MISSOURI WESTERN STATE UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES

DEPARTMENT OF COMPUTER SCIENCE, MATHEMATICS AND PHYSICS

COURSE NUMBER ACT 102
COURSE NAME Introduction to Web Page Development

COURSE DESCRIPTION

This course is an introduction to the design, creation, and maintenance of webpages and websites. Students learn how to critically evaluate website quality,create and maintain quality web pages, investigate web design standards, andcreate and manipulate images. The course progresses through web design tools HTML, XI-ITML, Cascading Style Sheets, and XML. A fictitious community organization website will be designed and developed by the students. Offered Fall and Spring semesters.

PREREQUISITES

Basic computer skills, searching, word processing, file creation, tile saving, folder
creation.

TEXT

Web Programming Step by Step, Stepp, Edition 2nd 12, Lulu, ISBN 9781105578786

COURSE OBJECTIVES

1. Students will gain the skills and project»based experience needed for web design and website development.

2. Students will be able to use a variety of strategies and tools to create websites.
3. Students will develop awareness and appreciation ofthe myriad ways that people access the web and will be able to create standards~based websites that are accessible and usable by a full spectrum ofusers.

COURSE OUTLINE

Unit 1 Designing and Planning Web Pages
    . learn to critically evaluate websites.
    . learn the criteria that experts use in evaluating websites.
    . develop a website evaluation tool as a way to critically examine
    the quality of websites.
    . develop experience documenting and sharing their ideas concerning
    what makes a quality website.
    . have a better understanding ofeffcctivc use ofcolor on the web.
    . be aware ofsome excellent color—related resources.
    . be able to identify why it is important to develop websites that
    comply with web standards.

. be able to describe the differences between HTML, CSS, XML, and XI'ITML.

. develop a basic understanding of the variety of methods and technologies used by
people with disabilities in accessing computers and the web.

I have experienced some ofthe common barriers people with disabilities face with
inaccessible web content.

- learn theories and techniques for effectively organizing website content.

Unit 2 Creating Web Pages with XHTML

0 learn prc~coding design steps.

. apply these steps as they prepare to design their own web portfolio sites.

c develop a basic understanding of XHTML elements and their structure.

0 learn the basic tags required for all XI'ITML documents.

. be able to use some common tags for displaying content on a web page and apply
the concepts ofnesting and assigning attributes to tags.

. be able to code ordered, unordered, and nested lists.

. be able to code relative and absolute links to other web pages.

. be able to codejump—to links and email links.

o be able create a simple and accessible data table.

Unit 3 Formatting Web Pages with Style Sheets

c develop a basic understanding of Cascading Style Sheets (CSS) markup

. be able to apply basic CSS properties to HTML elements, classes, and IDs
o be able to apply basic CSS positioning to align content on a web page.
-. be able apply an HTML as an alternative positioning strategy.

. be able to describe the pros and cons of using tables vs. CSS for layout,

Unit 4 Web Graphics

. Identify purposeful and effective use of web graphics

- Apply copyright law to using graphics on web pages

- Acquire digital images for use on web pages

. Crop and resize images

. Identify web file formats and optimize web graphics

o Utilize basic drawing tools and layers in graphics software to create simple web
graphics and buttons

. Utilize selection tools, image manipulation, and blending techniques to create
more advanced graphics and banner images

Unit 5 Overall Site Design and Management

. be able to describe four common steps in a usability test.

. have an opportunity to conduct their own usability test on a website of their
choosing.

. organize all web pages in their portfolio so that someone can easily navigate
through them and find the pages they're looking for.

. create an HTML list that will serve as the navigational menu for their portfolio
website.

. create an external style sheet, and link to it from within their web pages.

. use CSS to stylize an HTML list so that it appears as a navigational menu.

. name and describe some of the advanced technologies that are used to deliver web
content.

c figure out (or intelligently guess) what technologies are being used to implement
particular websites or web features

. have learned how a client~sidc script fits within the context of an HTML page.

. have learned some basic Javascript syntax.

. be able to test a web page using the W3C HTML and CSS Validators.

. gain practice interpreting the V alidator results and applying them toward
correcting invalid HTML and CSS code.

' learn about available tools for checking the accessibility of web pages

. gain practice using these tools to evaluate web pages for accessibility

Unit 6 Introduction to Web Authoring Software

. have a basic understanding of your software's web authoring environment

. have a basic understanding ofthe features that are common to most web authoring
so ftwarc programs.

' know how to create common I'I'I'ML elements using web authoring software
rather than writing code

. control and manipulate the style ofa web page from within the graphic web

editor.

. be able to describe the benefits of using web authoring software for managing
websites.

. be able to identify features within their web authoring software that facilitate site
management.

. work collaboratively as part ofa web design team.

. plan the design and development ofa website with appropriate level of detail and
complexity.

. identify, prioritize and organize tasks individually and as part ofthe team.

- develop a plan with the level- of detail and sophistication appropriate to purpose
and audience.

. identify areas in which web authoring software can assist in this process.

. use the site management features of your web authoring software to assist in
organizing and setting up a website.

. use web authoring software to design the homepage for the new website.

. use web authoring software to add placeholder content to dependent pages.

. use web authoring tools to find and correct problems in a mock website.

Unit 7 Client Website

. evaluate a client's needs

- follow the process outlined in this curriculum for creating websites, with an
emphasis first on content, second on presentation

. utilize the web quality rubric developed early in this course to ensure the finished
product meets established class andpersonal web quality standards

. use web tools for validating XHTML, CSS, and evaluating web quality including
accessibility.