



## Operating Systems

CS 502

## Topics

- ♦ Background
- ♦ Admin Stuff
- ♦ Motivation
- ♦ Objectives
- ♦ Operating Systems!



## Professor Background

- ♦ Dr. Mark Claypool (Professor, “Mark”)
- ♦ Systems guy
  - operating systems
  - distributed systems
  - collaborative systems
  - (multimedia performance)
- ♦ TRS-DOS, MS-DOS, Windows, Solaris
- ♦ *WindowsNT* and *Linux*



## Student Background

- ♦ Who are you?
  - Name, Major, Class
  - Undergrad degree in ...?
- ♦ Experience?
  - Programming (C, C++, Java)
- ♦ Operating Systems?
  - Unix
  - Windows
- ♦ Other
  - What do *you* want out of the course?



## Syllabus Stuff

- ♦ Online
  - <http://www.cs.wpi.edu/~claypool/courses/502-S00/>
- ♦ Office hours by appointment
- ♦ Email
- ♦ Text Book
  - Operating Systems Concepts. Fifth Edition, by A. Silberschatz and P.B. Galvin.
  - ♦ Was: Addison-Wesley, Mass, 1998.



## Course Breakdown

- ♦ Prerequisites
  - C programming (must)
  - Machine organization (recommended)
  - Unix (recommended), but other may be ok
- ♦ Grading
  - Exams
  - Projects
  - Homework
  - Attendance (kidding)



## Exams

- ♦ 2 exams
- ♦ Non-cumulative
- ♦ Closed
  - Closed-note
  - Closed-book
  - Closed-friend
  - Cheat-sheet?
- ♦ 25% of your grade, each



## Projects

- ♦ 4 projects
- ♦ Can be done in groups of 2
- ♦ Implementation *using* OS concepts
  - not *of*
- ♦ C, Unix
  - C++ Ok
  - Windows Ok
- ♦ 30% of grade
- ♦ Project 1 out today
  - turn in via email



## Homework

- ♦ 4 homework assignments
- ♦ Apply theory from class
- ♦ Prepare for exam
- ♦ 20% of grade



## Slides

- ♦ On the Web
- ♦ PPT and PDF
- ♦ Typically, after class but may have “Today’s Slides” or hard copies
  - Say, Wednesday afternoon
  - Will send email



## Why This Class?

- ♦ WPI CS requirements
  - “core course” for M.S. degree
- ♦ Combines CS concepts
  - algorithms, languages, data-structures, hardware
  - system design w/tradeoffs
- ♦ Better use of the computer
- ♦ Programming skills and systems concepts
  - Networks, Advanced Operating Systems
- ♦ Fun!



## Course Objectives

- ♦ Theory of Operating Systems
  - problem solving homework
- ♦ Implementation of systems issues
  - hands-on projects
- ♦ Latest OS concepts
  - Windows NT and Linux as examples
  - Supplementary research papers

