

CS 312: INTERNET CONCEPTS

Fall 2009

TR 11:00 am - 12:15 pm

Mills Godwin Life Science Building (MGB) 129

<http://www.cs.odu.edu/~mweigle/CS312-F09>

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Course Overview

An in-depth introduction to the Internet and the World Wide Web for CS or similar majors as a basis for more advanced studies in Web programming, Internet tools, and Web document publishing including HTML and Cascading Style Sheets, Internet design and communication protocols including: TCP/IP, FTP, HTTP, SMTP, telnet and the tools that use them. Internet search tools and their design will be studied. Internet issues such as netiquette, copyright, spam, computer viruses, cookies, security, and future of the Internet will be addressed. (From *ODU Course Catalog*)

Prerequisites

The main prerequisite for this course is CS 252 – Introduction to Unix for Programmers, so I expect you to be familiar with common Unix commands. If you need a refresher, there is a link to the CS 252 webpage from our course webpage (under ‘Useful Links’).

You will also need a CS Unix account. If you do not have one, please let me know as soon as possible.

Course Materials

The official textbook for this course:

CS 312 Internet Concepts.

This is a special edition textbook. It contains the first two chapters of *Computer Networking: A Top-Down Approach* by Kurose and Ross.

Much of the course material will come from online resources as well.

Course Objectives

By the end of the semester, you should be able to complete the following tasks, among others:

- Describe the causes of Internet delay and loss.
- Use networking tools such as `ping` and `traceroute` to investigate a network.
- Explain what happens on the network when you click a link on a web page.
- Explain how an email message you send to a friend is sent and delivered.
- Avoid spam or phishing email traps.
- Explain the difference between a blog and a wiki.
- Create and maintain a website, customized with CSS, JavaScript, XML, and AJAX technologies.

Course Outline

The course will cover the following topics (subject to change):

Computer Networks and the Internet

- Basic networking terms
- Delay and loss in the Internet
- Protocol layers

Application-level Protocols

- HTTP
- Email (SMTP)
- FTP

Applications

- Email spam and netiquette
- Blogs and wikis
- Internet search

Creating Online Content

- HTML
- CSS
- JavaScript
- PHP/Ajax
- Google Maps API

Academic Integrity

By attending Old Dominion University you have accepted the responsibility to abide by the honor code. If you are uncertain about how the honor code applies to any course activity, you should request clarification from the instructor. The honor code is as follows:

"I pledge to support the honor system of Old Dominion University. I will refrain from any form of academic dishonesty or deception, such as cheating or plagiarism. I am aware that as a member of the academic community, it is my responsibility to turn in all suspected violators of the honor system. I will report to Honor Council hearings if summoned."

Any evidence of cheating will result in a 0 grade for the assignment/exam, and the incident will be submitted to the department for further review. Evidence of cheating may include a student being unable to satisfactorily answer questions asked by the instructor about a submitted solution. Cheating includes not only receiving unauthorized assistance, but also giving unauthorized assistance. For class files kept in Unix space, students are expected to use Unix file permission protections (`chmod`) to keep other students from accessing the files. Failure to adequately protect files may result in a student being held responsible for giving unauthorized assistance, even if not directly aware of it.

Submitting anything that is not your own work without proper attribution (giving credit to the original author) is plagiarism and is considered to be an honor code violation. It is *not acceptable* to copy written work from any other source (including other students), unless explicitly allowed in the assignment statement. In cases where using resources such as the Internet is allowed, proper attribution must be given.

Students may still provide legitimate assistance to one another. You are encouraged to form study groups to discuss course topics. *Students should avoid discussions of solutions to ongoing assignments and should not, under any circumstances, show or share code solutions for an ongoing assignment.*

Please see the ODU Honor Council's webpage at <http://orgs.odu.edu/hc/> for other concrete examples of what constitutes cheating, plagiarism, and unauthorized collaboration. *All students are responsible for knowing the rules.* If you are unclear about whether a certain activity is allowed or not, please contact the instructor.

Grading

Your grade in this class will be based on the following:¹

- **8 Project Assignments** **40%**
These are to be completed individually and are due at the beginning of class on the due date.
- **3 Written Homework Assignments** **15%**
These are to be completed individually. They are due at the beginning of class on the due date.
- **Mid-Term Exam** **20%**
The exam questions will be similar in style and complexity to the written homework assignments and in-class exercises.
- **Participation / Quizzes** **5%**
May include unannounced quizzes.
- **Final Exam** **20%**
Our final exam is scheduled for Thursday, December 17 at 12:30pm. The final will cover topics from the entire semester.

Grading Scale

There will be no ‘-’ grades given. The grading scale is as follows:

90-100	A	70-76	C
87-89	B+	67-69	D+
80-86	B	60-66	D
77-79	C+	0-59	F

Course Conduct

Attendance

I expect you to attend class and to arrive *on time*. If you have to miss a class, you are responsible checking the course website to find any assignments or notes you may have missed. Students may leave after 15 minutes if the instructor or a guest lecturer does not arrive in that time.

Late Assignment Policy

Any assignment submitted after its deadline is considered late. Assignments that are submitted within 24 hours after the original deadline are considered to be “one day late,” within 48 hours “two days late,” *etc.* Weekends count just like weekdays in determining the number of days late.

Five percent (5%) of the assignment’s total value will be deducted for each day an assignment is late, as long as solutions to the assignment have not been provided to the class. After a solution to an assignment has been distributed or the solutions have been discussed in class, no credit will be awarded for a late assignment. The maximum number of late days per assignment is 3, after that no credit will be awarded for a late assignment.

Email

Students should activate their Old Dominion e-mail accounts and check them every day. If a student chooses to have his/her messages forwarded to another account, it is the student's responsibility to take the necessary steps to have them forwarded.

¹ The percentages listed are only approximate and are subject to change (by no more than 10%).

Classroom Conduct

Please be respectful of your classmates and instructor by minimizing distractions during class. *Cell phones should be turned off during class.*

Make-ups

Make-ups for graded activities are possible *only* with a valid *written* medical or university excuse. It is the student's responsibility to give the instructor the *written* excuse and to arrange for any makeup work to be done. A makeup exam may be different (and possibly more difficult) than the regularly scheduled exam.

Disability Services

In compliance with PL94-142 and more recent federal legislation affirming the rights of disabled individuals, provisions will be made for students with special needs on an individual basis. The student must have been identified, as "special needs" by the university and an appropriate letter must be provided to the course instructor. Provisions will be made based upon written guidelines from the University's Special Needs Students Resource Office. All students are expected to fulfill all course requirements.

Seeking Help

The course website should be your first reference for questions about the class. The schedule will be updated throughout the semester with links to lecture notes and assignments. Announcements and frequently asked questions (FAQ) will also be posted to the course website.

The best way to get help on assignments and in understanding lectures is to come to office hours. If you cannot make office hours, please send an email to setup an appointment. *Unfortunately, I am not able to take "walk-in" questions outside of office hours.*

I am available via email, but do not expect or rely on an immediate response.

Since this course will include several projects, here's a word of advice – ***start working on assignments early!*** *An hour spent reading and understanding an assignment on the day it is given out will be worth many hours on the night before it is due.*