CISC-103: Web Applications using Computer Science

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Prerequisites: None

COURSE DESCRIPTION
This course teaches basic Web Applications using computer science. In this course you will learn basic computer science principles through the use of xhtml and CSS and by programming in scripting languages (e.g., JavaScript).

COURSE OBJECTIVES:
By the end of course, you should be able to do all of the following.

- Create simple web pages by hand editing XHTML, CSS and JavaScript files.
- Identify the syntax and semantics of the most important XHTML elements.
- Explain the difference between HTML and XHTML.
- Explain various aspects of validation of web documents, including:
  - the purpose of a DOCTYPE declaration is at the beginning of an HTML/XHTML file
  - the benefits of writing "valid" HTML/XHTML
  - identifying and avoiding those common validation errors in sample HTML/XHTML code
- Use various syntax features of the CSS language.
- Explain the benefits/drawbacks of using CSS in the following ways:
  - internal style sheets
  - external style sheets
- Explain the difference between static and dynamic web pages.
- Explain the difference between client-side and server side dynamic content, and demonstrate this understanding by writing example code for each, including:
  - an example of JavaScript code to demonstrate client-side dynamic content (JavaScript will be a major course topic)
  - an example of PHP to demonstrate server-side dynamic content. (PHP will be a minor course topic.)
- Demonstrate an understanding of basic programming skills in JavaScript, including:
  - writing functions
  - using variables
  - using control structures including if/else, while loops, and for loops.
- Demonstrate an understanding of three ways of including JavaScript in a web page, namely (1) inline event handlers (2) internal script elements, (3) external script files.
• Demonstrate an understanding of the concept of scope in JavaScript, including differentiating between local and global variables.
• Differentiate between formal and actual parameters
• Distinguish between scalar and array values, and between array values and array indices.
• Distinguish between a web client and a web server
• Demonstrate why and how to include comments in XHTML, CSS and JavaScript code.
• Explain what the Document Object Model is in JavaScript, and demonstrate a basic understanding of DOM relationships such as parent and child elements through JavaScript code.

TEXTBOOKS AND EQUIPMENT NEEDED:

• Elisabeth Freeman and Eric Freeman: *Head First HTML with CSS and XHTML 1st Edition*
• Jim Keogh: *JavaScript DeMYSTiFieD, 1st Edition*
• A jump/flash memory drive. You must have the memory drive for the first lab. The flash memory drive is for you to save your lab work, should you not be able to complete it during the scheduled lab time.

ATTENDANCE POLICY:

• Attendance in lecture, though not taken, is expected. You are responsible for anything taught or announced in lecture and if you choose not to come, it is your job to find out what is going on without extra help from me. This includes class notes!
• Lab attendance is required. Attendance will be taken. If you do not attend lab and you run into trouble, do not expect the TA or me to put ourselves out to help you.

EMAIL:

Email is the only consistent method of communication I have with the entire class. It is imperative that you know that you are receiving mail from the class list. Anything mailed at least 24 hours prior is considered your responsibility to know. It may be very helpful to check email before, during or after any unusual event (i.e. power outages, snow, tests, holidays) Check the UD Homepage for any University wide cancellations.

CLASS RULES:

1. If you don’t attend class, don’t expect to pass this course
2. Your final grade cannot be more than one letter grader higher than your exam average. This reflects your mastery of the basic concepts of the course.
3. All labs must be removed from University computers when you leave lab or you will lose 25% off your lab.
4. Any lab placed in my mailbox will not be turned over to your TA and you will receive a 0. Either give labs to your TA or place them in your TA’s mailbox.
5. All paper assignments MUST BE STAPLED or they won’t be graded.
6. All emailed assignments must include your name or they won’t be graded.
GRADING:

Total Points/Grade        Summary of points (See grade sheet at the end for detail)

>=93  --  A        Exam 1                        15%
>=90  --  A-       Exam 2                        15%
>=87  --  B+       Final Exam                   20%
>=83  --  B        Labs, homeworks, and Quizzes  50%
>=80  --  B-       
>=77  --  C+       
>=73  --  C        
>=70  --  C-       
>=67  --  D+       
>=63  --  D        
>=60  --  D-       

LABS:

Learn your Section number and the name and email address of your TA!

