San José State University
Computer Science Department
CS160, Software Engineering, Sections 80/81, Fall, 2023

Course and Contact Information

Instructor:	H. Chris Tseng
Office Location:	DH239
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Email:	chris.tseng@sjsu.edu
Office Hours:	Mon/Wed: 8:45 - 9:15 PM Tue/Thurs.: 5:45 – 6 PM Sat: 4:30 – 5:00 PM by 1-1 appointment or email
Class Days/Time:	Tue/Thurs.: sec 80: 3:30 – 4:15 PM/sec 81: 4:30 – 5:45 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 the 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. The 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 the 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.
(No makeup exam will be provided unless you have written proof of an urgent situation).

c. Quizzes:

There will be quizzes almost every other week.

(No makeup quiz will be provided unless you have written proof of an urgent situation).

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 weekly.

Midterm: Tuesday, Oct. 10, 2023

Final: (Per SJSU Fall final schedule)

Section 80: 2:45-5:00 PM, Wednesday, December 13, 2023

Section 81: 2:45-5:00 PM, Friday, December 8, 2023

Grading Information (Required)

Grades:

HW assignments and team project milestones	20 %
Quizzes	20%
Midterm	20 %
Final Team Project	25 %
Final Exam	15%

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. Students cannot attend different sections at will as there will be project activities with assigned members.

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 the Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/. Make sure to review these policies and resources.

CS160, Software Engineering, Sections 80/81, Fall, 2023 Course Schedule

Online Zoom link: https://sjsu.zoom.us/j/87821522502 *(Need to login to your SJSU account to gain access to Zoom. All students must turn on the video to participate)*

The schedule is subject to change at the discretion of the instructor

Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	8/22/2023	Introduction to Software Engineering (reading: instructor slides and online material)
1	8/24/2023	Software Process and Process Models (reading: instructor slides and online material); Quiz on Intro to SWE
2	8/29/2023	Software Process and Process Models (reading: instructor slides and online material) HW#1 due
2	8/31/2023	Agile Development (reading: instructor slides and online material); Quiz on software process and models
3	9/5/2023	Agile Development (reading: instructor slides and online material); HW#2 due
3	9/7/2023	Understanding Requirements (reading: instructor slides and online material); Quiz on Agile development
4	9/12/2023	Understanding Requirements (reading: instructor slides and online material)
4	9/14/2023	Requirements Modeling: (reading: instructor slides and online material); HW#3 due
5	9/19/2023	Requirements Modeling: (reading: instructor slides and online material)
5	9/21/2023	Software Project Management(reading: instructor slides and online material): Quiz on Requirement Engineering
6	9/26/2023	Software Project Management(reading: instructor slides and online material)

6	9/28/2023	Use cases and use case diagrams: (reading: instructor slides and online material); HW#3 due
7	10/3/2023	Use cases and use case diagrams: (reading: instructor slides and online material); Quiz on Project Management
7	10/5/2023	Web Engineering review (HTML and CSS)
8	10/10/2023	**Midterm**
8	10/12/2023	Web Engineering review (HTML and CSS); Term Project introduction
9	10/17/2023	Term project requirement engineering (Milestone 1)
9	10/19/2023	Software Design and Architecture (reading: instructor slides and online material); Quiz on Web Engineering
10	10/24/2023	Software Design and Architecture (reading: instructor slides and online material)
10	10/26/2023	UML and Object Design (reading: instructor slides and online material)
11	10/31/2023	UML and Object Design (reading: instructor slides and online material); Quiz on Web Engineering
11	11/2/2023	Milestone 1 presentation
12	11/7/2023	Version Control (reading: instructor slides and online material)
12	11/9/2023	Version Control (reading: instructor slides and online material); Quiz on Version control
13	11/14/2023	Term Project Design (Milestone 2)
13	11/16/2023	Software Testing;
14	11/21/2023	Milestone 2 presentation
14	11/23/2023	*Thanksgiving Holiday(No class)*
15	11/28/2023	Software Testing; Quiz on software testing
15	11/30/2023	Term Project Implementation (Milestone 3)
16	12/5/2023	Milestone 3 (final milestone) presentation
Final Exam	Section 80: 2:45-5:00 PM, Wednesday, December 13, 2023 Section 81: 2:45-5:00 PM, Friday, December 8, 2023	(Per SJSU Fall final schedule)