

# Web Development Outline

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## 1 Course Summary

The Web Design course delivers a basic understanding of modern day web technologies to students with no previous experience. By the end of the course, students will be able to build full-featured websites from scratch. The course covers all three web standards: HTML, CSS, and JavaScript. Students use the same tools as professionals: Git, Bootstrap, and Gimp. Students have the opportunity to create their own blog through WordPress..

**Programs Used:** Sublime Text, GitHub, GIMP, Chrome/Firefox

**Age Range:** Grades 6-12

A working laptop is required for this course (any operating system).

### 1.1 Outline

- HTML - 3 classes
- Git - 1 class
- CSS - 2 classes
- Bootstrap - 2 classes
- GIMP - 2 classes
- JavaScript - 4 classes
- WordPress - 2 classes

## 2 Course Description

### 2.1 HTML

HyperText Markup Language (HTML) is the basic building block of all websites. This course focuses on basic HTML elements, incorporating multimedia, and the Document Object Model (DOM). All websites use HTML, and it is a key tool of any web designer.

### 2.2 Git

Git is a widely used version control system in the world of software development. In this course, students use GitHub to manage assignments, publish websites, and create projects. Many large corporations (Google, Apple, Microsoft, Amazon, Facebook, etc.) have extensive open-source repositories on GitHub. Course material is also hosted on GitHub. This course covers the basics of managing Git repositories.

### 2.3 CSS

Cascading Style Sheets (CSS) is used to describe the presentation of an HTML document. Knowledge of CSS is essential to User Interface (UI) design. Proper CSS use allows websites to be responsive and interactive. This course focuses on basic CSS attributes and responsive design.

## 2.4 Bootstrap

Bootstrap is a CSS framework containing templates for many different UI designs. It is meant to simplify development of dynamic websites and web applications. This course focuses on creating modular websites using Bootstrap.

## 2.5 GIMP

GNU Image Manipulation Program (GIMP) is a free and open-source image editor (similar to Adobe Photoshop). This course focuses on basic image manipulation and graphic design.

## 2.6 JavaScript

JavaScript is the leading scripting language for the web. It is supported by all major browsers, and has an uncountable number of frameworks and libraries written for it. This course focuses on JavaScript web application development.

## 2.7 WordPress

WordPress is a Content Management System (CMS) designed to simplify web design and development. Students create a blog with WordPress and learn to customize it appropriately.

# 3 Evaluations

## 3.1 Assignments

Homework is assigned weekly, to be due the next week. Each assignment is worth 3%, for a total of 24%. Assignment completion is critical to applying course material. Assignment submission/feedback is online. Assignments are not taken up in class unless a request is made.

## 3.2 Quizzes

Quizzes are held every two weeks in class. Each quiz is worth 4%, for a total of 16%. Quizzes are designed to evaluate immediate understanding of concepts and applications. Answers are taken up immediately, feedback is given online.

## 3.3 Tests

Tests are held every two weeks online, to be done at home. Each test is worth 10%, for a total of 40%. Tests are designed to evaluate conceptual knowledge of course material. Answers are taken up in the following class, feedback is given online.

## 3.4 Final Project

The final project consists of building a web application from scratch using frameworks and tools taught in class. It is worth 20%. A majority of work must be undertaken at home.

# 4 Marking Scheme

- Assignments - 24%
- Quizzes - 16%
- Tests - 40%
- Final Project - 20%

# 5 Contact

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