Instructor: John Reppy
            Hinds 033

TA: John Riehl
            Hinds 024A

Lectures: MWF 10:30-11:20
            Ry. 251

Office hours: TTh. 1:30-3:30 (Riehl; MacLab)

Mailing list: `cmsc23000@cs.uchicago.edu`
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Home page: `www.classes.cs.uchicago.edu/archive/2006/winter/23000-1`

Overview

This course aims to provide an introduction to the basic concepts and techniques used to implement operating systems. The course will involve both paper exercises and substantial programming projects. Students are expected to have taken CMSC15400 and have a working knowledge of the C programming language.

I expect to cover most of the topics from the first 13 chapters of the text. These include concurrent programming, processes, memory management, I/O systems, and file systems. If time permits, we may also discuss security and/or distributed systems. A preliminary syllabus can be found on the class web page.

A substantial part of the course work and grade are the two programming projects. The first is a small project that will introduce you to concurrent programming. The second project will involve implementing an operating system for a 16-bit embedded processor.

Texts

The main text for the course is

   Operating Systems Concepts (6th or 7th Edition)

by Silberschatz, Galvin, and Gagne
John Wiley and Sons, 2005

If your knowledge of C is uncertain, or if you are looking for a good C reference, you may want to acquire

C – A Reference Manual (5th Edition)
by Samuel P. Harbison and Guy L. Steele Jr.
Prentice Hall, 2002

These books are all available from the Seminary Co-op bookstore.

Assignments and Grading

There will be both written homework assignments and programming projects. In addition, there will be a midterm exam in class. Grades will be assigned based on roughly the following weights:

Homework	20%
Midterm exam	30%
Projects	50%

Paper copies of the assignments will be distributed in lecture and electronic copies will be made available for the course web page. Homework assignments should be handed in at the beginning of class the day they are due. Programming projects will be automatically collected from your gforge repository. In general, late homework and programming assignments will not be accepted, although valid excuses delivered before the assignment is due will be considered.

Academic Honesty[1]

The University of Chicago is a scholarly academic community. You need to both understand and internalize the ethics of our community. A good place to start is with the Cadet's Honor Code of the US Military Academy: "A Cadet will not lie, cheat, or steal, or tolerate those who do." It is important to understand that the notion of property that matters most to academics is ideas, and that to pass someone else's ideas off as your own is to lie, cheat, and steal.

The University has a formal policy on Academic Honesty, which is somewhat more verbose than West Point's. Even so, you should read and understand it.

We believe that student interactions are an important and useful means to mastery of the material. We recommend that you discuss the material in this class with other students, and that includes the homework assignments. So what is the boundary between acceptable collaboration and academic misconduct? First, while it is acceptable to *discuss* homework, it is not acceptable to turn in someone else's work as your own. When the time comes to write down your answer, you should write it down yourself from your own memory. Moreover, you should cite any material discussions, or written sources, for example,

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[1] In keeping with the spirit of this section, credit must be given to Stuart Kurtz for text.

The University's policy, for its relative length, says less than it should regarding the culpability of those who know of misconduct by others, but do not report it. An all too common case has been where one student has decided to "help" another student by giving them a copy of their assignment, only to have that other student copy it and turn it in. In such cases, we view both students as culpable and pursue disciplinary sanctions against both.

For the student collaborations, it can be a slippery slope that leads from sanctioned collaboration to outright misconduct. But for all the slipperyness, there is a clear line: present only your ideas as yours and attribute all others.

If you have *any* questions about what is or is not proper academic conduct, please ask your instructors.