Web Design with HTML and CSS

Course Outline

**Class:** WA110 – Web Design with HTML and CSS

60 hours

**Instructor:**

**Text:**  Web Design with HTML & CSS3: Comprehensive, 8th Edition

by Jessica Minnick

CENGAGE Learning

**Prerequisite:** None

**Equipment:** Each student shall be equipped with a desktop computer with the technical characteristics configured to run the programs used throughout the program:

* 20 desktop computers (including 24” monitors and mice) minimum
* Quad Core processor with Microsoft Windows 7, 8.x, or 10,
* Minimum 16 GB Ram
* Minimum 500 GB HD
* Internet access.

**Grading System:**

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|  | | **Grading Scale** | | |
| Classwork, Homework, Participation, Attendance | 10% | 90–100 | A | I - Incomplete |
| Exams/Quizzes | 50% | 80–89 | B | T - Transfer Credit |
| Presentation/Projects | 10% | 70–79 | C | E - Exempt |
| Final Exam | 30 % | 65–69 | D | W - Withdrew |
|  | **100%** | Below 65 | F | I - Incomplete |

**Course Description:**

Introduction to the latest, industry-leading website development practices. This course teaches the basics of web development, starting with building basic Hyper Text Markup Language (HTML) web pages. The students will learn to edit HTML code using plain text editors, learn the basics of HTTP(S) and FTP protocols, and practice troubleshooting techniques.

The second part of the course builds upon the students’ HTML skills and introduces the basics of web page styling using Cascading Style Sheets (CSS). The students learn how to position HTML elements on a web page, lay out the elements relative to the HTML document and other elements of the page, and style the HTML using predefined CSS values. The course also teaches the method of encoding web colors as hexadecimal values, and introduces the fundamentals of document object model.

**Overview:** This class meets for a total of 60 hours. Day classes are six hours per day, Monday through Friday.

**Objectives:** Upon successful completion of this course, the student will be able to:

1. Plan a Website
2. Understand the Basics of HTML
3. Use Web Authoring Tools
4. Use HTML Semantic Elements
5. Create HTML Headings and Lists
6. Create HTML Links and Images
7. Use Div elements
8. Use Forms
9. Validate HTML Documents
10. Use Cascading Style Sheets
11. Understand Web Colors
12. Understand Inline Elements and Block Elements
13. Create External Style Sheet and Referencing It from HTML Document
14. Align Webpage Content
15. Create Style Rules
16. Validate CSS Files

**Requirements:** 1. Meet attendance and academic criteria.

2. Completion of all assignments.

3. Completion of the final exam.

**Graded Work:** The test average and quiz average each comprise 50% of the final grade point average. Quiz grades are based upon completion of the assignment in the time allotted, ability to follow instructions, observance of safety rules and neatness of work area.

**Attendance:** Daily attendance is required. If you anticipate an absence, consult with your instructor.

Be aware that each absence will require an equal amount of make-up time. Each student is required to maintain a minimum attendance of 85% for each course:

* If you miss more than 15% of the total hours in any one course, you will be required to make-up enough missed hours to meet the minimum course attendance requirement of 85%.
* If at the end of the cycle your attendance is less than 85% you will receive an incomplete (I) for the course, and will have 5 business days immediately following the end of the cycle to make-up the hours missed, otherwise your grade will change from an incomplete to an F, and you will be required to retake the course.
* If you miss more than 30% of the total hours in any one course, you will receive a W (withdrawal) and will be required to retake the course.

**Make-up Work:** All missed work is required to be completed as soon as possible. If you need extra help, it is your responsibility to make an appointment with your instructor at a mutually agreeable time.

**Supplies:** Hunter Business School provides all the necessary supplies.

### **Lesson Plan**

##### Day 1 of 10

|  |  |
| --- | --- |
| **Name:** |  |
| **Date:** |  | **Department:** |  |

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| --- | --- |
| **Subject:** | Introduction to Web Design and HTML |
| **Subject Topics:** | Chapter 1: Introduction to the Internet and Web Design  Chapter 2: Building a Webpage Template with HTML5 |
| **# of Students in the Class:** |  |
| **Previous Requirements:** | none |
| **Aim / Objective:** | After completion of the lesson, students will be able to:   * Define Hypertext Markup Language (HTML) and HTML elements * Recognize HTML versions and web * Identify web authoring tools * Download and use a web authoring tool * Create and view a basic HTML webpage. * Explain how to manage website files * Describe and use HTML5 semantic elements * Determine the elements to use when setting the structure of a webpage * Design and build a semantic wireframe * Create a webpage template * Insert comments in an HTML document. |
| **Technology:** | * Overhead projector |
| **Materials:** | * PowerPoint presentation |
| **Teacher/Student Input:** | * Question and Answer interactions * Class exercises |
| **Lesson Plan** | 9 AM – 10:45 AM   * Program Overview * Introduction to the Internet and Web Design, slides 3-33 * Lab, slide 34   10:45 AM – 11 AM   * Break   11 AM – 12 PM   * Introduction to the Internet and Web Design, slides 35-42 * Lab, slide 43   12 PM – 12:30 PM   * Lunch break   12:30 PM – 3 PM   * Building a Web Page template, slides 44-64 * Labs, slide 65 |
| **Review / Assessment:** | 3 Lab assignments are planned to assess students understanding of the material |

