

## Course Outline

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### Design Methodology and Technology (March 2003)



**Duration:** 5 days (30 hours)

**Learning Objectives:**

*Design Methodology and Technology* is a course that teaches students how to create and manage Web sites with tools such as Microsoft FrontPage, Macromedia Dreamweaver and Flash, Dynamic HTML, and various multimedia and CSS standards. Students will also implement the latest strategies to develop third-generation Web sites, evaluate design tools, discuss future technology standards, and explore the incompatibility issues surrounding current browsers. The course focuses on theory, design and Web construction, along with information architecture concepts, Web project management, scenario development and performance evaluations

**Target Audience:**

Web authors, marketing and communications professionals, PR professionals, Webmasters, graphic designers, desktop designers, technical writers, and library scientists

**Prerequisites:**

Students must have CIW Foundations certification or have equivalent experience

**Topics Covered:**

- Overview of Design Concepts
  - Web Technology
  - The Nature of the Web
  - Web Design Concepts
  - New Technologies
  - Evaluating Your HTML Skills
- Web Page Layout and Elements
  - Web Users and Site Design
  - Effective Web Page Layout
  - Color and Web Design
  - Fonts and Web Design
- Web Site Usability Testing
  - The Importance of Audience Usability
  - Web Usability Testing
- Navigation Concepts
  - Why Is Navigation Critical?
  - Browsers and Navigation
  - Primary and Secondary Navigation
  - Navigation Hierarchy

- Site Structure, URLs and File Names
- Familiar Navigation Conventions
- Guided Navigation
- Navigation Action Plan
- Web Graphics
  - Web Site Images
  - Digital Imaging Concepts
  - Bitmap vs. Vector Graphics
  - Graphic Applications
  - Image File Formats
  - Creating Images
  - Image Optimization
- Multimedia and the Web
  - Multimedia and Web Sites
  - Current Multimedia Capabilities
  - Animation and the Web
  - Audio and the Web
  - Video and the Web
  - Goals of a Multimedia Site
  - Multimedia Site Design Basics
  - User Interaction
  - Selecting Multimedia Elements
  - Copyright Infringement
- The Web Development Process
  - Web Design Teams
  - Bottom-up Approach
  - Web Development Phases
  - Defining the Web Project Goals
  - Understanding the Business Process
  - Defining a Vision
  - From Vision to Strategy
  - The Metaphor
- Mindmapping
  - The Mindmapping Process
  - Mindmapping a Web Site
- Web Site Implementation Factors
  - Determining Site Implementation Factors
  - Web Site Characteristics
  - Calculating Download Times
- HTML Standards and Compliance
  - What Is HTML?
  - Web Browser HTML Support
  - The HTML Standard

- HTML 1.0, 2.0, 3.0 and 3.2
- HTML 4.0 and 4.01
- Web Page Accessibility
- HTML Tables and Web Page Structure
  - Creating Page Structures with Tables
  - Diagramming the Table
  - Borderless Web Page Structure
- HTML Frames
  - Frames and Framesets
  - <FRAMESET> and <FRAME> Tags
  - Targeting Hyperlinks in HTML
  - Adding a Frameset to a Frameset
  - Frameset Attributes
  - The <NOFRAMES> Tag
- Metadata and the Web
  - Metadata
  - <META> Tags and Document
  - Identification
  - <META> Tags and Search Engines
  - <META> Tags and Delayed File Change
- Cascading Style Sheets
  - Style Sheets
  - Cascading Style Sheets
  - Defining and Using Styles
  - Changeable Style Elements
- Site Development with Microsoft FrontPage
  - Microsoft FrontPage
  - FrontPage Views, Menus and Toolbars
  - Opening Webs and Files in FrontPage
- FrontPage – Basic Features
  - Page Layout Using Tables
  - Inserting Images, Page Properties, Image
  - Maps and Templates
  - Importing Formatted Text
  - Inserting HTML
  - Creating Text Hyperlinks
  - FrontPage Shared Borders, Framesets, Styles and Themes
- FrontPage – Advanced
  - FrontPage DHTML Toolbar, Web Forms, Components, Web Reports and Search Forms
- Site Development with Macromedia Dreamweaver MX
  - Dreamweaver MX
  - Layout Options
- Macromedia Dreamweaver MX – Basic Features

