Course Syllabus

Department: Computing Sciences

Date: 5/1/2012

I. Course Prefix and Number: CSC 223

Course Name: Web Development II

Credit Hours and Contact Hours: 3 credit hours and 3 contact hours

Catalog Description including pre- and co-requisites:

Web Development II builds on the basic web page development concepts presented in Web Development I, and is the second of a 2-course sequence in web page development. Assuming a basic knowledge of HTML coding and CSS, the goal of this course is to create large-scale, interactive, professional Web sites that are in accordance with current standards. The focus of this course is on dynamic HTML, a collection of web technologies such as HTML and scripting languages used together to create interactive and animated Web pages. Students will learn to program client-side scripts using JavaScript and the Document Object Model in order to transform static Web pages created with HTML and CSS into dynamic Web pages. In addition to the substantial programming element in this course, students will learn to use an industry-leading Web Authoring and Management tool to expedite the design and development of large-scale Web sites. Other Web design topics include information architecture, scalability, multimedia integration, browser compatibility, standardization, and maintenance.

Prerequisite: CSC 222 Web Development I, or equivalent experience.

II. Course Outcomes and Objectives

Student Learning Outcomes:

Upon completion of the course the participant will be able to:

- Create a well-designed and well-formed, professional Web site utilizing the most current standards and practices
- Demonstrate knowledge in web technologies including HTML, XHTML, CSS, image-editing software, web authoring software, and client-side scripting
- Create client-side scripts to add interactivity to Web pages
- Select appropriate Web tools for a Web development project
- Identify Web authoring obstacles created by the availability of various web browsers and markup language versions

Relationship to Academic Programs and Curriculum:

- This course is a required for the:
- Web and Multimedia Application Development Advisement Area for the AAS IT degree
- This course is offered as a 200-level elective for the:
- AS in Computer Science
- AS in Information Science
- AAS in e-commerce
- AAS in New Media
College Learning Outcomes Addressed by the Course:

- Writing
- Ethics/values
- Oral communications
- Citizenship
- Reading
- Global concerns
- Mathematics
- Information resources
- Problem-solving
- Computer literacy

III. Instructional Materials and Methods

Types of Course Materials:

- Textbooks: a tutorial approach to creating Web sites
- Software: Web browsers, text editors, validators, interpreters, web authoring and management
- Online Web Sites: standardization, educational, current trends

Methods of Instruction (e.g. Lecture, Lab, Seminar …):

- Lecture
- Discussions
- Demonstrations
- Hands-on lab activities
- Group projects

IV. Assessment Measures (Summarize how the college and student learning outcomes will be assessed):

Student learning outcomes will be assessed through a variety of activities including the following:

1. Assignments: Web page tutorials and case problems:

   Students will develop skills in information resources, problem solving, global concerns and ethics/values as they learn to create well-written, dynamic, and professional Web pages with respect to universal standards. Students will practice a variety of Web technologies including client-side scripting and web authoring and management, and will develop Web pages in accordance with the cultural and social aspects of Web development for the Internet. These development projects will assess the learning outcomes listed above. They will learn about the limitations of technologies and how to solve technical problems as they are encountered. In addition students will be introduced to security issues, Web services, and professional organizations such as the W3C.

2. Online text tests:

   Chapter tests will be given in a current online environment to encourage students to read the course materials. The tests will measure their comprehension of the course concepts as related to Web design and development.

3. In-class quizzes:

   In-class quizzes will be given routinely to assess student writing capabilities. They are expected to demonstrate college-level written text and well-reasoned solutions and arguments.
4. Final Project:

Students will be required to complete a final project that will assess professional competency, well-written presentational material, and a proficiency in a variety of Web technologies.

V. General Outline of Topics Covered:

JavaScript
- History of JavaScript
- Basic JavaScript language syntax
  - Script Elements
  - Data Types
  - Variables
  - Statements
  - Functions
  - Operators and Expressions
  - Arrays, Loops, and Conditional Statements
  - Objects and Methods
  - on event processing
- External JavaScript Files
- Debugging Tools and Techniques
- Document Object Model (DOM)
  - Objects
  - Properties
  - Methods
  - Events
  - Event Handlers
- Built-in JavaScript Classes
  - Date
  - Math
- Customized Classes
- Animating Menus
- Forms, Form Fields, and Validation
- Regular Expressions
- Event Model
  - Event Bubbling and Event Capturing
  - Attaching and Listening
  - Controlling and Cancelling
  - Mouse Events
  - Keyboard Events

Adobe Dreamweaver – Web Development
- Creative Cloud Introduction
- Getting Started with Dreamweaver CC
- Plan and Set Up a Website
- Developing a Web Page
  - Working with Text and CSS
  - Adding Images
  - Working with Links and Navigation
  - Positioning Objects with CSS and Tables
- Managing a Web Server and Files
- Using Styles and Style Sheets for Design