

**CompuScholar, Inc.**

**Correlations to the Texas Essential Knowledge and Skills (TEKS):**  
**Web Design**

**Texas Course Details:**

<b>Chapter</b>	Chapter 130. Texas Essential Knowledge and Skills for CTE
<b>Subchapter</b>	Subchapter K. Information Technology
<b>Course</b>	§130.316. Web Design
<b>Standards</b>	<a href="#">Subchapter K. Information Technology</a>
<b>TEKS Coverage</b>	100%

**CompuScholar Course Details:**

<b>Course Title:</b>	Web Design
<b>Course ISBN:</b>	978-0-9887070-3-0
<b>Course Year:</b>	2023

**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 Standards**

<b>Knowledge and Skills Statement:</b> (1) Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:	
<b>Student Expectation</b>	<b>Citation(s)</b>
(A) demonstrate proficiency in local and online collaboration	Chapter 14, Lesson 1 Chapter 18, Lesson 1
(B) create a website using web editors and web authoring programs	Chapter 16, Lesson 4
(C) evaluate the accessibility and usability of an original website as it relates to a target audience	Chapter 14, Lesson 3 Chapter 28, Lesson 1
(D) conceptualize new possible technologies based on current technical trends	Chapter 16, Lesson 3
(E) analyze the use of virtualization such as virtual classrooms, distance learning, virtual storage, and a virtual operating system	Supplemental Lesson 1

(F) demonstrate knowledge and appropriate use of operating systems, software applications, and communication and networking components	Chapter 14, Lesson 2 Chapter 15, Lessons 1, 3 Chapter 28, Lesson 1
(G) make decisions regarding the selection, acquisition, and use of software taking into consideration its quality, appropriateness, effectiveness, and efficiency	Chapter 16, Lesson 4

**Knowledge and Skills Statement:** (2) Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

Student Expectation	Citation(s)
(A) analyze and implement the proper and acceptable use of digital/virtual communications technologies such as instant messaging (IM), chat, email, and social networking	Chapter 14, Lesson 2 Chapter 16, Lesson 1 Chapter 28, Lesson 1
(B) define and implement the acquisition, sharing, and use of files taking into consideration their primary ownership and copyright	Chapter 11, Lesson 1 Chapter 16, Lesson 1
(C) apply decisions regarding the selection, acquisition, and sharing of uniform resource locators (URLs) used in research, taking into consideration their quality, appropriateness, and effectiveness	Chapter 14, Lesson 1 Chapter 28, Lesson 1
(D) solve problems using critical-thinking strategies	Chapter 14, Lesson 1 Chapter 28, Lesson 1
(E) compare, evaluate, and implement the use of wired versus wireless access	Chapter 15, Lessons 3, 4

**Knowledge and Skills Statement:** (3) Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

Student Expectation	Citation(s)
(A) verify the accuracy, validity, and currency of acquired information	Chapter 14, Lesson 3 Chapter 28, Lesson 1
(B) conduct effective searches with Boolean operators	Supplemental Lesson 3
(C) acquire and use appropriate vocabulary terms	Chapter 6, Lesson 1 and many other lessons
(D) cite sources appropriately using established methods	Chapter 14, Lesson 2 Chapter 28, Lesson 1
(E) model ethical and legal acquisition of digital information following guidelines in the student code of conduct, including plagiarism and copyright laws	Chapter 14, Lesson 2 Chapter 16, Lesson 1 Chapter 28, Lesson 1
(F) identify and discuss emerging technologies and their impact	Chapter 16, Lesson 3
(G) understand Internet history and structure and how they impact current use	Chapter 15, Lesson 2
(H) demonstrate appropriate use of grammar, spelling, and vocabulary when creating original work	Chapter 14, Lesson 3 Chapter 28, Lesson 1

