MMP 350: Advanced Web Design

Fall 2017
Wednesday 5:30pm - 9:10pm
Fiterman 1006

Professor Brian MacMillan
Skype: brian.macmillan.801
email: brianmacmillanteacher@gmail.com

Office Hours: None, but for most days I will be available to meet with students before class. I am also available via Skype.

Course Description

This course gives 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. From a technological perspective, the content management system WordPress will be the focus of the course, but other web technologies, development approaches and frameworks will be actively explored. A foundational knowledge of programming concepts, HTML, CSS and design for the web, is required for this course.

Over the course of the semester students, either individually or in small groups, will create a portfolio or blog using WordPress. *With the instructor's permission*, the term project may use development frameworks such as Bootstrap and Angular.js and / or content management systems such as Drupal or Ghost.
For the design component of the class, students may use image editing programs, for example Photoshop, Illustrator, GIMP, Inkscape, Blender, Maya and AfterEffects. These technologies will be supported, as time allows, by the Professor, but are not considered critical path.

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 explicitly excused by the Professor. Documentation, for example a doctor's note, made be required to verify the cause of missed classes.

Grades

10% | Attendance and participation
10% | Homework
16% | Critique of an inspirational website or technology
12% | 3 unannounced quizzes worth 4 percent each
32% | 2 assignments worth 16% each
20% | Final project

Late Submissions

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

Class Plan

Week 1
Introductions
Set up of Cloud 9 accounts
Syllabus review
Course overview
Lecture: Technical Review (HTTP,HTML, Document Object Model, CSS, javascript, php)
In-class exercises
Homework: Read Tidwell, set up Cloud 9 account (1 mark)

Week 2
Goals: Preparation for Assignment 1
Student presentation on an inspirational technology
Lecture: Design Review
Class discussion: web site critiques
Creation of groups
In class exercises
Homework: write one short paragraph describing what you want to do for your final project. (1 mark)

Week 3
Goal: Preparation for assignment 1
Possible quiz based on week 2 lecture
Student presentations on an inspirational website or technology
Lecture: Grid systems and wire-framing
Discussion: portfolio site critiques
In-class exercises
Homework: Create a features table comparing your project idea with existing websites (1 mark)

Week 4
Possible quiz based on week 3 lecture
Student presentations on an inspirational website or technology
Lecture: Agile versus SDLC software development models
Lecture: Frameworks and content management systems
Discussion: which frameworks and content management systems work best for me?
In-class work
Homework: Create a mockup of your site, using illustration software or a tool like moqups (1 mark)

Week 5
Assignment 1 due
Possible quiz based on week 4 lecture
Student presentations on an inspirational website or technology
Lecture: What is WordPress? The WordPress template hierarchy
In-class work
Homework: work on Assignment 2

Week 6
Assignment 2 due
Possible quiz based on week 5 lecture
Student presentations on an inspirational website or technology
Lecture: Creating a custom theme
In-class work
Homework: Create a custom theme (1 mark)

Week 7
Possible quiz based on week 6 lecture
Student presentations on an inspirational website or technology

Lecture: Accessing a database using php
Lecture: Understanding how WordPress uses a database
In-class work
Homework: Student defined deliverable (1 mark)

Week 8
Possible quiz based on week 6 lecture
Student presentations on an inspirational website or technology
Lecture: Building a WP Theme: index.php
In-class work
Homework: Student defined deliverable (1 mark)

Week 9
Possible quiz based on week 8 lecture
Student presentations on an inspirational website or technology
Lecture: Building a WP Theme: header.php
In-class work
Homework: Student defined deliverable (1 mark)

Week 10
Possible quiz based on week 9 lecture
Student presentations on an inspirational website or technology
Lecture: Building a WP Theme: image galleries
In-class work
Homework: Student defined deliverable (1 mark)

Week 11
Possible quiz based on week 10 lecture
Student presentations on an inspirational website or technology
Lecture: Building a WP Theme: WP loop and front-page
In-class work
Homework: Student defined deliverable (1 mark)

Week 12
Possible quiz based on week 11 lecture
Student presentations on an inspirational website or technology
Lecture: Building a WP Theme: footer.php, category.php, page.php, single.php
In-class work
Homework: Work on final project

Week 13
Possible quiz based on week 12 lecture
Student presentations on an inspirational website or technology
Lecture: Building a WP Theme: widgets and sidebar.php and post formats
In-class work
Homework: Work on final project

Week 14 & 15
Presentations and in-class work on projects

Course Work

Homework (10%)

There will be ten homework assignments worth 1 mark each. Grading guidelines for homework are outlined in Appendix A.

Presentation (16%)

Critique a web page OR present on an Internet related technology. Value: 16% of final grade. Grading guidelines for presentations are outlined in Appendix B: Grading Guidelines for Presentations. This Appendix will be discussed in class.

Quizzes (12%)

There will be three unannounced quizzes. These quizzes will have 4 questions based on the content of the previous week's lecture. A sample quiz can be found in Appendix C.

Assignments (32%)

There will be two assignments worth 16% of final grade each.
Example assignments are available in Appendix D.

Final Project (20%)

The final project will build on the work done for the assignments, and will be either a portfolio, a personal blog, or a business site for a client/friend/colleague. Alternative content, for example art projects, are encouraged but must be explicitly approved by the Professor.

Description of a Typical Class

The typical class will have the following components:
1. Student presentations
2. A brief introductory lecture or demonstration.
3. Discussion about the lecture
4. Unannounced quiz (periodic)
5. Discussion and setup of in-class work
6. In-class work

There will be no formal breaks but students will be able to leave the class at any time once in-class work begins.

