



CSC 3950

Web Technologies

General Course Information

Instructor: Prof. Noonan
Office: Mendel 200
Office Hours: MW 10 – 12, TR 11:30 – 12:15, or by appointment
Campus Phone: 978 837-5145
E-mail: mary.noonan@merrimack.edu
Course Web Site: Blackboard
Classroom: M159
Class Times: TR 9:10 – 10:50

Required Textbook: *Programming the World Wide Web 6 ed.*, Robert W. Sebesta. Addison Wesley, 978-0-13-213081-3

Course Description:

CS 3950 Web Technologies

4 cr.

An introduction to the programming tools and skills used to build and maintain web applications. Topics include: the World Wide Web, the HTTP protocol, Web standards, HTML and XHTML, CSS, client-side programming using Javascript and DOM, server-side programming using PHP and Ajax, ASP.NET and database access through the Web. Prerequisites: CSC 2620. *Four Hours per Week.*

Points of Learning – Student Objectives:

Points of Learning

1. Understand the structure of the World Wide Web as interconnected hypertext documents and the importance of the HTTP protocol in Web applications. Discuss web security considerations and standards.
2. Create and validate HTML/XHTML documents
3. Demonstrate an understanding of XML syntax and its use.
4. Understand how to use presentation software such as Cascading Style Sheets
5. Understand and implement client-side programming using Javascript and the

Document Object Model (DOM).

6. Understand and implement server-side programming using PHP, Ajax, Java Servlets and JSPs
7. Understand and implement the use of server-side backend databases in web sites and web applications
8. Develop a web application using ASP.NET
9. Compare and contrast the technologies used in web services, including open source languages and packages, proprietary languages and packages and enterprise Web developments and distributed Web applications

Class Operating Procedures

Attendance is expected at all class meetings. You are responsible for all material discussed in class. Text readings, homework, lab and long term assignments will be announced at each class meeting. If you miss a class, please get the assignment from a classmate. Please note: the following syllabus is a tentative outline. All assignments **will be due at the start of class on the date due . No late submissions will be accepted.**

Honesty Policy

Plagiarism and cheating are serious offenses and may be punished by failure on exam, paper or project; failure in a course; and or expulsion from the College. For more information refer to the Computer Science Department's "Academic Integrity" policy (distributed at the beginning of the semester). For this class, it is permissible to assist classmates in general discussions of computing techniques. General advice and interaction are encouraged. Each person, however, must develop his or her own solutions to the assigned projects, assignments, and tasks. In other words, students may not "work together" on graded assignments.

Need for Assistance

If you have any condition, such as a physical or learning disability, which will make it difficult for you to carry out the work as I have outlined it, or which will require academic accommodations, please notify me as soon as possible.

Companion Web Site/Resources

Please refer to page XIX of the text.

Software

We plan to use a variety of software packages and tools.

XAMPP - <http://www.apachefriends.org/en/index.html>

Mozilla Firefox - <http://www.mozilla.com/en-US/firefox/>

Firebug (A Firefox add-on) <https://addons.mozilla.org/en-US/firefox/addon/1843/>
Live HTTP Headers (A Firefox add-on) <https://addons.mozilla.org/en-US/firefox/addon/3829/>
Notepad++ <http://notepad-plus-plus.org/>
Visual Studio 2008 -- Download from msdn academic alliance
NetBeans IDE 6.9.1 <http://netbeans.org/>

Testing and Grading

Tests will be announced in advance. Make-up tests are not given unless an extremely good, verifiable reason is given and I am notified **before** the exam.

Quizzes/Programs	25%
Homework	15%
Tests(3)	45%
Final	15%

CSC 3950
Spring, 2011

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Topics:

Text Readings:

Intro to the Internet, WWW, Web Servers, HTTP and the Web Programmer's Toolbox	1
XHTML - Syntax, Markup, Images, HyperText Links, Lists, Tables, Form, W3C validation	2
Cascading Style Sheets - Levels, Style Spec. Formats, Selector and Property Value Forms, Font and List Properties, Color, Text Alignments, The Box Model, Background Images, Internal and External sheets, Conflict Resolution	3
Javascript - Syntax and Language Features, Pattern Matching using Regular Expressions, Form Validation	4
Javascript and XHTML Documents - The Document Object Model, Element Access in Javascript, Events and Event Handling	5
Dynamic Documents with Javascript - Element Positioning, Movement, Visibility, Stacking Locating and Reacting to Mouse Clicks	6

XML - Syntax, Document Structure, Document Type Definitions, Displaying XML Documents	7
PHP - Syntax and Language Features, Pattern Matching, Form Handling, Cookies, Sessions	9
Ajax - Overview, Implementation, The Form Document, The Request Phase, The Response Document, The Receiver Phase	10
Java Web Software - Servlets, Cookies, JSPs, JavaBeans	11
ASP.NET - C#, ASP.NET Controls, ASP.NET Ajax	12
Database Access Through the Web - MySQL, Database Access with PHP, ASP.Net	13