# Introduction to Computer Networks

CIS432/532
CRN: 11670/11683
Fall 2017
***http://www.cs.uoregon.edu/classes/17F/cis432***



# Admin Information

- Instructor: Reza Rejaie
  - Email: reza@cs.uoregon.edu
  - Office: Deschutes 328
  - Office Hour: Wed 2-3:30p (and anytime I am in my office and not having a meeting)
- GTF: Soheil Jamshidi
  - Email: jamshidi@cs.uoregon.edu
  - Office: Deschutes 331
  - Office hours: Tue noon-2p, Wed 2-3p
- email lists: 432list, 532list@cs.uoreogn.edu
- All announcements are sent to these email lists and then posted in class web page.
  - Using your email address on duckweb

# Why you should take this course?

- This introductory course covers:
  - Principles of computer networks
  - Network protocol stack
  - How to design & evaluate network protocol
- This course teaches you a valuable set of skills/concepts that helps you
  - perform network programming or design network protocols (find a good job!)
  - participate in networking research (go to a good graduate program!)



# Pre-req & textbook

- Prerequisites:
  - CIS313 (intro to data structure),
  - CIS315 (intro to algorithm),
  - CIS415 (OS),
  - Basic probability concepts
- Textbook: *Computer Networking: A Top-Down Approach Featuring the Internet*, by James F. Kurose and Keith W. Ross, Addison Wesley, 7th Ed.
  - Is it useful to put a copy of the book on reserve at the library?
  - Some copies of the earlier editions to borrow from me!
  - You should deal with minor differences between different editions.

# Grading

- Undergraduate
  - Midterm 25%
  - 2 Programs 50%
  - Final 25%
- Graduate
  - Midterm 20%
  - 2 Programs 50%
  - Final 20%
  - Paper Revs 10%

- Increased the points for programming projects
- We might have a couple of in-class quizzes.
- There might be ***minor*** extra credits in hw and progs.
- Grades in each components are posted on Canvas.
- 4 homeworks are assigned and the solutions are given on due date. There is no need to turn them in.



# Lectures & Exams

- Class schedule on the web site shows the covered topics in each class
  - Examine the workload!
  - If you have any problem with the exam times, let me know ASAP.
- Lecture notes are posted online after each chapter
- Class participation is required!!
- Lectures are interactive, Please ask questions!
- Exams are closed-book but you can bring a sheet of notes
  - You don't need to memorize anything
  - You need to learn the main concepts & how to apply them
- Exams test your ability to apply learned concepts in the context of a particular problem.
  - HWs provide exam-level questions to help you prepare (make sure to spend time on your HWs)

# Programming Assignments

- Substantial part of the course
  - Requires a significant fraction of your time
- Focus on socket programming & protocol design
- Undergrads can work on program assignments in group of 2, grads should work individually
- ***Programs must be written in C/C++ or Java***,
  - Your program should compile and run on department's server (ix-dev).
- Instructor or GTF can not spend time on material that is not related in computer networks (i.e. debugging your code, basic programming questions, makefile, etc).



# Extra components for grad students

- Six classic papers to read and submit technical reviews
  - Trains you in reading/reviewing research papers
  - Covers basic topics & serves as an intro to cis632
  - Reviews should be submitted online before the specified deadline

# Issues to Consider

- This course has a ***heavy load.*** Please adjust your overall workload accordingly
  - See the posted class schedule for more details and timing conflicts
- Lots of material to cover => class has a ***fast pace***
  - If you fall behind, it might be hard to catch up
  - Extending submission deadlines is not really helpful
- Helpful suggestions:
  - Read the relevant chapters of the text book as we cover them.
  - ***Start early*** and allocate plenty of time to hw & especially programming assignments.
  - Actively follow and ***participate*** in class discussion.
  - ***Ask questions*** as often as you need in class & during office hours. I may defer some questions to after class.



# Final Remarks

- This class requires lots of work, but it could/should be lots of fun as well because
  - It has informal class discussions
  - You learn lots of exciting skills/concepts that can apply them in practice, e.g. implement a web server
  - What you learn, would help you in your upcoming job interview, or research project
- The time you ***invest in reading and coding*** in this class is a valuable, long-term investment!!
- We invite the best u/grad students in class to join our research group in Winter term.
- If you have ***any suggestion*** that helps you better learn the material (perform better in this class), let me know any time throughout the term!

- The goal is to allow all interested seniors to take this class
- If you are not a senior, you may want to delay this class (after taking cis415)
- If you have not registered yet, please see me after class!
- Questions?