Course Outline for CIS 9104

WEB DESIGN SPECIALIST

Effective: Fall 2011

I. CATALOG DESCRIPTION:
CIS 9104 — WEB DESIGN SPECIALIST — 3.00 units

Design and publish Web sites using popular production tools such as Dreamweaver, Flash, Expressions, HTML/XHTML. General topics include Web Site Development Essentials (site development process, customer expectations, ethical and legal issues), Web Design Elements (aesthetics, user's experience, navigation, usability, accessibility), Basic Web Technologies (HTML/XHTML, image files, GUI site development applications, site publishing and maintenance) and Advanced Web Technologies (multimedia and plug-in technologies, client-side and server-side technologies, and Web databases). In this course, you will work with popular production tools such as Microsoft Expression, Adobe Dreamweaver and Flash. Study design and development technologies such as Cascading Style Sheets (CSS), Extensible Markup Language (XML), JavaScript, Java applets, Dynamic HTML, plug-ins, multimedia and databases. Learn how Web sites are developed as managed projects, relate Web site development to business goals, and apply guidelines for user accessibility to Web site development. Consider site design from several perspectives; design from the Web user's perspective so that you can identify with user interests and needs. You will also assume the roles of Web designer and project manager, as you work through the Web site development process by evolving a Web presence site into a working prototype Web project. . NOTE: This course is one of a series in the Certified Internet Web Professional (CIW: www.ciwcertified.com) program.

2.50 Units Lecture 0.50 Units Lab

Strongly Recommended
CIS 59 - Web Dev: HTML/CSS/Javascript

Grading Methods:
Letter or P/NP

Discipline:

	MIN
Lecture Hours:	45.00
Lab Hours:	27.00
Total Hours:	72.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 4

III. PREREQUISITE AND/OR ADVISORY SKILLS:

Before entering this course, it is strongly recommended that the student should be able to:

    A. CIS59

IV. MEASURABLE OBJECTIVES:
Upon completion of this course, the student should be able to:

    A. Site Development Essentials
        1. Identify and manage elements of the Web site development process
        2. Meet customer expectations with Web site project and design
        3. Identify ethical and legal issues relevant to Web development and design
    B. Web Design Elements
        1. Use Web design principles to evaluate and develop a site's aesthetic qualities and its ability to enhance viewer experience
        2. Use Web design principles to enable navigation, usability and accessibility
    C. Basic Web Technologies
        1. Use basic HTML and XHTML (X/HTML) to develop a series of Web pages
        2. Use X/HTML and extended technologies to enhance Web page structure, format and usability
        3. Create image files, and use images in X/HTML pages and site design
        4. Create Web sites using GUI site development applications like Dreamweaver, Flash, Microsoft Expressions
        5. Publish and maintain a production Web site
    D. Advanced Web Technologies
        1. Use multimedia and plug-in technologies to enhance a Web site like Flash
        2. Use client-side and server-side programming to enhance Web site functionality like Javascript, Actionscript
        3. Connect Web pages to a database

4. Conduct effective Internet marketing
        5. Create syndicated feeds using feed management services

V. CONTENT:
    A. Overview of Web Design Concepts
        1. Web Technology
        2. The Nature of the Web
        3. Web Design Concepts
        4. New Technologies
        5. Evaluating Your XHTML Skills
    B. Web Development Teams
        1. Web Teams and Tasks
        2. Web Project Management
        3. Web Project Collaboration
        4. Your Web Design Portfolio
        5. Your Web Design Business
    C. Web Project Management Fundamentals
        1. Web Project Management Phases
        2. Project Documentation and Communication
    D. Web Site Development Process
        1. Bottom-Up Approach to Web Development
        2. Understanding the Business Process
        3. Defining a Web Site Vision
        4. From Vision to Strategy
        5. Web Site Specifications
        6. The Metaphor
        7. Mystery Meat Navigation
        8. The Mindmapping Process
        9. Creating a Web Site Wireframe
        10. Creating a Web Page Wireframe
    E. Web Page Layout and Elements
        1. Web Users and Site Design
        2. Effective Web Page Layout
        3. Branding and the Web
        4. Color and Web Design
        5. Fonts and Web Design
    F. Web Site Usability and Accessibility
        1. Audience Usability and Accessibility
        2. Defining Usability
        3. Web Site Usability Testing
        4. Web Page Accessibility
    G. Browsers
        1. Browsers and Navigation
        2. Browsers and Design Considerations
        3. Browser Adoption
        4. Major, Minor and Alternative Browsers
        5. Creating Aliases with TinyURL
        6. Utilizing CAPTCHA
    H. Navigation Concepts
        1. Why Is Navigation Critical?
        2. Primary and Secondary Navigation
        3. Navigation Hierarchy
        4. Site Structure, URLs and File Names
        5. Familiar Navigation Conventions
        6. Guided Navigation
        7. Navigation Action Plan
    I. Web Graphics
        1. Web Site Images
        2. Digital Imaging Concepts
        3. Raster vs. Vector Graphics
        4. Graphics Applications
        5. Image File Formats
        6. Creating and Optimizing Images
        7. Essential Graphic Design Concepts
    J. Multimedia and the Web
        1. Multimedia and Web Sites
        2. Current Multimedia Capabilities
        3. Animation and the Web
        4. Audio and the Web
        5. Video and the Web
        6. Goals of a Multimedia Site
        7. Multimedia Site Design Basics
        8. User Interaction
        9. Selecting Multimedia Elements
    K. Ethical and Legal Issues in Web Development
        1. Ethics and Law in Web Development
        2. Ethical Issues and the Web
        3. Legal Issues and the Web
    L. HTML and the Evolution of Markup
        1. Function of Markup Languages SGML: A Short History
        2. What Is HTML?
        3. HTML Goals
        4. The HTML Standard
        5. HTML 1.0 and 2.0
        6. HTML 3.0 and 3.2
        7. HTML 4.0 and 4.01
        8. Separating Format from Structure in HTML
        9. Extensible HTML (XHTML)
        10. Reference Sites for Web Developers

