

# COMP 350: Introduction to Software Engineering

Fall 2020: Section 01

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## 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:

This class will be conducted completely asynchronously online. The course is divided into 15 weekly modules. Each module begins on Wednesday and ends on Tuesday evening at 11:59 pm.

Professor Isaacs will hold two hours of open Zoom sessions per week to discuss any questions you may have, and by appointment if the pre-arranged times don't work for you. Professor Stern is available for Zoom meetings by appointment.

## Grading:

The course grade will be determined by a weighted average of theory related activities, exams, and project.

### **Theory Related Activities – 50%**

- Quizzes – 15%, Questions will be drawn from previous reading material.
- Discussions – 15%, A mixture of oral and written discussions.
- Module Deep Dives – 20%, In depth exploration of a subset of course topics.

### **Project – 50%**

- To emulate software development in a professional environment the largest percentage of your grade will come from a semester long group project.

## Instructor Communication Policy:

Please email either professor with your concerns and questions, we will respond within 24 hours Monday-Friday. We may not be available to respond on a weekend, but please leave a message and we will respond on Monday. If you would like to set up a ZOOM meeting please contact one of us with three days and times you can meet.

## Textbook:

It is **required** that you obtain the textbook Clean Code by Robert Martin. There will be several modules which will include reading assignments from this book, and quiz questions will be drawn from the reading assignment.

### **Textbook Required**

Title: [Clean Code](#)

Author: Robert C. Martin

Publisher: Prentice Hall

ISBN-13: 978-0132350884

We also **recommend** seeking 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:

### 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 for the group portion of the project based on unacceptable contribution.
- Instructors reserve the right to modify team membership if necessary.

### Online Etiquette

All learners in this course are expected to abide by our [community ground rules](#).

### 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](#)).

**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.

### Accommodations for Students with Disabilities

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. Faculty, students and DASS will work together regarding classroom accommodations. You are encouraged to discuss approved accommodations with your faculty.

- [Apply for DASS Services](#).

### ***Title IX and Inclusion***

- Title IX & Inclusion manages the University's equal opportunity compliance, including the areas of affirmative action and Title IX. Title IX & Inclusion also oversees the campus' response to the University's nondiscrimination policies. CSU Channel Islands prohibits discrimination and harassment of any kind on the basis of a protected status (i.e., age, disability, gender, genetic information, gender identity, gender expression, marital status, medical condition, nationality, race or ethnicity, religion or religious creed, sexual orientation, and Veteran or Military Status). This prohibition on harassment includes sexual harassment, as well as sexual misconduct, dating and domestic violence, and stalking. For more information regarding CSU Channel Islands' commitment to diversity and inclusion or to report a potential violation, please contact Title IX & Inclusion at 805.437.2077 or visit <https://www.csuci.edu/titleix/>.

## **Tentative Schedule:**

### **Weekly Modules**

**Each module will begin on Wednesday and end on following Tuesday at 11:59pm.**

Module 1 | Introduction to Software Engineering | Dates: 8/26/20 - 9/1/20

Module 2 | User Stories, Estimation, and Planning | Dates: 9/2/20 - 9/8/20

Module 3 | Sprint 0 | Dates: 9/9/20 - 9/15/20

Module 4 | Source Control Management | Dates: 9/16/20 - 9/22/20

Module 5 | Wireframes, Mockups, and Prototypes | Dates: 9/23/20 - 9/29/20

Module 6 | Communicating Software Architecture | Dates: 9/30/20 - 10/6/20

Module 7 | Sprint Planning | Dates: 10/7/20 - 10/13/20

Module 8 | Definition of Done and Code Review | Dates: 10/14/20 - 10/20/20

Module 9 | Software Demo and Sprint Retrospectives | Dates: 10/21/20 - 10/27/20

Module 10 | Clean Code: Names, Functions, and Comments | Dates: 10/28/20 - 11/3/20

Module 11 | Clean Code: Objects and Data Structures and Error Handling | Dates: 11/4/20 - 11/10/20

Module 12 | Clean Code: Testing and Test-Driven Development | Dates: 11/11/20 - 11/17/20

Module 13 | Clean Code: Classes and Emergence | Dates: 11/18/20 - 11/24/20

Module 14 | Design Patterns | Dates: 11/25/20 - 12/1/20

Module 15 | Ethics | Dates 12/2/20 - 12/8/20