

First Day Admin

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<http://www.cs.odu.edu/~mweigle/CS455-S13/>

Intro to Networks and Communications First Things First...

- ▶ Weigle
 - ▶ pronounced "Why-gull"
- ▶ CS 455/555 - split undergrad/grad course
 - ▶ grad students will have more homework problems, harder exam questions, and a different final assignment

Intro to Networks and Communications

First Things First...

▶ Course website

- ▶ <http://www.cs.odu.edu/~mweigle/CS455-S13>
- ▶ syllabus
- ▶ announcements, clarifications, FAQs posted
 - ▶ check website before emailing me a question
- ▶ lecture notes and assignments will be posted on the schedule page before class
 - ▶ read lecture notes before class
 - ▶ bring lecture notes to class and take additional notes
 - save a tree - print double-sided!

Intro to Networks and Communications

First Things First...

▶ Blackboard

- ▶ posting grades
- ▶ possibly used for submitting assignments (instructions will come with first assignment)

▶ Email

- ▶ sign up for the class mailing list *today!*
 - ▶ <http://list.odu.edu/mailman/listinfo/cs455-mcw>
 - ▶ use an email address that you check every day

▶ Unix Computer Account

- ▶ you must have a CS department Unix account
- ▶ create one online - <https://sysweb.cs.odu.edu/online/index.php>

Intro to Networks and Communications

So, what things will we learn?

- ▶ How does the web work?
 - ▶ How does a client find a random web server?
 - ▶ How does a request make its way from a web browser to a web server and how does the reply makes it back?
 - ▶ How is it that all data transmitted arrives intact and in order?
 - ▶ How insecure is the connection and how secure is a secure connection?
- ▶ Why do we get the level of performance that we do?
 - ▶ How do the millions of web requests and responses that transit the ODU campus network every second share the capacity of the network?
 - ▶ Can one control or even improve the performance of their network connections?

What is this course about?

The Internet food chain of technology

- ▶ Application-level protocols
 - ▶ HTTP, FTP, SMTP (e-mail), and the Domain Name System (DNS)
- ▶ Socket programming and client/server computing
- ▶ Transport protocols TCP and UDP
- ▶ Congestion control principles and algorithms
- ▶ The Internet Protocol IP and Internet routing architecture and algorithms

Administrivia

Prerequisites

- ▶ CS 270 - Computer Architecture
- ▶ STAT 330U - Intro to Probability and Stats
- ▶ Good knowledge of Java or Python
 - ▶ or enough confidence in your programming skills to be able to learn Java or Python
 - ▶ we'll mainly be using simple constructs
- ▶ Program function/operation will be described using UNIX terminology
 - ▶ You should be comfortable with the UNIX file system, file I/O, I/O redirection, basic UNIX program development
 - ▶ Example:

```
% java prog1 < testScripts/foo > ../bar &
```

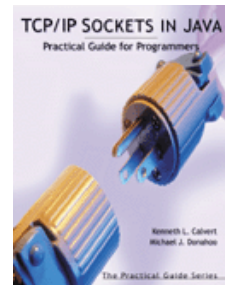
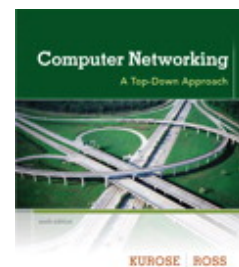
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Textbook

- ▶ Required
 - ▶ Computer Networking: A Top-Down Approach Featuring the Internet
 - ▶ 6th edition, by James F. Kurose and Keith W. Ross, Addison Wesley, 2009
 - ▶ 4th or 5th editions also acceptable
- ▶ Potentially Useful
 - ▶ TCP/IP Sockets in Java
 - ▶ by Donahoo and Calvert



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Honor Code

- ▶ All assignments, unless explicitly specified, are to be completed on your own
- ▶ All students are responsible for knowing the rules
- ▶ Any evidence of cheating or plagiarism will result in a 0 grade for the assignment/exam, and the incident will be submitted to the department for further review
 - ▶ guilty finding could result in notation on your transcript

Administrivia

Honor Code

- ▶ No sharing of code is allowed. This includes discussion about the design of a programming assignment solution.
- ▶ Tips to avoid cheating (even inadvertently)
 - ▶ Don't start at the last minute
 - ▶ Don't sit next to each other in the lab and talk about the assignment while you're working on it
 - ▶ Ask the instructor if you're stuck
 - ▶ which means that you can't start at the last minute...
 - ▶ Late policy: 5% per day
 - ▶ I'd rather you turn in something late than cheat

Honor Code

What is Cheating/Plagiarism?

- ▶ Turning in another student's work
- ▶ Especially for the final paper:
 - ▶ Copying material from a source text without proper acknowledgment
 - ▶ Copying material from a source text, supplying proper acknowledgment, but leaving out quotation marks
 - ▶ Paraphrasing material from a source text without appropriate acknowledgement or authorization
 - ▶ "In your own words" means that the text should be your own and not a paraphrase of others' work

When in doubt, ask!

