COMP 350: Introduction to Software Engineering

Fall 2022: Section 01
Lecture: 11:00 – 11:50 MW
Lab: 1:30 – 2:45 MW
Location: Sierra Hall 1222

Instructor: Jason Isaacs
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Office Hours: T 4-6 PM

Course Description:

Hours: Two hours lecture and three hours lab per week.
Prerequisite: COMP 232 and COMP 262.
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:

The learning environment for this class with be one of active learning. In this class format traditional lectures are replaced by out of class reading assignments and in class discussions and activities. The first meeting of the day will consist of discussions and activities designed to reinforce learning of new material covered in reading assignments. The second meeting period of the day will be devoted to the group term project. It is expected that students attend all class sessions and review the appropriate material prior to class.

Grading:

The course grade will be determined by a weighted average of the following assignment categories.

Kahoot Activities – 10%
- At the beginning of each lecture, we will do a short Kahoot Review Activity. It is expected that you have completed the short reading assignment before coming to lecture. The Kahoot Review Activity allows us to identify areas to focus our discussion.

Exams –50%
- All exams will be in-person and must be taken on a university lab computer.
- All exams will be closed book and closed notes.
- No make-up exams will be allowed. Medical exceptions are possible with proper documentation.
- Exam 1 – Date: October 10, 2022, 11:00 AM to 11:50 AM
- Exam 2 – Date: November 30, 2022, 11:00 AM to 11:50 AM

Project – 40%
- To emulate software development in a professional environment a large percentage of your grade will come from a semester long group project.
- Final Project Demo – Date: November 30, 2022 1:30 PM to 2:45 PM

Instructor Communication Policy:

I will make every effort to respond to your email questions within 24 hours Monday through Friday. However, I will not respond to emails outside of the hours 8 AM to 5 PM. If for some reason you have not received a reply after 24 hours, please feel free to email me again. I will not respond to your email after 5 pm on Friday until Monday morning.

Recommended Materials:

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

It is also **recommended** that you seek out learning resources related to your project. Depending on which language you are using you may want to consider one of the following.

Textbook Recommended
Title: Android Programming: The Big Nerd Ranch Guide
Author: Bill Phillips; Chris Stewart; Kristin Marsicano
Publisher: Big Nerd Ranch Guides
ISBN-13: 978-0-13-470606-1

Title: [Swift Programming: The Big Nerd Ranch Guide (2nd Edition)](#)
Author: Matthew Mathias; John Gallagher
Publisher: Big Nerd Ranch Guides
ISBN-13: 978-0134610610

Title: [Unity in Action: Multiplatform game development in C#](#)
Author: John Hocking
Publisher: Manning Publications
ISBN-13: 978-1617294969

Course Policies:

Attendance
- Course attendance is mandatory. Two unexcused absences will result in a full-letter grade deduction, with a further ½ grade reduction for every additional absence.
- For absences with extenuating circumstances related to a medical condition or disability for which you may require reasonable accommodation, please refer to the Disability Statement.

Group Work
- The group project grade will be split into two categories, individual contribution and group contribution. By default, each student will receive the same grade for the group contribution portion of the project. However, instructors reserve the right to modify individual grades based on unacceptable contribution.
- Instructors reserve the right to modify team membership if necessary.
- More details about the project grading will be made available in the first lab session.

Late Work
Assignments can be submitted late but will incur a 10% grade deduction for each day they are late. For example, if the assignment is due at noon on Thursday, if you turn it in by noon on Friday you will incur a 10% penalty, by noon on Saturday a 20% penalty, and so on.

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 at http://www.csuci.edu/campuslife/student-conduct/academic-dishonesty.htm). **If a student is found responsible for committing an act of academic dishonesty in this course, the student may receive academic penalties including a failing grade on an assignment or in the course, and a disciplinary referral will be made and submitted to the Dean of Students office.** For additional information, please see the faculty [Academic Senate Policy on Academic](#)

[Dishonesty](#), also in the CI Catalog. 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 needed services. You can [apply for DASS services here](#). 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:

Week 1 | Introduction to Software Engineering | Dates: 8/22 -8/24

Week 2 | User Stories, Estimation, and Planning | Dates: 8/29 - 8/31

Week 3 | Holiday and Requirement | Dates: 9/5 - 9/7

Week 4 | Sprint 0 and Definition of Done and Code Review | Dates: 9/12 - 9/14

Week 5 | Source Control Management and Sprint Planning | Dates: 9/19- 9/21

Week 6 | Communicating Software Architecture and UX Design | Dates: 9/26 - 9/28

Week 7 | Software Demo and Sprint Retrospectives and Exam Review | Dates: 10/3 - 10/5

Week 8 | Exam 1 and Clean Code: Names | Dates: 10/10 - 10/12

Week 9 | Clean Code: Functions and Comments | Dates: 10/17 - 10/19

Week 10 | Clean Code: Objects and Data Structures and Error Handling | Dates: 10/24 - 10/26

Week 11 | Clean Code: Testing and Test Driven Development | Dates: 10/31 - 11/2

Week 12 | Clean Code: Classes and Emergence | Dates: 11/7 - 11/9

Week 13 | Design Patterns | Dates: 11/14 - 11/16

Week 14 | Ethics and Lean Startups | Dates: 11/21 - 11/23

Week 15 | Exam Review and Exam 2 | Dates 11/28 - 11/30