

CompuScholar, Inc.

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

Texas Course Details:

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| Chapter | Chapter 130. Texas Essential Knowledge and Skills for CTE |
| Subchapter | Subchapter K. Information Technology |
| Course | §130.308. Web Technologies (One Credit), Adopted 2015. |
| TEKS Coverage | 100% |

CompuScholar Course Details:

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| Course Title: | Web Design |
| Course ISBN: | 978-0-9887070-3-0 |
| Course Year: | 2022 |

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

| Knowledge and Skills Statement: (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to: | |
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| Student Expectation | Citation(s) |
| (1.A) identify and demonstrate work behaviors and qualities that enhance employability and job advancement such as regular attendance, attention to proper attire, maintenance of a clean and safe work environment, pride in work, flexibility, and initiative | Supplemental Lesson 8 Supplemental Lesson 13 |
| (1.B) employ effective verbal and nonverbal communication skills | Chapter 14, Lessons 1 - 3 (Team Project) Supplemental Lesson 4 Supplemental Lesson 7 |
| (1.C) examine the role of certifications, resumes, and portfolios in the web technology profession | Supplemental Lesson 8 Supplemental Lesson 13 |
| (1.D) solve problems and think critically | Chapter 3, Lesson 1 Chapter 14, Lesson 3 |
| (1.E) demonstrate leadership skills and function effectively as a team member | Chapter 14, Lessons 1 - 3 (Team Project) Chapter 28, Lesson 1 (Team Project) |

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| (1.F) demonstrate planning and time-management skills such as storyboarding and project management, including initiating, planning, executing, monitoring, and controlling, and closing projects | Chapter 13, Lesson 1 Chapters 14 and 28 (Team Projects) Supplemental Lesson 4 |
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Knowledge and Skills Statement: (2) The student identifies employment opportunities in the IT field with a focus in the area of interactive media. The student is expected to:

| Student Expectation | Citation(s) |
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| (2.A) identify job opportunities and accompanying job duties and tasks | Supplemental Lesson 8 Supplemental Lesson 13 |
| (2.B) research careers of personal interest along with the education, job skills, and experience required to achieve personal career goals | Supplemental Lesson 8 Supplemental Lesson 13 |
| (2.C) demonstrate an understanding of the functions of resumes and portfolios | Supplemental Lesson 8 Supplemental Lesson 13 |
| (2.D) create a portfolio | Chapters 14 and 28 (Team Proejects) Supplemental Lesson 8 |

Knowledge and Skills Statement: (3) The student demonstrates knowledge and appropriate use of hardware, software, and connectivity technologies. The student is expected to:

| Student Expectation | Citation(s) |
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| (3.A) identify networking components and define the impact of networking components on web development | Chapter 15, Lessons 2, 3, 4 |
| (3.B) evaluate the various input, processing, output, and storage devices and storage services | Chapter 15, Lesson 1 Supplemental Lesson 1 |
| (3.C) identify current and future Internet protocols such as hypertext transfer protocol, file transfer protocol, telnet, and email | Chapter 15, Lesson 5 Chapter 16, Lesson 3 |
| (3.D) describe new trends in web technology and evaluate their impact on web development | Chapter 16, Lesson 3 Chapter 20, Lesson 1 |

Knowledge and Skills Statement: (4) The student complies with practices and behaviors that meet legal and ethical responsibilities. The student is expected to:

| Student Expectation | Citation(s) |
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| (4.A) explain and demonstrate ethical use of technology and online resources | Chapter 16, Lesson 1 |
| (4.B) differentiate between copyright and trademarks | Chapter 16, Lesson 1 |
| (4.C) explain the concept of intellectual property laws, including copyright, trademarks, and patents and consequences of violating each type of law | Chapter 16, Lesson 1 |
| (4.D) examine the consequences of plagiarism | Chapter 16, Lesson 1 |
| (4.E) adhere to copyright and trademark intellectual property laws and regulations, including demonstrating correct acquisition | Chapter 14, Lesson 1 Chapter 16, Lesson 1 |

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| (4.F) discuss the process of acquiring rights to use copyrighted and trademarked content in a web site | Chapter 11, Lesson 1 |
| (4.G) demonstrate appropriate behavior and adherence to acceptable use policies when accessing and using online resources | Chapter 16, Lessons 1, 2 |
| (4.H) explain the importance of information privacy such as securing credit card information, passwords, and personal information | Chapter 16, Lesson 2 |
| (4.I) describe the function of a non-disclosure agreement | Chapter 16, Lesson 1 |
| (4.J) discuss website accessibility concerns | Chapter 13, Lesson 2 |

Knowledge and Skills Statement: (5) The student evaluates electronic information. The student is expected to:

| Student Expectation | Citation(s) |
|---|---|
| (5.A) identify appropriate methods to analyze the design and functionality of web pages | Chapter 10, Lesson 1 Chapter 17, Lesson 2 |
| (5.B) demonstrate skill in testing the accuracy and validity of information acquired | Chapter 14, Lesson 3 Supplemental Lesson 4 |
| (5.C) synthesize information from data acquired from online resources | Chapter 14, Lessons 1, 2 |

