Web Foundations Series
Internet Business Associate

Internet Business Associate prepares students to work effectively in today's business environment. In this course, you will learn about the tasks involved in various Information Technology (IT) job roles, and explore career opportunities in the IT industry. You will also learn about Internet connection methods, Internet protocols, the Domain Name System (DNS), cloud computing and mobile devices. You will study the basic functions of Web browsers, the components of Web addresses and browser use in the business world. You will learn how browser plug-ins and add-ons can improve your Web-browsing experience, and you will use browsers to download and manage files.

You will learn about databases as they relate to Web search engines, and you will use search engines to conduct basic and advanced Web searches. This course also teaches you to use local and Web-based (cloud-based) e-mail clients, and it provides guidelines for communicating effectively over the Internet using Web technologies and social networking tools. You will also learn about Internet research and collaboration tools, software development tools, and the patent and licensing practices that accompany software applications.

In addition, you will learn how to protect your privacy and personal information on the Internet. This topic includes protecting your reputation by limiting the information you post online. This course also discusses the risks associated with being connected to the Internet, and the security measures that can keep your computer system and your personal information secure. You will also learn about the use and control of cookies. Finally, you will study the fundamental elements of project and program management, and the importance of acquiring these skills for all IT job roles.

Topics

Introduction to IT Business and Careers
Information Technology (IT)
IT Job Roles
IT Industry Career Opportunities
Technical Concepts and Training
Technology Adoption Models
Business Modeling
Data Modeling
The Importance of Standards
That's a Hot Site

Internet Communication
Communicating via the Internet
Modern Web Technologies
Social Networking
Messaging
Blogging
Communicating Effectively over the Internet
Convergence and Unified Communications Technologies
Web 2.0 Travel Guide?

Introduction to Internet Technology
Internet Technology
Overview of Networks
Overview of the Internet
Connecting to the Internet
Internet Protocols
Domain Name System (DNS)
Cloud Computing
Computing in the Cloud

Web Browsing
Introduction to Web Browsing
Basic Functions of Web Browsers
Installing a Web Browser
Web Addresses
How Browsers Work
Browser Choices
Browsing Techniques
Browser Elements
Configuring Web Browser Preferences
Proxy Servers
Troubleshooting Internet Client Problems
Working the Help Desk

Multimedia on the Web
Introduction to Multimedia on the Web
Objects, Active Content and Languages
Objects and Security Issues
HTML5 vs. Plug-ins
Introduction to Plug-in Technology
Data Compression and Decompression
Plug-in Installation
Types of Plug-ins
Firefox Add-Ons
Types of Viewers
Miscellaneous File Formats
Downloading Files with a Browser
The Right Tools for the Job

Databases and Web Search Engines
Introduction to Data Searching Tools
Overview of Databases
Introduction to Web Search Engines
Registering a Web Site with a Search Engine
Types of Web Searches
Basic Web Searching Techniques
Boolean Operators
Advanced Web Searching Techniques
Using Web Searches to Perform Job Tasks
Unexpected Web Search Results
Web Search Strategies
Evaluating Resources
Organizing Internet Research
Citing Copyrighted Online Resources
To Be Valid or Not to Be Valid?

Business E Mail and Personal Information Management
Introduction to Business Electronic Mail (E Mail)
How E Mail Works
E Mail Configuration Requirements
E Mail Message Components
Creating and Sending E Mail Messages

Receiving and Viewing E Mail Messages
E Mail in the Workplace
E Mail Problems and Solutions
Personal Information Management (PIM)
Mastering the Art of E-Mail

Protecting Yourself Online
Introduction to Protecting Yourself Online
The Right to Be Forgotten
Spam
Cookies
Configuring Browser Security
Authentication
Encryption
Malware (Malicious Software)
Virus Detection and Prevention
Spyware and Virus Removal
Updates and Patches
Locking Your Computer
Typosquatting

Protecting Company Resources
Firewalls
Security-Related Ethical and Legal Issues
Legal Protection

Internet Services and Tools for Business
Internet Resource Tools
Mass E-Mail and Texting Services
List Servers
File Transfer Protocol (FTP)
Managing Downloaded Files
Virtual Network Computing (VNC)
Remote Desktop Connection
Peer-to-Peer Networks
Troubleshooting Using TCP/IP Tools
Open-Source Development
Proprietary Software and EULAs
Software Patents
These Are Sensitive Files

IT Project and Program Management
Overview of IT Project and Program Management
Resources for Technical Data
Project Management Fundamentals
Project Management Skills
Project Management Phases
The Project Triangle
Project Management Software
Creating Project Schedules
Documenting Projects
Planning and Scheduling Meetings
Browsers in the Business World
Reviewing Projects
Quality Assurance
Business Implications of IT Projects
Project Management Institute (PMI)
Program Management Concepts
We Need an Intranet!