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### **Lesson Plan**

##### Day 2 of 10

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| **Name:** |  |
| **Date:** |  | **Department:** |  |

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| **Subject:** | HTML: Links and Images |
| **Subject Topics:** | Chapter 3: Links and Images |
| **# of Students in the Class:** |  |
| **Previous Requirements:** | none |
| **Aim / Objective:** | After completion of the lesson, students will be able to:   * Describe types of hyperlinks * Create relative links, absolute links, email links, and telephone links * Describe image file formats * Describe the image tag and its attributes * Add images to a website * Explain div elements and attributes * Use a div element to mark a page division * Define the class attribute * Describe and use HTML heading tags * Describe the types of lists in an HTML document * Create an unordered list and a description list * Test and validate links on a webpage |
| **Technology:** | * Overhead projector |
| **Materials:** | * PowerPoint presentation |
| **Teacher/Student Input:** | * Question and Answer interactions * Class exercises |
| **Lesson Plan** | 9 AM – 10:45 AM   * Links, slides 2-12 * Lab, slide 13   10:30 AM – 10:45 AM   * Break   10:45 AM – 12 PM   * Images, slides 14-21 * Lab, slide 22   12 PM – 12:30 PM   * Lunch break   12:30 PM – 3 PM   * Div elements, Headings and Lists, slides 23-35 * Lab, slide 36 * Optional Lab, slide 37 |
| **Review / Assessment:** | 3 Exercise (+ one optional) assignments are planned to assess students understanding of the material |

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### **Lesson Plan**

##### Day 3 of 10

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| **Name:** |  |
| **Date:** |  | **Department:** |  |

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| **Subject:** | Cascading Style Sheets |
| **Subject Topics:** | Chapter 4: Applying CSS Styles to Webpages |
| **# of Students in the Class:** |  |
| **Previous Requirements:** | none |
| **Aim / Objective:** | After completion of the lesson, students will be able to:   * Explain the importance of separating design from content * Describe Cascading Style Sheets (CSS) * Define inline, embedded, and external styles and their order of precedence * Describe a CSS rule and its syntax * Explain the difference between a selector, property, and value * Create styles that use text and color properties * Explain the difference between inline and block content * Describe the CSS box model and how to apply margins, padding, and borders * Create an external style sheet and link it to an HTML page * Create styles that use padding, border, and margin properties * Float an image * Create styles that use list properties * Add comments to an external style sheet * Validate a CSS file |
| **Technology:** | * Overhead projector |
| **Materials:** | * PowerPoint presentation |
| **Teacher/Student Input:** | * Question and Answer interactions * Class exercises |
| **Lesson Plan** | 9 AM – 10:45 AM   * Introduction to CSS and Hexadecimal numbering system, slides 2-16 * Lab, slide 17   10:45 AM – 11 AM   * Break   11 AM – 12:30 PM   * The CSS Box Model and Selectors, slides 18-29 * Lab, slide 30   12:30 PM – 1:00 PM   * Lunch break   1:00 PM – 3 PM   * Style Rules, slides 31-41 * CSS Validation, slides 42-45 * Exercise and student project presentation, slide 46 |
| **Review / Assessment:** | 3 Lab assignments and student project presentation are planned to assess students understanding of the material |

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### **Lesson Plan**

##### Day 4 of 10

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| **Name:** |  |
| **Date:** |  | **Department:** |  |

