
Course Description

Site Development Associate teaches you essential Webpage development skills. You will learn to develop Websites using Hypertext Markup Language version 5 (HTML5) and Cascading Style Sheets (CSS3). You will learn to write code manually, as well as use graphical user interface (GUI) authoring tools. You will also learn to insert images, create hyperlinks, and add tables, forms, video, and audio to your Webpages.

In addition to learning about HTML5 and CSS3 coding, you will learn how to use HTML5 Application Programming Interfaces (APIs) to extend the functionality of Webpages, such as geolocation, drag-and-drop, canvas, and offline Web applications. Other topics include validating your HTML code, recognizing the importance of search engine optimization (SEO), using style sheets extensively to format Webpage content, and implementing fundamental design concepts. Throughout the course, you will learn how Websites are developed as managed projects. You will also identify e-commerce solutions and relate Website development to business goals.

Site Development Associate provides an introduction to tasks, job roles and careers in Web development. This course will teach you to work as a productive part of a Website development team. Hands-on labs include real-world scenarios based on the uCorp Website that has been constructed for the CIW Web Foundation courses. Note that students will build prototype pages using uCorp content. All CIW Web Foundations courses offer Case Studies for class discussion about real-world skills applications, and job-related topics such as project management and the relationship between technology and business operations. Guided, step-by-step labs provide opportunities to practice new skills. You can challenge yourself and review your skills after each lesson in the Lesson Summary and Lesson Review sections. Additional skill reinforcement is provided in Activities, Optional Labs, Lesson Quizzes and a Course Assessment that are available from your instructor.

This coursebook includes supplemental material located on CIW Online. To practice the skills presented in class or to perform any labs that were not completed, refer to the Classroom Setup section for information about system requirements and using the lab files.

The CIW Web Foundations courses prepare students to take the CIW Web Foundations Associate certification exam.

Series

Site Development Associate is the second course in the CIW Web Foundations series:

- Internet Business Associate
- *Site Development Associate*
- Network Technology Associate

Prerequisites

No prior experience using the Internet, developing Webpages or configuring networks is necessary. However, students should be familiar with an operating system such as Microsoft Windows 10 before taking this course. The CIW Web Foundations courseware does not provide entry-level computer literacy. Rather, it builds upon computer literacy training and certifications such as Microsoft Office Specialist (www.microsoft.com).

Certification

The CIW Web Foundations series of courses prepares students to take the high-stakes CIW Web Foundations Associate certification exam (1D0-610). Those who pass the CIW Web Foundations Associate exam earn the highly respected CIW Web Foundations Associate certification, which is recognized throughout the industry as validating essential Internet skills for the workplace. The CIW Web Foundations Associate certification proves that an individual has evolved from being an Internet consumer to an Internet producer, capable of producing real-world Internet applications. A CIW Web Foundations Associate certificant can use common Internet-ready applications, can create properly formed HTML5 documents, knows database essentials, understands project management concepts and can troubleshoot networks.

Candidates also have the option to take any or all of the three modular CIW Associate exams, each of which earns the candidate a modular subject certification if passed:

- Internet Business Associate (exam 1D0-61A)
- Site Development Associate (exam 1D0-61B)
- Network Technology Associate (exam 1D0-61C)

Candidates who pass all three modular certification exams also earn the comprehensive CIW Web Foundations Associate certification.

For information about taking any CIW Associate exams, visit www.CIWcertified.com.

Target audience

Students and professionals who are interested in Website development can benefit from the *CIW Site Development Associate* course and/or certification:

- High school students
- College students
- Technical/trade school students

Professionals in all industries can benefit from the *CIW Site Development Associate* course and/or certification:

- IT professionals
- Marketing professionals
- Graphic artists
- Website designers

Courseware

This coursebook was developed for instructor-led and/or self-study training. Along with comprehensive instructional text and objectives checklists, this coursebook provides easy-to-follow hands-on labs and a glossary of course-specific terms. It also provides Internet addresses needed to complete some labs, although due to the constantly changing nature of the Internet, some addresses may no longer be valid.

The student coursebook is organized in the following manner:

Student Coursebook	
☰	Table of contents (including lists of labs, figures and tables)
☰	Lessons
☰	Lesson objectives
☰	Narrative text (including exam objective callouts, tables and figures, warnings and tech notes)
☰	Labs (including exam objective callouts, tables and figures, warnings and tech notes)
☰	Case Study
☰	Lesson summary
☰	Appendixes
☰	Glossary
CIW.uCertify.com	
☰	Online Resources
☰	Pre-assessment test
☰	Lesson resources
☰	Movie Clips
☰	CIW Online Exercises
☰	CIW Course Mastery
☰	Lab files
☰	Flashcards
☰	CIW Practice Exams
☰	Supplemental Files
☰	Answers*
☰	Appendixes
☰	Handouts*
☰	Live Labs**

*Not included in Academic Student materials.
 **Live Labs are available in Self-Study products.

