

# Course Syllabus

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## CS490

In this course, students work in teams under the guidance of a sponsor on the specification, design, implementation, testing (including user testing), and documentation of a significant software project.

A printable PDF version of this Syllabus is here: [[Syllabus PDF](#)  ].

A course schedule is here: [[Schedule](#)  ].

### General Information

**Class Times:** Tues-Thurs 12:45 am - 2:30 pm, LS G12

**Instructor:** Professor Jeff Johnson, [jajohnson9@usfca.edu](mailto:jajohnson9@usfca.edu) ([mailto:jajohnson@usfca.edu](mailto:jajohnson9@usfca.edu))

**Office:** Harney, Room 510i

**Office Hours:** Mon & Wed 1:45–3:15 pm; Tue & Thu 10:30-11:00, or by appointment

If you are unable to attend the above office hours, please contact the instructor directly to schedule an appointment. There will be no teacher assistant for this course. Please direct all questions to the instructor.

**Course materials:** No books are required for this class.

### Course Prerequisites

Students must have passed CS212 with a grade of C or higher and have senior standing.

### Learning Outcomes

At the end of this course, students should be able to:

- Specify, design, implement, test, and document a significant software project.
- Effectively and efficiently solve problems that arise during the development of a software project with a hard deadline.
- Provide detailed technical documentation of the software to users of that software and to developers wishing to extend the functionality of that software.
- Communicate effectively, productively, and professionally with the project sponsor, instructor, team members, and potential users.
- Design digital products and services using a design process that focuses on the needs of potential users.

- Clearly verbally communicate technical concepts in numerous settings, including in small groups, poster presentations, and presentations to the larger USF community.

Assessment of these outcomes will be done by a combination of periodic status reviews, draft specification, presentations, a poster, and a final project report.

The project report should be carefully written (and proof-read for errors) to ensure that it clearly communicates how the project was done, what was accomplished, and what the team learned from the experience.

## Weekly Schedule

For the latest schedule, check the [Schedule](#) link on the course's Canvas site.

## Last Day to Drop Course or Withdraw

**Census Date:** The last day students may drop or withdraw from the course without paying for it or having a record of it on their transcript is Friday, February 10.

**Final Drop Deadline:** The last day students may drop or withdraw from the course is Monday, April 10.

(see <https://www.usfca.edu/academics/resources/academic-calendar>  
(<https://www.usfca.edu/academics/resources/academic-calendar>))

## Grade Breakdown

The grade breakdown for this course is as follows:

- 02% Class Attendance and Project & Team Member Survey
- 05% Draft Specification
- 10% Midterm Presentation
- 10% Status Reviews
- 20% Final Status Review
- 20% Final Presentation, including demonstration of project software
- 20% Final Report
- 10% Project Poster
- 03% Poster Presentation

*Note: This class has no final exam. The Final Presentation, Final Report, Poster, and Final Status Review together take the place of a final exam.*

## Class Attendance and Status Reviews

Students are required to attend lectures, pitches by potential sponsors, status reviews, midterm and final presentations, and possibly a poster presentation session. Please consult the weekly schedule for details (see [Schedule](#) link on the course's Canvas site).

Status reviews will occur periodically throughout the semester. During the status review, each team will meet the instructor for 20-30 minutes and discuss their progress on the project. All team members are required to attend their team's status reviews. Teams should come to status reviews prepared: bring a laptop with the code & demo and show the statistics (time spent by each team member, lines of code produced, milestones reached). Teams should bring up any issues to the instructor that may affect the completion of the project during status reviews.

## Draft Specification and Final Report

Early in the semester the teams must submit a Draft Specification document that includes the following sections:

- **Introduction:** the purpose of the project and the problem it is supposed to solve.
- **Requirements:** the technical requirements and constraints and the user requirements, including how you determined them.
- **Design:** the initial design, including conceptual design and user-interface sketches.
- **Timeline:** the proposed research/design/development schedule.

