

**San José State University**  
**Computer Science Department**  
**CS160, Software Engineering, Section 5, Fall, 2020**

**Course and Contact Information**

Instructor:	H. Chris Tseng
Office Location:	MH213
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Email:	chris.tseng@sjsu.edu
Office Hours:	Tue/Thur 8:45 – 9:15 PM and by appointment or email
Class Days/Time:	Tue/Thur 7:30 – 8:45 PM
Classroom:	Online
Prerequisites:	CS 146, CS 151 (with a grade of "C-" or better in each); CS100W (with a grade of C or better) or instructor consent.

**Course Description**

Software engineering principles, 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. (See prerequisites description on top of this page).

**Learning Outcomes**

Upon successful completion of this course, students will be able to:

SLO 1 Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.

SLO 2 Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.

SLO 3 Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

(The above learning outcomes are provided by ABET for CS program under the URL <https://www.abet.org/accreditation/accreditation-criteria/criteria-for-accrediting-computing-programs-2019-2020/#GC3>. Learning outcomes related to CS160 are listed above.)

**Course Learning Outcomes (CLO)**

Upon successful completion of this course, students will be able to:

1. CLO 1 challenges of software engineering and the roles of process and methodologies;
2. CLO 2 functional specifications and use cases;

3. CLO 3 software design development and documentation;
4. CLO 4 UML, class, sequence diagrams;
5. CLO 5 software project test plan;
6. CLO 6 code walk through;
7. CLO 7 software project management;
8. CLO 8 tracking issues and progress;
9. CLO 9 software version control;
10. CLO 10 software revision control.

## Required Texts/Readings

### Textbook

This course requires no purchased textbook. Instructor will provide material from online and his own.

### Other Readings (reference)

Software Engineering: A Practitioner's Approach, 9th Ed., Roger S. Pressman, McGraw Hill, 2019 at <http://www.amazon.com/Software-Engineering-Practitioners-Roger-Pressman/dp/1259872971/tag=sjsucs-20>.

### Other technology requirements / equipment / material

You will be required to have a wireless-network ready laptop computer to participate in the class. You will also need to use your own laptop with wireless access to submit your assignment inside SJSU campus. Your laptop needs to have wireless capability and you need to register a free wireless account at <https://one.sjsu.edu/>. The instructor is not responsible for providing either laptops or alternatives.

## 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.

### a. Projects:

A final team project will be provided for you to practice software engineering principles.

This team project will be a collaborated group project. You are free to choose your own partners but you cannot change your partners in the middle of the project. Progressive design and implementation of the term project will be done through assignments as part of the learning objectives.

### b. Exams:

There will be one midterm and one final.

### c. Quizzes:

There will be 4-5 quizzes and each will be counted as a HW. Some of the quizzes are part of the online lesson activities.

d. Homework:

There will be 3-4 HWs. Intermediate milestones of your team project will also be counted as HW grades.

e. Tentative course exam and HW due dates:

(Please note that this is “subject to change with fair notice”)

HW/Quiz/Practice problems: One of these will be assigned every 2-3 class meetings.

Midterm: Tuesday, Oct. 8, 2020

Final: (Per SJSU final schedule) Thursday, December 10

g. Tentative course exam and HW due dates:

(Please note that this is “subject to change with fair notice”)

HW: There will be around 8 assignments on items (a)-(d) above.

**Grading Information (Required)**

Grades:

HW assignments and quizzes	25 %
Midterm	25 %
Final Team Project	30 %
Final Exam	20%

**Determination of Grades**

Grades will be assigned as described below. These intervals, however, may change (i.e., either way!) according to the performance of the class as a whole. C- is a passing grade.

- A: [ 93, 100 ]
- A-: [ 90, 93 )
- B+: [ 87, 90 )
- B: [ 83, 87 )
- B-: [ 80, 83 )
- C+: [ 75, 80 )
- C: [ 70, 75 )
- C-: [ 65, 70 )
- D+: [ 60, 65 )
- D: [ 55, 60 )
- D-: [ 50, 55 )
- F: [ 0, 50 )

**Classroom Protocol**

You are expected to attend classes. If you cannot attend, it is your responsibility to get a copy of the lecture notes and class announcements from a reliable classmate. The instructor reserves the right to ignore frivolous or inappropriate e-mail inquiries. Students are expected to participate actively to provide improvement to presentations by other classmates.

### **University Policies (Required)**

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, Section 5, Fall, 2020 Course Schedule

**Online Zoom link:** <https://sjsu.zoom.us/j/91387698363?pwd=N1FrOTduUDM2c2w5VXRlYytGeVpMdz09> (Need to login to your SJSU account to gain access to Zoom. All students must turn on video to participate)

*The schedule is subject to change with fair notice emailed to students.*

## Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	8/20/2020	Introduction to Software Engineering (reading: instructor slides and online material)
1		
2	8/25/2020	Software Process and Process Models (reading: instructor slides and online material)
2	8/27/2020	Software Process and Process Models (reading: instructor slides and online material)
3	9/1/2020	Agile Development (reading: instructor slides and online material)
3	9/3/2020	Agile Development (reading: instructor slides and online material)
4	9/8/2020	Understanding Requirements (reading: instructor slides and online material)
4	9/10/2020	Understanding Requirements (reading: instructor slides and online material)
5	9/15/2020	Requirements Modeling: (reading: instructor slides and online material)
5	9/17/2020	Requirements Modeling: (reading: instructor slides and online material)
6	9/22/2020	Use cases and use case diagrams: (reading: instructor slides and online material)
6	9/24/2020	Use cases and use case diagrams: (reading: instructor slides and online material)

7	9/29/2020	Software Design and Architecture (reading: instructor slides and online material)
7	10/1/2020	Software Design and Architecture (reading: instructor slides and online material)
8	10/6/2020	Midterm Review
8	10/8/2020	Midterm
9	10/13/2020	Term Project introduction
9	10/15/2020	Term project requirement engineering (Milestone 1)
10	10/20/2020	UML and Object Design (reading: instructor slides and online material)
10	10/22/2020	UML and Object Design (reading: instructor slides and online material)
11	10/27/2020	Milestone 1 presentation
11	10/29/2020	Version Control (reading: instructor slides and online material)
12	11/3/2020	Version Control (reading: instructor slides and online material)
12	11/5/2020	Term Project Design (Milestone 2)
13	11/10/2020	Software Project Management (reading: instructor slides and online material)
13	11/12/2020	Software Project Management (reading: instructor slides and online material)
14	11/17/2020	Milestone 2 presentation
14	11/19/2020	Software Testing
15	11/24/2020	Term Project Implementation (Milestone 3)
15	11/26/2020	Thanksgiving (no class)
16	12/1/2020	Software Testing
16	12/3/2020	Milestone 3 (final milestone) presentation
Final Exam		<u>Per SJSU final schedule</u> : 19:45-22:00, Thursday, December 10