- Page Layout, Creating Image Maps and Templates in Dreamweaver
- Frames
- Macromedia Dreamweaver MX- Advanced Features
  - Rollover Images, Web Forms, Behaviors, Modifying Layers, Library
  - Editing HTML and Jump Menus
  - Macromedia Dreamweaver Exchange
- Web Pages with Macromedia HomeSite 5
  - Macromedia HomeSite 5
  - Templates, Handling Files and Tag Editing Features
- Image Editing with Macromedia Fireworks MX
  - Macromedia Fireworks MX
  - Creating and Image
  - Adding Text to Images
  - Cropping Images
  - Image Layers in Fireworks
  - Image Frames in Fireworks
  - Transparent Images in Fireworks
  - Image Slices in Fireworks
- Multimedia with Macromedia Flash MX
  - Macromedia Flash MX
  - Flash Shapes
  - Color and Fills in Flash
  - Timeline and Layers
  - Saving and Publishing Flash Movies
  - Symbols and Buttons
  - Customizing the Flash Library
  - Flash, Motion and Shape Tweens
  - Tweening Text in Flash
  - Flash Movie Clips
  - Adding Sound
  - Adding Flash Movies to HTML files
  - Testing for the Flash Plug-in
  - Flash Action Scripts
  - Mask Layers in Flash
- JavaScript Fundamentals
  - Why Script?
  - Common Programming Concepts
  - What Is JavaScript?
  - JavaScript vs. Other Languages
  - Embedding JavaScript into HTML
  - Strengths of JavaScript
  - Using JavaScript to Communicate with the User

- JavaScript Functions
- Using JavaScript for Browser Detection
- Dynamic HTML
  - Dynamic HTML
  - Document Object Model (DOM)
  - CSS and DHTML
  - Scripting Language and DHTML
  - DHTML Implementation
- Extensible Markup Language (XML)
  - What Is XML?
  - HTML Goals
  - Separating Format from Structure
  - HTML Limitations
  - XML Goals
  - What Is an XML Document?
  - Rules for Well-Formed XML
  - Simple Well-Formed XML
  - What Is XHTML?
- HTTP Servers
  - What Is an HTTP Server?
  - Ports
  - Basic HTTP Server Administration
  - Server-Side Technologies
- Cookies
  - Understanding Cookies
  - Enabling and Disabling Cookies
  - Deleting Cookie Files
- Downloadables and Plug-Ins
  - Plug-In Technology
  - Plug-In Installation
  - Macromedia Shockwave and Flash
  - Adobe Acrobat Reader
  - RealNetworks RealPlayer
  - Creating a Downloadable File
- Java Applets
  - Why Use Java and Applets?
  - Introduction to Java
  - Demystifying Applets
  - Embedding a Java Applet
  - Java Applets and Animation
  - Java Applet Authoring Tools
  - Applet Resources
- Databases

- Web Design and Databases
- Database Anatomy
- Database Queries
- Database Management System (DBMS)
- Tools, Products and Database Programs
- Standards Organizations
  - Internet Governing Bodies
  - Internet Society (ISOC)
  - Internet Architecture Board (IAB)
  - Internet Research Task Force (IRTF)
  - Internet Engineering Task Force (IETF)
  - World Wide Web Consortium (W3C)
  - Internet Corporation for Assigned
  - Names and Numbers (ICANN)
  - Requests for Comments (RFCs)
- Web Site Publishing
  - Web Site Publishing
  - Web Site Hosting
  - Web Publishing with FTP
  - Publishing with FrontPage 2000
  - Publishing with Dreamweaver 4.0
  - Comparing Web Publishing Tools