Course Goals

• Overview of the basics
• Principles and Philosophies
• Read research papers
• Hands-on experience with networked systems
Prerequisites

• Undergraduate level networking course
• Some systems programming
• Familiar with Linux environment
• Access to a Linux environment
Structure

• Lectures
• Paper discussions
• Homeworks
• Projects
• Exams
• Class participation
Homeworks

• Three homeworks
• Concepts
• Calculations
• Some hands-on work
• Allowed to discuss with other students, but you should turn in your own writeup
Projects

• Two projects
• Build a networked system

• Possible to propose your own project
  – Talk to the instructor before P2 is out
Exams

• No final exam!
• The second exam will cover topics not covered by the first exam
• You can bring one sheet of notes
• In-class scheduling
  – Conflicts should be reported by this week
Grades

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- It is possible to get a C or lower grades
- No incompletes
Readings

• No required textbook
• Recommended texts
  – Computer Networks: A Systems Approach
  – UNIX Network Programming
• Research papers
• Standards
• Wikipedia
Academic Honesty

• The work you turn in should be yours

• Acknowledge
  – Group discussions
  – Internet sources

• Plagarism results in an F
Course Staff

- Instructor: Omprakash Gnawali
- TA: Md. Tarikul Islam

- Office Hours: MW4-5pm at PGH 531 for now
- TA Office Hours: F 10-12, T4-5pm
Communication

• Send questions and answers to the discussion site

• Blackboard

• Contact TA before contacting the instructor

• Personal emails MUST have COSC6377 (one word) in the subject.
Internet

• What is Internet?
• How did it start?
• How do we use it?
• Where is it going?
Inter-net

- Network of Networks
- Covers the whole world

From: http://www.telepresenceoptions.com/2008/04/att_first_service_provider_to/

http://www.chrisharrison.net
Connecting the Networks

- Cables
- Even under the sea

http://www.cablemap.info/
A Brief History

- Packet switching technology
- ARPANET and other research projects
- Commercial Internet by the early 90’s
- Core networks still owned by a handful of companies

Reference
How do we use it?

• Emails/Facebook
• Phone calls
• Government services
• Connect systems and services
Where is it going?

- More inter-connection
- Internet of Things / Web of things
- More mobile and wireless
- More networked applications
Internet and Us

http://earthobservatory.nasa.gov/Features/Lights/

http://www.chrisharrison.net

http://www.chrisharrison.net