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| **Subject:** | Applications |
| **Subject Topics:** | Chapter 5: Designing for Mobile Devices  Chapter 6: Designing for Tablet and Desktop Devices |
| **# of Students in the Class:** |  |
| **Previous Requirements:** | none |
| **Aim / Objective:** | After completion of the lesson, students will be able to:   * Explain the principles of responsive design * Explain the design principles of a mobile website * Describe a mobile-first strategy * Define a viewport * Create a fluid layout * Make images flexible * Use styles for a mobile viewport * Insert and style a span element * Use a viewport meta tag * Test a responsive site using a device emulator * Understand and use media query expressions * Explain the design principles of a tablet website * Insert a media query to target tablet viewports * Create style rules for tablet viewports * Explain the design principles of a desktop website * Insert a media query to target desktop viewports * Create style rules for desktop viewports * Identify and modify breakpoints * Explain pseudo-classes * Apply pseudo-classes to a website * Explain linear and radial gradients * Apply a linear gradient to a webpage for a desktop viewport |
| **Technology:** | * Overhead projector |
| **Materials:** | * PowerPoint presentation |
| **Teacher/Student Input:** | * Question and Answer interactions * Class exercises |
| **Lesson Plan** | 9 AM – 10:45 AM   * Responsive Design, slides 2-23 * Lab, slide 24   10:45 AM – 11 AM   * Break   11 AM – 12 PM   * Media Queries, slides 25-33 * Lab, slide 34   12 PM – 12:30 PM   * Lunch break   12:30 PM – 3 PM   * Tablet and Desktop Viewports, slides 34-45 * Pseudo-classes and Gradients, slides 46-59 * Lab, slide 60 |
| **Review / Assessment:** | 3 Lab assignments are planned to assess students understanding of the material |

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### **Lesson Plan**

##### Day 5 of 10

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| **Name:** |  |
| **Date:** |  | **Department:** |  |

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| **Subject:** | Applications |
| **Subject Topics:** | Chapter 7: Improving Web Design with New Page Layouts |
| **# of Students in the Class:** |  |
| **Previous Requirements:** | None |
| **Aim / Objective:** | After completion of the lesson, students will be able to:   * Explain when to use article, aside, and section elements * Define figure and figcaption elements * Redesign wireframes for tablet and desktop viewports * Explain and use the opacity property * Describe and use the text-shadow property * Add a banner image to a website * Insert and style a figure element * Insert and style a section element * Insert and style an article element * Insert and style an aside element * Create a three-column layout * Describe and use the overflow property |
| **Technology:** | * Overhead projector |
| **Materials:** | * PowerPoint presentation |
| **Teacher/Student Input:** | * Question and Answer interactions * Classroom discussions |
| **Lesson Plan** | 9 AM – 10:45 AM   * HTML5 Semantic Elements, slides 2-13 * Lab, slide 14   10:45 AM – 11:00 AM   * Break   11:00 AM – 12 PM   * Website Layout and Styling Use Case, slides 15-37   12 PM – 12:30 PM   * Lunch break   12:30 PM – 3 PM   * Lab and project presentation |
| **Review / Assessment:** | 2 exercises and class presentation are planned to assess students understanding of the material |

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### **Lesson Plan**

##### Day 6 of 10

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| --- | --- |
| **Name:** |  |
| **Date:** |  | **Department:** |  |

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| **Subject:** | HTML |
| **Subject Topics:** | Chapter 8: Creating Tables and Forms |
| **# of Students in the Class:** |  |
| **Previous Requirements:** | none |
| **Aim / Objective:** | After completion of the lesson, students will be able to:   * Define table elements * Describe the steps used to plan, design, and code a table * Create a table with rows and data * Insert a table caption * Style a table for tablet and desktop viewports * Use ROWSPAN and COLSPAN attributes * Describe form controls and their uses * Use the form and input elements * Create text input controls, labels, and check boxes * Create a selection menu with multiple options * Use the textarea element * Create Submit and Reset buttons |
| **Technology:** | * Overhead projector |
| **Materials:** | * PowerPoint presentation |
| **Teacher/Student Input:** | * Question and Answer interactions * Class exercises |
| **Lesson Plan** | 9 AM – 10:45 AM   * HTML Tables, slides 2-26   10:45 AM – 11 AM   * Break   11 AM – 12:00 PM   * Labs, slide 27   12:30 PM – 1:00 PM   * Lunch break   1:00 PM – 3 PM   * HTML Forms, slides 28-54 * Labs, slide 55 |
| **Review / Assessment:** | 2 Lab assignments and student project presentation are planned to assess students understanding of the material |

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### **Lesson Plan**

##### Day 7 of 10

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| --- | --- |
| **Name:** |  |
| **Date:** |  | **Department:** |  |

