



Course Content

Course Description:

In CIW v5 Foundations you will cover: **Internet Business Foundations**, **Site Development Foundations** and **Networking Technology Foundations**. In Internet Business Foundations students will cover web browsing, multimedia on the web, search engines, e-mail, internet security, internet services and tools and IT Project management. In Site Development Foundations students will cover markup language and XHTML coding, hyperlinks, tables and frames, web forms, graphical user interface editors and an overview of E-commerce practices. The Networking Technology Foundations section is designed to give students an introduction to networking and cover TCP/IP architecture and internet addressing, internetworking servers, hardware and operating maintenance & Network security and IT career opportunities.

Prerequisites

Windows Level 1 or equivalent knowledge.

Topics:

Information Technology and the Internet

- Overview of Information Technology
- IT Job Roles
- Overview of Networks and the Internet
- Connecting to the Internet
- Internet Protocols
- Domain Name System (DNS)
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Web Browsing

- Introduction to Web Browsing
- Installing Web Browsers and Web Addresses
- How Browsers Work, Choices and Techniques
- Resources for Technical Data
- Browsers in the Business World
- Configuring Web Browser Preferences and Security
- Cookies
- Proxy Servers
- Troubleshooting Issues
- Wireless Application Protocol (WAP)

Introduction to Multimedia on the Web

- Introduction to Multimedia on the Web
- Objects, Active Content, Languages and Security
- Issues
- Introduction to Plug-in Technology and Installation
- Data Compression and Decompression
- Types of Browser Plug-ins and Viewers
- Miscellaneous File Formats
- Downloading Files with a Browser
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Databases and Web Search Engines

- Introduction to Data Searching Tools and Web
- Search Engines
- Registering a Web Site with a Search Engine
- Types of Web Searches and Techniques
- Boolean Operators
- Advanced Web Searching Techniques
- Using Web Searches to Perform Job Tasks,
- Unexpected Web Search Results and Web Search
- Strategies.
- Citing Copyrighted Web Site References



E-mail and Personal Information Management

- Introduction to Electronic Mail
- How E-mail Works, E-Mail Configuration
- Requirements, Message Components, Creating and
- Sending, Receiving and Viewing Messages
- E-mail in the Workplace, Problems and Solutions
- Personal Information Management

Internet Security

- Introduction to Internet Security
- Encryption, Authentication, Firewalls, Malware,
- Virus Detection and Prevention, Spyware
- Updates and Patches
- List Servers and Listserve Groups
- Security-Related Ethical and Legal Issues

Internet Services and Tools

- Internet Resource Tools
- Newsgroups, Telenet, File Transfer Protocol (FTP)
- and Managing Downloaded Files
- Using Virtual Network Computing (VNC) and
- Microsoft Terminal Services
- Instant Messaging
- Peer-to-Peer Networks
- Lightweight Directory Access Protocol (LDAP)
- Concurrent Version System (CVS)
- Communicating Effectively over the Internet
- Troubleshooting Using TCP/IP Tools

IT Project Management

- Overview of IT Project Management
- Project Management Fundamentals, Skills, Phases,
- The Project Triangle and Software
- Creating Project Schedules, and Documenting
- Projects
- Planning and Scheduling Meetings
- Reviewing Projects and Quality Assurance
- IT Business Implications
- Project Management Institute (PMI)

Intro to Web Site Development

- Creating Web Pages
- Text editors and Markup Languages
- Graphic User Interface (GUI) Editors
- Front-End and Back-End Issues
- Considering the Habitat for Humanity Website

Markup Language and Site Development Essentials

- History of Mark-up Languages
- Web Site Development Principles

XHTML Coding

- Introduction to Using XHTML
- Markup and Document Structure Tags
- Document Type Declaration (DOCTYPE)
- Web Site File Structure
- Preparing Your Document Environment
- Paragraph Formatting, Block-Level and Text-Level
- Elements
- Lists
- Good Coding Practice

Markup Language and Site Development Essentials

- Horizontal Rules in XHTML
- Incorporating Images Into Web Pages
- Special Characters
- Specifying Colors in HTML
- HTML Page Colors and Backgrounds
- Specifying Font Information
- Web Design Issues

