**MMP 350: Advanced Web Design**

Spring 2017  
Monday and Wednesday  
7:30pm - 9:10pm  
Fiterman 1006

Professor Brian MacMillan  
email: brianmacmillanteacher@gmail.com  
Office none  
Office Hours  
I will meet with students on request

**Course Description**

This course gives the students the tools to build standards-compliant dynamic web sites. Students will incorporate client-side and server-side scripting with advanced CSS to create intuitive and interactive web interfaces. The learning will take placed in the context of a content management system. Contemporary web development processes and platforms will be explored. A foundational knowledge of programming concepts, HTML, CSS and design for the web is required for this course.

Students will write HTML, CSS JavaScript and PHP using the Sublime Text editor. They will use image editing programs, for example Photoshop or GIMP to create graphics for web sites. They will each require their own WordPress blog, to which they must be able to FTP files.

Course site: [github.com/brianmacmillan/teaching/mmp350](https://github.com/owenroberts/mmp350)  
Course notes: [brianmacmillan.github.io/mmp350/](http://owenroberts.github.io/mmp350/)

**Attendance**

At BMCC, the maximum number of absences is limited to one more hour than the number of hours a class meets in one week. For example, you may be enrolled in a four-hour class. In that class, you would be allowed 5 hours of absence (not 5 days). In the case of excessive absences, the instructor has the option to lower the grade or assign an F or WU grade.

In MMP350 all students are entitled to miss one class, with no reason, provided they inform the Instructor, by email, prior to class. All subsequent absences will result in a 2 per cent penalty against the final grade, up to 10%, unless excused by the Professor. Documentation, for example a doctor’s note, made be required.

**Outline of Topics**

* Overview, from project planning to software design patterns
* Content Management Systems
* The Document Object Model
* Interactivity through client-side scripting
* Dynamic web pages through server-side scripting
* Web site theme creation including:
  + Wireframing and prototyping
  + Responsive design
  + SASS and advanced CSS concepts
* Widgets, plugins and 3rd party functionality
* Github / version control
* Security, including access control lists, authentication and SQL injection

\*Topics and schedule are subject to change throughout semester

**Grading**

10% | Attendance and participation  
15% | Presentation on website or technology   
15% | In class assignments   
25% | Midterm Portfolio  
35% | Final Project

Grades on assignments will be reduced by 10% if handed in late. In exceptional circumstances the Instructo r may allow students to resubmit work or retake tests.

**Textbook:** [**Smashing WordPress: Beyond the Blog, 4th edition**](http://www.amazon.com/Smashing-WordPress-Thord-Daniel-Hedengren/dp/1118600754/ref=sr_1_1?s=books&ie=UTF8&qid=1422558908&sr=1-1&keywords=smashing+wordpress+4th+edition)Author: Thord Daniel Hedengren  
Publisher: Wiley, John & Sons, Incorporated  
ISBN 978-1118600757; 1118600754  
\*The text book is not required

**Course Work**

**1. Presentations and Assignments**

Presentations and assignments will be used to provide students with a broader understanding of Internet development.

a. Critique of a web page OR a presentation on an Internet related technology. Value: 15% of final grade

Critiques and presentations will follow the model demonstrated in class 2 by the Instructor. Grading guidelines for presentations are outlined in Appendix B, below.

b. 3 in-class tasks. ***Pass or fail***. 5 marks each for 15% total grade. Students will have to successfully perform three tasks that demonstrate to the Instructor a fundamental understanding of important course material. The demonstrations will take place in the class work periods that will typically occupy the last half of each class.

**Tasks**

1. create a git repository and use it (5% pass or fail)

2. access a database from php (5% pass or fail)

3. dynamically alter the DOM using javascript (5% pass or fail)

Each of these tasks will be demonstrated in class. Students will then be given functioning examples that they will have to setup in their own environment, and modify. ***The goal of these tasks is to ensure that all students complete the class with core skills.*** Students will be allowed to repeat these tasks twice, for credit, should their first attempts be unsuccessful.

**2. Midterm Project, value 25%**

One pedagogical goal of the class is to introduce students to the idea of a project life-cycle, from conception to implementation. The midterm project will focus on the first parts of the project life cycle. It will require the following:

1. A one or two sentence project description. 5 out of 25 marks

2. A design template for a cellphone, laptop, desktop and 4k interfaces. This template can use a drawing tool like Photoshop or Indesign, a prototyping site like moqups.com, or a webpage that you create yourself using HTML and CSS. 15 out of 25 marks

5 marks for responsive design. Will the design work on multiple platforms? Does its sensibly change content according to platform?