Target Audience

All students preparing to enter or continue in the workforce can benefit from the CIW *Internet Business Associate* course and/or certification:

- High school students

- College students

- Technical/trade school students

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

- IT professionals

- Healthcare professionals

- Legal professionals

- Marketing professionals

- Graphic artists

- Business professionals

Job Responsibilities

Understand the common core of Internet knowledge, and apply the foundation skills required for further specialization.

Prerequisites

No prior experience using the Internet, developing Web pages or configuring networks is necessary. However, students should be familiar with an operating system such as Microsoft Windows 7 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*).

Web Foundations Series
Site Development Associate

Site Development Associate teaches you essential Web page development skills. You will learn to develop Web sites using Hypertext Markup Language version 5 (HTML5) and Cascading Style Sheets (CSS). 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 Web pages.

In addition to learning about HTML5 and CSS coding, you will learn how to use HTML5 Application Programming Interfaces (APIs) to extend the functionality of Web pages, 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 Web page content, and implementing fundamental design concepts. Throughout the course, you will learn how Web sites are developed as managed projects. You will also identify e-commerce solutions and relate Web site 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 Web site development team. Hands-on labs include real-world scenarios based on a previously live version of the Habitat for Humanity site. Note that students will build prototype pages using Habitat for Humanity content. This content is provided by Habitat for Humanity with permission to use it in labs teaching site development skills. The prototype pages that students build do not necessarily represent, duplicate or simulate the current live Habitat for Humanity Web site, which can be visited at *www.habitat.org*.

Topics

Markup Language and Site Development Essentials
Creating Web Pages
Mobile and Cloud Issues
Text Editors and Markup Languages
Graphical User Interface (GUI) Editors
History of Markup Languages
The HTML Web Development Trifecta: HTML5, CSS and JavaScript
Web Site Development Principles
Hosting and Web Service Providers
The Habitat for Humanity Web Site

HTML5 Coding
Introduction to Using HTML
Elements and Markup Tags
Document Structure Tags
Web Site File Structure
Preparing Your Development Environment
Paragraph Formatting and Block-Level Elements
Text-Level Elements
Lists
Good Coding Practice

Cascading Style Sheets (CSS) and Graphical Elements
Cascading Style Sheets (CSS)
Separating Content in HTML
Images in Web Pages
HTML Entities
Specifying Colors

Page Colors and Backgrounds
Specifying Font Information
Web Design Issues
HTML5 and Older Browsers

Hyperlinks
Introduction to Hyperlinks
The Anchor Element
Creating Local Hyperlinks
Creating External Hyperlinks
Using Images as Hyperlinks
Creating Internal Links
Managing Hyperlinks

HTML Tables
Introduction to HTML Tables
CSS Properties for All Table Elements
Table and Data Alignment Options
Height and Width of Table Elements
Column and Row Spanning
HTML Tables vs. CSS Page Structure

Web Forms
Introduction to Web Forms
Web Forms and CGI
HTML5 and Forms
Basic Tags for Creating Web Forms
Web Form Fields

Video, Audio and Image Techniques
Introduction to Web Video, Audio and Image Techniques
The <video> Element
The <audio> Element

Graphic Types
Image Maps
Image Transparency
Image Interlacing
Animation
Mobile Device Issues with Animation and Plug-Ins
Creating and Managing Images

Extending HTML
Extending HTML
Server-Side and Client-Side Languages
Server-Side Languages
Client-Side Languages
Dynamic HTML (DHTML)
Document Object Model (DOM)
HTML5 APIs
Canvas
Offline Web Application
Geolocation
Drag-and–Drop Functionality
Web Application Frameworks
Connecting to a Database

