CS 390 - Software Engineering
Fall 2008 - Syllabus

Instructor
Dr. Deborah Hwang
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Home page: http://csserver.evansville.edu/~hwang

Office Hours: See instructor's home page.

Course Home Page
Announcements regarding handouts and assignments will be made in class. Assignments will be available only at the course home page (http://csserver.evansville.edu/~hwang/f08-courses/cs390.html). It is your responsibility to consult the course home page on a regular basis. Grades will be posted to Blackboard (http://acebb.evansville.edu).

Catalog Data
Study of the software design and development process in the context of a large group-programming project. Topics covered include: project management, software management, requirements and specifications methods, software design and implementation, verification and validation, aspects of software testing and documentation standards, technical documents, contracts, risks and liabilities.

Objectives

● Students will have a firm understanding of leading and participating in a software engineering project.
● Students will be familiar with team structures, peer reviews, inspections, and software engineering workflow models.
● Students will be familiar with requirement, analysis, design, implementation, and maintenance phases of development.
● Students will participate in an open-ended software engineering project where they will apply software engineering principles to carry a project from inception to completion.
● Students will become aware of the importance of ethics in software engineering, especially given the role software plays in critical systems such as those in business or transportation.

Prerequisites: CS 215; CS 290 recommended

Required Textbook

Software Project
The bulk of the final grade will consist of a term project in which software engineering principles are applied from start to finish. Each student will be assigned their own project, but some of them will be related, allowing for some collaboration. See handout Software Project for more details. The grading for the project will be based on the following:
50% Implementation
40% Documentation (website)
10% Final Presentation

Writing Assignments
There will be several writing assignments given throughout the term. The main writing assignment will a 5-page paper giving an analysis of a current computer system article in terms of software engineering issues. The grading for this paper will be based on the following:

60% Technical content: How you develop your thesis, applicability to software engineering, statements are factual and supported.
15% Structure of the paper: Organization, headings, subheadings, readability, clarity.
25% Mechanics: Proper grammar including punctuation, complete sentences and paragraphing.

Final Grading
The final grade will be based on the following weighting:

70% Software Project
15% Paper
15% Writing Assignments (weighted as indicated)

There is no final exam for this course. However, project presentations will be given during the regularly scheduled final exam period for this course, Thursday, December 11, 2008.

Late Work
Course work is due at the instructor's office and/or electronically as appropriate by 4:30pm on the date specified unless otherwise noted. Any assignments arriving after 4:30pm are considered late. The following automatic late penalties will be applied:

10% if handed in by 4:30pm, one day late
20% if handed in by 4:30pm, two days late
30% if handed in by 4:30pm, three days late

Unexcused late work will not be accepted for credit after three days after the due date without prior arrangements. For the purpose of counting days, Friday 4:30pm to Monday 4:30pm is considered one day. Please note that the purpose of the automatic late extension is to allow students leeway when needed. It is usually better to hand in something late and completed than on-time and incorrect. However, chronically handing in late submissions will lower your final grade.

Valid excuses for missing exams and handing assignments in late include illness, family emergencies, religious observances, official UE events such as varsity games and concerts, etc. They do not include (most) work conflicts, studying for other classes, leaving a day early or staying home an extra day over a weekend or holiday, etc. In general, an excused absence is one caused by circumstances beyond your control.
The instructor will rely on your integrity for getting work excused. If you have a valid excuse, put it in writing, sign your name to it, and give it to the instructor. For religious observances and official UE events, you must inform the instructor that you will be absent before the absence occurs, otherwise it will be considered an unexcused absence.

Excused work must be made up within one calendar week from the original due date for full credit. Late excused work will not be accepted. Exceptions will be made for serious or prolonged illness, or other serious problems. Please note: It is your responsibility to take care of missed or late work.

Attendance Policy
Attendance is important and expected. Attendance records will be maintained in accordance with Federal Law, but will not be used in the determination of grades, except in borderline cases. However, the instructor reserves the right to reduce a final grade in this course for excessive absences. Students will be warned prior to such action. Students are responsible for all material covered in class. If you miss a class, find out what was covered from another student. You are responsible for checking the course homepage for new assignments even if you miss class.

Honor Code
All students are expected to adhere to the University's Honor Code regarding receiving and giving assistance. The following specific guidelines are in force for this course.

- **The software project is to be your own work. However, close collaboration with other students in the class is allowed.** With respect to students not in the class, discussing the meaning and general solution techniques is permitted. For example, discussing “Would a stack be a reasonable data structure to use in manipulating a web browser history?” is acceptable.

  Asking another student for assistance on specific items in your own analysis and design or code is also permitted, but you may not observe another person’s solution or code in its entirety for the purposes of copying it, with or without that person's permission. However, this is not to say that you cannot read other people's solutions for ideas for your own project.

  In particular, copying solutions obtained from the Internet more or less verbatim for your software project will result in a 0 for the project, an F for the course, and possibly formal disciplinary action.

- **All writing assignments are to be your own work.** Any papers that are plagiarized to any extent will result in a 0 for the paper, and possibly formal disciplinary action. Plagiarism is defined as attributing someone else's writing as your own. Certainly you are allowed to quote another's writing if credit is given to that person.

If there is any doubt as to whether assistance is acceptable or whether a paper is properly cited, consult the instructor.

Course Schedule
Here is a tentative schedule of topics for the term.

- Scope of Software Engineering
- Software Life-Cycle Models
● Software Process
  ● Requirements
  ● Analysis
  ● Design
  ● Implementation
  ● Postdelivery Maintenance
● Teams
● Tools
● Testing
● Modules vs. Objects
● Reusability and Portability
● Planning and Estimating