Intro to LAN/WAN

CS 513
Topics

- Background
- Admin Stuff
- Motivation
- Objectives
Professor Background

Dr. Emmanuel Agu (professor, “Emmanuel”)

Research areas
- Computer Graphics (rendering, mobile graphics, etc)
- wireless networking and mobile computing

Underlying themes:
- computer systems
- networks

Advise MQPs, MS and PhD theses
Student Background

- Name
- Class (grad student, BS/MS, part-time, etc …)
- Major (CS, EE, knitting socks, …)
- C experience (CS 2303, from job)
- Unix experience
- Operating Systems (CS 3013/502)?
- Other
Syllabus


- **Office hours:**
  - Mondays: 4:30-5:30
  - Note: Please use office hours or book appointments first

- **Important:** All questions on myWPI, share info

- **Email questions that concern only you**

- **Text Book:** Computer Networks by Tanenbaum
  - Good stuff so read, but will focus

- **Supplementary text:** TCP/IP Sockets in C: Practical Guide for Programmers, Michael J Donahoo and Kenneth Calvert Morgan Kaufmann Publishers 2001
Course Structure

◆ Grading
  – Exams: 2 exams, not cumulative (40%)
  – Projects: 3 programming projects (45%)
  – Homework: 3 homeworks (15%)

◆ Groupwork for projects, not for written homework

◆ Important: Choose partner, email me by 02/01/10

◆ Prerequisites
  – C programming (assumed)
  – Operating Systems (assumed)
  – Unix (recommended)
  – Probability?
Why This Class?

- **WPI requirements**
  - CS undergrads/masters: 1 of 8 or 11 courses to graduate?
  - Phds: One of 6 bins
  - Cross listed with ECE (ECE 506)

- **Networks are everywhere!**
  - Cable modem, ADSL, dial-up phone line, Internet, World Wide Web, wireless and software to join
  - Indeed, the network is the computer!

- **Fun!**
Course Objectives

- Understanding of Networks and Systems
- Motivation
- Hands-on programming of several network layers
  - C
  - Unix
The Nature of this Course

- Acronyms/definitions up the wazoo!! TCP/IP, LAN, WAN, 802.11, etc
- Lots of concepts covered quickly
- Some concepts easy to understand
- Some concepts really abstract/tough
- ECEs struggle with amount of programming
- **Exams:** not enough time to study, easy to forget some concepts
Class Format

- Class time: 2 hours, 50 minutes
- Broken down into:
  - 1 hr 15 minutes lecture
  - 15 minute break
  - 1 hr 15 minutes lecture