



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 HTML 5. 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.

Instructor, Contact Email, Office Hours and Site:

Instructor

Andrew Sheehan

E-mail

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

Office hours

By appointment.

Official BU Calender

[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 works.

Topic Coverage

1. Introduction to HTML
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. Integrating with MySQL.
8. Fundamentals of security and encryption.

Course Objectives

- To understand and develop HTML.
- Develop an understanding and the importance of Cascading Style Sheets.
- To correctly use Ajax.
- Use XML and JSON.
- Use encryption to secure Personally-Identifiable information with MySQL and/or PHP.
- Use jQuery and jQuery UI.
- Show competency with PHP and MySQL.

Course Books

- **REQUIRED** *"Murach's HTML5 and CSS3"*. ISBN: 978-1-890774-66-0 [**Online price check:** directtextbook.com]
- **REQUIRED** *"Murach's PHP and MySQL"*. ISBN: 978-1-890774-56-1 [**Online price check:** directtextbook.com]

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.

- Homework will not be accepted after its due date.

Grading Policies

Homework

Several assignments will be given throughout the semester. 20% 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. 40% 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/Notes
September 3, 2013 Week 1	Policies and Expectations; Tools; Setup; Introduction to HTML.	Murach(HTML) Chapters: 1,2,3
September 10, 2013 Week 2	HTML: Syntax and Structures; Images, Forms and Tables.	Murach(HTML) Chapters: 6,8,9,10
September 17, 2013 Week 3	a. Introduction to CSS; Video, Embed and Param elements. b. Introduction to PHP: Syntax, Structures and Fundamentals.	Murach(HTML) Chapters: 4,5,6,11 Murach(PHP) Chapters: 1,2,8,9
September 24, 2013 Week 4	a. Introduction relational databases with MySQL. b. Using PHP with MySQL. b. PHP: Manipulating/using Dates. b. PHP: Working with form data.	Murach(PHP) Chapters: 3,4,7,10
October 1, 2013 Week 5	Fundamentals Javascript; Syntax, Rules and Algorithms	Murach(HTML) Chapters: 13
October 8, 2013 Week 6	a. Built-in Javascript Objects: Functions, Arrays, Strings and Dates. b. How to use and create Dates in PHP. b. Custom Javascript Objects.	Murach(PHP) Chapters: 11
October 15, 2013	No Class: Columbus Day Holiday Substitution	

Schedule of Events* (Subject to change)

Dates	Lectures	Readings/Notes
Week 7		
October 22, 2013	Event Handling	Murach(HTML) Chapters: 13
Week 8		
October 29, 2013	Introduction to jQuery	Murach(HTML) Chapters: 14
Week 9		
November 5, 2013	Principles of Ajax	Instructor Material
Week 10		
November 12, 2013	Midterm Examination.	
Week 11		
November 19, 2013	JavaScript Animations with jQuery UI; Introduction to CAPTCHA	Instructor Material
Week 12		
November 26, 2013	Introduction to XML processing (XSLT); Using jQuery Mobile	Murach(HTML) Chapters: 15
Week 13		
December 3, 2013	Final Project Presentations	
Week 14		