California State University, Sacramento (CSUS)
College of Engineering and Computer Science

CSC 131 - Software Engineering
Fall 2020

Instructor: Azizi Penn
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Office Hours:
Tuesday 3:15 – 3:45 pm:
https://csus.zoom.us/j/99467391908
Thursday 7:00 – 7:30 pm
https://csus.zoom.us/j/96982159810
Please let me know via email or during class, in advance (5 minutes at least) if you will attend my office hour.

Catalog Course Description:
Principles of Software Engineering covering the software development life cycle, including software requirements engineering (elicitation, modeling, analysis and specification), software design, software implementation and testing. Main topics include various software development process models, method and techniques for specifying requirements, architectural and detailed design specification, prototyping, top-down and bottom-up software implementation and testing. Topics also include project management, project documentation and the development of communication skills through written documentation and oral presentation.

Prerequisite: CSC 130 (can be taken concurrently)

Textbook:
There is no required textbook for this class.
Handouts, lecture notes, papers and other reading materials will be assigned.

Required Materials:
Laptop/Desktop
You will need a laptop or Desktop for quizzes and lab work.

If you do not have a laptop, you may check one out from IRT, with instructor request. Please let me know if you wish to checkout a laptop from IRT.

Smart Phone:
We will use Kahoot for "pop" quizzes. You can use your laptop. You can also use your phone's browser or download the Kahoot app.

Course Goals:
By the end of this course, students should be able to:

1. Software Engineering General
    a. Define software engineering and its goal.

   b. Understand the impact of software engineering, its processes and desired outcome. Identify breakdowns in SE.
   c. Understand and apply basic modeling principles such as behavioral and structure modeling.

2. Teamwork & Communication
   a. Demonstrate effective communication skills, both oral and written as part of a software development team.
3. Software Development Life Cycle (SDLC)
   a. Understand the phases of a software development life cycle and different life-cycle models including the activities, products, and human roles in each phase.
   b. Understand agile development frameworks and agile techniques.
   c. Explain and discuss fundamental software project management issues.
   d. Analyze a desired software product outcome and apply SDLC processes to create a solution.
4. Requirements
   a. Develop effective functional and non-functional requirements that strive to be complete, concise, correct, consistent, testable, and unambiguous.
   b. Effectively analyze requirements and prioritize accordingly.
5. Design
   a. Outline software design processes and understand basic design principles.
   b. Explain and demonstrate the application of human centered design to a software development project.
   c. Understand the essential elements of software structure and architecture in terms of styles, patterns, and frameworks.
6. Implementation
   a. Apply the fundamentals of software construction and key technologies to construct a software product.
   b. Demonstrate, by means of example and artifacts, adherence to an agile software development lifecycle.
   c. Effectively manage code changes via a source code repository.
7. Testing
   a. Understand testing terminology.
   b. Execute specific software tests with well-defined objectives and targets.
8. Deployment
   a. Create and demonstrate a working software product.
9. Maintenance
   a. Understand DevOps process

Class Participation:

Format:

Online Classes for Fall 2020 will be held synchronously, “in real time”, live for the duration of the semester.

To succeed in the software/computer science profession requires self-motivation and lifelong learning. You, as upper-division students, are expected to be active participants in your own learning.

Active participation includes:

- Being prepared to offer your comments regarding material presented.
- Responding, verbally or via chat, with thoughtful answers to questions asked in class.
- Participating in classroom activities with a willing and optimistic attitude.
- Completing assigned readings before class and being prepared to discuss them.
- Seeking external sources for additional skills that will enhance your success in class.

Methods of Evaluation:

Assignment and project specifics will be discussed and posted on Canvas.

Assignments	**Weight**
In-class assignments, activities & "pop" quizzes	10%
Homework assignments	15%
Project assignments	15%
Graded Quizzes- (3 - 5)	40%
Final	20%

There will be no make-up for any missed quizzes or the final.

In-class assignments, activities and "pop" quizzes (Kahoot) will be given full credit if completed and turned in during the class period, ZERO credit if not completed or turned in during the class period.

Late Assignments

Homework and project assignments that are submitted late will receive 80% credit if less than 24 hours late, 60% credit if less than 1 week (168 hours) late. Assignments turned in more than 168 hours past the due date/time will be given ZERO credit.

All homework assignments must be submitted through Canvas unless otherwise instructed. Homework submissions in ways other than Canvas, such as by email, will receive ZERO credit. In-class assignments/activities will be submitted using several platforms, primarily Google document, Padlet and Kahoot.

Quizzes cannot be made up. Quizzes will be administered on Canvas. There will a two- or three-day period during which you will be given one chance to complete the quiz. One-page of student prepared notes is allowed and encouraged for each quiz. Quizzes are timed to minimize use of other outside resources during the exam period.

All members of the group are expected to participate in the scheduled group project presentation. Failure of any group member to attend the presentation will detrimentally affect that individual's grade for the project.

I will use the CSUS guidelines below for graded homework and project assignments.

Definition of Grade Symbols

Grade	Definition
A	Exemplary achievement of the course objectives. In addition to being clearly and significantly above the requirements, work exhibited is of an independent, creative, contributory nature.
B	Superior achievement of the course objectives. The performance is clearly and significantly above the satisfactory fulfillment of course requirements.
C	Satisfactory achievement of the course objectives. The student is now prepared for advanced work or study. Note: The letter grade "C" does not imply satisfactory achievement at the graduate level.
D	Unsatisfactory achievement of course objectives, yet achievement of a sufficient proportion of the objectives so that it is not necessary to repeat the course unless required to do so by the academic department.
F	Unsatisfactory achievement of course objectives to an extent that the student must repeat the course to receive credit.

Final Grades are earned via the scale below. I do not assign minus grades. I do not round up. Therefore, I encourage students to complete extra credit work as it could make the difference in receiving a higher grade.

A	90% and above
B+	87 - 89.999%
B	80-86.999%
C+	77-79.999%
C	70-76.999%
D+	67-69.999%
D	60-66.999%
F	59.999% and below

Academic Honesty:

All students are expected to maintain high standards of academic integrity. All work you submit should be your own. All suspected cases of academic dishonesty will be reported and pursed. Please review the CSUS Academic Honesty Policy (https://www.csus.edu/umanual/student/stu-0100.htm)

Attendance policy:

All students are expected to attend all classes. In-class exercises and "pop" quizzes will be un-announced and cannot be made up if a student is absent. Unexcused absences from quizzes, final exam, or project presentations will result in ZERO credit for the assignment.

Excused Absences:

Students who are unable to attend class due to Sac State sponsored activities (such as sports, band, academic competition, field trips, etc.) or personal religious observances may request reasonable accommodations. Please notify me during the **first 2 weeks of the semester** regarding potential absences so that we can determine alternative methods for you to complete the required work.

Housing & Food Security:
If you experience difficulties with financial, housing or food security, please contact Basic Needs Division of Student Affairs (https://www.csus.edu/basicneeds/) for assistance.

Parents & Families:
If you are a student with dependents, please feel free to let me know that you may have special needs, preferably in advance of any particular crisis. Also, please reach out to Parents & Families Division of Student Affairs (https://www.csus.edu/student-affairs/centers-programs/parents-families/) for all resources available on campus.

Disability Services:
If you have a documented disability and need accommodations in this course, please register with the Office of Services to Students with Disabilities (https://www.csus.edu/sswd/). They will verify your need for services and make recommendations for the course. I will be happy to discuss any accommodations I can provide to assist your learning with you.

Changes to this Document:
I reserve the right to change any information on this document or course materials at any time. A change to the grading policy is unlikely.