CS-333: Introduction to Operating Systems

Harry H. Porter III, Ph.D. Fall 2014

Class Webpage:

www.cs.pdx.edu/~harry/os

Course Organization

Office Hours: After class, 4PM-5PM

Textbook: "Modern Operating Systems (4th ed.)," Andrew Tanenbaum About 80 pages / week **Assignment:** Chapter 1 "Intro" **Chapter 2 "Processes and Threads"** Will cover chapters 1-6, plus...? **Class Web Page = Syllabus** www.cs.pdx.edu/~harry/os **Bookmark it, read it** Grader / TA... **Email mailing list: Mailman "PorterClassList2"** You must subscribe. **Attendance:** Required **Questions?** ASK!!!

Course Organization

Grading:

- **10%** Homeworks
- **25% Programming Projects**
- 15% Mid-Term Exam #1
- 15% Mid-Term Exam #2
- **30%** Final Exam
- 5% Attendance

Homeworks:

Every 2 weeks

Exams:

Closed book, closed notes Will cover reading and/or lectures **Programming Project**

The Blitz System

Lots of documentation Steep learning curve

Lots of Existing Code ... You'll modify and add functionality

Will implement an O.S. kernel

- Threads
- Processes, System Calls
- Virtual Memory, Paging
- File System

Our Goal: To execute a "shell" program!

Programming Project

May work together, cooperate, discuss You must write your own code! Do not copy code!

Discussion encouraged Mailing list

Projects will be approx. weekly

Each project will build on previous work *Must not fall behind!*

BLITZ Documentation Package

~241 Pages

 Purchase from Clean Copy \$25
On Broadway (between Mill and Montgomery)

• Or print it yourself

Download the PDF files More info on the webpage

The BLITZ System

<u>Project 1</u>: Get familiarity with BLITZ tools Due in 1 week

BLITZ Components:

- Computer architecture (similar to SPARC, ARM)
- Virtual Machine Emulator
- Debugger
- Assembler and Linker
- Compiler

KPL: A Kernel Programming Language

The "host" computer:

Option 1: PSU's System (Sun Solaris OS) Option 2: Macintosh OS X Option 3: Any Linux / Unix Option 4: Windows using "Cygwin"

- Unix Tools