XHTML Hyperlinks

- Introduction to Hyperlinks
- Anchor Tag
- Creating Local and External Hyperlinks
- Using Images as Hyperlinks
- Creating Internal Links
- Managing Hyperlinks



XHTML Tables

- Introduction to XHTML Tables
- Table and Data Alignment Options
- Changing Height and Width of Table Elements
- Column and Row Spanning
- Formatting Content in Tables

Web Forms

- Introduction to Web Forms
- Web Forms and CGI
- <FORM> Tag
- Web Form Fields

Web Image Techniques

- Introduction to Web Image Techniques
- Image Maps
- Image Transparency
- Image Interlacing
- Animated Images

XHTML Frames

- Introduction to XHTML Frames
- <FRAMESET> and <FRAME> Tags
- Frameset Document
- <NOFRAMES> Tag
- Targeting Frames with Hyperlinks
- Specifying a Base Target
- Borders, Margins and Scrolling with Frames
- Appropriate Use of Frames

Graphical User Interface Editors

- Graphical User Interface Editors
- Types of GUI HTML Editors
- GUI Editor Functionality
- Creating Web Pages in a GUI Editor
- HTML Text Editors vs. GUI Editors
- Previewing and Validating Code
- Web Site Publishing

Web Technologies

- Extending HTML
- Connecting to a Database
- Style Techniques

- Dynamic HTML (DHTML)
- Document Object Model (DOM)
- Working with Providers

Overview of E-Commerce Practices

- Traditional Commerce Versus E-Commerce
- E-Commerce Models
- Using Web Technologies
- E-Commerce Information Formatting Technologies
- E-Commerce Payment Technologies
- Working in a Global Environment

Introduction to Networking

- Overview of Networks and Protocols
- Telephony Networking
- Networking Evolution
- Client/Server Model
- Network Operations Center (NOC)
- Networking Categories, Topologies and Operating Systems
- Novell NetWare
- Microsoft Windows Servers
- UNIX
- The Need for Protocols
- OSI Reference Model and Examples
- Packets
- Major Networking Protocols
- Local Area Networks (LANs)
- Wide Area Networks (WANs)
- Network Access Points (NAPs)
- Common Network Components
- Transmission Media
- Wireless Network Technologies
- Transmission Types
- IEEE LAN Standards
- WAN Standards
- T-Carrier, E-Carrier and SONET/SDH

TCP/IP Architecture and Internet Addressing

- Introduction to TCP/IP
- Internet Architecture
- Requests for Comments (RFCs)
- Internet Protocols
- De-multiplexing



- Introduction to Routing
- Routing Protocols
- Port numbers
- Internet Addressing
- Subnet Mask
- Internet Address Classes
- Internet Protocol Version 6 (IPv6)
- System Configuration and IP
- Addresses
- Diagnostic Tools for Internet Troubleshooting

Internetworking Servers

- Overview of Internetworking Servers
- HTTP Server Essentials
- File, Print, Database, Proxy, Mail, Mailing List,
- Media, DNS, FTP, News, Certificate, Directory,
- Catalog, Fax and Transaction Servers
- Instant Messaging (IM)
- The Internet Daemon: inetd and xindtd
- Mirrored Servers
- Choosing Web Server Products

Hardware and Operating System Maintenance

- Basic Hardware and System Maintenance
- Motherboard, IRQs, I/O Addresses and DMA, Mass
- Storage Device Interfaces, Network Interface Cards,
- Common Peripheral Ports, CD-ROM and DVD
- Client Operating System Management
- Software Licensing
- Partitions and Logical Drivers
- File System Types and Management Tools
- Troubleshooting Software
- Remote Management and Troubleshooting

Network Security and IT Career Opportunities

- Importance of Network Security
- Overview of Network Attack Types
- Viruses and Worms
- Defeating Attacks
- Authentication and Encryption
- Network-level Protocols and Encryption
- Virtual Private Networks (VPN)
- Digital Certificates
- Public Key Infrastructure (PKI)
- Firewalls, Firewall Topologies, Security Audit and
- Zones
- Uninterruptible Power Supply (UPS)
- IT Industry Career Opportunities
- Technical Concepts and Training