When you return to your home or office, you will find this coursebook to be a valuable resource for reviewing labs and applying the skills you have learned. Lesson review questions are provided as a study resource only and in no way guarantee a passing score on the CIW Web Foundations Associate certification exam.

Coursebook versions

The CIW Web Foundations courseware is designed for various classroom environments: academic, learning center/corporate and self-study. Coursebooks are available in both instructor and student versions. Check your book to verify which version you have.

Instructor (Academic, Learning Center/Corporate)

- Example syllabi for 10-week, 16-week and 32-week instruction periods are included in the instructor resource files available in the Resources section of the online course. Learning centers can teach this series at an accelerated pace; consult the implementation tables that can be found in the instructor resource files.
- The instructor version of this book includes Instructor Notes in the margin, which provide additional tips and commentary for the instructor to supplement course narrative. Margin callouts also direct instructors to material that relates directly to specified CIW Web Foundations objectives.
- The instructor book and supplemental files contain answers to Labs, Case Studies, Activities, Optional Labs and Lesson Quizzes.
- The online instructor resources also include handout versions of Labs, Activities, Optional Labs and Lesson Quizzes, which the instructor can print and assign during class or as homework.
- The online instructor resources include an appendix listing the CIW Web Foundations Associate certification exam objectives and locations of corresponding material in the coursebook.

Additional online resources, such as Pre-Assessment, Lesson Quizzes, Practice Exams and Post Assessments, are provided as study and course-grading resources only; success on these materials in no way guarantees a passing score on the CIW Web Foundations Associate certification exam.

Student (Academic, Learning Center/Corporate, Self-Study)

- The student book and supplemental files include Pre-Assessment and Lesson Review questions for each lesson. However, the student book does not provide answers to these questions.
- The student book also does not include any Activities, Optional Labs or Quizzes. Students can obtain these elements and answers from the instructor (for ILT training) or from CIW Online (for learning center/corporate or self-study training).
- The student supplemental materials are available in the online course and include appendixes and files used to perform many of the labs in the coursebook.
- The online course also includes an appendix listing the CIW Web Foundations Associate certification exam objectives and locations of corresponding material in the coursebook.

Lesson Quizzes are provided as study and course-grading resources only; success on these materials in no way guarantees a passing score on the CIW Web Foundations Associate certification exam.

Online resources

You can visit CIW Online at <http://ciw.ucertify.com> to access all course materials and to get help in preparing for the CIW Web Foundations Associate certification exam. The online course provides a variety of tools you can use to supplement the Official CIW Courseware.

CIW courseware supplemental files

This coursebook includes supplemental material that can be accessed from the CIW online course. Online materials are provided for both instructors and students, and include some elements required to complete the coursework and other optional elements that are provided for your interest or further study.

Student materials include:

- Lab files used to complete the course labs.
- Exercises, glossary flashcards and quizzes.
- Appendixes with related information (including the CIW Web Foundations Objectives And Locations Appendix).

Instructor materials include:

- Course syllabi and implementation tables
- Answers to students exercises and quizzes
- Appendixes with related information (including the CIW Web Foundations Objectives And Locations Appendix).

See the instructor resource files available in the Resources section of the online course for information about accessing these files.

CIW Pre-Assessment

An online Pre-Assessment test is provided to help identify areas for students to concentrate their studies before beginning the CIW Web Foundations courses. The Pre-Assessment test is provided as an initial indicator of base knowledge and course-grading resource; success on the Pre-Assessment in no way guarantees a passing score on the CIW Web Foundations certification exams.

CIW Movies

CIW Web Foundations courses offer movie clips that provide supplementary instruction in a multimedia format, and enhance the coursebook narrative and labs. However, movie content does not comprehensively address CIW Web Foundations certification exam objectives and is not intended to replace coursebook content.

Instructors in a classroom environment are strongly encouraged to present movies to the entire class using a computer screen projector. Group presentations enable instructors to present and discuss movie content when appropriate. Controlling the presentation of movies also minimizes distractions from course material and essential lecture or lab time.

Students are strongly encouraged to watch the movie clips on their own if they are unable to view them in class. CIW Movies are part of the online course materials for all students.

