

San José State University
Department of Computer Science
CS160, Software Engineering, Section 3, Fall, 2018

Course and Contact Information

Instructor:	Weiwei Cao
Email:	weiwei.cao@hotmail.com
Office Hours:	TTH:7:00pm - 7:30pm
Class Days/Time:	TTH:7:30pm - 8:45pm
Classroom:	MH233
Prerequisites:	CS146, CS151 (with a grade of "C-" or better) or instructor consent. CS100W (with a grade of "C" or better) or instructor consent

Course Description

Software engineering principles, software process and process models, requirements elicitation and analysis, design, configuration management, quality control, project planning, social and ethical issues. Required team-based software development, including written requirements specification and design documentation, oral presentation, and tool use.

Learning Outcomes

By the end of this course, a student should be able to:

- Software process: Reason about and apply the entire software development process. Create a software project schedule.
- Requirements engineering: Solicit, elaborate, and validate software product specifications and generate meaningful use cases.
- Software design: Understand what software design architectures are suitable for various software projects. Apply appropriate software designs to a team project. Explain and defend design decisions.
- Software verification and validation (V&V): Understand the software validation process and use issue-tracking tools. Create and execute test plans.

Required Texts

Ian Sommerville
Software Engineering (10th Edition)
Pearson, 2015.
ISBN-10: 0133943038
ISBN-13: 978-0133943030

Course Requirements and Assignments

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus. More details about student workload can be found in University Policy S12-3 at <http://www.sjsu.edu/senate/docs/S12-3.pdf>. Note that University policy F15-12 at <http://www.sjsu.edu/senate/docs/F15-12.pdf> states that "Attendance shall not be used as a criterion for grading."...

“Students are expected to attend all meetings for the courses in which they are enrolled as they are responsible for material discussed therein, and active participation is frequently essential to ensure maximum benefit to all class members. In some cases, attendance is fundamental to course objectives; for example, students may be required to interact with others in the class. Attendance is the responsibility of the student.”... “Participation may be used as a criterion for grading when the parameters and their evaluation are clearly defined in the course syllabus and the percentage of the overall grade is stated.”

Assignments

There will one project assignment which is divided into four sub-assignments given to assess your ability to apply the material covered in class. The project assignment takes up 60% of the total grades. The first two project assignments would weigh 20% more than the last two project assignments, which means the first two assignments weigh 40% of total grades and the last two assignments weigh 20% of total grades.

Extra credit is available for in-class exercises and group discussion.

The submissions are due at midnight on the due date. The assignments are to be submitted on time. A penalty of 10% per day is applied to late submissions. No assignments will be accepted after a week past its due date.

Quizzes

Unannounced brief quizzes toward the end of the lecture to assess your understanding of the material covered in that session.

Final Examination or Evaluation

Final examination will be questions to help you reflect on the material covered in class and the project assignment you have done during the course.

Exams

- Absolutely NO items may be shared during the exams, including books, notes, and calculators.
- Absolutely NO usage of cell phones during exams. Cell Phones must in off or silent mode and not within your reach.
- Makeup exams will only be granted in case of documented medical emergency with an advanced notice to the instructor.

No students are allowed to miss either exam. Failure to take an exam during its scheduled time will result in a grade of zero on that exam.

Grading Information

Your individual class grade will be weighted as follows:

Assignments 60%

Quizzes 10%

Exams (Midterm and Final) 30%

Total 100% A --93, A- --90, B --83, B- --80, C --73, C- --70, D --63, D- --60, F --Below 60.

Classroom Protocol

Be respectful.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/> Make sure to review these policies and resources.

CS160 / Software Engineering, 2018 Fall, Course Schedule

List the agenda for the semester including when and where the final exam will be held. Indicate the schedule is subject to change with fair notice and how the notice will be made available.

Course Schedule

WK	Date	Topics	Readings	Assignments
1	08/21	Introduction		
1	08/23	Software Engineering in a Nutshell	Chapter 1	
2	08/28	Software Lifecycle and Processes	Chapter 2	
2	08/30	Agile Software Development	Chapter 3	
3	09/04	Software Requirements	Chapter 4	
3	09/06	Software Requirements		
4	09/11	Team Formation, Project Requirements Elicitation		Project Assignment #1
4	09/13	Software Modeling	Chapter 5	
5	09/18	Software Modeling		
5	09/20	Assignment Review, Q&A, Team-work Session		
6	09/25	Architectural design	Chapter 6	Project Assignment#2
6	09/27	Architectural design		
7	10/02	Object-Oriented Design	Chapter 7	
7	10/04	Object-Oriented Design		
8	10/09	Midterm Overview, Q&A, Team-Work session		
8	10/11	Midterm Exam		
9	10/16	Mid Semester Demos		
9	10/18	Mid Semester Demos		
10	10/23	Configuration Management	Chapter 25	
10	10/25	Configuration Management(cont.)		
11	10/30	Software Verification and Validation	Chapter 8	

11	11/01	Software Verification and Validation(cont.)		
12	11/06	Software Evolution and Maintenance	Chapter 9	
12	11/08	Security Engineering	Chapter 13	
13	11/13	Project Management & Planning	Chapter 22,23	
13	11/15	Project Management & Planning	Chapter 22,23	
14	11/20	Assignment Review, Q&A, Team-Work session		
14	11/22	Thanksgiving(no class)		
15	11/27	Project Demos		
15	11/29	Project Demos		
16	12/04	Wrap-up		
16	12/06	Wrap-up		
17	12/13	Final Exam, MH233, 7:30pm - 9:30pm		