

**University of Wisconsin Oshkosh
Computer Science Department**

**CS 346: Web Software Development
Fall 2008**

----- Course Syllabus -----

COURSE SCHEDULE

		Days	Time	Location
Section 001	Lecture	WF	12:40-1:40pm	HS 208
	Lab	M	12:40-1:40pm	HS 101C

INSTRUCTOR Dr. Kathy (Kate) S. Faggiani
Computer Science Department

EMAIL faggianik@uwosh.edu

PHONE (920) 424-2069

IN-PERSON OFFICE HOURS*(HS 218):

MWF 11:20am-12:40pm

TTH 12:50-1:20pm

Or use Google CHAT: kfaggiani@gmail.com whenever I'm online.

*Also available other times by appointment

PREREQ COMP SCI 262 with a grade of C or better

COURSE DESCRIPTION

An introduction to the tools for developing internet applications. Topics covered include: Internet history, the HyperText Markup Language, graphic images and manipulation, multimedia, programming in the JavaScript and PERL languages. (Source: University of Wisconsin Oshkosh Undergraduate Bulletin, 2007-2009, p. 129.)

PURPOSE OF THE COURSE

The majority of new application software development is web-based. This course provides a broad overview of web-based application design and the tools/methods for constructing effective web-based applications. CS 346 is a required course in the Computer Science Software Engineering and Computer Information Systems emphases, and an elective in the Computer Science emphasis. It is also an elective course in the Computer Science minor and the Computer Science emphasis for Management Information Systems majors.

COURSE OVERVIEW

Web Software Development involves both design and construction activities. Your learning will occur through a variety of modes, including classroom lecture, discussion, hands-on activities, web-based tutorials, lab quizzes/activities, and both individual and team web site development projects. Learning both design and construction techniques requires your active involvement and participation in the

learning process – as you develop an understanding of web-based design concepts and apply these concepts in the construction of live web sites.

LETTER TO THE STUDENT

Welcome to Web Software Development! I hope you're looking forward to a creative and rewarding semester. I've added this letter to the syllabus to share some additional perspectives on the course that you may find informative and useful.

This course will introduce you to the challenges and opportunities of web application design in a Web 2.0 world, the fundamental technical and programming skills needed to build web sites, and a wide range of tools/technologies that exist to support the efficient development of rich, interactive web applications. The knowledge and skills you receive in this class focus, enhance, and apply the existing computer science principles you've learned in your other courses. At completion of the course, you will have created two significant example web sites to add to your portfolio of skills.

Since the majority of new application software development is web-based, successful completion of this course will help prepare you for some interesting and plentiful career opportunities. The U.S. Bureau of Labor Statistics indicates that computer software developers (which includes web developers), specifically those engaged in application development, are among the top 20 occupations with the highest projected employment increases for 2006-2016 (US Occupational Outlook Handbook, 2008-09 edition, <http://www.bls.gov/oco/reprints/ocor006.pdf>). The job prospects for graduates with at a bachelor's degree in computer science and with practical work experience are excellent. As of August 2007, there were over 20,000 employment opportunities nationwide for people who have varying degrees of experience in web development, and over 200 of these jobs were in Wisconsin (<http://www.dice.com> search with keyword web retrieved on Monday, September 1, 2008). Average salaries for entry level software developers and web programmers vary widely depending on industry and geographical location, but a starting salaries in the upper-40s to low -50s or higher are fairly common for those with a bachelor's degree and some experience. Salary information for a variety of computer-related occupations can be found in the ComputerWorld 2007 Salary Survey at: http://www.computerworld.com/spring/salary-survey.htm?activeYear=2007&type=job_level¶meter=0&page=2 .

In addition to providing potential employment opportunities, background in web software development will give you a richer understanding of the growing importance of web-based communication and application development. I also hope that the combination of media involved in rich interactive web applications, the flexibility and variety of available technologies, and the limitless possibilities of web-based technology spark your creative side and motivate you to explore other ideas in web software development.

I hope this brief letter provides you with additional background about the course. For more details, please read the attached syllabus and if I've left anything out don't be afraid to ask!

Also, if you're wondering what to call me since my last name can be a real mouthful, my previous students have called me by my first name/nickname Kate, Dr. F, Dr. Kate, or those with a bit of Italian

in their background have used the full-on “Dr. Faggiani”. I try not to be too formal, so feel free to use my first name or whatever you find most comfortable.

I look forward to working with you this semester!

Your Instructor and Web Software Development Tour Guide,
Dr. Kathy (Kate) Faggiani

MATERIALS AND RESOURCES

REQUIRED TEXTBOOK Deitel, P.J. and Deitel, H.M. (2008). Internet & World Wide Web: How to Program. (Fourth edition). Prentice Hall. Available as hard copy ISBN: 0-13-175242-1. Also available as an eText at a significantly reduced price with ISBN: 0-13-228472-3 from <http://www.coursesmart.com> (you can also check this site for e-versions of your other textbooks).