1. Adobe Fireworks CS5
2. Creating an Image Document in Fireworks
3. Adding Text to Images in Fireworks
4. Cropping Images in Fireworks
5. Image Layers in Fireworks
6. Image States in Fireworks
7. Transparent Images in Fireworks
8. Image Slices in Fireworks

Y. Multimedia with Adobe Flash Professional CS5
1. The History of Flash
2. Flash Technology Features
3. Developing with Flash
4. Flash Shapes
5. Color and Fills in Flash
6. Multimedia with Flash Professional CS5 — Timeline, Layers, Symbols and Buttons
7. Flash Timeline, Flash Layers
8. Saving and Publishing Flash Movies
9. Flash Symbols ,Flash Buttons
10. Customizing the Flash Library

A@. Multimedia with Flash Professional CS5 — Tweens
1. Flash Tweens : Motion, Shape, Text

AA. Multimedia with Flash Professional CS5 — Movie Clips
1. Flash Movie Clips
2. Adding Sound to Flash Files
3. Adding Flash Movies to X/HTML Files
4. Testing for the Flash Player Plug-In

AB. Multimedia with Flash Professional CS5 — ActionScript, Masks and Practical Uses
1. Flash ActionScript
2. Mask Layers in Flash
3. Using SWF and SVG Files on the Web
4. Flash and Accessibility

AC. JavaScript and DHTML Fundamentals
1. Why Script?
2. JavaScript and Common
3. Programming Concepts
4. What Is JavaScript?
5. JavaScript vs. Other Languages
6. Embedding JavaScript into X/HTML
7. Using JavaScript to Communicate with the User
8. JavaScript Functions
9. Using JavaScript for Browser Detection
10. Dynamic HTML (DHTML)

AD. Plug-Ins and Java Applets
1. Plug-In Technology
2. Plug-In Installation
3. Adobe Shockwave and Flash Players
4. Adobe Reader
5. RealNetworks RealPlayer
6. Rich Media Content
7. Creating a Downloadable File
8. Introduction to Java
9. Java Applets
10. Applets and Animation
11. Applet Authoring Tools and Resources

AE. HTTP Servers and Web Applications
1. What Is an HTTP Server?
2. Accessing Servers and Services
3. Basic HTTP Server Administration
4. Server-Side Technologies
5. Web Servers and Cookies
6. Enabling, Disabling and Deleting Cookies
7. Setting Cookie Files
8. XML and Web Applications
9. Syndicated Feeds

AF. Databases
1. Web Design and Databases
2. Database Anatomy
3. Database Queries
4. Database Management System (DBMS)
5. Connecting Web Pages to Databases
6. Database Tools, Products and Programs

AG. Web Site Publishing and Maintenance
1. Web Site Testing, Publishing, Hosting
2. Web Publishing with an FTP Client
3. Web Publishing with Expression Web
4. Web Publishing with Dreamweaver
5. Comparing Web Publishing Tools
6. Maintaining Web Sites
7. Web Server and Web Site Security

VI. METHODS OF INSTRUCTION:
A. Classroom discussion
B. Computer demonstrations with overhead display panel
C. Read text and other supplemental sources (example, Internet sites)
D. **Lecture** -
E. PowerPoint presentations
F. Chat rooms
G. Discussion boards
H. Lab experience: hands-on lab assignments

VII. TYPICAL ASSIGNMENTS:
A. Lecture 1. Creating headings, paragraphs, and lists 2. Adding Javascript to an HTML/XHTML document B. Reading 1. Read the chapter on Introducing Working with Fonts, Colors, and Graphics 2. Read the U.S. Department of Labor Bureau of Labor Statistics Occupational Outlook Handbook Web Developer jobs C. Hands-on lab assignment, such as: 1. Use authoring tools to create a Web site documents 2. Find web sites that explain HTML tags 3. Find a web site and save and print its source code 4. Upload your web page to a web host

VIII. EVALUATION:
A. **Methods**

   1. Exams/Tests
   2. Quizzes
   3. Class Participation
   4. Lab Activities
   5. Other:
      a. Methods
         1. Quizzes and final examination
         2. Graded hands-on lab assignments
         3. Web site evaluation
         4. Relevant active participation

B. **Frequency**

   1. Frequency
      a. Chapter quizzes, examinations (mid-term, final)
      b. Weekly hands-on lab assignments to reinforce and demonstrate mastery of the various tools

IX. TYPICAL TEXTS:
   1. Amstuz, Irina, and Ken Kozakis *Web Design Specialist.1.0.*, ComputerPrep, 2009.
   2. Gosselin, Don *The Web Warrior Guide to Web Design Technologies.*, Course Technology, 2009.

X. OTHER MATERIALS REQUIRED OF STUDENTS:
   A. Mobile storage device: web storage, flash drives, CD RW
   B. Access to the World Wide Web with any major Web browser
   C. Authoring Software: Dreamweaver, Flash, Microsoft Expressions