



Channel Islands  
CALIFORNIA STATE UNIVERSITY

# COMP 490: Topics in Computer Science

Advanced Software Engineering

Spring 2018: Section 01

Location: Sierra Hall 1432

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## Course Description:

The course will provide an accelerated coverage of software engineering in the context of the NASA Swarmathon Competition. The course will focus on software development in a large team and on a large existing code base. Students will be introduced to professional software development and project management tools.

## 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.
- Actively participate in SCRUM meetings.
- Proficiently utilize software version control tools such as Git.
- Employ professional project management software tools such as Jura.
- Actively participate in code reviews.

## Learning Environment:

The beginning of each class meeting will be devoted to a SCRUM meeting where each student in the class will participate as team members. The rest of the class time will be devoted to project planning, code reviews, and software testing. It is expected that students will be present at each class meeting and spend approximately 10 hours per week working on assignments.

## Grading:

The course grade will be determined by a weighted average of a group project, class participation, outreach activity, and a final term paper.

### Sprints – 80%

- The course grade will be primarily determined by contributions to the term project. The project will be broken down into 7 Sprints. Each Sprint will take approximately two weeks. For each Sprint each student will be assigned one or more Tasks which they will be responsible for completing during the Sprint. Additionally, each student is expected to document their activity during the Sprint (template will be provided), participate in SCRUM meetings, participate in code reviews, and participate in outdoor physical testing.

### Outreach Activity – 10%

- We will be mentoring a team from Pacifica High School to participate in the NASA Swarmathon High School Competition. It is expected that each member of the CSUCI team will attend at least one visit to Pacifica High to help teach the students there about swarm robotics.

### Final Term Paper – 10%

- The culminating assignment for the class will be a writing assignment. The purpose of this paper is for you to spend time reflecting on your time working on this project. What did you learn? How did you grow as a person and as a professional? Did you accomplish as much as you expected that you would? Which parts of the project got you excited to come to class? Which part of the project do you hope to never have to work on again?

## Instructor Communication Policy:

We 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 again or call our office.

## Recommended Materials:

### Textbooks Recommended

Title: [A Gentle Introduction To ROS](#)

Author: Jason M. O'Kane

Publisher: CreateSpace Independent Publishing Platform

ISBN: 978-14-92143-23-9

## 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 at <http://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 (4:30 PM - 5:45 PM)
1/23/18	Discuss Syllabus Introduction To Jura
1/24/18	Sprint 1
1/30/18	Sprint 1
2/1/18	Sprint 1
2/6/18	Sprint 2
2/8/18	Sprint 2
2/13/18	Sprint 2
2/15/18	Sprint 2
2/20/18	Sprint 3
2/22/18	Sprint 3
2/27/18	Sprint 3
3/1/18	Sprint 3
3/6/18	Sprint 4
3/8/18	Sprint 4

3/13/18	Sprint 4
3/15/18	Sprint 4
3/20/18	<b>Spring Break</b>
3/22/18	<b>Spring Break</b>
3/27/18	Sprint 5
3/29/18	Sprint 5
4/3/18	Sprint 5
4/5/18	Sprint 5
4/10/18	Sprint 6
4/12/18	Sprint 6
4/17/18	<b>Field Trip to NASA</b>
4/19/18	<b>Field Trip to NASA</b>
4/24/18	Sprint 6
4/26/18	Sprint 6
5/1/18	Sprint 7

5/3/18	Sprint 7
5/8/18	Sprint 7
5/10/18	Sprint 7
5/19/18	<b>Final Exam</b> <b>10:30 AM to 12:30 PM</b>