

## CompuScholar, Inc.

### Alignment to South Carolina Fundamentals of Web Page Design and Development (5031) Standards

#### South Carolina Course Details:

<b>Course Title:</b>	5031 - Fundamentals of Web Page Design and Development
<b>Grade Level:</b>	9th - 12th grade
<b>Standards Link:</b>	<a href="#">Fundamentals of Web Page Design and Development (March 2023)</a>

#### CompuScholar Course Details:

<b>Course Title:</b>	Web Design
<b>Course ISBN:</b>	978-0-9887070-3-0
<b>Course Year:</b>	2024

**Note 1:** Citation(s) listed may represent a subset of the instances where objectives are met throughout the course.

**Note 2:** Citation(s) for a "Lesson" refer to the "Lesson Text" elements and associated "Activities" within the course, unless otherwise noted. The "Instructional Video" components are supplements designed to introduce or reinforce the main lesson concepts, and the Lesson Text contains full details.

**Note 3:** "Supplemental" or "Suppl." citation(s) refer to Supplemental Lessons included at the end of the course.

### Course Description

The Fundamentals of Web Page Design and Development course will guide students in the development of websites in a project-based, problem-solving environment. Students will learn HTML as a means to organize website content and CSS to format the appearance of website content in order to develop websites that are well-organized, universally accessible, and easy to navigate.

### Course Standards

A. SAFETY	CITATION(S)
1. Review school safety policies and procedures.	Supplemental Lesson 14
2. Review classroom safety rules and procedures.	Supplemental Lesson 14
3. Review safety procedures for using equipment in the classroom.	Supplemental Lesson 14
4. Identify major causes of work-related accidents in office environments.	Supplemental Lesson 14
5. Demonstrate safety skills in an office/work environment.	Supplemental Lesson 14

<b>B. STUDENT ORGANIZATIONS</b>	<b>CITATION(S)</b>
1. Identify the purpose and goals of a Career and Technology Student Organization (CTSO).	Supplemental Lesson 13
2. Explain how CTSOs are integral parts of specific clusters, majors, and/or courses.	Supplemental Lesson 13
3. Explain the benefits and responsibilities of being a member of a CTSO.	Supplemental Lesson 13
4. List leadership opportunities that are available to students through participation in CTSO conferences, competitions, community service, philanthropy, and other activities.	Supplemental Lesson 13
5. Explain how participation in CTSOs can promote lifelong benefits in other professional and civic organizations.	Supplemental Lesson 13

<b>C. TECHNOLOGY KNOWLEDGE</b>	<b>CITATION(S)</b>
1. Demonstrate proficiency and skills associated with the use of technologies that are common to a specific occupation.	Extensive use of HTML, CSS, text editors and web browsers throughout the course.
2. Identify proper netiquette when using e-mail, social media, and other technologies for communication purposes.	Chapter 16, Lesson 1
3. Identify potential abuse and unethical uses of laptops, tablets, computers, and/or networks.	Chapter 16, Lessons 1, 2
4. Explain the consequences of social, illegal, and unethical uses of technology (e.g., piracy; illegal downloading; cyberbullying; licensing infringement; inappropriate uses of software, hardware, and mobile devices in the work environment).	Chapter 16, Lessons 1-2
5. Discuss legal issues and the terms of use related to copyright laws, fair use laws, and ethics pertaining to downloading of images, photographs, documents, video, sounds, music, trademarks, and other elements for personal use.	Chapter 11, Lesson 1 Chapter 16, Lesson 1 Chapter 19, Lessons 1, 3
6. Describe ethical and legal practices of safeguarding the confidentiality of business-related information.	Chapter 16, Lessons 1-2
7. Describe possible threats to a laptop, tablet, computer, and/or network and methods of avoiding attacks.	Chapter 16, Lesson 2