5 marks for stability. How does the design handle different browsers? Does the design handle errors

5 marks for look and feel. Are too many fonts used? Too many colors? Is there an overriding design idea?

3. A features table that compares your project idea with at least one similar web page. A drawing, table or paragraph that explains the context of your idea. If your idea is unique, then you should focus on the latter task. 5 out of 25 marks.

**3. Final Project (35% of total)**

The bulk of the class will be spent working toward a final term project, a Wordpress blog that employs a custom theme.

WordPress theme template files. This should be a zipped archive with all of your PHP and SASS files, as well as any image assets that are used for the theme.

Working installation of WordPress theme on the BMCC server with your portfolio work added.

Grading

Concept (5 marks out of 35)

* The theme/portfolio should be clear in concept and execution. Include the concept in the description in the style.css file.

Visual Design (10 marks out of 35)

* Overall Impression: does the visual design fit the concept for this theme? This is about the atmosphere and feel of the site. Much of this is conveyed by the fonts, colors and images and graphic embellishments (icons, shadows, borders etc).
* Parts of the page are clearly visible: header, nav, content, footer etc. and the relative importance.
* This includes support for responsive or mobile design.

Content (10 marks out of 35)

* Is the content of your portfolio appropriate for the theme? There should be images or videos, descriptions and links (if available) for all of the projects in the portfolio.

Template Files (5 marks out of 35) - These are the WordPress files we have been working on this semester. For the theme to work correctly all of these files must be included.

* index.php: default page. Required of all themes
* 404.php : Shows if a page or post is now found. the only one where you don’t need a content- because there is no loop
* search.php: shows the search results
* archive.php: shows list of category/tag/date/author posts
* single.php: shows a single post
* page.php: single page (like about or bio)
* home.php: can be used for blog.
* header.php: Includes doctype, opening html, head and opening body tags, navigation
* footer.php: Includes footer and closing body and html tags.
* sidebar.php and functions.php
* favicon.png and screenshot.png

Theme Functionality (5 marks out of 35)

* Menus (Navigation)
* Featured Images
* Widget Areas (at least one)

**Description of a Typical Class**

The typical class will have the following components:

1. A brief introductory lecture or demonstration related to the topic to be explored in class. The relationship may be tangential, in the sense that one of the php classes will feature a discussion of sql injection.

2. A student presentation

3. Setup of environment for in-class work

Break

Instructor guided in-class work related either to a project or to a programming example.

**Learning Objectives**

Design

* Design for content, specific and general
* Typographic hierarchy
* Layout
* Styles
* WordPress classes and elements

Coding

* The Document Object Model
* HTML for document structure
* CSS for style
* Javascript for dynamic pages
* PHP for database management
* Using javascript with PHP
* Using Sublime text editor and WordPress interface

Administration

* Using WordPress database and authoring tools

Iteration

* Process of receiving feedback and adapting designs

Deployment

* Deliver public facing website for final with content, media, code

Responsive design

* Designing for multiple platforms

**Schedule**

**Week 1**

* Introduction: Course, WordPress (WP) development environment and Class Project
* [Intro notes](https://owenroberts.github.io/mmp350/week1/)
* [Portfolio Structure](http://owenroberts.github.io/mmp350/week1/portfolio.html)

**Week 2**

* Project Planning: Initial Project Proposal
* [Grid Systems & Wireframing](https://github.com/owenroberts/mmp350/blob/master/week2)

**Week 3**

* [Wireframing](https://github.com/owenroberts/mmp350/blob/master/week3)

**Week 4**

* [Responsive Design](https://github.com/owenroberts/mmp350/blob/master/week4)

**Week 5**

* [Responsive development with Foundation](https://github.com/owenroberts/mmp350/blob/master/week5)

**Week 6**

* [Typography](https://github.com/owenroberts/mmp350/blob/master/week6)

**Week 7**

* [Sass](https://github.com/owenroberts/mmp350/blob/master/week7)
* [Calculating color](http://owenroberts.github.io/mmp350/week7/)
* Midterm: Completed portfolio template
  + Sass stylesheet with finalized typography and color scheme
  + index, blank and single HTML page templates
  + Foundation classes and CSS for Desktop and Mobile
  + Uploaded to wpmmp website

**Week 8**

* [Setting up WordPress theme and Database](https://github.com/owenroberts/mmp350/blob/master/week8)
* Midterm workshop

**Week 9**

* [Building a WP Theme: index.php](http://owenroberts.github.io/mmp350/week9/)

**Week 10**

* [Building a WP Theme: header](http://owenroberts.github.io/mmp350/week10/)

