King Fahd University of Petroleum & Minerals

College of Computer Sciences and Engineering
Information and Computer Science Department

SWE 363: Web Engineering & Development (3-0-3)

Syllabus – Fall Semester 2009-2010 (091)

Website: Blackboard (WebCT) & http://faculty.kfupm.edu.sa/ICS/alfy/files/teaching/091-swe363/index.htm

Class Time, Venue and Instructor Information:

Sec.	Time	Venue	Instructor	Office Hours
01	SMW 8:00-8:50am	24-165	**Dr. EL-SAYED EL-ALFY** Office: 22-108 Phone: 03-860-1930, E-mail: alfy@kfupm.edu.sa, http:faculty.kfupm.edu.sa/ics/alfy	SMW 11:00:11:59am SM 9:15-10:00pm Or by appointment

Course Catalog Description

Internet basics for web applications. Web Engineering fundamentals: requirements, analysis modeling, design modeling, testing. Technologies and tools for developing web applications: markup languages, styling, client and server side programming, data description and transformation. Web services. Advances in web engineering

Pre-requisites: Junior Standing

Course Objectives

- Provide students with conceptual and practical knowledge, and skills required to develop web applications and web services.

Course Learning Outcomes

Upon completion of the course, you should be able to:

1. Perform analysis modeling and design modeling for web applications.
2. Identify candidate tools and technologies for developing web applications.
3. Develop user-interfaces for web applications.
4. Describe and transform data using XML and its related technologies.
5. Develop web applications and web services.

Required Material

- H. M. Deitel & P. J. Deitel *Internet and World Wide Web How to Program*, 4th Edition, Prentice Hall, 2008.
  - URL: http://www.pearsonhighered.com/deitel/
  - Code Examples: http://media.pearsoncmg.com/ph/esm/deitel/IW3HTP4e/examples/
- Lecture notes and some pointed websites

Other Recommended References

- H. M. Deitel, et al., *XML How to Program*, First Edition, Pearson Education Inc., 2001.
- R. Pressman, *Web Engineering: A Practitioner's Approach*, McGraw-Hill Higher Education, 2008. http://highered.mcgraw-hill.com/sites/0073523291/
- G. Kappel, B. Pröll, S. Reich, and W. Retschitzegger (eds), Web Engineering - The Discipline of Systematic Development of Web Applications, John Wiley & Sons, 2006 http://eu.wiley.com/WileyCDA/WileyTitle/productCd-0470015543,descCd-tableOfContents.html and http://www.web-engineering.at/eng/

Assessment Plan

Assessment Tool	Weight
Assignments & Quizzes	10 %
Major Exam I (Date: Nov 11, 2009 @7:00-8:30PM & Room: TBA)	20 %
Major Exam II (Date: Jan 4, 2010 @7:00-8:30PM & Room: TBA)	20 %
Final Exam (semi-comprehensive) [Date: as announced by the registrar]	25 %
Term Project (Group of 2 students) – more info will be announced	25 %
Bonus: Class Participation & Discussions in Blackboard based on quality & number	8 %

Tentative Schedule & Major Topics

Wk#	**Date**	**Lecture**		
		Covered Topics	**Minimum Readings**	**Other Activities**
1	Oct 3	Getting Started	M0	
	Oct 5	Internet & Web Basics I	1.5-1.8, 1.15-1.12, M1	
	Oct 7	Internet & Web Basics II	Ch. 2, M1	
2	Oct 10	Internet & Web Basics III	Ch. 3, M1	Hw1 Assigned
	Oct 12	Web Eng. Fundamentals I	M2	
	Oct 14	Web Eng. Fundamentals II	M2	
3	Oct 17	Web Eng. Fundamentals III	M2	Project announced
	Oct 19	Web Eng. Fundamentals IV	M2	Quiz1
	Oct 21	Web Eng. Fundamentals V	M2	Hw1 Due
4	Oct 24	Markup Lang. I	Ch 4, M3	Hw2 Assigned
	Oct 26	Markup Lang. II	Ch 4, M3	
	Oct 28	Markup Lang. III	Ch 4, M3	
5	Oct 31	Markup Lang. IV	Ch 4, M3	Proj. Phase 1 due
	Nov 2	Cascading Style Sheets I	Ch. 5, M4	
	Nov 4	Cascading Style Sheets II	Ch. 5, M4	Hw2 Due
6	Nov 7	Cascading Style Sheets III	Ch. 5, M4	Quiz2
	Nov 9	Cascading Style Sheets IV	Ch. 5, M4	
	Nov 11	Major Exam I		
7	Nov 14	Client-Side Prog., Scripting Lang. & DOM I	Ch.6-Ch.13, M5	Hw3 assigned
	Nov 16	Client-Side Prog., Scripting Lang. & DOM II	Ch.6-Ch.13, M5	
	Nov 18	Client-Side Prog., Scripting Lang. & DOM III	Ch.6-Ch.13, M5	
Nov 19-Dec 4		Eid Al-Adha Break (No classes)		