CIW Online Exercises

These interactive activities are instructional supplements to the official print and online books, designed to offer a blended-learning approach. Mapped directly to the Official CIW Courseware, the CIW Online Exercises enable you to review important concepts from the Web Foundations courses and measure your proficiency on content relevant to the CIW Web Foundations Associate certification exam. CIW Online Exercises challenge you with a wide range of activities that all provide immediate feedback, including:

- Glossary flashcards.
- Matching exercises.
- Fill-in-the-blank exercises.
- True/false questions.

CIW Lesson Quizzes

CIW Lesson Quizzes are designed to assess your knowledge of the concepts, skills and best practices of Web technology taught in the Official CIW Courseware. The CIW Lesson Quizzes assess lesson knowledge, reinforce classroom learning and enhance instruction. This online assessment program contains multiple-choice assessments that cover CIW Web Foundations courseware content lesson by lesson.

CIW Course Mastery

CIW Course Mastery questions are designed to assess your knowledge of the concepts, skills and best practices of Web technology taught in the Official CIW Courseware. The CIW Course Mastery questions assess lesson knowledge, reinforce classroom learning and enhance instruction. This online review program contains multiple-choice questions that cover CIW Web Foundations courseware content lesson by lesson. The Course Mastery program is based on a unique method that maximizes knowledge retention.

CIW Certification Practice Exams

After you have mastered the Web Foundations course material, you are ready to prepare for the high-stakes CIW Web Foundations Associate certification exam. The online CIW Certification Practice Exams program helps you build confidence with your knowledge of the CIW exam objectives. This program provides you with:

- Timed practice exams that simulate the high-stakes testing environment and help predict actual performance on CIW certification exams.
- A feedback review mode that allows you to check answers and gain valuable feedback that relates each question to a CIW exam objective and a lesson in the Official CIW Courseware.
- Exam results that report on your mastery of each CIW exam objective.

- Personalized performance reports and study plans to track individual progress and view overall class trends.

CIW Post-Assessment

The online Post-Assessment test is a multiple-choice post-course assessment that will evaluate your knowledge of the skills and concepts taught in CIW Web Foundations. The Post-Assessment test is provided as study and course-grading resources only; success on these materials in no way guarantees a passing score on the CIW Web Foundations Associate certification exam.

Course Objectives

After completing this course, you will be able to:

- ↻ Discuss the importance of a business Website that complements your organization.
- ↻ Identify front-end and back-end Webpage design issues, demonstrate knowledge of Website development principles, and define the concepts of creative design and branding standards.
- ↻ Discuss the history of markup languages, and identify markup language standards and the organizations that define them.
- ↻ Define markup and document structure elements, and use Cascading Style Sheets (CSS3) to apply formatting to Webpages.
- ↻ Use both a text editor and a GUI markup language editor to create HTML5 pages.
- ↻ Create HTML5 pages with horizontal rules, images, browser-safe colors, hyperlinks, tables, Web forms, client-side image maps, audio and video.
- ↻ Test processing of Web forms using a public test engine, and validate your HTML5 code to W3C standards.
- ↻ Identify requirements for Website publishing, identify uses for client-side and server-side Web technologies and languages, and demonstrate HTML5 Application Programming Interfaces (APIs).
- ↻ Identify the benefits of Dynamic HTML (DHTML) and the Document Object Model (DOM).
- ↻ Identify Webpage development techniques for mobile devices, and use Web application frameworks to create and manage dynamic Websites.
- ↻ Use Web 2.0 technologies to customize your Webpages.
- ↻ Compare using a service provider to hosting on your own Web server.
- ↻ Discuss Internet marketing issues and search engine optimization (SEO), and their effects on the content and performance of your Website.
- ↻ Identify issues related to working in a global environment.

Classroom Setup

Your instructor has probably set up the classroom computers based on the system requirements listed in the following sections. Most software configurations on your computer are identical to those on your instructor's computer. However, your instructor may use additional software to demonstrate network interaction or related technologies.

System Requirements

This section lists the hardware, software and connectivity requirements to implement this course.

Hardware

The following table summarizes the hardware requirements for all courses in the CIW program. Each classroom should be equipped with an individual computers to accommodate each student and the instructor with their own system.

Note: The CIW hardware requirements are similar to the minimum system requirements for Microsoft Windows 10 implementation.