**Week 11**

* [Building a WP Theme: WP loop & front-page.php](http://owenroberts.github.io/mmp350/week11/)
* [Building a WP Theme: styling front-page.php](http://owenroberts.github.io/mmp350/week11/foundation.html)

**Week 12**

* [Building a WP Theme: footer.php](http://owenroberts.github.io/mmp350/week12/)
* [Building a WP Theme: category.php, page.php, single.php](http://owenroberts.github.io/mmp350/week12/pages.html)

**Week 13**

* [Building a WP Theme: widgets & sidebar.php](http://owenroberts.github.io/mmp350/week13/)
* [Building a WP Theme: image gallery](http://owenroberts.github.io/mmp350/week13/gallery.html)

**Week 14**

* [Building a WP Theme: post formats](http://owenroberts.github.io/mmp350/week14/)
* [Building a WP Theme: theme branding and final template pages](http://owenroberts.github.io/mmp350/week14/final.html)

**Week 15**

* Final project workshop

**Appendix A: Grading Criteria for Final Project**

A Excellent

* The work clearly differentiates itself from other work. The work has memorable impact, and pursues concepts and techniques above and beyond original goals. The ideas behind the work are original, thoughtful and/or imaginative. Spelling, punctuation or grammatical errors are non-existent. The work demonstrates the student’s ability to think critically and work independently. The work also demonstrates the student’s use of strong methods and process.

B Very Good / Good

* The work is better than average and shows extra effort. The impact of the work is good, and demonstrates the use of an iterative production process. The work employs above average craft and attention to detail.

C Satisfactory

* Average and competent, the work has acceptable levels of impact and conceptual development. The content of the work is sufficiently developed, but it lacks thoughtful, original, and imaginative resolution and/or attention to detail and craft. The work employs process, but does not demonstrate notable solutions.

D Poor / Below Average

* The work is lacking in many or most areas that show any understanding of the research, design, and/or prototyping phase(s). The impact of the work is weak with unsound, unoriginal, or unimaginative thinking. Problems may include lack of interest, procrastination, poor planning and/or poor craft.

F Unacceptable

The work shows no overall understanding of the research, design, and/or prototyping phase(s) on many levels or either a severe lack of interest.

**Appendix B: Grading Criteria for Presentations**

Presentations are graded according to the following criteria:

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| --- | --- | --- |
| Criterion | Weight | Guidelines |
| Poise | 25% | Did you address the audience? Did you speak clearly? Did you use intonation to emphasize your points? Did you present yourself well, or did you slouch, wander or dissemble? Did you speak at a volume level appropriate for the venue?  A - Presenter had good posture, spoke clearly, used correct, non-idiomatic English, and did not distract the audience with her/his body language.  B - Presenter met most but not all of the criteria outlined for an A.  C - Presenter met some of the criteria for an A, but for the most part did not.  D - Presenter wandered, dissembled, slouched, was difficult to hear, or too loud.  F - Presenter was obnoxious, incomprehensible, spoke extremely loudly or was inaudible. |
| Multi-media presentation materials (e.g. slideshows, handouts) | 25% | A - Presentation materials enhanced the presentation and/or provided a solid foundation for it. Note that students can receive an A for visually stunning presentation materials that captivate the audience OR for presentation materials that are simple, professionally executed, and provide a solid foundation for the presentation.  B - Presentation materials met most of the criteria for an A but were somewhat facile or distracting, or not professionally executed.  C - Presentation materials somewhat distracted from or otherwise undermined the presentation. Presentation materials were sloppily executed, but comprehensible.  D - Presentation materials distracted from or otherwise undermined the presentation. Presentation materials were sloppily executed and somewhat incomprehensible.  F - Presentation materials were non-existent or poorly executed to the point of being incomprehensible. |

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| Structure | 25% | A - Presentation topic was clearly introduced, ideas were well developed, the development of ideas occurred in a coherent manner, the conclusion succinctly summarized the content.  B - Presentation met most but not all of the criteria outlined for an A.  C - Presentation did not have an introduction and conclusion, ideas though presented, were not developed in a logical fashion. Points were made in a disconnected way.  D - Presentation was disorganized and somewhat illogical.  F - Presentation was incoherent, topic was never introduced, ideas, if presented at all, were not developed. |
| Content | 25% | A - Content was topical and/or interesting; arguments were supported by properly documented evidence; evidence was creatively/critically evaluated; language was clear, concise and grammatical.  B - Content met most but not all of the criteria outlined for an A.  C - Content met some of the criteria for an A, with significant issues like undocumented sources, unsubstantiated claims, etc.  D - Content was unoriginal or trivial, some factual claims were not substantiated, language was ungrammatical.  F - Content was incoherent, factual claims were never substantiated, language was ungrammatical. |