Knowledge and Skills Statement: (6) The student creates and modifies web and digital media designs. The student is expected to:

| Student Expectation | Citation(s) |
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| (6.A) implement functional design elements such as proximity, repetition, contrast, alignment, color theory, consistency, image file size, and typography | Chapter 14, Lessons 1, 2 |
| (6.B) identify, create, modify, and use common file formats such as text, image, video analog and digital, and audio files | Chapter 2, Lesson 4 Chapter 6, Lesson 5 Chapter 25, Lesson 4 |
| (6.C) select, create, modify, and integrate effective digital content such as vector-based and raster graphics, motion graphics, video, and audio | Chapter 11, Lessons 1, 2, 3 Chapter 19, Lessons 1, 2 Supplemental Lesson 5 |
| (6.D) create web pages using current web standards and web development skills such as version control, documentation, web application security, validation, accessibility, and compatibility across multiple browsers and devices | Chapter 2, Lesson 4 Chapters 14 and 28 (Team Projects) Chapter 16, Lesson 5 |
| (6.E) demonstrate proper use of folder structure hierarchy | Chapter 2, Lesson 1 Chapter 6, Lesson 5 Chapter 25, Lesson 4 |
| (6.F) use web coding standards to evaluate the design and functionality of web pages such as the World Wide Web | Chapter 13, Lesson 2 Chapter 17, Lesson 3 |

| Knowledge and Skills Statement: (7) The student demonstrates and employs knowledge of Internet programming strategies to develop and maintain web applications. The student is expected to: | |
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| Student Expectation | Citation(s) |
| (7.A) explain the importance of Internet programming standards | Chapter 1, Lesson 2 Chapter 16, Lesson 3 Chapter 25, Lesson 1 |
| (7.B) differentiate among various web coding standards such as HyperText Markup Language, and cascading style sheets | Chapter 25, Lessons 1, 4 |
| (7.C) use standard applications to develop web applications such as text-based editing programs, word processors, and web | Chapter 11, Lesson 1 Chapter 16, Lesson 5 |
| (7.D) compare and contrast the impact of different browsers on web development | Chapter 17, Lesson 1 Chapter 20, Lesson 1 |
| (7.E) explain client-server applications and describe the process of a client-server transaction | Chapter 13, Lesson 3 |
| (7.F) identify the advantages and disadvantages of client-side processing | Chapter 13, Lesson 3 |
| (7.G) identify security issues related to client-side processing | Chapter 13, Lesson 3 |
| (7.H) use standard scripting languages to produce interactive web applications | Chapters 25, 26, 27 |
| (7.I) identify characteristics of various scripting languages | Chapter 25, Lesson 1 |
| (7.J) explain the process to construct secure transaction interfaces from the web server to the customer | Chapter 16, Lesson 2 |

| Knowledge and Skills Statement: (8) The student employs knowledge of web administration to develop and maintain web applications. The student is expected to: | |
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| Student Expectation | Citation(s) |
| (8.A) compare the advantages and disadvantages of running a personal server versus using a server provider | Supplemental Lesson 1 |
| (8.B) explain the Transmission Control Protocol/Internet Protocol | Chapter 15, Lesson 2 |
| (8.C) identify hardware and software requirements for web servers | Supplemental Lesson 1 |
| (8.D) evaluate server providers | Supplemental Lesson 1 |
| (8.E) describe the process of establishing a domain name | Supplemental Lesson 2 |
| (8.F) simulate the administration of web servers, including uploading and managing files | Chapter 15, Lesson 5 |
| (8.G) collect and analyze usage statistics | Supplemental Lesson 9 |
| (8.H) maintain documentation of the server environment such as specifications, passwords, and software versions | Supplemental Lesson 1 |

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| (8.I) summarize the process of server backup and restoration of software features | Supplemental Lesson 1 |
| (8.J) propose security measures to protect web servers from electronic threats such as unauthorized access and negative intentions | Chapter 16, Lesson 2 |
| (8.K) evaluate security measures such as using a firewall, Secure Socket Layer (SSL) connections, and Hypertext Transfer Protocol Secure (HTTPS) transactions | Chapter 16, Lesson 2 |

Knowledge and Skills Statement: (9) The student evaluates a problem and creates a project management plan of action for meeting client requirements. The student is expected to:

| Student Expectation | Citation(s) |
|---|---|
| (9.A) communicate with clients to analyze requirements to meet the needs of the client and target audience | Supplemental Lesson 4 |
| (9.B) document design properties, necessary tools, and resources, and identify and address risks | Chapter 14, Lesson 1 Supplemental Lesson 4 |
| (9.C) develop and use a timeline task list such as critical milestones, potential challenges, and interdependencies | Chapter 14, Lesson 1 Supplemental Lesson 4 |
| (9.D) use various methods to evaluate the progress of the plan and modify as necessary | Chapter 14, Lesson 2 Supplemental Lesson 4 |

Knowledge and Skills Statement: (10) The student creates and implements a web product using a project management plan. The student is expected to:

| Student Expectation | Citation(s) |
|---|---|
| (10.A) create and simulate the publication of a multipage web product using client required content and web design concepts | Chapter 14, Lesson 3 Supplemental Lesson 4 |
| (10.B) develop a test plan for a multipage web product for testing usability, effectiveness, reliability, and customer | Chapter 14, Lesson 3 Supplemental Lesson 4 |
| (10.C) explain the quality assurance process | Chapter 14, Lesson 3 Supplemental Lesson 4 |
| (10.D) develop and implement a quality assurance plan | Chapter 14, Lesson 3 Supplemental Lesson 4 |