ONLINE RESOURCES Use of online resources in the course will be extensive. URLs will be made available on a per topic basis in the Content section of the D2L course site. A key site we will use across the course is:
<http://www.w3schools.com>

SOFTWARE Access to a wide variety of web developments tools and platforms will be provided. The campus-wide labs and the CS Lab will have web development resources available for your use. In addition, many tools are available for free download. Additional information will be provided as needed during the course.

OTHER A minimum 1GB jump drive to store web software; you also have access to network storage on the campus server. Additional resources will be used on the internet and links will be provided in D2L.

LEARNING OUTCOMES AND ASSESSMENT OF STUDENT LEARNING

Learning outcomes represent the knowledge, skills and abilities, and attitudes/behaviors you will acquire as a result of successful participation in this course. The learning objectives for Software Engineering I are listed below. Please note that each learner’s progress will be assessed at regular intervals using a variety of different assessment tools and techniques; in addition, learners will have the opportunity to self-assess their progress in some areas using D2L online activities.

Table 1. CS 346 Learning Outcomes and Assessment

Learning Outcome	Assessment Activity
1. Explain the key concepts associated with internet architecture that facilitates web application development.	Exam

2. Explain the basic components of web architecture and describe how web browsers and servers work in tandem.	Exam
3. Describe a web engineering framework to support the development of web-based applications.	Exam
4. Apply the web engineering process to the development of a moderately complex web application.	Project
5. Utilize an integrated development environment to construct and deploy a web application.	Project
6. Construct and validate web pages.	Project Lab
7. Design and implement client-side application logic with selected scripting languages.	Project Lab Exam
8. Design and implement server-side application logic with selected technologies.	Project Lab Exam
9. Design and implement the model-view-controller architecture for web-based applications.	Project Lab Exam
10. Design and construct web pages that interact with persistent storage.	Project Lab
11. Read and apply web standards to the design and creation of web-based applications.	Project Exam
12. Identify trends in web technologies and develop an evaluation strategy for assessing emerging web technologies.	Project Lab
13. Work effectively with a small team of web developers to produce a web application.	Observation Self- and Peer Assessment

The learning outcomes described in Table 1 relate directly to the Computer Science Program Objectives found at: http://www.uwosh.edu/departments/computer_science/cs_major/program_objectives.php

If you have a major or minor other than Computer Science, please consult the learning objectives for your specific program to determine the contribution of CS 346 learning outcomes to your degree program.

DETERMINATION OF GRADES

The previous section on learning outcomes and assessment of student learning described what you can expect to learn in the course and how it will be assessed. The Course Policies section described the importance of meeting due dates, and the different elements that will contribute to your overall grade. The items that will contribute to your final grade and the percent of contribution are listed below:

	<u>Points Possible</u>	
Web Development Team Project	30%	300
Web Development Partner Project	20%	200
Exams	40%	400
Lab Quizzes/Lab Activities/Class Activities	<u>10%</u>	<u>100</u>
	100%	1000

Your letter grade for the course will be determined based on total points earned in the course as follows:

Point Range	Grade	Point Range	Grade
920 to 1000	A	720 to 789	C
890 to 919	AB	690 to 719	CD
820 to 889	B	600 to 689	D
790 to 819	BC	0 to 599	F

COURSE POLICIES

Please read the follow course policies carefully and make sure you email faggianik@uwosh.edu or kfaggiani@gmail.com with any questions you have. You will be responsible for conforming to all course policies, related rewards, and consequences as they are documented here, whether or not they are explicitly discussed in class.

ATTENDANCE and IN CLASS ACTIVITIES

“Eighty percent of success is showing up.”

-Woody Allen

It is my goal to make the scheduled meetings so interesting that you don’t want to miss one! Since the course involves much more than memorizing information presented on Powerpoint presentations or in readings, or writing code, your attendance to participate in classroom activities is vital to your success in the course. Each of you make a unique contribution to the classroom environment through your shared knowledge and experience – if you’re not in class, the class is less than it can be and everyone suffers. Please plan to attend each session. Occasionally in-class activities will be conducted which allow the participant to earn points. If you miss an activity worth points, you may not make up the points unless your absence has been pre-approved by the instructor.

PREPARATION

“To be prepared is half the victory.”

- Miguel de Cervantes Saavedra

In addition to attending scheduled sessions, the successful learner must be prepared. The D2L course site lists reading projects, required and optional learning activities, project instructions, due dates, and other learning tools. It is the responsibility of the learner to complete scheduled items prior to the class period and be prepared to engage in active learning exercises. Please note that if you are prepared for class, it will be much easier to earn the maximum possible points on in-class activities.

DUE DATES

“A perfect method for adding drama to life is to wait until the deadline looms large.”

-Unknown

Due dates for all graded items are posted well in advance. Please plan your available time well, and commit to meeting all due dates. If you miss a due date without prior discussion and approval of the instructor, you will receive no points for the assigned item. Also note that I have numerous office hours during the week, including virtual office hours, and I can be reached by email. I am happy to help you succeed in the course so don't be afraid to ask for assistance when needed. Please don't let lack of understanding stand in the way of your success.