(I) acquire, evaluate, and use various web standards such as World Wide Web Consortium (W3C), Ecma International, and Internet Corporation for Assigned Names and Numbers (ICANN) to make informed decisions and implement standards in original work	Chapter 13, Lesson 2 Chapter 14, Lesson 2 Chapter 16, Lesson 3
(J) understand, analyze, and use interactive websites	Chapter 13, Lesson 3
(K) understand, evaluate, and determine the appropriate use of dynamic and static websites	Chapter 13, Lesson 3
(L) understand, evaluate, and determine the appropriate use of open/closed source file formats and software	Chapter 1, Lesson 1 Chapter 19, Lessons 1, 3
(M) explain and demonstrate how search engines work such as advanced options, preferences, advertising, and search categories	Supplemental Lesson 3
(N) evaluate, create, and apply principles of project management, including web storyboards, site maps, job duties, time constraints, group dynamics, communication interaction, and project completion, evaluation, and feedback	Chapter 13, Lesson 1 Supplemental Lesson 4
(O) understand the use and application of a virtual private network (VPN)	Chapter 15, Lessons 3, 4
(P) distinguish among protocols, including Hypertext Transfer Protocol (HTTP) and File Transfer Protocol (FTP)	Chapter 15, Lesson 5
(Q) summarize the technical needs of a World Wide Web server, including random access memory (RAM), hard disk capacity, central processing unit (CPU) speed, busses, methods of connectivity, and appropriate software	Supplemental Lesson 1
(R) demonstrate proficiency in the use of a variety of electronic input devices such as keyboard, scanner, voice/sound recorder, mouse, touch screen, or digital video by incorporating such components while publishing web pages	Chapter 14 Chapter 28
(S) demonstrate proper digital etiquette and knowledge of acceptable use policies when using networks, especially resources on the Internet	Chapter 16, Lesson 1
(T) demonstrate proficiency in and appropriate use and navigation of local area networks (LANs), wide area networks (WANs), the Internet, and intranets for research and resource sharing	Chapter 14, Lesson 1 Chapter 28, Lesson 1
(U) construct appropriate search strategies in the acquisition of information from the Internet, including keyword searches and searches with Boolean operators	Supplemental Lesson 3
(V) acquire information in electronic formats, including text, audio, video, and graphics, citing the source	Chapter 14, Lesson 1 Chapter 28, Lesson 1

**Knowledge and Skills Statement:** (4) Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

Student Expectation	Citation(s)
(A) demonstrate the transfer and adaptation of knowledge through the creation of original work	Chapter 14, Lesson 2 Chapter 28, Lesson 1

(B) evaluate and implement security measures to protect original work such as firewalls and Hypertext Transfer Protocol Secure (HTTPS)	Chapter 16, Lesson 2
(C) analyze and follow timelines needed to create, edit, and present original work	Chapter 14, Lesson 1 Supplemental Lesson 4
(D) verify current licensing issues for software being used for the creation of original work	Chapter 16, Lesson 4
(E) identify and evaluate the design and functionality of web pages using rubrics	Chapter 14, Lesson 3 Chapter 28, Lesson 1
(F) optimize web information for fast download such as dial- up and high speed Internet and mobile devices	Chapter 11, Lesson 1
(G) evaluate original work through self-, peer, and professional review of websites	Chapter 14, Lesson 3 Chapter 28, Lesson 1
(H) evaluate the types, functions, and target audiences of websites	Chapter 10, Lesson 1 Chapter 13, Lessons 3, 4
(I) read, use, and develop technical documents	Chapter 13, Lessons 1, 2 Chapter 14
(J) analyze, examine, assess, and decide on servers as they relate to the management of a website	Supplemental Lesson 1
(K) analyze, examine, assess and decide on a web host	Supplemental Lesson 1
(L) analyze, examine, assess and decide on domain name acquisition and retention	Supplemental Lesson 2
(M) evaluate the functionality of a website such as color scheme, grammar, technological constraints, age appropriateness, cross-platform usability, and user relevant criteria as it relates to an intended audience	Chapter 13, Lesson 2 Chapter 17, Activity 1
(N) identify software file formats and their characteristics and appropriate use	Chapter 19, Lessons 1, 3
(O) identify and apply search engine optimization (SEO) to ensure optimal website visibility	Chapter 13, Lesson 4
(P) investigate and choose electronic security methods for a web server to protect from unauthorized access and negative intentions	Chapter 16, Lesson 2
(Q) draw conclusions from data gathered from electronic and telecommunications resources	Chapter 14, Lesson 1 Chapter 28, Lesson 1