<b>D. PERSONAL QUALITIES AND EMPLOYABILITY SKILLS</b>	<b>CITATION(S)</b>
1. Demonstrate creativity and innovation.	Chapter 14, Lesson 1 Chapter 14, Activity 1
2. Demonstrate critical thinking and problem-solving skills.	Chapter 14, Lesson 1 Chapter 14, Activity 1
3. Demonstrate initiative and self-direction.	Chapter 14, Lesson 1 Chapter 14, Activity 1
4. Demonstrate integrity.	Chapter 14, Lesson 1 Chapter 14, Activity 1

5. Demonstrate work ethic.	Chapter 14, Lesson 1 Chapter 14, Activity 1
6. Demonstrate conflict resolution skills.	Chapter 14, Lesson 1 Chapter 14, Activity 1
7. Demonstrate listening and speaking skills.	Chapter 14, Lesson 1 Chapter 14, Activity 1
8. Demonstrate respect for diversity.	Chapter 14, Lesson 1 Chapter 14, Activity 1
9. Demonstrate customer service orientation.	Chapter 14, Lesson 1 Chapter 14, Activity 1
10. Demonstrate teamwork.	Chapter 14, Lesson 1 Chapter 14, Activity 1

<b>E. PROFESSIONAL KNOWLEDGE</b>	<b>CITATION(S)</b>
1. Demonstrate global or “big picture” thinking.	Chapter 14, Lesson 1 Chapter 14, Activity 1
2. Demonstrate career and life management skills and goal-making.	Chapter 14, Lesson 1 Supplemental Lesson 4 Supplemental Lesson 8
3. Demonstrate continuous learning and adaptability skills to changing job requirements.	Chapter 14, Lesson 1 Chapter 14, Activity 1
4. Demonstrate time and resource management skills.	Chapter 14, Lesson 1 Chapter 14, Activity 1
5. Demonstrates information literacy skills.	Chapter 10, Lesson 1 Chapter 12, Lessons 1, 2 Chapter 14 (Team Project)
6. Demonstrates information security skills.	Chapter 16, Lessons 1, 2
7. Demonstrates information technology skills.	Extensive use of text editors, web browsers, and file management apps throughout the course.
8. Demonstrates knowledge and use of job-specific tools and technologies.	Extensive use of HTML and CSS throughout the course. Use of web authoring tools starting in Chapter 16, Lesson 4.
9. Demonstrate job-specific mathematics skills.	Chapter 9, Lessons 1, 2 Chapter 10, Lesson 1 Chapter 27
10. Demonstrates professionalism in the workplace.	Chapter 14, Lesson 1 Chapter 14, Activity 1
11. Demonstrates reading and writing skills.	Chapter 10, Lesson 1 / Activity 1 Chapter 13, Lesson 1 / Activity Chapter 14 (Team Project) Supplemental Lessons 3, 4, 7, 8

12. Demonstrates workplace safety.	Supplemental Lesson 14
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<b>F. WEB DESIGN PRINCIPLES</b>	<b>CITATION(S)</b>
1. Define web terminology.	Throughout the course
2. Describe the history and evolution of the internet.	Chapter 1, Lesson 2 Chapter 15, Lesson 2 Chapter 16, Lesson 3
3. Explain how the Internet functions, including the World Wide Web (WWW), browsers, FTP, URL, ISP, encryption, https, and domains.	Chapter 15, Lessons 2 - 5 Chapter 16, Lesson 2 Supplemental Lesson 2
4. Describe the tools for accessing the Internet.	Chapter 1, Lesson 1 Chapter 15, Lesson 5 Supplemental Lessons 3, 9
5. Explain how websites and social media solve problems in business, industry, government, and education.	Chapter 15, Lesson 2 Chapter 16, Lesson 3
6. Explore principles of e-commerce as they apply to web development, mobile devices, banking, and government regulations.	Chapter 13, Lesson 4
7. Explain the role of Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), and JavaScript (or a similar scripting language) in Web development.	Throughout the course, including: Chapter 1, Lesson 2 Chapters 6, 25