The final report is due on May 18<sup>th</sup>. It should include the same sections as the draft specification, as well as the following additional sections:

- **Testing:** how you tested your project – for software correctness and usability by intended users.
- **Results:** what you achieved, what you learned from the project, and possible next steps.

## Presentations

Learning how to present your work is an important skill we will work on in this class. Students are required to present intermediate results in class during the midterm presentation, their final results during the final presentation, and a poster during the poster session.

## Final Status Review

20% of the grade is assigned for the final status review. During the final status review the team meets with the instructor for a longer period of time, demonstrates the software, shows their final results and the code they have written.

The majority of work for this course will be completed in teams of 2 to 4 students. How well a student performs in his or her team will be taken into consideration for the final status review grade. Team participation is determined through a peer assessment, in which each student comments on their own contribution and those of other team members. *Please note that different team members can receive different grades for the class depending on their contribution to the project.*

Project sponsors will also be given an opportunity to assess the team that worked on their project. This assessment goes beyond the scope of the project deliverables, and may include a team's ability to

communicate progress and solve problems, as well as the team's overall responsiveness, productivity, and cohesiveness. The team is expected to meet with their project sponsor and show him or her the final results **before** meeting with the instructor for the final status review.

## Letter Grades

Letter grades will be assigned according to the following cutoffs:

- A  $\geq$  94%
- A-  $\geq$  90%
- B+  $\geq$  87%
- B  $\geq$  84%
- B-  $\geq$  80%
- C+  $\geq$  77%
- C  $\geq$  74%
- C-  $\geq$  70%
- D+  $\geq$  67%
- D  $\geq$  64%
- D-  $\geq$  60%
- F < 60%

For example, a student will receive a C letter grade if the grade is greater than or equal to 70% and less than 77%. Please note this scale is subject to change.

See <http://www.usfca.edu/catalog/regulations/student/#497495> for more information about letter grades and how they are translated into GPA.

## Late Policy

*All deadlines are firm—no late submissions will be accepted.* Exceptions to this policy are made only in the case of documented medical or family emergency of more than one team-member. Extensions must be arranged *prior* to the deadline except in cases of extreme emergency (such as an emergency room visit).

## Academic Honesty

All students are expected to adhere to the University of San Francisco's Honor Code. Go to <https://myusf.usfca.edu/academic-integrity/honor-code> (<https://myusf.usfca.edu/academic-integrity/honor-code>) for details. The first violation of the Honor Code will result in an automatic 0 on the offending assignment, and repeat violations will result in an automatic F for the course.

Simply put, do not cheat and do not plagiarize. This includes copying (without attribution) code from the web, copying code from other students, or having anyone other than yourself write your code. For group assignments, code is expected to be shared amongst members within the group, but should *not* be shared outside of the group.









## Student Support











**The Learning and Writing Center (LWC)** provides writing assistance to students in their academic pursuits. Services are free to students and include individual and group tutoring appointments and consultations to develop specific study strategies and approaches. Please visit <http://www.usfca.edu/lwc> (<http://www.usfca.edu/lwc>) for more information.

**The Center for Academic and Student Achievement (CASA)** provides students academic and personal support to promote holistic student development. Please visit <https://myusf.usfca.edu/student-life/casa> (<https://myusf.usfca.edu/student-life/casa>) for more information.

**The Student Disability Services (SDS)** provides support for students with disabilities. If you are a student with a disability or disabling condition, or if you think you may have a disability, please contact SDS within the first week of class to speak with a disability specialist. If you are determined eligible for reasonable accommodations, your disability specialist will send your accommodation letter to the instructor detailing your needs for the course. For more information, please visit <https://www.usfca.edu/student-disability-services> (<https://www.usfca.edu/student-disability-services>) or call (415) 422-2613.

