Web-based Systems
COSC 430
Spring 2016

Meeting Information

College Hall 444
MWF 11:00 a.m.–11:50 a.m.
Final exam: Thursday, April 28, 8:30 a.m.–10:30 a.m.
Course web page: http://duq.blackboard.com

Instructor

Dr. Jeffrey Jackson
Office: 421 College Hall
Office Hours: MWF 10:00 a.m. — 11:00 a.m., Thursday 9:30 a.m. — noon and 1:00 p.m. — 2:00 p.m., at other times by appointment, or drop-in
Phone: (412) 396-5116
Email: jacksonj@duq.edu

Textbook


Objectives

The overall goal of this course is to provide a rigorous introduction to a variety of fundamental technologies that have developed since the invention of the World Wide Web. This is not a course explaining how to quickly build Web sites; instead, it provides a low-level view of the technologies on which higher-level development tools are built. Given this knowledge, it should be relatively easy for students to learn and work expertly with such Web development tools.

Specifically, students will become familiar with a number of different languages and technologies used for web development:

- Protocols used for web communication, particularly HTTP
- Web browsers and web servers, using Firefox and Tomcat as primary examples
- Markup Languages, particularly Hypertext Markup Language (HTML) and the Extensible Markup Language (XML)
- Style sheets, particularly Cascading Style Sheets (CSS)
- Client-side scripting languages, particularly JavaScript
- Basic server-side programming techniques, as illustrated by Java Servlets
- Web development technologies that facilitate the separation of program logic from web page design, particularly JavaServer Pages (JSP)
- Technologies for processing XML documents, particularly XSLT and various Java API's
- As time allows, an introduction to Web Services technologies, including WSDL and SOAP

Grading

I anticipate making roughly seven small to medium programming-type assignments over the course of the semester that will give students experience with the various technologies listed above. The assignments will generally have multiple requirements and will be graded based on how closely the final project fulfills the requirements. While most projects will be done individually, I might allow teamwork on one or two projects. I also expect to make approximately four non-programming homework assignments that will tend to focus on technical details of the material covered. Finally, there will be one midterm exam and a comprehensive final exam. These exams will test student understanding of concepts and technical details as well as basic skill with the technologies covered.

Different elements of the course will be weighted for grading purposes as follows:

- Assignments 40%
- Midterm exam 25%
- Final exam 35%

While I will not formally take attendance or include it in grading, I recommend regular attendance at class meetings.

Late Work Policy: Assignments typically will be discussed in class the day they are due and solutions will be posted. Therefore, unless I have approved your absence in advance (or in other exceptional circumstances at my discretion), I normally do not accept a late homework assignment. Well, if you did the assignment and forgot to bring it to class, I might be lenient. But don’t make a habit of it and don’t count on it (but do ask). The bottom line is, you should plan to complete assignments for this class early, not late.

The final grade will be assigned as follows:

Any curving I apply to grades normally happens on individual pieces of work, not on the final grade. I do assign minus grades as well as pluses, so if it’s important to you that you receive an A rather than an A-, make sure that your grade is 93 or above. As a rule, I do not give extra credit assignments. However, if you go beyond the requirements for an assignment I sometimes at my discretion give students some extra credit (up to about 10%) on individual assignments.

**Gilligan’s Island Rule**

See the policy at [http://www.mathcs.duq.edu/~jackson/GilligansIsland.pdf](http://www.mathcs.duq.edu/~jackson/GilligansIsland.pdf) allowing you to get as much help as you need while attempting to ensure that work you turn in represents your understanding of the material. Briefly, you can get as much help as you want from whatever sources, but you cannot use any external help (that is, help beyond the textbook and materials I supply) while you are writing your answers to the homework. And you must wait at least 30 minutes between receiving help and writing answers.

**Schedule**

We are scheduled to have 42 class meetings. The tentative schedule is:

1–3. Introduction to the Internet, Web, Browsers, and Servers

4–8. XHTML and HTML5

9–12. Cascading Style Sheets

13–19. JavaScript

20. Midterm exam **Monday, Feb. 22**

21–24. DOM


29–33. JSP

34–38. XML Processing

39–41. Web Services and/or Advanced Topics

42. Review

Final. Final exam **Thursday, April 28, 8:30 a.m.**
Notes

Students with documented disabilities are entitled to reasonable accommodations if needed. If you need accommodations, please contact the Office of Freshman Development and Special Student Services in 309 Duquesne Union (412-396-6657) as soon as possible. Accommodations will not be granted retrospectively.

The information in this syllabus is subject to change at the instructor’s discretion.