CS533 Concepts of Operating Systems

Class 1

Course Overview
About the Instructor & TA

- Instructor - Jonathan Walpole
  - Professor at PSU
  - Research Interests: Scalable Concurrent Programming, Operating Systems, Parallel and Distributed Systems

- TA - no TA
Course Overview

- Based on ~30 research papers
  - Read them carefully!
  - Submit a written review of each paper BEFORE class!

- Class structure
  - Student presentations
  - Instructor-led discussion

- Course web page
  www.cs.pdx.edu/~walpole/class/cs533/winter2012/home.html
Topics

- Multi-threading and concurrency
- Event-based systems
- Message passing and RPC
- System structuring using layers
- Modular kernels and extensibility
- Virtualization and exo-kernels
- Concurrency on modern CPU architectures
Grade Structure

- Paper reviews - 20%
  - Email to me before class (walpole@cs.pdx.edu)
- Paper presentations - 30%
- Midterm exam - 20%
- Position paper - 10%
- Final exam - 20%
Paper Presentations

- Your paper assignments are posted on the web page
- Your presentations should last 20 minutes
- Emphasize key ideas, not irrelevant details
- Do the necessary background reading!
- Prepare a formal presentation with slides
- Send me a draft presentation in time for me to review it and give you feedback
- Make sure your presentation is of high quality!!!
Position Papers

- Short paper (<1500 words)
- Your chance to summarize
  - current OS research trends
  - future directions
- By the end of this class you should have a clear understanding of OS research directions and challenges
- I want to know what you think
  - ... not a straight summary of the papers we have studied
Before Class 2

- Visit the class web page
  www.cs.pdx.edu/~walpole/class/cs533/winter2012/home.html

- Find your first paper assignment
  - I will post them by Wednesday
  - Email me if there is a problem!

- Read class 1 papers and papers for class 2
  - I will present the papers for class 1 and 2

- Submit paper reviews as directed on the class web site
Entrance exam

- Are you in the right class?
- Write your name and email address on your paper
- Keep your answers concise!
- Clarify what you know, and what you don’t know
- Estimate you grade for each answer out of 10

- If you do not get a paper assignment (on the class web page) you did not pass the entrance exam
  - Take CS333 and come back to CS533 later!