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| **Subject:** | Web Design |
| **Subject Topics:** | Chapter 9: Integrating Audio and Video  Chapter 10: Creating Interactivity with Social Media |
| **# of Students in the Class:** |  |
| **Previous Requirements:** | None |
| **Aim / Objective:** | After completion of the lesson, students will be able to:   * Describe the benefits and limitations of multimedia in websites * Identify audio formats * Identify video formats * Describe a plug-in * Understand codecs * Understand and create audio elements * Understand and create video elements * Identify common audio attributes * Identify common video attributes * Understand the source element * Test audio elements * Test video elements * Understand social media * Identify and describe forms of social media * Understand and describe a blog |
| **Technology:** | * Overhead projector |
| **Materials:** | * PowerPoint presentation |
| **Teacher/Student Input:** | * Question and Answer interactions * Class exercises |
| **Lesson Plan** | 9 AM – 10:45 AM   * Audio and Video, slides 2-30 * Lab, slide 31   10:45 AM – 11 AM   * Break   11 AM – 12 PM   * Social Media, slides 32-50   12 PM – 12:30 PM   * Lunch break   12:30 PM – 3 PM   * Lab, slide 51 |
| **Review / Assessment:** | 2 Lab assignments are planned to assess students understanding of the material |

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### **Lesson Plan**

##### Day 8 of 10

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| **Name:** |  |
| **Date:** |  | **Department:** |  |

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| **Subject:** | Introduction to Web Design and HTML |
| **Subject Topics:** | Chapter 11: Publish and Promote a Website |
| **# of Students in the Class:** |  |
| **Previous Requirements:** | none |
| **Aim / Objective:** | After completion of the lesson, students will be able to:   * Describe search engines * Explain search engine optimization (SEO) * Create description meta tags * Describe a domain name * Describe a top-level domain * Explain the role of a web hosting service * Describe a File Transfer Protocol (FTP) client * Connect to a remote server * Publish a website with an FTP client * Market a website * Register a URL with a search engine. |
| **Technology:** | * Overhead projector * Server hosting account |
| **Materials:** | * PowerPoint presentation |
| **Teacher/Student Input:** | * Question and Answer interactions * Class exercises |
| **Lesson Plan** | 9 AM – 10:45 AM   * Publishing your web site, slides 3-25 * Lab, slide 26   10:45 AM – 11 AM   * Break   11 AM – 12 PM   * Marketing your web site, slides 27-29 * Lab, slide 30   12 PM – 12:30 PM   * Lunch break   12:30 PM – 3 PM   * Lab, slide 31 |
| **Review / Assessment:** | 3 Lab assignments are planned to assess students understanding of the material |

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### **Lesson Plan**

##### Day 9 of 10

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| --- | --- |
| **Name:** |  |
| **Date:** |  | **Department:** |  |

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| **Subject:** | Introduction to Web Design and HTML |
| **Subject Topics:** | Review the course materials and write the WA110 final test. |
| **# of Students in the Class:** |  |
| **Previous Requirements:** | none |
| **Aim / Objective:** | Test the students’ understanding of the course subjects. |
| **Technology:** | * Overhead projector * Server hosting account |
| **Materials:** | * PowerPoint presentation |
| **Teacher/Student Input:** | * Question and Answer interactions * Class exercises |
| **Lesson Plan** | 9 AM – 10:45 AM   * Publishing your web site, slides 3-25 * Lab, slide 26   10:45 AM – 11 AM   * Break   11 AM – 12 PM   * Marketing your web site, slides 27-29 * Lab, slide 30   12 PM – 12:30 PM   * Lunch break   12:30 PM – 3 PM   * Lab, slide 31 |
| **Review / Assessment:** | 3 Lab assignments are planned to assess students understanding of the material |

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### **Lesson Plan**

##### Day 10 of 10

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| **Name:** |  |
| **Date:** |  | **Department:** |  |

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| --- | --- |
| **Subject:** | Introduction to Web Design and HTML |
| **Subject Topics:** | Introduction to JavaScript |
| **# of Students in the Class:** |  |
| **Previous Requirements:** | none |
| **Aim / Objective:** | After completion of the lesson, students will be able to:   * Explain the history of the World Wide Web * Describe the difference between client-side and server-side scripting * Understand the components of a JavaScript statement * Add basic JavaScript code to your web pages * Structure your JavaScript programs |
| **Technology:** | * Overhead projector * Server hosting account |
| **Materials:** | * PowerPoint presentation |
| **Teacher/Student Input:** | * Question and Answer interactions * Class exercises |
| **Lesson Plan** | 9 AM – 10:45 AM   * Understanding Client/Server architecture, slides 2-15 * Lab, slide 16   10:45 AM – 11 AM   * Break   11 AM – 12 PM   * JavaScript Variables, Expressions and Events, slides 17-32 * Lab, slide 33   12 PM – 12:30 PM   * Lunch break   12:30 PM – 3 PM   * Including JavaScript in HTML pages, slides 34-38 * Validating JavaScript, slide 39 * Lab, slides 40-41 |
| **Review / Assessment:** | 3 Lab assignments are planned to assess students understanding of the material |

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