to other students.
- Challenging the instructor's authority.
- Excessive talking.
- Use of personal electronic devices such as pagers or cell phones.
- Improper use of equipment, materials or resources.

The purpose of this University is to provide the highest quality of education possible. All measures will be taken to insure that you are provided with a safe environment that best promotes learning.

Auditing Policy:
In order to best serve the students enrolled in the class it is not permitted to audit the class.

Feedback:
It is very important to your instructor that you receive the highest quality teaching. If at any time you have suggestions as to how the course, subject, instructor or any other aspect of your experience this fall can be improved please let the instructor know by any means your wish.

Seeking Help:
If you find that you are having trouble succeeding in the coursework you should immediately seek help and assistance. Many resources are available and provided to you by the University. These include, but are not limited to:

- Office hours: These periods are provided for you so that you may seek individual help and clarification from the instructor. If you are having trouble and you aren't going to office hours you are missing out on a very useful resource.
- Other Students: You are not alone at this University. Other students may be able to help you and benefit from you by engaging in study sessions in the library, or at home. Colleagues are an excellent resource because of the shared perspectives and level of abilities. You may not collaborate on assignments or tests but you are encouraged to get together and discuss problematic conceptual areas or discuss sections and topics present in the book in order to increase your understanding of the material being presented in lecture and required for projects and exams.

- WebCT: Students can engage in persistent discussions through the use of the http://webteach.csun.edu/ message board. Please self register for the course titled "COMP282 Advanced Data Structures Wiegley" You are free to discuss topics on the discussion board but you may not provide significant code examples that would constitute academic dishonesty. If you aren't sure whether or not a code fragment would be permissible to post email the instructor to obtain approval before posting.
- Department Office and Chair. These individuals will know the best course of action for you to take in times of trouble. Especially if your trouble exceeds the scope of class material or are of a personal nature.
- If you are suffering from medical or health problems you should contact one of:
  - Student Health Center. Location: SHC Phone: 818.677.3493 or 818.677.3692(TDD)
  - Center on Disabilities. Location: SU 110 Phone: 818.677.2684
  - University Counseling Services Location: SU 520 Phone: 818.677.2366 or 818.677.7834(TDD)