Labs meet at the scheduled days/times and locations. In most cases, you will need to complete the lab assignments outside of class time; you may either come in and use a free machine in Smith or use another PC lab on campus that has compatible software. Most of the computer labs allow you to call in by phone and reserve a PC for a 2-hour period.

Lab assignments:

Each week you will begin a new lab. This lab will be due at the beginning of lab session the following week. If you cannot make it to the lab session, you can turn the lab in to the TA’s mailbox prior to the lab session. If you turn it in after the lab session, it will be considered late.

If you cannot turn the lab in on time, you are allowed to put it into the TA’s mailbox by the beginning of the lecture that immediately follows the lab’s due date, but 50% will be deducted. The lab will not be accepted any later. Penalties are based on when the assignment is TURNED IN, not when it was run on the computer.

IMPORTANT - PLEASE KEEP YOUR RETURNED GRADED LABS WITH YOU UNTIL THE END OF THE SEMESTER AS A PROOF IN CASE YOUR LAB SCORES HAVE BEEN INCORRECTLY RECORDED. Lab attendance is REQUIRED!

A place is reserved for you during lab time. It is the only time you can be GUARANTEED access to a machine, the lab materials, the software and the Teaching Assistant (TA). To receive full credit for attendance, you must attend the lab session until you have COMPLETED the lab being worked on that day, NOT the one that is due. If you leave early without turning in that day’s lab, it will be considered an absence.

Keep your TA informed about planned absences. Send email just prior to or immediately after any absence from LAB, even if you’ve told the TA ahead of time. This makes record keeping so much easier.
You are allowed three absences from lab and you should save it for when you are sick – **you are still required to turn in the lab assignment by the due date**. More than 3 absences will result in automatic failure of labs. Notes attesting to visits to the infirmary will **NOT** result in an excused absence from lab. If you need to miss a lab and wish to have credit for attendance, you must complete the entire assignment and turn it in **PRIOR** to the lab in which you would have been working on it. If you do the lab early, you must do it on your own; the TAs will not be available to help you.

**EXAMS:**

*Attendance is MANDATORY for all exams. If an exam is missed because of an excused absence, it cannot be taken later and it will not be included in the computation of the final grade; the other exams will be weighted extra. If an exam is missed because of an unexcused absence, it cannot be taken later, and a score of 0 will be included in the computation of the final grade.*

The Final Exam is **cumulative**. Final Exam Schedules are not known until halfway into the course. **Do not plan to leave before the end of exam period.** This class has often had its final on the last possible day.

**ACADEMIC DISHONESTY:**

Please be advised that the University of Delaware Academic Honesty & Dishonesty Policy is taken seriously by this Instructor and **NOTE WELL** that it will be followed in the conduct of this course. This policy covers all forms of

- Plagiarism, including “copying, or allowing another student to copy, a computer file that contains another student’s assignment, and submitting it, in part or in its entirety, as one’s own” and “working together on an assignment, sharing the computer files and programs involved, and then submitting individual copies of the assignment as one’s own individual work”;
- Fabrication, including “submitting as your own any academic exercise (e.g., written work, printing, sculpture, etc.) prepared totally or in part by another”;
- Cheating, including “copying from another student’s test paper, allowing another student to copy from a test paper, collaborating on a test, quiz, or other project with any other person(s) without authorization”; and
- Academic Misconduct, including “other academically dishonest acts such as … taking part in obtaining or distributing any part of an unadministered test”.

**Course Assignments:**

*All reading assignments, homeworks, and labs will be posted to the course Web site. You are responsible for checking the Web site regularly to make sure you are on target.*