

New Applications: Web Development in the 21st Century **Scope and Sequence**

Unit Lesson	Objectives
THE WORLD WIDE WEB: HISTORY AND DEFINITIONS	
History of the Web in a Nutshell	
	Describe the complexity of the influences in the creation of the Internet.
	Discuss a person's placement within the historical context of the Internet.
	Explain how deconstructing the past can help project future possibilities within a rapidly emerging technology.
	Define common terms and their origins.
Project: The Interconnected Internet	
File Sizes and Resolution	
	Demonstrate an understanding of the complexity of file size, speed, resolution, and Moore's Law.
	Defend the importance of HTML and evaluate possible uses of HTML.
	Distinguish common terms, definitions, and their origins.
Project: Consulting	
Hosted vs. Local Computing	
	Describe and discuss web browsers, various website protocols, and HTML.
	Practice the technique of reverse engineering HTML on websites.
Manual Transmission: HTML (Part One)	
	Contrast the difference between the server and the local machine.
	Explain some of the basics of making code changes.
	Compare HTML-editing software and create a rudimentary website.
	Demonstrate preliminary use of HTML.
Project: Developing HTML	

New Applications: Web Development in the 21st Century Scope and Sequence

Unit Lesson

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The Editor's Two Flavors: HTML (Part Two)

Explain the elements of formatting using the HTML tags.

Describe the part that meta-information plays in coding.

Explain how the use of iframes allows another web page to be inserted into a web page.

Demonstrate preliminary use of HTML using tag charts for reference.

Project: On Assignment as a Web Developer

The Wave of the Present

Compare types of HTML editing software.

Appraise the use of free web-based HTML editing programs and downloadable client-based HTML editors.

Explain the difference between the server and the local machine.

Identify the benefits of a WYSIWYG editor.

Unit 1 Test

WEBSITE DESIGN ON CONTENT-MANAGED PLATFORMS

WordPress Roles

Discuss the creation and use of e-mail addresses and avatars.

Explain how to navigate the Dashboard of WordPress.

Compare and contrast the roles of the administrator, author, editor, and contributor in WordPress.

Use WordPress to construct a simple site.

Project: Developing a WordPress Account

WordPress Themes

Unit Lesson

Objectives

Appraise a span of theme choices.

Navigate and customize all aspects of the theme on the WordPress sandbox website.

In a word-processing document, create a customization report that shows the default state of each customizable item.

Explain some of the intricacies of creating menus in WordPress.

Project: Marketing to a Potential Client

Typography

Describe some basics of printing and typesetting history.

Identify and compare various fonts and their aspects.

Operate standard Adobe Font in WordPress.

Explain other aspects of customization and navigation in a WordPress site.

Detailed Editors

Recognize and explain the major benefits of the content-managed website-creation software tool WordPress.

Create regular posts.

Describe the benefit of tags in organizing the content on a website.

Explain the process for moving from draft to publishing in Word Press.

Discuss some of the formats (and formatting – The Kitchen Sink) available to users through WordPress.

Widgets

Recognize and explain the major benefits of the content-managed website-creation software tool WordPress.

Explain the background of APIs and plug-ins.

Demonstrate an understanding and ability to remote post from MS Word to WordPress.

Project: Bringing It All Together

New Applications: Web Development in the 21st Century Scope and Sequence

Unit Lesson

Objectives

Third Party Add-ons

Describe where plug-ins are used.

Compare and contrast plug-ins and apps.

Be able to define plug-ins, apps, add-ons, snap-ins, and extensions.

Explain how this study fits into the larger subject of software applications and operating systems.

Project: A Comparative Study of Apps, Plugins, and Extensions

Unit 2 Test

MANAGING SITE CREATION

Assigning Roles

Appraise a variety of free audio and video files sources.

Discuss the benefits of using SoundCloud and YouTube instead of WordPress for audio and video.

Demonstrate an ability to use editing controls, including options such as changing color, instant play, and comment display.

Identify the differences between Flash embedding and HTML5 embedding.

Project: Photos, Videos, and Sound Files in WordPress

Designing the Website

Demonstrate client fact-gathering strategies that aid in the design and deployment of a customer's web presence.

Define at least three alternative methods for posting content to a website.

Project: Creating Posts

Developing the Content

Define and complete a needs statement for an imaginary client based on given specifications for text, images,

New Applications: Web Development in the 21st Century Scope and Sequence

Unit Lesson

Objectives

sound files, and video..

Explain SEO (search engine optimization) and how it works within companies like Google..

Discuss why identifying web trends can be helpful to a business.

Publishing Deadlines

Demonstrate an understanding of and practice the use of deadlines.

