

CPSC 460/560

Computer Networks

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Course Overview

Audience

- ❑ MSCS students who take it as CPSC 560
 - Expected to have completed core course CPSC 545
- ❑ Undergraduate students who take it as CPSC 460
 - A grade of C or better in CPSC 341 Operating Systems & Networks
- ❑ All are expected to have background in
 - Multiprocessing and multithreading (Pthread) programming skills under Unix/Linux

Special Note for Undergraduate Students

- ❑ The Fasttrack MSCS program allows qualified students to obtain both bachelor and master degrees in five years
- ❑ It allows students to take two graduate courses (10 credits, 500-level electives) in their undergraduate years and count them towards both the undergraduate and the graduate degrees.
- ❑ Requires a minimum GPA of 3.2

Course Materials & Structure

- ❑ Will be posted on class website
 - <http://fac-staff.seattleu.edu/zhuy>
 - Lecture slides
 - Projects
 - Additional materials
 - Others
- ❑ What counts in this class?
 - Performance (Pop quizzes, Assignments, Projects, Exams)
 - Active participation in discussion
- ❑ 2 sessions per class, 10-15 minutes break

What I Expect You to Do ...

- ❑ Reading is very important
 - Pre- and post-class reading textbook and supplemental materials
 - Lectures do not cover full stories
- ❑ Active participation in class discussion
- ❑ Accomplish projects
- ❑ For students taking it as CPSC 560
 - Research paper reviews
 - Presentation

Other Notes

- ❑ Late HWs & Projects won't be accepted unless
 - You have a good excuse and
 - Have made arrangements with me in advance
- ❑ Class courtesy
 - Be on time
 - Turn off your mobile phones before coming to the classroom

Networking is everywhere!

- ❑ Internet, ad-hoc wireless networks, sensor networks
- ❑ Networking devices:
 - Computers, PDAs, i-pods, sensor nodes, others
- ❑ Networking services
 - Web, emails, P2P file sharing, VoIP, VOD, multimedia streaming ...
- ❑ Changing our lives in many ways!

What will be discussed in this class?

- ✓ This class **IS** about...
 - ✓ Principles and Concepts in Computer Networks
 - ✓ General-Purpose Computer Networks
 - ✓ Internet Perspective
 - ✓ Network Software and Programming
 - ✓ Understanding Network Design Principles
 - ✓ Application, Transport, Network, Link Layers
 - ✓ Special topics, e.g., data center networks and protocols, P2P networks, etc...

- ❑ This class **IS NOT** about...
 - Survey of protocol standards
 - Special Purpose Networks
 - OSI - TCP/IP Battle
 - Network Hardware Components
 - Queuing Theory
 - Physical layer (a little bit touch though)

Project machines

- ❑ Linux server: `cs1.seattleu.edu`
 - Requires your SeattleU account and password
 - Contact Renny Philipose
 - philipr@seattleu.edu
 - CC to me to request account creation if it has not created for you!
- ❑ A secondary Linux server:
`css2.seattleu.edu`
 - Used for network communication when necessary

Required reading for all!

- J.H. Saltzer, D.P. Reed and D.D. Clark, *End-to-End Arguments in System Design*, ACM Transactions on Computer Systems (TOCS), Volume 2, Issue 4, November 1984.