CS 312 Internet Concepts

DESCRIPTION

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. Topics include: historical and current development of the Internet Web document publishing, Internet design, communication, and application protocols and the tools that use them. Internet search tools and their design. Internet issues such as netiquette, copyright, spam, computer viruses, cookies, security, and future of the Internet. (From ODU Course Catalog) This course is preparation for CS 418 (Web Programming) and CS 455 (Intro to Networking). During the semester we will cover topics related to both of these courses. Note that a grade of 'C' or better in CS 312 is a prerequisite for CS 418 and CS 419 (Internet Databases).

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.
- Describe how Google orders Internet search results.
- Create and maintain a website, customized with CSS, JavaScript, XML, PHP, and AJAX technologies.

Requirements

Prerequisites

The main prerequisite for this course is CS 252 (Intro to UNIX for Programmers), so I expect you to be familiar with common UNIX commands. If you need a refresher, see the CS 252 webpage. This course requires programming in the UNIX environment. So, you will need a CS UNIX account. If you do not have one, use the Account Creation Page to create one as soon as possible.

Academic Integrity / Honor Code

Please refer to the statement on academic integrity given below.

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 if 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."

In particular, 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 source code or 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.

Any evidence of an honor code violation (cheating) will result in a 0 grade for the assignment/exam, and the incident will be submitted to the Department of Computer Science 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.

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. For group assignments, one group may not share code or solutions with another group.

Please see the ODU Honor Council’s webpage 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.

Course Policies
Grading

Your grade in this class will be based on the following: (Note that these percentages are only approximate and are subject to change, but by no more than 10%.)

Programming Assignments

These are to be completed individually unless otherwise specified and are due before midnight on the due date.

Written Homework Assignments

These are to be completed individually and are due at the beginning of class on the due date.

Mid-Term Exam

The exam questions will be similar in style and complexity to the written homework assignments and in-class exercises.

Participation / Quizzes

May include unannounced quizzes.

Final Exam

Our final exam is scheduled for Saturday, Dec 10, 2011 at 3:45-6:45pm in our regular classroom. The final will cover topics from the entire semester.

The grading scale is as follows:

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<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90-100</td>
<td>A</td>
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<tr>
<td>87-89</td>
<td>B+</td>
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<tr>
<td>80-86</td>
<td>B</td>
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<td>70-76</td>
<td>C</td>
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<tr>
<td>67-69</td>
<td>D+</td>
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<tr>
<td>60-66</td>
<td>D</td>
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Late Assignments
Any assignment submitted after its deadline is considered late. The following penalties for late assignments apply:
- 0-24 hours late: -5%
- 25-48 hours late: -10%
- over 48 hours late: not accepted, grade = 0
This time limit includes weekends -- they are counted just like weekdays.
I reserve the right to specify that late submissions will not be accepted for particular assignments.

Attendance
I expect you to attend class and to arrive on time. Your grade may be affected if you are consistently tardy.
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.

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.
I will use blackboard to send out important updates to your ODU email address. (assignment deadline changes, class cancellations, office hours cancellations, etc.)

Classroom Conduct
Please be respectful of your classmates and instructor by minimizing distractions during class. Cell phones must be turned off during class.

Make-up Work
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. Provision will be made based upon written guidelines from the University's Office of Educational Accessibility. All students are expected to fulfill all course requirements.

Seeking Help
Announcements, lecture notes, power point slides and assignments will be posted in blackboard and/or on the course website.

Office Hours
The best way to get help on assignments and in understanding lectures is to come to class, ASK QUESTIONS, if you still have questions, your peers are the next best thing, of least value is office hours. Office hours are minimally effective, they are one to one instead of one to many. First, if there are situations that fall outside of course content such as illness or family issues, these can be discussed in office hours. Let us make it clear what office hours are not for:

1. they are not an opportunity for me to repeat everything I just said in class
2. they are not a chance for me to do your homework
3. they are not private tutoring sessions

If you have tried all other avenues to understand the material, then you must write ONE question on one side of a 3x5 card, this is your office hour’s ticket. I will keep the ticket for future reference. On the back list all the ways you have tried to understand the question. This has two motivations 1) it forces you to be concise and actually try to understand the material, and 2) it prevents “question creep”, e.g. I will not answer any question that is not specifically listed on your card. Unfortunately, I am not able to take walk-in questions outside of office hours.

Do not expect or rely on an immediate response to questions by email, I personally have religious issues with the concept of email, so again, the best way to get your questions answered is to attend class, you should make friends with a couple of your peers in situations where you cannot attend.

Since this course will include several projects, 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.

LEARNING OBJECTIVES
REQUIRED MATERIALS