COMP 350: Introduction to Software Engineering

Fall 2017
Location: Sierra Hall 1222

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Office Hours (held in SIE 1432): T 1-2 PM and W 4-5 PM	Office Hours: T 10 AM -12 PM

Course Description:

Concepts and techniques for systems engineering, requirements analysis, design, implementation and testing of large scale computer systems. Principles of software engineering for production of reliable, maintainable and portable software products. Emphasis on functional analysis and structured design techniques. Topics include unit, integration and systems testing, configuration management, and software quality assurance practices. Participation in group activities involving analysis, design and implementation of a software intensive system. Introduction to Computer Aided Software Engineering (CASE).

Student Learning Outcomes

By the successful completion of this course, you will be able to:

- Create effective documentation for computer code.
- Organize and express ideas clearly and convincingly in oral and written forms.
- Construct project plans.
- Identify project life cycle components.
- Create a design document.
- Perform a requirements analysis.
- Create project review presentations.

Learning Environment:

Each week will be a blend of lecture and lab. The first meeting of the day is a lecture and will cover new material. The second meeting period of the day will be devoted to laboratory assignments designed to exercise the material covered in lecture. It is expected that students review the appropriate material prior to class.

Grading:

The course grade will be determined by a weighted average of quizzes, labs, exams, and project.

Quizzes – 10%

- It is expected that you will prepare for each lecture by reviewing the reading assignments. Questions will be drawn from reading assignments and lecture material.

Labs – 20%

- Lab assignments are due one week after assignment. Students are expected attend each lab session, and if necessary to finish lab assignments outside class time. Missing a lab session will result in a 20% reduction in the grade for that lab.

Exams – 30%

- Midterm - 15%, Date: October 11, 2017 11:00 AM to 11:50 AM
- Final – 15%, Date: December 13, 2017 1:00 PM to 3:00 PM

Project – 40%

- In an effort to emulate software development in a professional environment the largest percentage of your grade will come from a semester long group project. Details of the project will be provided in the first lab session.

Instructor Communication Policy:

I will make every effort to respond to your email questions within 24 hours Monday through Friday. If for some reason, you have not received a reply after 24 hours, please feel free to email me again or call my office.

Recommended Materials:

Textbook Recommended

Title: Software Engineering
Author: Ian Sommerville
Publisher: Pearson
ISBN-13: 978-0133943030

Title: Test-Driven Java Development (Available on Proquest)
Author: Viktor Farcic; Alex Garcia
Publisher: Packt Publishing
ISBN-13: 978-0133943030

Title: Clean Code
Author: Robert C. Martin
Publisher: Prentice Hall
ISBN-13: 978-0132350884

Course Policies:

Academic Dishonesty

- By enrolling at CSU Channel Islands, students are responsible for upholding the University's policies and the Student Conduct Code. Academic integrity and scholarship are values of the institution that ensure respect for the academic reputation of the University, students, faculty, and staff. Cheating, plagiarism, unauthorized collaboration with another student, knowingly furnishing false information to the University, buying, selling or stealing any material for an examination, or substituting for another person may be considered violations of the Student Conduct Code (located athttp://www.csuci.edu/campuslife/student-conduct/academic-dishonesty.htm). Please ask about my expectations regarding academic dishonesty in this course if they are unclear.

Disability Statement

- If you are a student with a disability requesting reasonable accommodations in this course, please visit Disability Accommodations and Support Services (DASS) located on the second floor of Arroyo Hall, or call 805-437-3331. All requests for reasonable accommodations require registration with DASS in advance of need:https://www.csuci.edu/dass/students/apply-for-services.htm. Faculty, students and DASS will work together regarding classroom accommodations. You are encouraged to discuss approved accommodations with your faculty.

Course Policies Subject to Change

- It is the student's responsibility to check CILearn for corrections or updates to the syllabus. Any changes will be posted in CILearn.

Tentative Schedule:

Date	Lecture (11:00 AM - 11:50 AM)	Lab (1:30 PM - 2:45 PM)
8/28/17	Discuss Syllabus Chapter 1: Introduction to Software Engineering	Survey and Discuss Project
8/30.2107	Introduction to Software Development Processes	Lab 1: Categorize Project Processes
9/4/17	**Labor Day Holiday**	**Labor Day Holiday**
9/6/17	Introduction to Agile and Scrum	Lab 2: Organizing Product Backlogs Project Idea Presentation
9/11/17	Introduction to Requirements (SRS and Use Cases and Vision / Scope)	Lab 3: Writing Use Cases
9/13/17	Functional Requirements	Introduce Project
9/18/17	Non-Functional Requirements	Lab 4: Writing Requirements (SRS)
9/20/17	Introduction to Design (Functional Design Document)	Project Use Cases
9/25/17	Introduction to Mockups	Lab 5: Designing Mockups
9/27/17	Introduction to UML	Project SRS
10/2/17	Introduction to Test Driven Development	Lab 6: Creating UML Diagrams
10/4/17	JUnit Tests	Project Mockups
10/9/17	Integration Testing	Lab 7: Writing Unit Tests (Junit)
10/11/17	**Midterm**	Project UMLs

10/16/17	Clean Code: Names and Comments	Lab 8: Refactoring Names and Comments
10/18/17	Clean Code: Refactoring Functions	Project Functional Design Document
10/23/17	Clean Code: Refactoring Classes	Lab 9: Refactoring Functions and Classes
10/25/17	Clean Code: Emergent Design	Nick's Birthday Party and Project Testing Strategy
10/30/17	Introduction to Design Patterns	Transition to Scrum
11/1/17	Structural Patterns	Project: Start of Sprint 1
11/6/17	Behavioral Patterns	Project: Sprint 1
11/8/17	Introduction to Project Management	Project: Start of Sprint 2
11/13/17	Prototypes	Project: Sprint 2
11/15/17	Customer Feedback	Project: Start of Sprint 3
11/20/17	Changing Requirements	Project: Sprint 3
11/22/17	Software Maintenance	Project: Start of Sprint 4
11/27/17	Product Life Cycle	Project: Sprint 4
11/29/17	Introduction to Lean Startup	Project: Start of Sprint 5
12/4/17	Introduction to Lean Startup	Project: Final Product

12/6/17	Presentations	Presentations
12/13/17		**Final Exam** **1:00 PM to 3:00 PM**