

CS-554: Operating Systems

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1 Times and Places

- Time: MWF 10:30-11:15
- Office hours will normally be MWF 12:30-2:15
Other times by appointment.

2 Texts and Other Resources

Required Text

Operating System Concepts, 7th edition, Silberschatx, Galvin, and Gagne, Wiley, ISBN 0-471-69466-5, 2005

Recommended Text

Linux Kernel Development, 2nd ed., Robert Love, Novell, ISBN 0-672-32720-1, 2005

C Programming Language (2nd Edition, ANSI C) Brian W. Kernighan, Dennis M. Ritchie. Prentice Hall PTR; ISBN: 0131103628;

Other Resources

Many online resources (Kennel hacker's guide etc.)
Linux Kernel Source Code

3 Course Objectives

There are three major objectives in this course. Upon completion of the course:

1. You should have an understanding of the basic operating systems concepts that are used in current operating systems (UNIX, Windows, ...).
2. You should have an understanding of the organization of the linux kernel and details of a few major parts of the kernel.
3. It should be verified that you have the ability to write your own C programs.

4 Course Overview

Most of the course text book will be covered. The instructor will highlight the prime concepts in lectures and provide details not included in the textbooks where needed. A schedule for your readings in the books and references will be provided as the course progresses. There will be time to ask questions on the readings, but it will be up to the student to ask questions as some of this material will not be covered in lectures.

You will be given: a group project related to hardware under linux. You will have several meetings with the instructor to present progress on your project over the term, which will be graded. At the end of the term you will give a final presentation to the instructor and turn in a cd with html, presenting your project results and all materials. Late submissions and submissions not on cd for the final report will not be accepted.

You will need access to a machine you can install a linux 2.6 kernel on and make changes to. There will be several non-group linux kernel related programming assignments.

It is assumed you are a competent C/C++ programmer, and know about UNIX program development. The books for cs224 may be of aid if you are weak in these areas. A programming standard will be provided and explained. Its use will be enforced.

5 Grading

Two exams, (16.66% each).

Assignments (about 5) (33.33% total).

Project: Midterm and Final evaluations (16.66% each)

Class participation (extra credit - if used).

The following grading scale will be used initially.

SCALE: A	100-90
BA	90-88
B	88-80
CB	80-78
C	78-70
DC	70-68
D	68-60

Please note that the kernel assignments will will require significant time to complete. Any student getting less than 25% on any single assignment will get an E for he class.

The final scale may be curved at the end of the course, if it appears warranted.

6 Details

Late Assignments

Late assignments will recieve a 50% deduction if turned in within a week of the due date. Normally, no credit for work that is more than one week late.

Early and Make-up Exams

No early or make-up exams will be given, unless there is a serious documented reason, which is beyond the student's control. Travel plans do not count as a serious reason. This includes the final exam.

Incompletes

Incompletes will only be given for causes as inducated in the Graduate and Undergraduate catalog (see them for details).

Academic Integrity

The Professional Concerns Committee of the Faculty Senate recommends that all faculty include the following paragraph in each syllabus.

You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate Catalog (pp. 268-269) and Graduate Catalog (pp. 26-27) Catalog that pertain to Academic Integrity. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Conduct. You will be given the opportunity to review the charge(s). If you believe you are not responsible, you will have the opportunity for a hearing. You should consult with me if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.

There will be some efforts expended to catch violations. The instructor will do everything in his power to see that a grade of E is assigned to all students involved in violations and that they are removed from the University. Do not ask for a second chance.