CompuScholar, Inc.
Alignment to Utah
"Web Development 2" Course Standards

Utah Course Details:

Course Name:	Web Development 2
Primary Cluster:	CTE / IT
Course Code(s):	35.02.00.00.065
Credit:	0.5
Grade Level:	9th-12th
State Standards Link:	Web Development 2 Strands and Standards

CompuScholar Course Details:

Course Title:	Web Design
Course ISBN:	978-0-9887070-3-0
Course Year:	2019

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 re-enforce the main lesson concepts, and the Lesson Text contains full details.

Course Description

Web Development is a course designed to guide students in a project-based environment in the development of up-to-date concepts and skills that are used in the development of today's websites. Students will learn the fundamentals of how the Internet works. They will learn and use the basic building blocks of the World Wide Web: HTML5 coding, Cascading Style Sheets (CSS) and JavaScript.

Course Standards

STRAND 1: Fundamentals of HTML5: Students will demonstrate creation of "well formed" web pages.	CITATION(S)
Standard 1: Use advanced HTML5 elements to create web pages.	
a. Incorporate SVG image maps on web page.	Supplemental Lesson 10
b. Incorporate forms on web page. Examples: radio, checkbox, text, text area.	Supplemental Lesson 11
c. Understand the action that will run on the server on form submit button. (PHP file)	Supplemental Lesson 11

d. Incorporate iframes on a web page.	Supplemental Lesson 12
e. Incorporate Javascript on a web page.	Chapters 25 - 27
f. Use a GUI-based HTML editing software to create web pages.	Chapter 16, Lessons 4-5

STRAND 2: Cascading Style Sheets (CSS): Students will format web pages using CSS.	CITATION(S)
Standard 1: Use selectors in a CSS.	
a. Link to internal and external style sheet.	Chapter 6, Lesson 3 Chapter 6, Lesson 5
b. Implement a tags, ID, & classes to modify an HTML element.	Chapter 6, Lesson 3 Chapter 7, Lesson 3
c. Implement an id selector to modify a single element on the page.	Chapter 7, Lesson 3
d. Implement class selectors to modify several class elements using span.	Chapter 7, Lesson 3
e. Implement contextual selectors to modify nested elements.	Chapter 22
f. Implement selectors a: link, a:visited, a:active a:hover	Chapter 8, Lesson 1 Chapter 23, Lesson 1
Standard 2: Format page layout with advanced CSS.	
a. Use width, height, or auto to adjust the size.	Chapter 9, Lesson 1 Chapter 21, Lesson 1
b. Use float to position elements.	Chapter 9, Lesson 4
c. Use absolute, relative, fixed, and static to position elements.	Chapter 9, Lessons 1-2
d. Use text align, margin, and padding	Chapter 7, Lesson 2 Chapter 10, Lesson 2
Standard 3: Frameworks to layout web pages.	
a. Format web pages using frameworks like: BootStrap, JQuery, etc.	Chapters 26-27
b. Explore new frameworks.	Chapters 26-27
c. Use frameworks to create responsive pages.	N/A

Standard 4: Code animation and graphics with advanced CSS	
a. Buttons (i.e., rounded, colored, etc.)	Supplemental Lesson 11
b. Create Navigation Bars	Chapter 5, Lesson 3 Chapter 24
c. Image overlay hover (i.e. Fade in, slide in, etc.)	Chapter 26, Lesson 4 Chapter 27, Lesson 1
d. Image slider	Chapter 27, Lesson 1

STRAND 3: Site Planning and Design: Students will plan, design, implement, and maintain website(s).	CITATION(S)
Standard 1: Create a website plan and pitch for a client	
a. Identify basic principles of website usability, readability, and accessibility.	Chapter 10, Lesson 1 Chapter 13, Lessons 1-2
b. Plan a website by using sketches, website hierarchy, or a site map.	Chapter 13, Lesson 1 Chapter 14, Lesson 1
c. Communicate with others (such as peers and clients) about design and content plans.	Chapters 14, 28 Supplemental Lesson 4
d. Produce website designs that work on various devices and browser versions/configurations.	Chapter 17, Lesson 1 Chapter 20, Lesson 1
e. Plan, communicate, or present a client's website before, during or after website development.	Chapters 14, 28 Supplemental Lesson 4
Standard 2: Create content for website.	
a. Create and prepare 2D images. .gif, .png, .jpg, .svg	Chapter 11, Lesson 1 Chapter 14, Activity 2
b. Prepare rich media; such as, video, sound, or animation.	Chapters 19, 27 Chapter 28
c. Identify when to use various image and digital media file formats.	Chapter 11, Lesson 1 Chapter 19, Lessons 1, 3
d. Optimize images for web content, such as resize, resolution, compress, thumbnails.	Chapter 11, Lesson 1
e. Understand the use of favicons.	N/A
f. Identify how to avoid violating copyright rules.	Chapter 11, Lesson 1 Chapter 16, Lesson 1
Standard 3: Uploading and maintaining a site.	
a. Understand and be able to describe the capabilities of web servers.	Chapter 14, Lesson 2 Supplemental Lesson 1