Plagiarism

The Only Two Rules You Need to Know

- ▶ First: If anything except turning off your computer happens after you have highlighted text and pressed "Control-C" then you are plagiarizing.
 - ▶ unless you put that text in quotation marks
 - ▶ this should only be rarely used
- ▶ Second: If you find yourself trying to paraphrase someone else's words to avoid plagiarizing then you are plagiarizing.
 - ▶ unless you include a citation at the end of the sentence
 - ▶ this should not be done for entire paragraphs

<http://gentlemansc.blogspot.com/2011/08/more-you-know.html>

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Grading

- ▶ Programming Assignments (~5) 20%
- ▶ Written Homework Assignments (~4-5) 20%
- ▶ Mid-Term Exam 20%
- ▶ Final Exam 25%
- ▶ Undergrad Paper / Grad Presentation 10%
 - ▶ more details will come later in the semester
- ▶ Participation / Quizzes 5%
 - ▶ some quizzes may be unannounced

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Assignments

- ▶ Written homework (anything where a hard copy is submitted) is due at the start of class on the due date
 - ▶ Anything handed in after I start lecturing is considered late (don't be late for class!)
- ▶ Electronically submitted projects are due before midnight on the due date
 - ▶ Unexcused absences on a project due date will count against your participation grade
 - ▶ Don't skip class to finish your assignment!
- ▶ Penalty:
 - ▶ 0-24 hours late: -5%
 - ▶ 25-48 hours late: -10%
 - ▶ over 48 hours late: not accepted, grade = 0
 - ▶ weekends count

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Attendance

- ▶ Arrive on time to class
 - ▶ your grade will be affected if you are consistently tardy
- ▶ If you are absent, first check the course webpage for missed notes and/or assignments
 - ▶ Don't come ask me, “Did I miss anything important?”
 - ▶ The answer is “Yes!”

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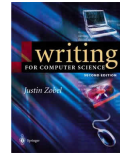
Policies

- ▶ Turn off cell phones before coming to class
- ▶ Make-up work is only given with a written medical or university excuse
- ▶ No individual extra credit work is given

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Seeking Writing Help

- ▶ Buy two inexpensive books
 - ▶ *Writing for Computer Science* by Justin Zobel
 - ▶ *The Elements of Style* by Strunk and White



- ▶ Look at online information from ODU's Writing Tutorial Services
 - ▶ <http://al.odu.edu/wts/students/>
- ▶ Contact ODU's Graduate Writing Assistance Program
 - ▶ <http://al.odu.edu/gwap>



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Seeking Help

- ▶ Ask questions in class!
- ▶ Check the course website
 - ▶ FAQs, lecture notes, assignments, useful links
- ▶ Come to office hours
 - ▶ Mon 1:30-3pm, Thurs 9:30-10:45am in E&CS 3214
 - ▶ if you can't make office hours, send me an email to setup another time
- ▶ Send email
 - ▶ but only for short, clarifying questions
 - ▶ don't depend on an immediate answer
 - ▶ include the phrase "CS 455" or "CS 555" in your subject line

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How to do well in this course

- ▶ Attend class regularly
 - ▶ Ask questions!
 - ▶ Exercise your understanding of course material on a daily basis
- ▶ Rigorously test your programs before submitting them
 - ▶ Think of pathological test cases – I certainly will
- ▶ Read over lecture notes before class
 - ▶ Take more notes during class
- ▶ Study the homework and in-class "thought" problems
 - ▶ Don't just "do" the homework
- ▶ Take (and study your) notes!

How To Do Well

Last Things

- ▶ Coding on Unix machines
 - ▶ easiest to use XWin (displays Unix windows on your PC) and an editor like emacs
- ▶ Note the "Links" listed on the course webpage
 - ▶ especially Unix, Java, Python, emacs tutorials
 - ▶ don't ask me questions that you can quickly find the answers to yourself (i.e., don't ask me to be Google for you)
 - ▶ example: How do I use the indexOf method in the String class?
- ▶ Get started early!

Program 1

- ▶ Assigned: today
- ▶ Due: next Tuesday
 - ▶ start early!
 - ▶ if you have trouble completing this, or it takes you more than 2 hours, please see me during office hours this week (so, start early!)
- ▶ Write a Java or Python program to handle command-line arguments and do some simple String processing
- ▶ Details on course webpage
 - ▶ Schedule > *Today's date* > Assignment

Introductions

- ▶ About Me
 - ▶ I'm from Louisiana
 - ▶ so, I'm a huge Saints, LSU, and college football fan



- ▶ I got my PhD from UNC
 - ▶ I'm a pretty big Tarheel fan, too



- ▶ My research interests are networking, web science, and info vis

Introductions

▶ Your Turn!

- ▶ Name
- ▶ Home town/state/country
- ▶ undergrad/grad
- ▶ Why you're taking this course
- ▶ Something interesting about yourself