In the interests of pacing, this class template may be periodically modified.

Learning Objectives

Design
- Design and layout considerations for different types of content
- Understanding of typographic hierarchy
- Styles
- WordPress classes and elements
- Responsive design

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 text editors to edit code
- Creating a WordPress plugin
- The WordPress database

Iterative Product Development Using an Agile or SDLC Model
- Project conception
- Project Implementation
- Project deployment - Deliver public facing website for final with content, media, code

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

*Topics and schedule are subject to change throughout semester

Submission Standards

All written work should have a heading that includes the course name, the student name and the assignment name.

When assignments are submitted via email, the email should have the subject "MMP350 Assignment n" where n is the assignment number.

.zip file names should include MMP350 and your first and last name.

Appendix A: Grading Criteria for Homework

There were will ten homework assignments worth one mark each. Five of these assignments are assigned by the Instructor; five are defined by the students. The assignments will be graded as complete (1 mark), partially complete (0.5 marks) or incomplete (0). The goal of these assignments is to ensure that students do their homework.

The five assignments defined by the students will be tasks related to the completion of their final projects. To be considered complete these assignments will have to be communicated to the instructor via email and implemented. Unsuccessful implementations count for full marks. Assessments will occur during the in-class section of the class when the homework is due.

Appendix B: Grading Criteria for Presentations

Presentations are graded according to the following criteria:

Criterion	Guidelines
Poise (4 marks)	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? 4. Presenter had good posture, spoke clearly, used correct, non-idiomatic English, and did not distract the audience with her/his body language. 3. Presenter met most but not all of the criteria outlined for full marks. 2. Presenter met some of the criteria for a full marks. 1. Presenter wandered, dissembled, slouched, was difficult to hear, or spoke too loudly. 0. Presenter was obnoxious, incomprehensible, spoke extremely loudly or was inaudible.
Structure (4 marks)	4. Presentation topic was clearly introduced, ideas were well developed, the development of ideas occurred in a coherent manner, and the conclusion succinctly summarized the content. 3. Presentation met most but not all of the criteria outlined for an A. 2. 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.

	1. Presentation was disorganized and somewhat illogical. 0. Presentation was incoherent, topic was never introduced, ideas, if presented at all, were not developed.
Content (4 marks)	4. Content was topical and/or interesting; arguments were supported by properly documented evidence; evidence was creatively/critically evaluated; language was clear, concise and grammatical. 3. Content met most but not all of the criteria outlined for full marks. 2. Content met some of the criteria for full marks, with significant issues like undocumented sources, unsubstantiated claims, etc. 1. Content was unoriginal or trivial, some factual claims were not substantiated, and language was ungrammatical. 0. Content was incoherent, factual claims were never substantiated, language was ungrammatical.
Interaction (4 marks)	Did you engage the audience in your presentation? 4. Presenter was enthusiastic about the topic and thereby engaged the audience. 3. Presenter displayed scant enthusiasm for the topic. 2. Presenter appeared indifferent to the topic. 1. Presenter was unenthusiastic about the presentation. 0. Presenter was hostile to the audience

Appendix C: A Sample Quiz

Question: List the components the Agile manifesto

Answer:

1. **Individuals and Interactions** *more than processes and tools*
2. **Working Software** *more than comprehensive documentation*
3. **Customer Collaboration** *more than contract negotiation*
4. **Responding to Change** *more than following a plan*

Appendix D: Deliverables and Grading Criteria for Assignments

Assignment One (16%)

One pedagogical goal of the class is to introduce students to the idea of a project life-cycle, from conception to implementation. Assignment 1 focuses on the first part of the project life cycle. It will require the following:

- A one or two sentence project description. (8 marks)
- A features table that compares your project idea with at least two similar web pages and / or an annotated list of features (8 marks).

Please see the document *MMP350 Assignment One Guidelines Fall 2017* for examples.

Assignment Two (16%)

Create a functioning prototype that uses HTML, Foundation and SASS or comparable technologies, such as Bootstrap.

- A design template for two interfaces. This template can use a drawing tool like Photoshop or Indesign, a prototyping site like moqups.com. (4 marks per template)
- Color palette (4 marks)
- Sample content (4 marks)

Please see the document *MMP350 Assignment Two Guidelines Fall 2017* for examples.

Appendix E: Deliverables and Grading Criteria for Final Project

Final Project (20%)

The bulk of the class will be spent working toward a final term project, a Wordpress site that employs a theme designed or customized by the student.

Grading

1. Visual Design (5 marks out of 20)
   - 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 fonts, colors, images and graphic embellishments (icons, shadows, borders etc). (2 marks)
   - The interrelationship between parts of the page - header, navigation, search, content, footer etc. - is obvious. For example, navigation tools aren't mixed in with content. (1 mark)
   - Design works on at least two platforms, for example a cell phone and a laptop. (2 marks)

2. Content (5 marks out of 20)
   - Is the content of your site appropriate for the WordPress theme you have created/customized? (2 marks)
   - How representative is your content of the assets you expect to showcase on your site. (3 marks)

     Note that grades will *not* be given for extensive content. Your goal should be to present *interesting*, *relevant* and *representative* content.

3. Template Files (5 marks out of 20) - 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 20)
   - Menus (Navigation) (3 marks)
   - Featured Images (1 mark)
   - Widget Areas (at least one) (1 mark)