Explain the necessity and practicality of a needs statement.

Describe the development of a site design in collaboration with a client.

Project: Creating a Statement of Work

Approvals, Change Orders, and Last-Minute Edits

Define and appraise the importance of service-level agreements.

Explain the purpose of change orders.

Discuss the importance of developing good client relationships.

Self-Evaluation and Your Projects

Describe the benchmarking process and establish three representative indicators for meeting a specific benchmark.

Discuss how baseline, goals, and benchmarks are addressed in the development of an operation plan and estimate the approximate weight that should be given to each.

Project: Baseline, Benchmark, Objective, and Goal

Unit 3 Test

INTERNET-DISTRIBUTED APPLICATIONS

What Are Internet Distributed Applications?

New Applications: Web Development in the 21st Century

Scope and Sequence

Unit Lesson

Objectives

Explain the phases that led to the present state of application delivery.

Define and differentiate cloud computing from other applications.

Compare various cloud-computing applications.

Project: What Is Cloud Computing?

Distribution of Internet Applications

Explain interaction between brick-and-mortar stores and online applications.

Debate the strengths and weaknesses of several applications that bridge physical and virtual worlds.

Project: Are You Online or Offline?

The Internet – Revolutionary Path to Applications

Explain how the Internet was a game-changing invention that included a worldwide collaborative effort.

Compare the similarities and differences of the Internet to technological advancements from the last century.

Explain how the Internet is a revolutionary force that is changing our civilization, including perspectives on global economy.

Project: New Technology: Autos vs. Internet

Strategies for Keeping Well-Informed

Distinguish between primary sources and secondary sources of information.

Describe appropriate use of aggregation technology to keep abreast of industry changes.

Compare the features of various free RSS aggregators.

Explain the use of Outline Processor Markup Language.

Project: RSS Feed Comparisons

Report on the Present

New Applications: Web Development in the 21st Century

Scope and Sequence

Unit Lesson

Objectives

Identify and explain key benchmarks for critical thinking.

Discuss how critical thinking and critical reading assist in keeping abreast of developments in the field of your interest.

Project: Find Your Own Trends

Evaluating Products and Services

Move beyond any evaluation apprehensions to clearly assess personal strengths and weaknesses.

Demonstrate a critical nonjudgmental approach toward assessment.

Define and classify various targets for evaluation and defend justifications for choosing these targets.

Develop evaluations to address complex issues that arise at the nexus of human interaction and technology.

Unit 4 Test

NEW APPS: CREATIVITY AND CAREERS

The Mobile Apps Industry

List the three most popular platforms for mobile apps.

Illustrate the differences between feature phones and smartphones.

Evaluate some of the barriers app developers may face when marketing their products in emerging global markets.

Develop a preliminary proposal for a new app.

Project: Apps Review

Building Apps

Explain the difficulty app developers face when creating apps for multiple platforms.

List four activities required to move a proposed app from concept to finished product.

Describe what app developers typically market through in app sales strategies.

Debate whether free editions of apps genuinely benefit the consumer.

New Applications: Web Development in the 21st Century **Scope and Sequence**

Unit	Lesson	Objectives
	Health Considerations in Developing Apps	
		Argue why ergonomics should always be a consideration in office design.
		Discuss and explain the environmental and occupational safety hazards that exist in the app-development office.
		Suggest alternative work environments that mitigate some of the common causes of employee injury in an app-development office.
		Estimate the cost of bringing your workspace up to a level that reduces the likelihood of injury or strain.
		Discuss some inexpensive or no-cost actions a developer can employ to reduce, mitigate, or eliminate injury or loss of focus.
	Project: The Ergonomic App Development Office	
	Entrepreneurial App Development	
		List the three most popular platforms for smartphone and Web-app deployment.
		Compare and evaluate the process of uploading an app to the Apple App Store and another app store.
		Describe the sequence of activities associated with carrying an app from concept to distribution.
		Evaluate the strengths and shortcomings associated with three revenue streams available to the app developer.
	Project: Researching Network Operating Systems	
	Expanding Career Opportunities	
		Discuss the several roles and responsibilities of various app-development studio employees.
		Describe how entry-level designers and creative staff can move up in an organization.
		Explain why various app platforms must conform to specific programming languages.
	Technology Advances, Careers	

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Unit **Lesson**

Objectives

Redefined

Explain the difference between the three routes to computer science training.

Discuss reasons why the World Wide Web and web browsers may fall into disuse.

Create a timeline of major computer and software innovations.

Develop a basic career development plan for entry level positions in app and software development.

Project: Next Year's App Solution

Unit 5 Test

COURSE REVIEW AND EXAM

Review

Exam