PROJECTS

“If your project doesn't work, look for the part that you didn't think was important”

-Arthur Bloch

Your web software development learning experience in this course will involve two projects: a partner project and a team project. In addition to classroom activities and labs, the projects will provide you with the ideal opportunity to apply the design and web development technology/tool skills you are learning to more significant web development efforts. Detailed project requirements and evaluation criterion will be provided to help guide your efforts. The projects will comprise a total of 50% of your overall course grade – 20% from the partner project and 30% from the team project.

EXAMS

“Examinations are formidable even to the best prepared, for the greatest fool may ask more than the wisest [person] can answer.”

-Charles Caleb Colton

In addition to demonstrating skills/abilities and professional attitudes/behavior in the course, each student must demonstrate an understanding of web software development design, the ability to construct well-designed web sites, and knowledge of current web technologies. These aspects of the learning process will be assessed in two exams, each worth 200 points. Exams will contribute 40% of the overall course grade.

All exams will use the D2L Quiz platform or a combination of media. A sample exam will be available for students to practice with prior to the first exam. This will allow students to gain familiarity with the testing platform and know what to expect during the exam.

LAB/LAB QUIZZES

“The work of the individual still remains the spark that moves mankind ahead even more than teamwork.”

-Igor Sikorsky

The class meets three times each week – the Monday session is a hands-on lab practice session that meets in HS101C. Each scheduled lab will begin with a brief quiz that covers the assigned reading and class content covered during the previous week. The Wednesday and Friday sessions are lecture, presentations, discussion and/or activity-based learning experiences. The points awarded on Labs/Lab Quizzes/In-Class Activities will constitute 10% of the overall course grade.

ACADEMIC HONESTY

“Integrity is doing the right thing, even if nobody is watching”

- Unknown

As an adult, you have the choice to complete the course requirements to the best of your abilities or sacrifice your integrity and reputation for what you may perceive as a necessity at the time. If, at any point during the semester, you feel pressured to commit an act of academic misconduct in order to successfully fulfill course requirements, please see me immediately. I’m sure we can come up with a plan of action that will help you succeed in the course and maintain your integrity. Please note that the following actions constitute academic misconduct and are subject to disciplinary action under the [UW Oshkosh Student Discipline Code](#) (2007): claiming the work of others as one’s own – whether the work is given willingly or unwillingly/unknowingly by another student, copied from an internet site of any kind contrary to course requirements, or originating anywhere other than as your own work product; cheating on an examination or gaining unauthorized access to examination materials; collaborating on work with others, contrary to the stated requirements of the course; failing to appropriately identify and cite the sources or ideas presented in a work product for the course; submitting work previously presented in another course; tampering with or destroying work completed by other students; or assisting other students in any of these acts. Students who feel compelled to engage in academic misconduct will be subject to the penalties defined in UWS Chapter 14 of the UWO Student Discipline Code.

COURSE CALENDAR

The table below is provided as a general timetable for topics and activities. Note that depending on progress in the course, this schedule may be modified. All modifications will be announced in class and posted as a news item on the D2L course site. Please see the Content section of the D2L course site for detailed information about weekly course activities, labs, projects, and related due dates.

Dates	Topics
Sept 3-5	Introduction to the Course Overview of Online Tutorial Site The Internet, Web Browsers, and Web 2.0 Overview of Designing for the Web – Communication and Usability
Sept 8-12	Lab 1/Quiz XHTML and CSS Web Software Design – Standards and Navigation Begin Partner Project
Sept 15-19	Lab 2/Quiz JavaScript Basics, Control Statements, Functions, Arrays, and Objects
Sept 22-26	Lab 3/Quiz Document Object Model (DOM) JavaScript Events
Sept 29 – Oct 3	Lab 4/Quiz XML and RSS

Dates	Topics
	Partner Project Site Design Due at 12:30pm on Oct 1 Prepare for Exam 1
Oct 6-10	Exam 1 at 1:20pm on Oct 6 in HS101C Ajax-Enabled Rich Internet Applications
Oct 13-17	Lab 5/Quiz Web Servers and Databases
Oct 20-24	Lab 6/Quiz PHP
Oct 27-31	Lab 7/Quiz PHP and Database Access Partner Project Due at 12:30pm on Oct 29 Peer Evaluation of Individual Projects Due at 12:30pm on Oct 31
Nov 3-7	Lab 8/Quiz Planning and Managing Web Development Effort Begin Team Project ASP.NET and ASP.NET Ajax Prepare for Exam 2
Nov 10-14	Exam 2 at 1:20pm on Nov 10 in HS101C Java Server Faces (JSF) and Ajax-Enabled JSF Applications
Nov 17-21	Team Project Site Design Due at 12:30pm on Nov 19 Web Services Content Management Systems
Nov 24-30	Team Project Thanksgiving Break – No Class on Nov 26, 27, 28
Dec 1-5	Team Project
Dec 8-12	Team Projects Due at 12:30pm on Dec 8 Peer Evaluations of Team Project Sites Due at 12:30pm on Dec 10 Team Project Presentations Due on Dec 12

This course syllabus was developed based on the principles defined in “*The Course Syllabus: A Learning-Centered Approach*” by J. Grunert (1997).