Hardware Specifications	Minimum Requirements
Processor	1 GHz 32-bit (x86) or 64-bit (x64) processor
Hard disk	16 GB available hard disk space (32-bit) or 20 GB available hard disk space (64-bit) for Windows 10 installation. 16 GB of additional space must be available for course applications and files.
RAM	1 GB RAM (32-bit) or 2 GB RAM (64-bit)
Network interface card (NIC)	Wireless, 10/100 Ethernet, or Gigabit Ethernet
Wireless router (AP)	Wireless-G, Wireless-N, or Wireless-AC router with built-in 4-port Ethernet switch to connect wired network PCs and devices. Wireless NICs must support the wireless router (G, N or AC).
Sound card/speakers	Required
Video adapter	Microsoft DirectX 9 graphics device with WDDM driver
Monitor	1024 x 768 screen resolution using a VGA, DVI or HDMI connector
Network connectivity	Enough wireless nodes, hubs or switches to allow classroom computers to communicate and access the Internet.
Web camera (Webcam)	Any type of Web camera. Some monitors include an internal Webcam. USB Webcams are a good choice.

Software

The CIW Web Foundations series is intended to be largely operating system- and browser-independent. Provided you use Hypertext Markup Language version 5 (HTML5)-compliant browsers, the labs should function properly. HTML5-compliant browsers include Google Chrome (any version), Mozilla Firefox (version 10 or higher) and Microsoft Edge.

Each school's network is configured differently. You should test each lab to ensure the ports are open on the firewall before presenting the lab to the class. You may have to talk to your network administrator to open the ports.

If you are teaching all three CIW Web Foundations courses sequentially, there is no need to reformat your computers for each course. The recommended software configurations for computers used to complete the labs in this book series are as follows.

Site Development Associate

To be installed before class:

- **Microsoft Windows 10** (typical installation)
- **Windows Internet Explorer 9** (typical installation)
- **Google Chrome — any version** (typical installation)
- **Firefox 10 or higher** (typical installation)
- **Microsoft Movies & TV** (typically included with Windows 10)

To be installed by students during course labs:

- **Lynx** (binary provided in the C:\CIW\Site_Dev\Lab Files\Lesson01\Lab_1-3\Lynx folder)
- **FormMail** (binary provided in the C:\CIW\Site_Dev\Lab Files\Lesson06\Lab_6-1\FormMail folder)
- **KompoZer** (binary provided in the C:\CIW\Site_Dev\Lab Files\Lesson09\Lab_9-1 folder)
- **OBS** (binary provided in the C:\CIW\Site_Dev\Lab Files\Lesson07\Lab_7-1 folder)
- **HandBrake**(binary provided in the C:\CIW\Site_Dev\Lab Files\Lesson07\Lab_7-2 folder)

To be installed by instructor for instructor-led demonstration in Optional Lab 8-1:

- **XAMPP** (binary provided in the C:\CIW\Site_Dev\Lab Files\Lesson08\Optional_Lab_8-1\XAMPP folder)

Connectivity

Internet connectivity is required for this course. You will experience optimal performance with a dedicated Internet connection (e.g., a cable/DSL modem or a T1 line).

CIW supplemental files

Each coursebook includes supplemental materials that are referenced and used throughout the course. These supplemental materials are provided online at <http://ciw.ucertify.com>.

You will need to create a directory for all supplemental materials for the course. The recommended location is *C:\CIW\[Course_Title]*. Lab files are available before the lab steps in the online course. You can download them to this directory as you reach each lab. You can then create a shortcut to this directory on your Desktop. As you conduct the course labs, you can use this shortcut to quickly access your lab files.

Conventions and Graphics Used in This Book

The following conventions are used in these coursebooks.

Terms	Technology terms defined in the margins are indicated in bold type the first time they appear in the text. However, not every word in bold type is a term requiring definition.
Lab Text	Text that you enter during a lab appears in <i>italic bold type</i> . Names of components that you access or change in a lab appear in bold type .
Notations	<i>Notations or comments regarding screenshots, labs or other text are indicated in italic type.</i>
Program Code or Commands	Text used in program code or operating system commands appears in the Lucida Sans Typewriter font.

The following graphics are used in these coursebooks.



Tech Notes point out exceptions or special circumstances that you may find when working with a particular procedure. Tech Notes that occur within a lab are displayed without the graphic.



Tech Tips offer special-interest information about the current subject.



Warnings alert you about cautions to observe or actions to avoid.



This graphic signals the start of a lab or other hands-on activity.



The *CIW Online* graphic signals appropriate points in the course at which to view additional online resources.



Each lesson summary includes an *Application Project*. This project is designed to provoke interest and apply the skills taught in the lesson to your daily activities.



Each lesson concludes with a summary of the skills and objectives taught in that lesson. You can use the *Skills Review* checklist to evaluate what you have learned.



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