<b>G. PLANNING AND DESIGN</b>	<b>CITATION(S)</b>
1. Utilize a design document as part of the design and development process.	Chapter 13, Lesson 1 Chapters 14, 28 Supplemental Lessons 4, 7
a. Determine the purpose and target audience of a website.	Chapter 13, Lesson 1 / Activity Chapter 14, Lesson 1 / Activity 1
b. Develop a design solution for a website including a storyboard, navigation plan, and wireframes/mockups.	Chapter 13, Lesson 1 Chapter 14, Lesson / Activity 1 Chapter 14, Lesson / Activity 2
2. Create relevant and appropriate content including text, graphics, and hyperlinks.	Chapters 5, 11 Chapter 14, Activities 1, 2
3. Develop a file management system for website content, utilizing proper naming conventions for files and folders.	Chapter 1, Lesson 3 Chapter 6, Lesson 5 Chapter 25, Lesson 4
4. Optimize media for web content (i.e., file size, resolution, compression).	Chapter 11, Lesson 1 Supplemental Lesson 5
5. Explore and apply color principles to websites.	Chapter 6, Lesson 2 Chapter 10, Lesson 1 Chapter 14, Lesson / Activity 2

6. Explore and apply current best practices for web typography.	Chapter 7, Lesson 1 Chapter 10, Lesson 1 Chapter 14, Lesson / Activity 2 Chapter 20, Lesson 4
7. Research and incorporate features that ensure a quality user experience (e.g., white space, page speed, interactivity, hyperlink differentiation, website consistency, responsiveness, accessibility, data usage).	Chapter 6, Lesson 2 Chapter 10, Lesson / Activity 1 Chapter 11, Lesson 1 Chapter 13, Lesson 2
8. Evaluate the design of existing websites and their source code.	Chapter 10, Lesson / Activity 1 Chapter 14, Lesson 1 Chapter 17, Activity 1
9. Research current best practices and emerging technologies.	Chapter 4, Lesson 2 Chapter 16, Lessons 3, 4 Chapter 17, Lessons 1, 2, 3
10. Critique websites for professional quality in look and layout based on design principles.	Chapter 10, Lesson / Activity 1 Chapter 14, Lesson 1 Chapter 17, Activity 1

<b>H. CONSTRUCTING WEBSITES: HTML</b>	<b>CITATION(S)</b>
1. Develop webpages using a text editor (e.g., Notepad, Notepad++, Textpad, and Textedit).	Chapter 2, Lesson 2 and throughout the first semester
2. Explain the purpose of the doctype declaration.	Chapter 2, Lesson 4
3. Structure a webpage using appropriate HTML elements (e.g., html, head, title, body, meta, style).	Chapter 2, Lesson 4 Chapter 3, Lessons 1-2 Chapter 6, Lesson 3
4. Use HTML rules to create functional web pages (e.g., lowercase elements, proper nesting, quotes for attribute values).	Chapter 2, Lessons 3, 4 Chapter 3, Lessons 1, 2 Chapter 4, Lessons 1, 2
5. Use a variety of HTML elements to create webpages (e.g., headings, lists, images, hyperlinks, span, div).	Chapters 2, 3, 4, 5, 11, 12, etc.
6. Compare and contrast block and inline elements.	Chapter 4, Lesson 1
7. Create relative and absolute hyperlinks.	Chapter 2, Lessons 2, 3, 4
8. Use special characters (e.g., &nbsp; &copy; &quote; &lt; &gt; &amp; &mdash)	Chapter 4, Lesson 2
9. Demonstrate the use of semantic elements (e.g., header, footer, section, article, nav, aside).	Chapter 17, Lessons 2, 3, 4
10. Embed third-party content into a web page (e.g., calendar, form, map, video, Bootstrap web components).	Chapter 19, Lessons 1, 2 Chapter 26, Lesson 1 Supplemental Lessons 10-12