**Knowledge and Skills Statement:** (5) Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

Student Expectation	Citation(s)
(A) engage in online activities that follow appropriate behavioral, communication, and privacy guidelines, including ethics, personal security, verbiage determined by the intended audience, and ethical use of files and file sharing	Chapter 16, Lessons 1, 2
(B) understand the negative impact of inappropriate technology use, including online bullying and harassment	Chapter 16, Lesson 1

(C) implement online security guidelines, including identity protection, limited personal information sharing, and password protection of a secure website	Chapter 16, Lesson 2
(D) engage in safe, legal, and responsible use of information and technology	Chapter 16, Lesson 1
(E) understand and respond to local, state, national, and global issues to ensure appropriate cross-browser and cross-platform usability	Chapter 1, Lesson 1 Chapter 20, Lesson 1
(F) interpret, use, and develop a safe online shared computing environment	Chapter 16, Lesson 2 Plus inherent in use of this online
(G) identify legal, ethical, appropriate, and safe website marketing practices	Chapter 13, Lesson 4
(H) identify legal, ethical, appropriate, and safe multimedia usage, including video, audio, graphics, animation, and emerging trends	Chapter 11, Lesson 1 Chapter 16, Lesson 3 Chapter 19, Lessons 1, 3
(I) analyze the impact of the World Wide Web on society through research, interviews, and personal observation	Chapter 16, Lesson 3 Chapter 17, Activity 1
(J) participate in relevant and meaningful activities in the larger community and society to create electronic projects	Chapter 14, Lesson 1 Chapter 28, Lesson 1

**Knowledge and Skills Statement:** (6) Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

Student Expectation	Citation(s)
(A) demonstrate knowledge of hardware, including scanners, cameras, printers, video cameras, and external hard drives	Chapter 15, Lesson 1
(B) identify the parts of a computer and explain its functions	Chapter 15, Lesson 1
(C) summarize the need for and functionality and use of servers	Chapter 15, Lesson 2
(D) identify the advantages and disadvantages of running a personal web server versus using a web server provider	Supplemental Lesson 1
(E) differentiate and appropriately use various input, processing, output, and primary/secondary storage devices	Chapter 14, Lesson 2 Chapter 15, Lesson 1 Chapter 28, Lesson 1
(F) create and implement universally accessible documents	Chapter 14, Lesson 2 Chapter 13, Lesson 2 Chapter 28, Lesson 1
(G) analyze bandwidth issues as related to audience, server, connectivity, and cost	Supplemental Lesson 1
(H) establish a folder/directory hierarchy for storage of a web page and its related or linked files	Chapter 2, Lesson 1
(I) create file and folder naming conventions to follow established guidelines, including spacing, special characters, and capitalization	Chapter 1, Lesson 3 Chapter 2, Lesson 1

(J) identify basic design principles when creating a website, including white space, color theory, background color, shape, line, proximity, unity, balance (ratio of text to white space), alignment, typography, font size, type, style, image file size, repetition, contrast, consistency, and aesthetics	Chapter 6, Lesson 2 Chapter 10, Lesson 1 Chapter 11, Lesson 1
(K) demonstrate knowledge of the six core domains (gov, net, com, mil, org, edu) and be familiar with new domain implementation	Supplemental Lesson 2
(L) implement escape codes, HyperText Markup Language (HTML), cascading style sheets (CSS), and javascript through hard coding, web editors, and web authoring programs	Chapter 4, Lesson 2 Chapter 6, Lessons 1, 3, 4, 5 Chapter 16, Lessons 4, 5 Chapters 25, 26, 27
(M) identify and use FTP client software	Chapter 15, Lesson 5
(N) implement java applet insertion	Supplemental Lesson 6
(O) identify and differentiate various network topologies, including physical and logical	Chapter 15, Lesson 4
(P) create, evaluate, and use web-based animation	Chapter 27, Lesson 3
(Q) create, evaluate, and use video, including editing, compression, exporting, appropriateness, and delivery	Supplemental Lesson 5
(R) demonstrate the ability to conduct secure communications from a web server to a client	Chapter 16, Lesson 2
(S) use hypertext linking appropriately when creating web pages	Chapter 5