

CIS 270 Client-Side Web Programming

Prereqs: CIS 202 (A/B Recommended)

<http://jbwyatt.com>

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INSTRUCTOR: Joseph Wyatt

PLACE: 142 Becker Hall

TIME: mwf 10:00

TERM: Spring 2017

OBJECTIVE :

Introduces the fundamentals of client-side web programming. Coverage includes HTML, XHTML, CSS and JavaScript. Although HTML and CSS do not constitute true programming, **JavaScript is programming**. That means the student must have an understanding of variables, assignment, arithmetic and boolean operators, loops, branches and functions (methods).

Programming can be tedious, time-consuming and frustrating -- it can also be rewarding and fun. I will present material, set goals and evaluate achievement. I will recognize and attempt to match extra effort, but will not shoulder the responsibility for lack of effort. **You** are responsible for your performance.

OUTCOMES :

The successful student will:

- understand the fundamentals of how the internet and the world wide web work;
- understand how a program executes;
- understand and demonstrate web page construction and fundamentals of HTML for structure and content;
- understand and demonstrate complex web page construction and fundamentals of CSS for presentation;
- understand the advantages provided by dynamic web pages;
- understand the syntax of a client-side web programming language such as JavaScript;
- understand how to interface HTML, CSS and JavaScript in order to create a complex web page;
- demonstrate the ability to partition complex pages into separate files and link those files together;
- understand the need for variables and how JavaScript deals with variable types;
- understand why conversion of variables is needed and demonstrate the conversion between different types;
- demonstrate the ability to dynamically input data into a web page;
- demonstrate the ability to dynamically output information from a web page;
- demonstrate the ability to dynamically repeat statements in a loop within a client-side program;
- demonstrate the ability to make decisions dynamically within a client-side program;
- demonstrate the ability to create separate functions or methods within a client-side program;
- understand user interfaces and demonstrate the ability to create a graphical user interface;
- understand and demonstrate how to find and correct errors within a web page.

All competencies will be assessed through a series of assignments and exams.

TEXT and MATERIALS: (<http://jbwyatt.com/cis270.html>)

1. HTML & CSS: Design and Build Websites by J. Duckett, Wiley, 2011 [REQUIRED]
2. JavaScript & JQuery: Interactive Front-End Web Development by J. Duckett, Wiley, 2014 [REQUIRED]

A USB flash drive (1GB+) is very useful and relatively cheap (\$10).

CONTACT INFORMATION: (<http://jbwyatt.com/contact.html>)

My E-mail address is: wyatt@clarion.edu or wyattwyatt@gmail.com (preferred)

My Web URL is <http://jbwyatt.com/>

My office is in 141 Becker Hall. My office telephone is (814) 393-2643 - feel free to leave a message. Come see me!

Office hours are as posted, but other hours can be arranged.

Please defer personal conversations and smalltalk until after class as it annoys other students and bugs the heck out of me.

TOPICS / SCHEDULE (42 classes) (<http://jbwyatt.com/cis270.html>) Topics and coverage is somewhat dynamic and is updated often on the class website.

Part I

01. Course Intro: Expectations & Topics
02. How the Web works: Browsers, HTML, CSS & Javascript (Duckett-HC Intro)
03. HTML Structure & Text & SEO (Duckett-HC Ch. 1 & 2)
04. HTML Lists, Links & Images (Duckett-HC Ch. 3, 4 & 5)
0D. CSS Intro (Duckett-HC Ch. 10) <i>Imagine an invisible box around every HTML element.</i>
0E. CSS Color and Text Styling (Duckett-HC Ch. 11, 12)
0F. CSS Boxes(mbox) & Layout (Duckett-HC Ch. 13, 15)
05. JavaScript Programming (Duckett-JJ Intro & Ch. 1a, 1b, 1c)
06. Basic JavaScript Instructions & FireBug (Duckett-JJ Ch. 2)
☆ Test1 - Mid Term Exam: M() & W()

Part II

07. Decisions & Loops (Duckett-JJ Ch. 4)
08. Functions, Methods & Objects (Duckett-JJ Ch. 3)
09. Document Object Model (Duckett-JJ Ch. 5)
0A. Events (Duckett-JJ Ch. 6)
0B. Canvas: Using JavaScript to Create Graphics
0C. HTML Forms (Duckett-HC Ch. 7)
10. Error Handling & Debugging (Duckett-JJ Ch. 10)
11. jQuery (Duckett-JJ Ch. 7)
12. Form Enhancement & Validation [jQuery] (Duckett-JJ Ch. 13)
☆ Test 2 - Final Exam: F() 10am

Student is responsible for notes, readings and classroom discussions. Notes may be changed, emphasized, re-ordered or skipped over.

GRADES: (<http://jbwyatt.com/grades.html>) 1,000 total points

Grades are determined by your % score: 90+ = A ; 80 – 89 = B ; 70 – 79 = C ; 60 – 69 = D ; below 60 = E.

Grades are determined as follows:

~60%: TQ (tests and quizzes) (~600 points)

Two tests (make-up **only** with prior notice and excuse).

Various 5-10 point quizzes. Some quizzes may be online.

~40%: AS (assignments) (~400 points)

6 to 7 programs - programs are worth between 25 and 100 points

While in class you are expected to be attentive and to participate and to take notes. Participation means constructive and informed (by way of doing the assignments and reading) discussion about the subject material.

SPECIAL NEEDS and CONSIDERATIONS:

Special circumstances that may affect your performance in the class should be brought to my attention. Any student requiring accommodations for taking notes or tests should make arrangements to discuss their needs with me after the first class.

Copying code is cheating. Allowing others to copy your code is cheating. You must protect your intellectual property as you protect your personal property - with all reasonable measures.

You must *write your code on your own*, not as part of a group. Make efforts to avoid even the *appearance* of impropriety. Penalties will be severe: a grade of zero for all conspirators.