<b>I. CONSTRUCTING WEBSITES: CSS</b>	<b>CITATION(S)</b>
1. Create and modify CSS to format the styling of HTML elements and page layout.	Chapters 6-9, 18, 20-24
2. Identify parts of CSS syntax (i.e., rule, declaration, selector, property, value).	Chapter 6, Lesson 1
3. Compare and contrast inline, internal and external styles.	Chapter 6, Lessons 1, 3, 5
4. Use CSS to format HTML elements including:	
a. background (i.e., color, image);	Chapter 8, Lesson 2 Chapter 21, Lessons 1, 2
b. font (i.e., type, size, and color);	Chapter 6, Lessons 1, 2 Chapter 7, Lesson 1 Chapter 20, Lesson 4
c. text (i.e., align);	Chapter 6, Lesson 1 Chapter 7, Lesson 1 Chapter 10, Lesson 2
d. border (i.e., width, style, and color);	Chapter 8, Lesson 3 Chapter 20, Lesson 3
e. list (i.e., style type, position).	Chapter 10, Lesson 3
5. Format page layout with CSS including:	
a. CSS box model (i.e., width, height, border, padding, margin);	Chapter 7, Lesson 2 Chapter 8, Lesson 3 Chapter 9, Lessons 1, 2
b. absolute and relative positioning;	Chapter 9, Lessons 1, 2
c. floating elements;	Chapter 9, Lesson 4
d. converting between inline elements and block elements;	Chapter 24, Lesson 2
e. responsive design.	Supplemental Lesson / Activity 15

<b>J. CONSTRUCTING WEBSITES: JAVASCRIPT (OPTIONAL)</b>	<b>CITATION(S)</b>
1. Distinguish between variables and functions in writing JavaScript.	Significant programming logic is beyond the scope of this course.
2. Demonstrate how JavaScript can enhance a project.	Chapters 25, 26, 27
3. Implement a simple script that obtains input and displays it as output.	Significant programming logic is beyond the scope of this course.

<b>K. QUALITY ANALYSIS &amp; USER EXPERIENCE</b>	<b>CITATION(S)</b>
1. Identify and use validation tools.	Supplemental Lesson 9
2. Comply with legal requirements and standards for accessibility on the web.	Chapter 13, Lesson 2 Chapter 14, Lesson / Activity 2
3. Optimize websites to accommodate users with special needs.	Chapter 13, Lesson 2 Chapter 14, Lesson / Activity 2 Chapter 17, Lessons 2, 3, 4
4. Discuss issues relating to usability on a variety of platforms and devices.	Chapter 13, Lessons 1, 2 Chapter 17, Lessons 1, 2, 3, 4
5. View multiple websites using various browsers and computing devices.	Chapter 1, Lesson 1 Chapter 17, Lesson 1 / Activity 1 Chapter 20, Lesson 1 Supplemental Lesson / Activity 15
6. Identify and solve coding errors throughout the design process.	Troubleshooting steps identified as needed throughout the course (e.g. Chapter 3, Lessons 1-2). See also Chapter 14, Lesson / Activity 3.

<b>L. PUBLISHING AND MAINTAINING WEBSITES</b>	<b>CITATION(S)</b>
1. Explain the domain naming system.	Chapter 15, Lesson 3 Supplemental Lesson 2
2. Identify the process for obtaining a domain name, acquiring hosting, and uploading and maintaining a website.	Supplemental Lessons 1, 2, 4, 9
3. Research features and costs of domain name and hosting providers.	Supplemental Lessons 1, 2

<b>M. CAREER DEVELOPMENT</b>	<b>CITATION(S)</b>
1. Compare and contrast various job positions in the web design and development industry including compensation, required credentials, educational pathways, and work environment.	Supplemental Lesson 8
2. Prepare an electronic portfolio of projects developed in the class.	Multiple websites are developed throughout the course. See also Supplemental Lesson 8