8	Dec 5	Client-Side Prog., Scripting Lang. & DOM IV	Ch.6-Ch.13, M5	
	Dec 7	Client-Side Prog., Scripting Lang. & DOM V	Ch.6-Ch.13, M5	
	Dec 9	Server-Side Prog. I	Ch. 21, 23, 25, M6	Proj. Phase 3 due
9	Dec 12	Server-Side Prog. II	Ch. 21, 23, 25, M6	Hw3 Due
	Dec 14	Server-Side Prog. III	Ch. 21, 23, 25, M6	
	Dec 16	Server-Side Prog. IV	Ch. 21, 23, 25, M6	Hw4 Assigned
10	Dec 19	Server-Side Prog. V	Ch. 21, 23, 25, M6	
	Dec 21	AJAX I	Ch. 15, 25.7, M7	
	Dec 23	AJAX II	Ch. 15, 25.7, M7	
11	Dec 26	Web Services I	Ch. 28, M8	Quiz3
	Dec 28	Web Services II	Ch. 28, M8	
	Dec 30	XML Data Description & Transformation I	Ch. 14 , M9	Hw4 due
12	Jan 2	XML Data Description & Transformation II	Ch. 14 , M9	
	Jan 4	Major Exam II		
	Jan 6	XML Data Description & Transformation III	Ch. 14 , M9	Hw5 Assigned
13	Jan 9	XML Data Description & Transformation IV	Ch. 14 , M9	Proj Phase 4 Due
	Jan 11	XML Data Description & Transformation V	Ch. 14 , M9	
	Jan 13	E-Commerce & Web Security I	M10	
14	Jan 16	E-Commerce & Web Security II	M10	
	Jan 18	E-Commerce & Web Security III	M10	Hw5 Due
	Jan 20	Web Content Manag. Systems	M11	Final Proj Due
15	Jan 23	Project Presentations		Quiz4
	Jan 25			
	Jan 27			
FIN	TBA	Final Exam (as announced by the registrar)		

Note: M# refers to lecture notes provided in addition to the textbook where # is the module number

Course Policies

- ***Course Website & Participation***: Students are required to periodically check the course website and download course material as needed. Several resources will be posted through the website as well. Keys to quizzes and exams are generally discussed during class as time permits but solutions will not be posted. Blackboard CE 8 will be used for communication and interaction, posting and submitting assignments, posting grades, posting sample exams, etc. It is expected that you get benefit of the discussion board by raising questions or answering questions put by others. Also you can prepare and give a short presentation on a related tool or some interesting technology. Up to 8% bonus will be granted based on your active participation and the usefulness of the material you share with other students.
- ***Class attendance***: Regular attendance is a university requirement; hence attendance will be checked at the beginning of each class. Late arrivals will disrupt the class session. Hence, two late attendances (more than 10 minutes) will be considered as one absence. If you are 15 minutes late, you will be marked as absent and will not be permitted to enter the class. More importantly, you are not allowed to leave the class unless it is an urgent matter. Missing more than 9 lectures will result in a DN grade without prior warning. To avoid being considered as absent, an official excuse must be shown no later than one week of returning to classes. Every unexcused absence leads to a loss of 0.5% of total grade.
- ***No makeup of homework, quizzes or exams will be given.***

- ***Re-grading policy***: If you have a complaint about any of your grades, discuss it with the instructor no later than a week of distributing the grades (except for the final, an office hour will be announced in Blackboard after grading in which complains can be raised, if any). Only legitimate concerns on grading should be discussed.
- ***Term Project***: Group work, each group of two students is expected to design and implement a web application following the systematic approach for web engineering. Around the third week, the instructor will provide you with a requirement document, then each group should go through all different phases web engineering and development. Innovative ideas are highly encouraged and will be rewarded in the project grade. All group members are expected to know all the details about the project. More information about deliverables on Blackboard.
- ***Academic honesty***: Students are expected to abide by all the university regulations on academic honesty. Cheating will be reported to the Department Chairman and will be severely penalized. Although collaboration and sharing knowledge is highly encouraged, copying others' work without proper citation, either in part or full, is considered plagiarism. Whenever in doubt, review the university guidelines or consult the instructor. Cheating in whatever form will result in F grade.
- ***Courtesy***: Students are expected to be courteous toward the instructor and their classmates throughout the duration of this course. Talking while someone else is speaking will not be tolerated. Furthermore, all cell phones must be turned off during class and exams. In addition, students are expected to be in class on time. To contact your instructor, please keep all communications, except in urgent matters, through Blackboard and avoid using phone calls, university emails or written notes. When sending an email through the university email system, please indicate 091-SWE363 in the "Subject" field of your email, e.g. 091-SWE363: Question about homework 1. Not following properly these guidelines may result in late or no response of your email.

⊙⊙⊙ **Best of luck!!** ⊙⊙⊙