

CIW Site Designer Series Course: Design Methodology and Technology (March 2002)

Design Methodology and Technology is a 30-hour course that teaches students how to create and manage Web sites with tools such as Macromedia Dreamweaver 4.0 and Flash 5.0, FrontPage 2000, 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.

Topics

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 2000

- Microsoft FrontPage 2000
- FrontPage Views, Menus and Toolbars
- Opening Webs and Files in FrontPage

FrontPage 2000 – 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 2000 – Advanced

- FrontPage DHTML Toolbar, Web Forms, Components, Web Reports and Search Forms

Site Development with Macromedia Dreamweaver

- Dreamweaver 4.0
- Layout Options

Macromedia Dreamweaver – Basic Features

- Page Layout, Creating Image Maps and Templates in Dreamweaver
- Frames

Macromedia Dreamweaver – Advanced Features

- Rollover Images, Web Forms, Behaviors, Modifying Layers, Library
- Editing HTML and Jump Menus
- Macromedia Dreamweaver Exchange

Web Pages with Macromedia HomeSite

- Macromedia HomeSite 5
- Templates, Handling Files and Tag Editing
- Features

Design Methodology and Technology (March 2002) Continued

Images with JASC Paint Shop Pro

Introduction to JASC Paint Shop Pro
Adding Text to an Image File
Special Effects
Decreasing Color Depth
Cropping Images
Creating Screen Captures
Creating Animated GIF Images

Multimedia with Macromedia Flash 5.0

Macromedia Flash 5.0
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 Tell Targets
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

Web Workshop

Building Your Web Site

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 equivalent experience.

Duration

30 hours

Job Responsibilities

Implement and maintain hypertext-based Web sites using authoring and scripting languages; create Web content; use Web management tools and digital media tools; and apply human-factor principles to design.