

Boston University

Metropolitan College

MET CS601: Web Application Development



Overview and Description:

This course focuses on building core competencies in web design and development. It discusses and works with the latest version of HTML (HTML 5) and PHP (Version 5.x). Students will be learning to use Cascading Style Sheets (CSS Levels 1,2 and 3) with any HTML page they create in this course. Students will learn the fundamentals of JavaScript, including object-oriented JavaScript. AJAX - using both XML and JSON are also covered. Open source libraries such as jQuery Core 2.0 and jQuery UI (1.10.x) will be covered, as they assist in building cross-browser applications rapidly and efficiently. The PHP language will be presented and covered. The course will use MySQL 5.x as its relational database system (RDMS).

This course has been designed to be very hands-on with in-class workshops in most classes. Please have a laptop available during this course.

Instructor, Contact Email and Office Hours:

Instructor

Andrew Sheehan

E-mail

asheehan@bu.edu

Office hours

By appointment.

Official BU Calendar

[Official Academic Calendar for Fall, 2015](#)

BU Blackboard: MET CS601 relies on the BU LMS system, learn.bu.edu. You need to have an account to have access to our course with all its material. Please attempt to login as soon as you can and verify that your account works.

Course Objectives

- To understand and develop modern HTML.
- Develop an understanding and appreciation of CSS.
- To develop websites with JavaScript.

Course Books



"HTML5 & CSS3 For The Real World 2nd Edition" **ISBN-13:978-0987467485**

Recommendations on Course Software

- Visual Code
- Apache
- MySQL
- PHP
- MySQL Workbench

Course Policies

- Homework will not be accepted after its due date.
- There are no make-up exams for either the Midterm or the Final examinations.
- All homework assignments are due one (1) week from the date it was assigned.

Grading Policies

Homework 20.00%

Several assignments will be given throughout the semester.

Quizzes and Participation 20.00%

Quizzes are given throughout the semester. **They cannot be made up.**

Midterm Examination 20.00%

Covers all material up to the date of the midterm.

Project 20.00%

Completion of a project and presenting it at the end of the course.

Final Examination 20.00%

Covers all material presented in the course.

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

Course Schedule

Schedule of Events * (Subject to change)

Week	Dates (Wednesday)	Topics	Readings	Homework/Quizzes	Final Project Deliverables	
Week 1	September 7, 2015	Labor Day (Class Suspended)				
Week 2	September 14, 2015	Class Expectations. Tools of the trade. Beginning our conversation about HTML. The anatomy of a web page. Hello World, powered by HTML and CSS. Breaking down the sections of a HTML document. Paragraphs, headings and lists. First Look: Your first PHP page.	Chapters 1,2		Start planning your final project.	
Week 3	September 21, 2015	Tables and forms in HTML. Validating form data (client-side). Images, links and generic elements. The basics of PHP: Syntax and grammar.	Chapters 3	Homework #1 Due	Stage 1: Environment Setup Due	
Week 4	September 28, 2015	Introduction to CSS CSS with Pure Control statements in PHP. Validating data with PHP (server-side). Embedding fonts in your pages.	Chapter 4,9 and 10	Quiz #1		
Week 5	October 5, 2015	Continuation of our CSS lecture and PHP. Media Queries and Responsive Web Design. CSS: Floating and positioning elements. PHP Functions, Arrays and Objects.	Chapter 6	Homework #2 Due	Stage 2: Concept Due	
Week 6 (*Tuesday*)	October 13, 2015	Introduction to Databases with MySQL. Walkthrough of MySQL Workbench and MySQL. Writing basic ANSI SQL. Putting it all together: Using PHP and MySQL in a web application on localhost.	Chapter 5	Quiz #2		
Week 7	October 19, 2015	Continuation of MySQL and PHP lecture. PHP Superglobals Review for the midterm exam	Chapter 13	Homework #3 Due		
Week 8	October 26, 2015	In-class Midterm Examination				
Week 9	November 2, 2015	JavaScript 101: Grammar and Syntax. How to debug JavaScript Variables and expressions. Values, types and operators Conditionals and Iterations. First Look: jQuery.			Stage 3: Database Design Due	
Week 10	November 9, 2015	Built-in Objects: String and Date/Time Named and Anonymous Functions. JavaScript: What are Closures? Using PHP Sessions.		Quiz #3		
Week 11	November 16, 2015	Objects: The prototype and the literal. JavaScript events. Anonymous functions with events.	nbsp;	Homework #4 Due	Stage 4: Functional Mockup Due	
Week 12	November 23, 2015	Using jQuery Validation. Using Ajax with jQuery.				

		Hands-on use of JSON and XML. Introduction to server-side JavaScript with NodeJS.			
Week 13	November 30, 2015	Captcha jQuery UI Web Sockets and Workers. Model-View-View Model (MVVM) with DurandalJS.		Homework #5 Due	Final Stage: Compress source files and submit.
Week 14	December 7, 2015	In-class Student Presentations and Class Review			
Week 15	December 14, 2015	In-class Final Examination			