

eDynamic Learning Course Title: Web Development 1a/1b

State: TX  
State Course Title: Web Technologies  
State Course Code: 130.308  
State Standards: Information Technology  
Date of Standards: 2017

TEKS	Course Title. (a or b), if applicable, e.g. Game Design 1a	Unit Name(s)	Lesson(s) Numbers
(1) The student demonstrates professional standards/employability skills as required by business and industry.			
(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;	Web Development 1b	Unit 8: Working the Web	Lessons 1-4
(B) employ effective verbal and nonverbal communication skills;	Web Development 1b	Unit 8: Working the Web	Lesson 3
(C) examine the role of certifications, resumes, and portfolios in the web technology profession;	Web Development 1b	Unit 8: Working the Web	Lesson 2
(D) solve problems and think critically;	Web Development 1b	Unit 8: Working the Web	Lesson 3
(E) demonstrate leadership skills and function effectively as a team member; and	Web Development 1b	Unit 8: Working the Web	Lessons 1 ,2
(F) demonstrate planning and time-management skills such as storyboarding and project management, including initiating, planning, executing, monitoring and controlling, and closing a project.	Web Development 1a	Unit 6: User-Centered Planning and Project Management	Lessons 1-3
(2) The student identifies employment opportunities in the IT field with a focus in the area of interactive media.			
(A) identify job opportunities and accompanying job duties and tasks;	Web Development 1b	Unit 8: Working the Web	Lab
(B) research careers of personal interest along with the education, job skills, and experience required to achieve personal career goals;	Web Development 1b	Unit 8: Working the Web	Lab
(C) demonstrate an understanding of the functions of resumes and portfolios; and	Web Development 1b	Unit 8: Working the Web	Lesson 2
(D) create a portfolio.	Web Development 1b	Unit 8: Working the Web	Activity 2
(3) The student demonstrates knowledge and appropriate use of hardware, software, and connectivity technologies.			

(A) identify networking components and define the impact of networking components on web development;	Web Development 1b	Unit 7: The Mobile Web	Lessons 1-4
(B) evaluate the various input, processing, output, and storage devices and storage services;	Web Development 1a	Unit 8: Web Project Workflow	Lesson 4
(C) identify current and future Internet protocols such as hypertext transfer protocol, file transfer protocol, telnet, and email; and	Web Development 1a	Unit 7: The Mobile Web	Lesson 3
(D) describe new trends in web technology and evaluate their impact on web development.	Web Development 1a	Unit 5: Serving Up the Web	Lesson 4
<b>(4) The student complies with practices and behaviors that meet legal and ethical responsibilities.</b>			
(A) explain and demonstrate ethical use of technology and online resources;	Web Development 1b	Unit 6: Web Regs	Lessons 1-3
(B) differentiate between copyright and trademarks;	Web Development 1b	Unit 6: Web Regs	Lesson 1
(C) explain the concept of intellectual property laws, including copyright, trademarks, and patents and consequences of violating each type of law;	Web Development 1b	Unit 6: Web Regs	Lesson 1
(D) examine the consequences of plagiarism;	Web Development 1b	Unit 6: Web Regs	Lesson 1
(E) adhere to copyright and trademark intellectual property laws and regulations, including demonstrating correct acquisition and citation of sources;	Web Development 1b	Unit 6: Web Regs	Lessons 1-3
(F) discuss the process of acquiring rights to use copyrighted and trademarked content in a website;	Web Development 1b	Unit 6: Web Regs	Lesson 1
(G) demonstrate appropriate behavior and adherence to acceptable use policies when accessing and using online resources;	Web Development 1b	Unit 6: Web Regs	Lesson 2
(H) explain the importance of information privacy such as securing credit card information, passwords, and personal information;	Web Development 1b	Unit 6: Web Regs	Lesson 4
(I) describe the function of a non-disclosure agreement; and	Web Development 1b	Unit 6: Web Regs	Lesson 4
(J) discuss website accessibility concerns.	Web Development 1b	Unit 6: Web Regs	Lesson 3
<b>(5) The student evaluates electronic information.</b>			
(A) identify appropriate methods to analyze the design and functionality of web pages;	Web Development 1b	Unit 3: Web Maintenance and Performance	Lesson 1
(B) demonstrate skill in testing the accuracy and validity of information acquired; and	Web Development 1b	Unit 3: Web Maintenance and Performance	Lessons 2, 3
(C) synthesize information from data acquired from online resources.	Web Development 1b	Unit 3: Web Maintenance and Performance	Lab

