

NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY

ITD 210 – WEB PAGE DESIGN II (3 CR.)

Course Description

Incorporates advanced techniques in web site planning, design, usability, accessibility, advanced site management, and maintenance utilizing web editor software(s). Lecture 3 hours per week.

General Course Purpose

This course builds on the web design skills learned in ITD110. It concentrates on creating professional quality webs sites. The course covers planning, design, coding and testing web sites with a focus on creating a robust and appropriate user interface. Students will move beyond the basics and work with dynamic web sites, writing scripts and understanding the importance of database integration.

Course Prerequisites/Corequisites

Prerequisite: ITD 110

Course Objectives

Upon completing the course, the student will be able to:

- Expand on knowledge and implementation of basic web design concepts, features, and HTML/CSS conventions offered in Web Design I
- Use a versatile and visual editor
- Create web sites with existing and emerging client-side technologies such as HTML, CSS, JavaScript, jQuery and DOM
- Use advanced techniques for producing professional quality static and dynamic web sites
- Publish sites to a web server using various technologies, including File Transfer Protocol (FTP)
- Employ current technology to create web sites using site administration tools, templates, scripting graphics and multimedia
- Identify and describe current technologies for database integration

Major Topics to be Included

- Web design concepts, features, HTML5 and CSS conventions
- The purpose of Web design
- The Web design process
- Defining the target audience
- Site organization principles
- Effective site navigation
- Proper page design
- Compliance with Section 508 accessibility standards
- Validating HTML and CSS against W3C standards
- Implementing AJAX
- Ethical use of information on the Web, such as copyright requirements
- Responsive design technologies

Student Learning Outcomes

Web Site Management

- a) Describe the use of search engine optimization (SEO) techniques
- b) Apply search engine optimization techniques, such as meta tags
- c) Recognize the types and importance of site analytics
- d) Illustrate the proper use of file management techniques to organize projects, files and folders on the web server and local drives

- e) Distinguish the typical site statistics and how they are used to manage a web site

Site Architecture

- a) Explain the options for site organization (hierarchical, linear, etc)
- b) Develop a diagram of the web project (site map / storyboard)

JavaScript

- a) Utilize JavaScript including Control Structures, Functions, Objects and DOM
- b) Use JavaScript libraries

Database integration technologies

- a) Describe current server-side frameworks
- b) Identify the database technologies used for backend processing

Produce web sites

- a) Develop static web pages
- b) Develop dynamic web pages
- c) Develop professional quality web sites
- d) Use new features of HTML5 and CSS

Publishing

- a) Evaluate types of Web host providers
- b) Use File Transfer Protocol (FTP)
- c) Utilize meta tags
- d) Manage files and folders on a web server

Templates / Libraries

- a) Demonstrate the use of templates in web design
- b) Choose appropriate template designs
- c) Incorporate CSS in template designs

Other Optional Content

- a) jQuery
- b) JSON
- c) RSS
- d) Database Integration
- e) XML
- f) Multimedia software authoring tools
- g) Graphics editing software
- h) Manipulation of CSS

Required Time Allocation per Topic

To standardize the core topics of ITD 210 so that a course taught at one campus is equivalent to the same course taught at another campus, the following student contact hours per topic are required. The topics do not need to be followed sequentially. Many topics are taught best as an integrated whole, often revisiting the topic several times, each time at a higher level. There are normally 45 student-contact-hours per semester for a three-credit course. (This includes 14 weeks of instruction and does not include the final exam week so $14 \times 3.2 = \sim 45$ hours. Sections of the course that are given in alternative formats from the standard 15 week session still meet for the same number of contact hours.) The final exam time is not included in the timetable. The last category, Other Optional Content, leaves time for an instructor to tailor the course to special needs or resources.

Topic	Hours	Percentage
Web design concepts, features, HTML5 and CSS conventions	12	26.7%
Web Site Management	3	6.67%
Site Architecture	2	4.4%
JavaScript	9	20%
Database integration technologies	3	7%
Produce web sites	7	13.4%
Publishing	2	4.4%
Templates / Libraries	1	2.2%
Other Optional Content	6	15.6%
TOTAL HOURS	45	100%