GUI HTML Editors and Mobile Web Sites
Introduction to GUI HTML Editors
Types of GUI Editors
GUI HTML Editor Functionality
Creating Web Pages with a GUI Editor
HTML Text Editors vs. GUI Editors
Previewing Pages and Validating Code
Web Site Publishing

Developing Web Pages for Mobile Devices
Mobile Apps vs. Mobile Web Sites
Converting a Web site for Mobile Users
Working with Web 2.0

Web Site Development for Business
Developing a Business Web Site
E-Commerce Considerations
Internet Marketing and Search Engine Optimization (SEO)
E-Commerce Payment Technologies
Working in a Global Environment

Databases and Web Pages
Optimizing the Impact of the Web Page
Front-End Issues
File Formats and Active Content
Back-End Issues
Bandwidth and Download Time
Naming Web Page Files

Target Audience

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

- IT professionals

- Marketing professionals

- Graphic artists

- Web site designers

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Web Foundations Series
Network Technology Associate

Network Technology Associate teaches essential networking technologies and skills, including TCP/IP, stable network creation, wireless networking, mobile devices and network troubleshooting. You will learn to use various network components and protocols that enable users to share data quickly and easily. You will explore the different types of transmission media, and you will learn how network architecture and topologies provide for efficient and secure communication. In addition, you will learn about the OSI reference model and its relationship to packet creation, and you will compare and contrast the OSI model with the Internet architecture model.

You will study the functions, features and technologies associated with Internet services, such as cloud computing. You will learn about the advantages and disadvantages of Bring Your Own Device (BYOD), the growing trend of employees bringing their personal mobile devices to work. BYOD policies and enforcement strategies will also be covered.

You will learn about the benefits of implementing a Content Management System (CMS). You will also achieve competency in performing basic hardware and operating system maintenance procedures. In addition, you will study mobile computing devices and mobile operating systems.

You will also learn about the importance of routing, and you will explore IP addressing, IP address classes and subnet masks. Finally, you will explore essential network security concepts, Internet-based challenges facing today's users, and methods you can use to secure networks and network transmissions, including authentication, encryption and firewalls.

Topics

Introduction to Networking
Overview of Networks and Protocols
Telephony and Convergence Networking
Networking Evolution
Client/Server Model
Network Operations Center (NOC)
Networking Categories
Network Topologies
Network Operating System
Microsoft Windows Servers
UNIX/Linux
The Need for Protocols
OSI Reference Model
Data Encapsulation
Packets
OSI/RM Protocol Examples
Transmission Control Protocol/Internet Protocol (TCP/IP)
Binding Protocols
Local Area Network (LAN)
Wide Area Network (WAN)
Internet Exchange Point (IXP)

Networking Components and Standards
Overview of Networking Components
Common Network Components
Transmission Media
Wireless Network Technologies
Transmission Types
IEEE LAN Standards
Carrier Systems
Virtualization

Connecting to the Internet
Introduction to Connecting to the Internet
Mobile Computing
Mobile Devices and Cloud Computing
Configuring a Wireless Network
Fourth-Generation (4G) Wireless
TCP/IP
Internet Architecture
Internet Protocols
Demultiplexing
Introduction to Routing
Routing Protocols
Port Numbers
Internet Protocol Version 4 (IPv4)
Internet Protocol Version 6 (IPv6)
Configuring TCP/IP
Diagnostic Tools for Internet Troubleshooting

Internet Services
Overview of Internet Services
Cloud Services
Real-World Case Study:
Internet Servers
Choosing Web Server Products
Content Management System (CMS)

Hardware and Device Connectivity
Introduction to Hardware and Device Connectivity
Motherboard
Storage Devices
Network Interface Card (NIC)
Optical Discs
Device Connectivity
System Management
Preventive Maintenance
Software Troubleshooting

Network and Cloud Security Risks
Importance of Network Security
Bring Your Own Device (BYOD)
Real-World Case Study
Cloud Security Threats
Cloud Disaster Recovery
Malware (Malicious Software)
Overview of Network Attack Types
Defeating Network Attacks
Authentication
Encryption
Firewalls
Security Zones
Virtual Private Network (VPN)
Security Audit
Other Security Threats

Target Audience

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