<b>(6) The student creates and modifies web and digital media designs.</b>			
(A) implement functional design elements such as proximity, repetition, contrast, alignment, color theory, consistency, image file size, and typography;	Web Development 1b	Unit 1: Beautiful Web Design	Lessons 1, 2
(B) identify, create, modify, and use common file formats such as text, image, video analog and digital, and audio files;	Web Development 1a	Unit 7: Organizing Web Files	Lesson 2
(C) select, create, modify, and integrate effective digital content such as vector-based and raster graphics, motion graphics, video, and audio;	Web Development 1b	Unit 2: Files, Formats and Media	Lesson 1
(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;	Web Development 1b	Unit 2: Files, Formats and Media	Activity 2
(E) demonstrate proper use of folder structure hierarchy; and	Web Development 1a: Introduction	Unit 7: Organizing Web Files	Lesson 1
(F) use web coding standards to evaluate the design and functionality of web pages such as the World Wide Web Consortium (W3C) guidelines.	Web Development 1b	Unit 6: Web Regs	Lesson 3
<b>(7) The student demonstrates and employs knowledge of Internet programming strategies to develop and maintain web applications.</b>			
(A) explain the importance of Internet programming standards;	Web Development 1a	Unit 2: Introduction to HTML	Lessons 1, 4
(B) differentiate among various web coding standards such as Hypertext Markup Language, and cascading style sheets;	Web Development 1a	Unit 2: Introduction to HTML	Lesson 1
(C) use standard applications to develop web applications such as text-based editing programs, word processors, and web authoring software;	Web Development 1a	Unit 8: Web Project Workflow	Lesson 2, Activity
(D) compare and contrast the impact of different browsers on web development;	Web Development 1a	Unit 5: Serving Up the Web	Lesson 4
(E) explain client-server applications and describe the process of a client-server transaction;	Web Development 1a	Unit 5: Serving Up the Web	Lesson 1
(F) identify the advantages and disadvantages of client-side processing;	Web Development 1a	Unit 5: Serving Up the Web	Lesson 1
(G) identify security issues related to client-side processing;	Web Development 1a	Unit 4: Introduction to JavaScript	Lessons 1-4
(H) use standard scripting languages to produce interactive web applications;	Web Development 1a	Unit 1: Introduction to Web Development	Lesson 1
(I) identify characteristics of various scripting languages; and	Web Development 1a	Unit 1: Introduction to Web Development	Lesson 3
(J) explain the process to construct secure transaction interfaces from the web server to the customer.	Web Development 1a	Unit 5: Web Development Platforms	Lesson 1
<b>(8) The student employs knowledge of web administration to develop and maintain web applications.</b>			

(A) compare the advantages and disadvantages of running a personal server versus using a server provider;	Web Development 1a	Unit 5: Serving Up the Web	Lesson 1
(B) explain the Transmission Control Protocol/Internet Protocol;	Web Development 1b	Unit 5: Web Security	Lesson 3
(C) identify hardware and software requirements for web servers;	Web Development 1a	Unit 5: Serving Up the Web	Lesson 1
(D) evaluate server providers;	Web Development 1a	Unit 5: Serving Up the Web	Lesson 4
(E) describe the process of establishing a domain name;	Web Development 1a	Unit 5: Serving Up the Web	Lesson 3
(F) simulate the administration of web servers, including uploading and managing files;	Web Development 1a	Unit 7: Organizing Web Files	Lesson 3
(G) collect and analyze usage statistics;	Web Development 1b	Unit 3: Web Maintenance and Performance	Lesson 1
(H) maintain documentation of the server environment such as specifications, passwords, and software versions;	Web Development 1a	Unit 4: Introduction to JavaScript	Lessons 1-4
(I) summarize the process of server backup and restoration of software features;	Web Development 1a	Unit 4: Introduction to JavaScript	Lessons 1-4
(J) propose security measures to protect web servers from electronic threats such as unauthorized access and negative intentions; and	Web Development 1a	Unit 4: Introduction to JavaScript	Lessons 1-4
(K) evaluate security measures such as using a firewall, Secure Socket Layer (SSL) connections, and Hypertext Transfer Protocol Secure (HTTPS) transactions.	Web Development 1a	Unit 4: Introduction to JavaScript	Lessons 1-4
<b>(9) The student evaluates a problem and creates a project management plan for meeting client requirements.</b>			
(A) communicate with clients to analyze requirements to meet the needs of the client and target audience;	Web Development 1a	Unit 6: User-Centered Planning and Project Management	Lesson 2
(B) document design properties, necessary tools, and resources and identify and address risks;	Web Development 1a	Unit 6: User-Centered Planning and Project Management	Lesson 2
(C) develop and use a timeline task list such as critical milestones, potential challenges, and interdependencies; and	Web Development 1a	Unit 6: User-Centered Planning and Project Management	Lesson 2
(D) use various methods to evaluate the progress of the plan and modify as necessary.	Web Development 1a	Unit 6: User-Centered Planning and Project Management	Lesson 2
<b>(10) The student creates and implements a web product using a project management plan.</b>			
(A) create and simulate the publication of a multipage web product using client required content and web design concepts;	Web Development 1b	Unit 3: Web Maintenance and Performance	Lessons 1-4
(B) develop a test plan for a multipage web product for testing usability, effectiveness, reliability, and customer acceptance;	Web Development 1b	Unit 3: Web Maintenance and Performance	Lessons 1-4

(C) explain the quality assurance process; and	Web Development 1b	Unit 3: Web Maintenance and Performance	Lessons 1-4
(D) develop and implement a quality assurance plan	Web Development 1b	Unit 3: Web Maintenance and Performance	Lessons 1-4