b. Identify protocols HTTP, HTTPS, FTP, TCP/IP	Chapter 15, Lessons 2, 5 Chapter 16, Lesson 2
c. Parts of a domain name	Chapter 5, Lesson 4 Supplemental Lesson 2
d. Upload pages to a web server. * Optional if security allows	N/A
e. Differentiate between types of IP addresses.	Chapter 15, Lesson 3
f. Describe a static IP address.	Chapter 15, Lesson 3
g. Describe a Dynamic IP address.	Chapter 15, Lesson 3
h. Differentiate between ipv4 and ipv6.	Chapter 15, Lesson 3
i. Conduct basic technical tests such as validating the website (wc3 compliant), accessibility, SEO, etc.	Supplemental Lesson 9
j. Present web pages to others for quality assurances (QA) such as team members and clients for feedback and evaluation on technical merits	Chapters 14, 28
k. Identify methods for collecting site feedback, such as using counters, feedback forums, Google Analytics, Google Webmaster Tools.	Supplemental Lesson 9
l. Provide site maintenance using bug reports, backups, and promotion.	N/A
m. Document all aspects of website maintenance.	Supplemental Lesson 4
Standard 4: Use version control in projects.	
a. Utilize tools like Git/Github, Tortoise SVN, etc.	N/A
b. Understand basic terms and procedures of version control.	N/A
Standard 5: Work as a team to create a website.	
a. Use good oral and written communication skills as a team member	Chapters 14, 28
b. Use Agile/Scrum project management tools to help the teamwork.	N/A

STRAND 4: Advanced Web Concepts: Students will explore advanced web concepts.	**CITATION(S)**
Standard 1: Demonstrate the use of scripting and other interactive tools.	
a. Use HTML5 tags	Chapter 17, Lessons 2 - 4

b. Add interactivity to your website using JavaScript.	Chapters 25 - 27
c. Understand the difference between client side and server side scripting languages.	Chapter 13, Lesson 3
d. Explore HTML5 elements, such as; canvas, drag and drop, audio, video, geolocation.	Chapter 19 (audio and video)
Standard 2: Understand other web technologies.	
a. Understand when to use a database.	Chapter 13, Lesson 3
b. Describe new and emerging Web technologies such as Web 2.0, wikis, blogs, forums, etc.	N/A
c. Understand the purpose of content management systems (CMS) such as Wordpress, Drupal, Weebly, etc.	N/A

STRAND 5: Exploration & Preparation for Careers in Web Development: Students will explore careers in Web Development and prepare a portfolio of projects created.	**CITATION(S)**
Standard 1: Explore IT Web Development careers.	
a. Identify job roles in the Information Technology (IT) industry as they apply to web development	Supplemental Lesson 8
b. Full-stack Developer, Front-end back-end developer.	Supplemental Lesson 8
c. Understand the responsibilities, tasks, and skills each job requires.	Supplemental Lesson 8
Standard 2: Create a Student portfolio.	
a. Prepare an electronic portfolio of projects developed in the class.	N/A (But existing projects may be modified as needed)
Standard 3: Participate in a CTSO, Utah Digital Media Arts, or competition.	
a. Compete in a project-based competition using web design and development skills.	Deferred to local opportunities

STRAND 6 (Optional): JavaScript has become an essential web technology along with HTML and CSS, as most browsers implement JavaScript. Students will understand basic JavaScript in front-end and back-end development, mobile app development, desktop app development, and game development.	CITATION(S)
Publisher's Note: While we devote 3 chapters to JavaScript and jQuery, we avoid making this a "programming" class with concepts like variables, functions and conditional logic.	
Standard 1: Intro to JavaScript	
a. Introduce JavaScript and how it is used in web development.	Chapters 25 - 27
b. Learn a few basic JavaScript commands.	Chapters 25 - 27
c. Create a simple webpage using JavaScript	Chapters 25 - 27
Standard 2: Variables in JavaScript	N/A
Standard 3: Input in JavaScript	N/A
Standard 4: Functions in JavaScript	N/A
Standard 5: Conditionals in JavaScript	N/A