CS494
Software Engineering II: Software Implementation
Spring 2012

Catalog Description

During this course, students will study the implementation and maintenance of a large software project. This includes the study of software development techniques, managing requirement and design changes during implementation, verification and validation, and defect management. In addition, students will participate in code reviews, study professionalism and job interview techniques. Prerequisite: CS 493 with a grade of "C" or better. 2 hours.

Topics

SE/SoftwareVerificationValidation
- Different kinds of testing – human computer interface, usability, reliability, security, conforman to specification
- Testing fundamentals, including test plan creation and test case generation black-box and white-box testing
    techniques
- Unit, integration, validation, and system testing
- Regression testing
- Inspections, reviews, audits

SE/SoftwareProcesses
- Software life-cycle and process models
- Software process capability maturity models
- Software process measurements

SE/ToolsAndEnvironments
- Testing tools including static and dynamic analysis tools
- Tools for source control, and their use in particular in team-work
- Configuration management and version control tools
- Tool integration mechanisms

SE/SoftwareEvolution
- Software maintenance
- Characteristics of maintainable software
- Refactoring

SP/ProfessionalEthics
- Community values and the laws by which we live
- The nature of professionalism (including care, attention and discipline, fiduciary responsibility, and mentoring)
- Keeping up-to-date as a professional (in terms of knowledge, tools, skills, legal and professional framework as well as the ability to self-assess and computer fluency)
- Maintaining awareness of consequences
- Codes of ethics, conduct, and practice (IEEE, ACM, SE, AITP, and so forth)
- "Acceptable use" policies for computing in the workplace

These topics are taken from the ACM Computer Science Curriculum 2008:An Interim Revision of CS 2001

Instructor Details

Professor:	Shereen Khoja
Email:	shereen@pacificu.edu
Office:	Strain 203C
Phone:	(503) 352-2008
Office Hours:	T 10:30am – 11:30am W 10:30am – 11:30am Th 2:30pm – 03:30pm or by appointment

Course Details

Course Title:	CS494 Software Engineering II
Prerequisite:	CS493 with a grade of C or better
Required For:	Graduation
Meeting Times:	TTh 1:00pm – 01:50pm One on one meetings with your professor will also be required
Location:	Strain 101
Textbooks:	none

Course Website

http://zeus.cs.pacificu.edu/shereen/cs494sp12/

Course Assessment

Grade Distribution:

Design and Implementation Design of modules (25%) Implementation of modules (50%) Completeness of project and following schedule (25%)	40%
In-class discussions and demos Updated schedule (2.5%) Initial demos (2.5%) Project demos at start of semester (5%) Code reviews (20%) Final demo of software (5%) Practice presentation (10%) Senior projects day presentation (20%) Beta testing (10%) Résumé (10%) Class participation and attendance (15%)	25%
Written reports Weekly logs (10%) Project abstracts (10%) Testing report (10%) Project manual (10%) Report draft (10%) Final report (25%) Project Poster (20%) Project Portfolio (5%)	35%

Percent Breakdown:

			92-100%	A		90-92%	A-
88-90%	B+		82-88%	B		80-82%	B-
78-80%	C+		72-78%	C		70-72%	C-
68-70%	D+		60-68%	D			
			0-60%	F			

Important Dates

Spring Break:
Saturday, March 24, 2012 – Friday, March 30, 2012

Senior Projects Day:
Wednesday, April 28, 2012

Date of Final:
Saturday, May 12, 2012, 3:00pm - 5:30pm

Academic Calendar:
http://www.pacificu.edu/as/calendar/

Policies

1. The format of this class will not be a traditional lecture. I will expect you to participate and come to class prepared to talk about your project. Also, you will be expected to work independently. I will provide you with access to information, but many times you will be required to learn it on your own.

2. Absolutely no late assignments will be accepted. Some of the due dates for assignments will be set by your professor, others will be determined by your schedule. In either case, you are responsible for meeting your deadlines. More details and policies for setting your schedule will be discussed in class.

3. Your project completeness grade will reflect how well you implemented your project as planned. Unnecessary modifications to your project (e.g. eliminations of elements due to time) will severely penalize your grade.

    First Change Request: Free
    Second Change Request: -2 percentage points off your final grade
    Third Change Request: -4 pts percentage points off your final grade
    Fourth Change Request: -8 pts percentage points off your final grade
    The pattern should be evident.

4. If you are scheduled to lead a discussion or make a presentation, you must be in class. No exceptions. If another student is scheduled for a presentation, you must attend to give feedback. Failure to attend a presentation without a valid excuse results in a zero on your presentation. Being late for a presentation counts as not attending.

5. Pacific University has no tolerance for academic dishonesty. It is university policy that all acts of academic dishonesty be reported to the Assistant/Associate Dean. Sanctions that may be imposed for academic dishonesty range from an "F" for the assignment, an "F" for the course, and suspension or dismissal from the university. Forms of academic dishonesty include, but are not limited to, plagiarism, fabrication, cheating, tampering with grades, forging signatures, and using electronic information resources in violation of acceptable use policies. Plagiarism is the use of someone else's words, ideas, or data without proper documentation or acknowledgment; it may entail self-plagiarism, i.e. reusing/resubmitting your own work without approval. Quotations must be clearly marked, and sources of information must be clearly indicated in all student work. Please consult the

Academic Conduct Policies in the A&S Catalog. **Any use of third party libraries or code must be properly cited and receive prior approval from the instructor.**

6. No project may be work for which you receive any restitution, whether it is money or credit for another class.

7. The project will become the intellectual property of Pacific University at the end of the course sequence. Therefore, the project cannot be tied to any particular company.

8. Presentations will be peer reviewed.

9. A weekly log of your progress is required. Make a habit of documenting everything you do in a notebook along with any ideas or questions that occur to you. This will help you write your weekly status reports.

10. No exams will be given in this class.

11. If you have a complaint regarding a grade on an assignment or exam, write a one paragraph description of why you feel the grade is incorrect and deliver it to the instructor within five working days of when the graded material was returned to you. I will not consider any grade changes later than five working days after the graded material was returned.

12. If you have a documented disability covered under the ADA then services and accommodations are available from LSS (Learning Support Services). If you need reasonable accommodations to fully participate in course activities or meet course requirements, you must contact Edna K. Gehring, Director of LSS, at X2107. She will meet with you, review the documentation of their disabilities, and discuss the services Pacific offers.