

Overview and Description:

This course focuses on building core competencies in web design and development. It begins with a complete immersion into HTML, with a focus on the new HTML5 standard. Students are exposed to and are heavily encouraged to use and apply Cascading Style Sheets (CSS Levels 1, 2 and 3) with any HTML page they create. Students will learn the fundamentals of Javascript, including object-oriented JavaScript. AJAX - using both XML and JSON. Open source libraries such as jQuery core and jQuery UI will be covered, as they assist in building cross-browser web applications rapidly and efficiently. The PHP language will be presented and covered; however, students are free to use other server-side languages; such as ASP.NET, Java or Ruby on Rails for their work. The course will focus on MySQL 5.x as a relational database system with the final project. Students may use other databases with instructor approval. Students will work with either IIS 6 (or better) or Apache 2 (Apache is preferred), using any modern operating system when working on their term projects and class laboratories.

This course has been designed to be very hands-on, with several in-class workshops in every class. Please have a laptop available during this course. We will have workstations in our lab this semester.

Instructor, Contact Email, Office Hours and Site:

Instructor

Andrew Sheehan

Email

[asheehan@bu](mailto:asheehan@bu.edu)

Office hours

By appointment.

Official BU Calendar

[Official Academic Calendar for 2013-2014](#)

BU Blackboard: MET CS601 relies on the new BU online system learn.bu.edu. You need to have an account with BU and have access to our course material. Please attempt to login as soon as you can and verify that your account is fine.

Topic Coverage

1. Introduction to HTML (HTML5)
2. Using Cascading Style Sheets (CSS)
3. Javascript
4. jQuery 1.9.x or better for DOM manipulation and User Interface (UI).
5. Use of Ajax, with both JSON and XML.
6. Introduction to PHP.
7. Creating a data-driven websites with MySQL.
8. Fundamentals of security and encryption (at the database level).

Course Objectives

- To understand and develop HTML5 pages.
- Develop an understanding and the importance of Cascading Style Sheets.
- To correctly use Ajax.
- Using XML and JSON.
- Using encryption to secure Personally-Identifiable information with MySQL and/or PHP.
- Using jQuery and jQuery UI.
- Show competency with PHP and a relational database management system (MySQL).

Course Books

- **REQUIRED** "Murach's HTML5 and CSS3". ISBN: 978-1-890774-66-0
- **REQUIRED** "Murach's PHP and MySQL". ISBN: 978-1-890774-56-1

Recommendations on Course Software

- TextPad, NotePad, VI, Emacs, Dreamweaver, Expression Web, Netbeans or similar.
- Apache or IIS
- MySQL
- PHP
- Dreamweaver
- PhpMyAdmin
- MySQL Workbench

Course Policies

Attendance is your choice. Doing homework (on time) is mandatory.

- For every day your homework is late, you lose 10% (one letter grade)

Grading Policies

Homework

Several assignments will be given throughout the semester. 30% of your grade.

Quizzes and Participation

Quizzes are given throughout the summer. **They cannot be made up.** 10% of your grade.

Midterm Examination

Covers all material up to the date of the midterm. 30% of your grade.

Project

Completion of a project and presenting it at the end of the course. 30% of your grade.

- *There will be no final examination.*
- *All homework assignments are due one (1) week from the date it was assigned.*

Academic Honesty

The course is governed by the Boston University Academic Conduct, for Metropolitan College.

You need to be aware of its contents: www.bu.edu/met/for-students/met-policies-procedures-resources/academic-conduct-code

Code may be taken from the Internet (stackoverflow.com, javascriptkit.com, w3schools.com, etc...) but, it must be cited in your source. In general, you should avoid 'cut and paste' of other's work as you will not be learning the material.

Course Schedule

Schedule of Events* (Subject to change)

Dates	Lectures	Readings
Monday, May 20, 2013 Week 0	We do not have class due to holiday.	
Friday, May 31, 2013 Week 1	<ul style="list-style-type: none"> Welcome to the course, policies and expectations. Fundamentals of the web. Discussion on development tools. Fundamentals of HTML. What is PHP and how it works with HTML. 	Murach(HTML): Chapters 1,2 Murach(PHP): Chapter 1 Web References: <ul style="list-style-type: none"> CSS Validator Service HTML Validation Service ApacheFriends.org
June 3, 2013 Week 2	<ul style="list-style-type: none"> Continuation of HTML Fundamentals. Introduction to CSS: Selectors, The cascade and inheritance. Creating 2 & 3 column layouts. Understanding padding vs. margin. CSS: float and display PHP: Control Structures and Language Fundamentals. 	Murach(HTML): Chapters 3, 4, 5 Murach(PHP): Chapters 2,8, 13
June 10, 2013 Week 3	<ul style="list-style-type: none"> Introduction to Javascript. Javascript Syntax. Control Structures. 	Murach(HTML): Chapter 13 Material for this class will be made digitally available at learn.bu.edu
June 17, 2013 Week 4	<ul style="list-style-type: none"> Introduction to Arrays. Javascript Strings. Working with Dates and Timestamps. 	Murach(HTML): Chapters 5,6 Murach(PHP): Chapter 23
June 24, 2013 Week 5	<ul style="list-style-type: none"> Basics of Event Handling with Javascript. Fundamentals of jQuery core & UI. Using jQuery to build your own UI's. Effects, animation & resizing abilities. 	Murach(HTML): Chapter 14
July 1, 2013 Week 6	Midterm Examination.	
July 8, 2013 Week 7	<ul style="list-style-type: none"> Introduction to Relational Database Management Systems (RDMS) using MySQL. MySQL with PHP: DDL and DML. Connecting to your MySQL database with PHP. 	Murach(PHP): chapters 3,4
July 15, 2013 Week 8	<ul style="list-style-type: none"> Principles of Ajax jQuery and Ajax Ajax, JavaScript and PHP - all together. Object literals. Javascript Closures Functions as Objects Use of the prototype with Objects 	Murach(HTML): Chapter 15.
July 22, 2013 Week 9	<ul style="list-style-type: none"> Superglobals \$_GET and \$_POST. PHP: Using and Creating Functions. HTML5 Tables: formatting, nesting, grouping Fieldsets and Legends. Introduction to XML processing Creating HTML with XML and XSL 	Murach(HTML): Chapters 9, 10 Murach(PHP): Chapters 7
July 29, 2013 Week 10	<ul style="list-style-type: none"> Introduction to CAPTCHA How to use the Video, Embed and Param elements Using jQuery Mobile Viewports 	Murach(HTML): Chapter 15.
August 5, 2013 Week 11	Final Project Presentations	