



## Syllabus for CSE120-01: Software Engineering

Spring 2019

Instructor: Chi Yan Leung

<b>Designation:</b>	CSE 120 Software Engineering
<b>Catalog Description:</b>	Building large software systems is hard, but experience shows that building large software systems that actually work is even harder. And trying to do all this before your competitors has proved fatal to many software projects. This course covers techniques for dealing with the complexity of software systems. We will focus on the technology of software engineering for the individual and small team, rather than business or management issues.
<b>Text Books and Other Required Materials:</b>	<p>There is one textbook for this class along with selected readings.</p> <p>"Code Complete" by Steve McConnell, ISBN: 9780735619678</p> <p>Following books are recommended if you want to read more about the topics covered in class.</p> <p>"Software Engineering. A Practitioner's Approach (6th ed.)" by Roger Pressman</p> <p>"UML Distilled: A Brief Guide to the Standard Object Modeling Language (2nd ed.)" by Martin Fowler</p> <p>"Extreme Software Engineering. A Hands-On Approach" by Daniel H. Steinberg, Daniel W. Palmer</p> <p>"Design Patterns: Elements of Reusable Object-Oriented Software" by Erich Gamma, Richard Helm, Ralph Johnson, John Vlissides</p>
<b>Course Objectives/ Student Learning Outcomes:</b>	<p>This course is unique in the CSE curriculum in that students are involved in a large-team unique project. Students will see what it takes to collaborate with people with different skills and approach to software development. Students will select an industry-sponsored project and almost all aspects of development (programming language, libraries, build environment, etc.)</p> <p>By the end of the course, students will be able to:</p> <ol style="list-style-type: none"><li>1) Gather information about a contemporary problem, and consolidate them into requirements, to produce a technical specification.</li><li>2) design a computing solution to a challenging contemporary problem, within realistic constraints and utilizing appropriate standards.</li><li>3) use project management and teamwork skills to deliver a solution within time constraints.</li><li>4) deliver a professional presentation appropriate to a broad audience.</li><li>5) demonstrate effective written technical communication skills through design exams.</li></ol>

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**Program Learning Outcomes:**

**Prerequisites by Topic:** CSE 100, Senior standing

**Course Policies:** Attendance of labs are mandatory, as this may be the only time you can meet with your group members and discuss any issues that may arise.

There will be 4 project presentations during lectures throughout the semester. Each group member is required to participate in order to receive portion of the individual scores of the Class Project. Presentation dates will be announced when the assignments are released.

**Academic Dishonesty Statement:**

- a. Each student in this course is expected to abide by the University of California, Merced's Academic Honesty Policy. Any work submitted by a student in this course for academic credit will be the student's own work.
- b. You are encouraged to study together and to discuss information and concepts covered in lecture and the sections with other students. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of an e mail, an e mail attachment file, a diskette, or a hard copy. Should copying occur, both the student who copied work from another student and the student who gave material to be copied will both automatically receive a zero for the assignment. Penalty for violation of this Policy can also be extended to include failure of the course and University disciplinary action.
- c. During examinations, you must do your own work. Talking or discussion is not permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examinations will result in failure of the exam, and may lead to failure of the course and University disciplinary action.

**Disability Statement:**

Accommodations for Students with Disabilities: The University of California Merced is committed to ensuring equal academic opportunities and inclusion for students with disabilities based on the principles of independent living, accessible universal design and diversity. I am available to discuss appropriate academic accommodations that may be required for student with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances. Students are encouraged to register with Disability Services Center to verify their eligibility for appropriate accommodations.

**Topics:**

Software Development Process  
Requirements and Specification  
Unified Modeling Language  
Design Patterns  
Code Process  
Version Control  
Testing  
Debugging  
Concurrency  
Code Tuning  
Security  
User Interface  
Quality Management

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<b>Class/laboratory Schedule:</b>	Lecture: M/W 12:00pm -1:15pm, SSB 130; Labs: See schedule for time and locations
<b>Midterm/Final Exam Schedule:</b>	This schedule is subject to change, but is tentatively set as follows: Midterm : Week of March 18 Final Exam : May 17, 8:00am-12:00pm
<b>Course Calendar:</b>	
<b>Professional Component:</b>	
<b>Assessment/Grading Policy:</b>	The relative weight of the components of your grade will be approximately: Reading assignment (10%) Lab assignments (15%) Midterm exam (15%) Weekly meeting minutes (10%) Project (30% as a group, 20% as individuals).
<b>Coordinator:</b>	Chi Yan (Daniel) Leung
<b>Contact Information:</b>	Email: cleung3@ucmerced.edu I will try to answer your emails within 48 hours. However, I may not answer email after 5:00 p.m. or on weekends. Please plan accordingly.
<b>Office Hours:</b>	T/R: 10:00am-12:00pm (AOA 126) W: 9:00 - 10:30am (AOA 126) or by appointment