California State University SAN MARCOS
COLLEGE OF SCIENCE TECHNOLOGY ENGINEERING & MATHEMATICS
DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS
California State University San Marcos 333 S. Twin Oaks Valley Road San Marcos, CA 92096-0001

Spring 2023

SE 491: Senior Project II

Section 001:	M W	2:30 - 3:45 PM	VEP 5105
	M W	4:00 - 5:15 PM	VEP 5107

Instructor

Dr. Simon Fan
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Office hours

M W 1:30 pm-2:30 pm (Office)
Friday 9:30 am-10:30 am (ZOOM)

Office Hour ZOOM: https://csusm.zoom.us/j/97495539024
ZOOM ID: 974 9553 9024
With Waiting room enabled: Be patient if another student is in.

Course Description

Continuation of capstone project from SE 490. Collaborates on team-based projects with realistic constraints from clients. Continues exercising the incremental software development process, periodically conducting project and code reviews and frequently collecting feedback from stakeholders. Provides hands-on experience in managing projects, making team decisions, documenting design artifacts, applying modern construction technologies, as well as presenting and demonstrating project progress to stakeholders. Six hours of activity.

Prerequisite(s): SE 490: Senior Project I

Course Learning Objectives

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

	Course Learning Objectives (CLOs)	Relevant Topics Covered
O1	Collaborate on a team-based project to meet project milestones and user needs	Agile project management, trade-off analysis, risk analysis, and impact analysis
O2	Communicate effectively as part of a software team	Interacting with stakeholders, make team decisions, technical presentation, reflection on software process
O3	Apply software engineering principles in eliciting and refining requirements	requirements elicitation, requirements management and Traceability, Dealing with uncertainty and ambiguity
O4	Apply a software process model to develop a software product of good quality	Agile approach, architectural trade-offs, Architectures for network, mobile, and embedded systems, Database design, Test-driven development

O5	Commit to ethical and professional responsibilities throughout the software process	ACM/IEEE software engineering code of ethics, Social, legal, cultural and professional issues and concerns
O6	Use appropriate CASE tools to support software development activities.	Modeling tools, version control systems, project management tools, open source tools
O7	Learn domain knowledge, business process, and techniques that are necessary to meet user needs	Technology Stacks, Platforms, regulations, Intellectual Property, Non-Disclosure Agreement

Program Learning Outcomes (With Maps to CLOs)

	Program Learning Outcomes (PLOs)	CLOs
SE 2	to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	O3 O4
SE 3	to communicate effectively with a range of audiences	O2
SE 4	to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	O5
SE 5	to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	O1
SE 7	to acquire and apply new knowledge as needed, using appropriate learning strategies	O6 O7

Textbook(s) and Supplemental Material

Required

Clean Code, Robert C. Martin, Pearson, 2008, ISBN-13: 978-0132350884

CapStone Web Site:

Cougar Courses is NOT used for our Capstone Projects. Another Web application called CapStone (https://MyCapstone.CSUSM.edu) is in use instead. In particular, CapStone is used for

(1) Distribution of course materials (schedules, slides, video links)
(2) Submission of assigned works
(3) Project management (clock-in/clock-out)
(4) CASE tools for design artifacts
(5) Communication with faculty advisors and industry mentors.
(6) Help desk: Questions and Answers

Grading Criteria:

Grading is based on your weekly progress, project reports and your performance in project presentation. The following table gives the different assessed components of the course (based on 100 points):

2023 Spring Semester Grading Rubrics

Category	Variable	Percentage	InputFrom	Type	Points Earned		Final Points
System	G0	20%	Advisor	Team	0	× T	
Report Version 3.0	G1	10%	Advisor	Team	0	× T	
Report Version 3.5	G2	10%	Advisor	Team	0	× T	
Report Version 4.0	G3	10%	Advisor	Team	0	× T	
Report Version 5.0	G4	15%	Advisor	Team	0	× T	
Presentation Phase 3	G5	10%	(Co-)Advisor	Individual	0		0.00
Presentation Phase 4	G6	15%	(Co-)Advisor	Individual	0		0.00
Capstone Forum	G7	10%	Instructor	Individual	0		0
Attendency Penalty (negative means bonus)	G8	Up to 10 points	Instructor	Individual	0		0
My Final Grade	0 (missing teamwork parts)			What if	T =		0

Final Grade Calculation G=

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(G0 × 20%× T) + (G1 × 10%× T) + (G2 × 10%× T) + (G3 × 10%× T) + (G4 × 15%× T) +
(G5 × 10%) + (G6 × 15%) + (G7 × 10%)  - G8
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Final Letter Grade

F	D-	D	D+	C-	C	C+	B-	B	B+	A-	A
[0, 52)	[52, 56)	[56, 60)	[60, 64)	[64, 68)	[68, 72)	[72, 76)	[76, 80)	[80, 84)	[84, 88)	[88, 92)	[92, 100)

Course Policies

- **Effort**: Each student should budget about **10 hours per week** (excluding class time) to work on your project. For a team of 3 students, the team would have $3 \times 10 \times 15 \times 2 = 900$ hours (assuming 15 weeks per semester) to work on your two-semester project.

- **Assignments**: If not otherwise stated, all works should be submitted through the CapStone system (**https://MyCapstone.CSUSM.edu**). For project reports, each team should use the cover page generated by the CapStone system as the first page of your project reports.

- **In-class activities:** Be prepared to discuss and ask questions about the covered topics. You should *actively participate* in the class activities and discussions. You can demonstrate your intellectual engagement in a number of ways including speaking up in class, bringing interesting and relevant material into the class, and discussing the material being covered with peers.

- **Attendance Policy:** Punctual attendance is mandatory for all class periods. All excused absences must be supported by written documentation, such as a doctor's receipt, athletics travel notice, etc. **Each student will be allowed 2 unexcused absences – for each absence after that, there will be a deduction of 2% points from your final class grade.**

- **Makeup Policy:** Only if the makeup is arranged before the scheduled quiz/exam period, and only in the case of an excused emergency.

Academic Integrity

Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle for all academic activity, and everyone is expected to act in accordance with this principle.

- Students are expected to finish the assignments independently. Discussions among students are encouraged. However, copying other's code or solutions without acknowledgement is strictly prohibited. If you make use of code from outside resources, you must provide clear reference to the sources. If not clearly stated, any copying of any part of another's work will result in zero points for all parties involved (copier and copied).
- Cheating and plagiarism will be treated very seriously. Incidents of Academic Dishonesty will be reported to the Dean of Students. Sanctions at the University level may include suspension or expulsion from the University

Disability Accommodation

Students with disabilities who require academic accommodations must be approved for services by providing appropriate and recent documentation to the Office of Disabled Student Services (DSS). This office is located in Craven Hall 4300 and can be contacted by phone at (760) 750-4905, TDD (760) 750-4909 or by email at: dss@csusm.edu.