CS533
Modeling and Performance Evaluation of Network and Computer Systems
Mark Claypool

Topics
• Background
• Admin Stuff
• Motivation
• Performance Evaluation!
  - (Introduction)

Professor Background (Who am I?)
• Dr. Mark Claypool (professor, "Mark")
  • Systems
  • CS502 Operating Systems
  • CS529 Multimedia Networking
• Research interests
  • Networks (QoS, congestion control...)
  • Multimedia (Repair, Perceived quality...)
  • Network games
  • Performance
• Research groups PEDS and CC

Syllabus Stuff
• http://www.cs.wpi.edu/~claypool/courses/533-S04/
• Office hours:
  - TBA (about 3 per week each)
  - See Web page
• Email:
  - claypool at cs.wpi.edu
  - cs533-ta at cs.wpi.edu
  - cs533-all at cs.wpi.edu

Text Books
• Required
• Other

Topics
• Measurement techniques
• Monitoring tools
• Statistical analysis
• Simulation
• Analytic models
• Queuing theory
• Benchmarks
• Performance evaluation problems
Course Structure

• Prerequisites
  - Analysis of Computations and Systems (CS504, recommended)
  - Analysis of Probabilistic Signals and Systems (EE502, recommended)
  - Interest in performance evaluation
  - No networking experience required
• Grading
  - Exams (50%)
  - Projects (50%)

Exams

• 2 exams
• 50% of grade
• Non-cumulative
• Closed-note
• Closed-paper
• Closed-friend
• One-page "crib-sheet" (handwritten)

Projects

• About 4 projects
• Individual
• Apply concepts taught in class
• Performance evaluation related
  - Provide insight not obvious before project
  - Most are real problems

Slides

• On the Web
• PPT and PDF
• Caution! Don't rely upon the slides alone!
  Use them as supplementary material
  - (come to class)
• See timeline, too

Why This Class?

• WPI CS requirements
  - (Course in Systems core area)
• Performance is the bottom line
  - Yes, the first line is just getting it to work,
    but that is intro CS
  - Better at school/job, if you do your own
    perf eval or read about others
• You cannot do experiments without
  performance evaluation
  - Experiments are science!
• Fun!