Beginning and Intermediate System Administration

Tentative Syllabus

1 Course Information

CCN: CS98-15: 26229, CS198-15: 26231

Facilitators: Calvin Ardi, Jonathan Chu, and Joshua Kwan

Office Hours: `http://www.ocf.berkeley.edu/staff_hours`

Location and Time: 275 Soda, Wednesday 530-700pm

Website: `http://www.ocf.berkeley.edu/sysadmin-class`

Course Description: The course will cover the setup and administration of a production-quality web server. Topics include the Internet infrastructure, use of a Unix environment, database use and administration, security in a multi-user environment, and emerging web technologies.

Course Goals: After completing this course, students will be able to setup and secure their own web server from a minimal installation of a GNU/Linux installation. Students will also be able to coordinate and administer a multi-user web application environment.

Grading: This course will be graded on a Passed/Not Passed basis. For the purposes of this course, a Pass will be considered at least 60% correct. The final grade will be determined as follows: 50% project, 30% laboratories, and 20% homework.

To obtain a 'Pass' grade in this course, students **must complete** a final project, turn in *all* assigned homeworks, and submit laboratory reports for *all* assigned laboratories. Up to **3** laboratories and/or homeworks may be dropped; the final project may not be dropped. **Failure to complete the final project will result in an automatic NP!**

Laboratories and homework will be assigned during each course meeting and must be completed prior to the next course meeting.

Laboratory: Laboratories are in-class exercises done in a computer lab that are designed to help students familiarize themselves with all the material covered up to that week's lecture. This hands-on approach is one of the

most useful aspects of this class as it allows students to apply concepts and ideas learned from lectures and books as opposed to merely 'book-learning.' A laboratory write-up (answers to specific questions) is to be turned in for each corresponding laboratory.

Homework: Homeworks are assignments that allow students to apply problem-solving skills and go more in-depth into the material being covered by giving specific scenarios and problems that may arise during their setup and asking students how they would respond or what kind of actions they would take in response. Assigned on a weekly basis, the format will generally be multiple-choice, fill in the blank, or require paragraph-length responses.

Final Project: The finalized specifications for the final project is TBD, but previous projects done in prior semesters include: setting up and securing a multi-user web environment and looking for vulnerabilities on other students' project while protecting your own server, building and maintaining an Internet server and designing implementing different features and utilities not covered in class.

2 Tentative Schedule

Week	Topic (Beginning)	Topic (Intermediate)
1	Introduction to System Administration	
2	Introduction to UNIX	The Shell
3	UNIX Commands	The Filesystem
4	The Internet	Authorization
5	Server Daemons	Compiling Software
6	The Simplification of Week 5	Review
7	LAMP	Networking + Linux Kernel
8	Multi-User Environments	More Networking
9	Security	Mail
10	Special Topics	
11	Special Topics	