## ASSIGNMENTS SUMMARY:

| Date             | Details                                                                                                                                                                                                                                                                                   |                |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Fri Dec 16, 2016 |  <a href="#">Poster Presentation</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633944">https://usfca.instructure.com/courses/1566062/assignments/6633944</a> )          | due by 12:45pm |
| Tue Jan 24, 2017 |  <a href="#">CS Background Form</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6638065">https://usfca.instructure.com/courses/1566062/assignments/6638065</a> )           | due by 12:45pm |
| Tue Jan 31, 2017 |  <a href="#">Project and Team Member Form</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633951">https://usfca.instructure.com/courses/1566062/assignments/6633951</a> ) | due by 11:59pm |
| Tue Feb 21, 2017 |  <a href="#">Status Review 1</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633953">https://usfca.instructure.com/courses/1566062/assignments/6633953</a> )              | due by 12:45pm |
|                  |  <a href="#">Draft Specification</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633945">https://usfca.instructure.com/courses/1566062/assignments/6633945</a> )          | due by 11:59pm |
| Tue Feb 28, 2017 |  <a href="#">Status Review 2</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633954">https://usfca.instructure.com/courses/1566062/assignments/6633954</a> )              | due by 12:04pm |
| Tue Mar 7, 2017  |  <a href="#">Status Review 3</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633955">https://usfca.instructure.com/courses/1566062/assignments/6633955</a> )              | due by 12:45pm |
| Tue Mar 21, 2017 |  <a href="#">Status Review 4</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633956">https://usfca.instructure.com/courses/1566062/assignments/6633956</a> )              | due by 12:45pm |

| Date             | Details                                                                                                                                                                                                                                                                                                                                          |                |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Tue Mar 28, 2017 |  <a href="https://usfca.instructure.com/courses/1566062/assignments/6633949">Mid-term presentation</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633949">https://usfca.instructure.com/courses/1566062/assignments/6633949</a> ) | due by 12:45pm |
| Tue Apr 4, 2017  |  <a href="https://usfca.instructure.com/courses/1566062/assignments/6633957">Status Review 5</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633957">https://usfca.instructure.com/courses/1566062/assignments/6633957</a> )       | due by 12:45pm |
| Tue Apr 11, 2017 |  <a href="https://usfca.instructure.com/courses/1566062/assignments/6633958">Status Review 6</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633958">https://usfca.instructure.com/courses/1566062/assignments/6633958</a> )       | due by 12:45pm |
| Tue Apr 18, 2017 |  <a href="https://usfca.instructure.com/courses/1566062/assignments/6633959">Status Review 7</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633959">https://usfca.instructure.com/courses/1566062/assignments/6633959</a> )       | due by 12:45pm |
| Tue Apr 25, 2017 |  <a href="https://usfca.instructure.com/courses/1566062/assignments/6633960">Status Review 8</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633960">https://usfca.instructure.com/courses/1566062/assignments/6633960</a> )       | due by 12:45pm |
| Tue May 2, 2017  |  <a href="https://usfca.instructure.com/courses/1566062/assignments/6633948">Final Status Review</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633948">https://usfca.instructure.com/courses/1566062/assignments/6633948</a> )   | due by 12:45pm |
| Mon May 15, 2017 |  <a href="https://usfca.instructure.com/courses/1566062/assignments/6633950">Poster</a> ( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633950">https://usfca.instructure.com/courses/1566062/assignments/6633950</a> )                   | due by 11:59pm |
| Tue May 16, 2017 |  <a href="https://usfca.instructure.com/courses/1566062/assignments/6633946">Final Presentation</a><br>( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633946">https://usfca.instructure.com/courses/1566062/assignments/6633946</a> )    | due by 11:59pm |
| Thu May 18, 2017 |  <a href="https://usfca.instructure.com/courses/1566062/assignments/6633947">Final Report</a> ( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633947">https://usfca.instructure.com/courses/1566062/assignments/6633947</a> )           | due by 11:59pm |
|                  |  <a href="https://usfca.instructure.com/courses/1566062/assignments/6633952">Roll Call Attendance</a> ( <a href="https://usfca.instructure.com/courses/1566062/assignments/6633952">https://usfca.instructure.com/courses/1566062/assignments/6633952</a> )   |                |