COMP 129   Software Engineering (3 credits)
Spring 2011

This syllabus describes the way this course will be conducted. Please contact the instructor if there are statements that are unclear, or that you disagree with. Questions and feedbacks are ALWAYS welcomed. Please feel free to talk to me if you have any concerns or needs. Specifics are subject to change with appropriate notice.

Instructor: Dr. Jinzhu Gao

- **Office:** CTC 123  **Phone:** 946-3037  **FAX:** 946-7326  **Email:** jgao@pacific.edu
- **Homepage:** http://www1.pacific.edu/~gaoj
- **Lecture:** MWF 3:30 pm – 4:25 pm at CTC 114
- **Office hours:**
  - MWF: 1:30 pm – 2:30 pm
  - Or by appointment

Textbooks:

- *Software Engineering* by Ivan Marsic, http://www.ece.rutgers.edu/~marsic/books/SE/

Sakai:

Sakai, [https://pacific.rsmart.com](https://pacific.rsmart.com), will be used for distributing course notes, assignments and announcements. Students are responsible for checking the site regularly.

Prerequisite:

COMP 101 Application Programming

Although this course does not emphasize coding, it will be helpful to have programming and software engineering experience from other Computer Science courses or industry. Since a final report is required to document your methodology choices, it will be helpful for you to have coursework or experience in technical writing.

Course Description:

Many Computer Science courses offer students the opportunity to build software of modest complexity from the ground up. This course will give students the tools they need to be meaningful contributors as developers and managers on significant software systems. Lectures and readings will focus on general software engineering principles, requirements specification, communication skills, project management (both from the point of view of the engineer and the
technical manager), testing and documentation. Course projects and substantial in-class discussion will examine the student’s understanding of the lecture material and associated reading. However, our focus is on the general methodology, not a particular implementation style.

Major topics that will be covered in the Course are:
- The software life cycle: requirements engineering, modeling, software architecture, software design, software testing, and software maintenance.
- Software management: configuration management, people management, managing software quality, cost estimation, and project planning and control.
- Introduction to software tools.

By the end of the course, students will be able to:
- Understand general software engineering principles
- Develop good communication and project management skills.
- Document the methodology choices for their projects.
- Complete a project or extend an open-source or commercial software program in a way that substantially improves its usefulness to a customer within our campus community, or elsewhere.

Grading:
Homework/Class Discussion: 20%
Attendance and Participation: 20%
Exam: 20%
Project + Final Report: 40%

Homework: There will be some homework assignments, some of which may be solved during class discussion.

When paper submission is requested, everything you submit must be typeset and printed. No handwritten submissions will be accepted, except for rare cases where an explicit exception is made in the assignment specification.

When electronic submission is requested, follow submission guidelines carefully. All files submitted (including all program code) should have your name and the assignment number clearly indicated near the top of the file.

Exams: There will be one exam that will be held during class.

Attendance and Participation: Class attendance and participation is necessary and expected. Participation requires that you are properly prepared for classroom discussions and activities, and have completed all reading assignments before the relevant class.

Students missing a class are responsible for making up the material discussed in that class on their own. Students are responsible for being aware of any announcements made during their absence.

Late Assignments and Make-up Work: The only acceptable excuses for missing an assignment due date are serious illness, death in the immediate family or important professional activities. Illness or death in the family may require documentation. Excuses for professional activities must be approved by the instructor in advance.
**Individual Work and Collaboration:** Computer professionals usually work in a cooperative environment, yet proper assessment requires that work be done by individuals. To alleviate confusion, the following policy will be followed:

Collaborative work is encouraged. This includes students working together on problem sets, planning solution strategies and helping each other to debug programs. Collaboration must stop short of the writing of program code or English that represents your work. You may not directly copy the work of another student. It is your responsibility to ensure that the work you submit is an honest representation of your own understanding of the material.

Marginal cases will be resolved by oral examination of the students involved. If they understand the material in the assignment, it will be considered honest collaboration. If they do not, then it will be considered academic dishonesty.

**Honor Code and Academic Dishonesty:** The University Honor Code is an essential element of academic integrity. It is a violation of the Honor Code to give or receive information from another student during an examination or to submit all or part of someone else's work as one's own. If a student violates the Honor Code, the faculty member may refer the matter to the Office of Student Life. If found guilty, the student may be penalized with failure of the assignment or the course. The student may also be reprimanded or suspended from the University.

Cases of academic dishonesty will not be tolerated. On a first offense, the student will be given a written warning and a grade of zero for the work in question. On a second offense, notice will be sent to the student's academic advisor, the Dean of the School of Engineering and Computer Science and the Dean of the student's own school, and the matter will be turned over to the Office of Student Life for resolution.