# ISE 495bx Senior Project Design

**Spring 2021 — Friday - 9:00am - 12:00 pm**

**Location:** Online

## Syllabus addendum

| | |
|---|---|
| **Coach: Theodore Mayeshiba**<br>**Contact Info:**<br>**email: mayeshib@usc.edu**<br>https://usc.zoom.us/j/3929749748 | **Coach: Paul Lu**<br>**Contact Info:**<br>**email: paullu@usc.edu** |
| **Coach: Prof. James Moore**<br>**Office:** GER203<br>**Contact Info:**<br>**email:** jmoore@usc.edu<br>**USC:** (213) 740-0595<br>**Cell:** (213) 663-8146 | **Blackboard (Bb) Help:**<br>(213) 740-5555 option 2<br>**email:** blackboard@usc.edu<br><br>Office Hours: F, 11:00a<br>and by appointment |

## Catalogue Course Description

Preparation and development of the senior project proposal. Open only to industrial and systems engineering majors.

## Prerequisites

- ISE 315 – Engineering Project Management
- ISE 435 – Discrete Systems Simulation
- ISE 495ax – Senior Design Project
- Either ISE 370 – Human Factors in Work Design or ISE 470 – Human / Computer Interface Design

## Schedule

| Week | Friday Date | Activity | Deliverable |
|---|---|---|---|
| 1 | 1/15 | Start of Semester B | |
| 2 | 1/22 | *Begin weekly meeting with Coach during office hours* | Coach - Project update – confirm resumption + changes |
| 3 | 1/29 | Client Meeting / Presentation | Client - Project Update (1) |
| 4 | 2/5 | | |
| 5 | 2/12 | CDR Readiness Review | **Coach: CDR Readiness review**<br>Client: - Project Update (2) |
| 6 | 2/19 | CDR **Dress rehearsal** | |
| 7 | Week of 2/26 | Client Presentation / Report | |
| 8 | 3/5 | Summarize CDR agreed changes and submit Implementation Outline (Part of Update) | **Review changes with Coach**<br>Client - Project Update (3) |
| 9 | 3/12 | WELLNESS DAY | |
| 10 | 3/19 | | Client - Project Update (4) |
| 11 | 3/26 | | |
| 12 | 4/2 | | |
| 13 | 4/9 | | **Coach - Implementation Readiness Review** |
| 14 | 4/16 | Implementation **Dress Rehearsal** | |
| 15 | Week of 4/23 | Client - Final Presentation | |
| 16 | 4/30 | WELLNESS DAY | |
| Finals Week | 5/12 – 6PM | Last day for work product submission | Final Written Report due 5/7 - 9:00A |

- It is the expectation that all teams will meet with their Coaches **weekly** during office hours.
- Dress Rehearsal requires presentation be recorded and at least two (2) coaches be present for assessment

# CDR Outline (Items 1-5 from PDR)

1. Mission Objective

2. Architectural/Process Design Development.

3. Requirements

4. Concept of Operations

5. Validate and Verify

6. Interfaces and Interface Control Document ICD – List the bounds of the study

7. Mission Environment

8. Technical Resource Budget Tracking

9. Risk Management – (e.g., identify risks to safety, performance, schedule and program)

10. Configuration Management and Documentation.  Establish baseline configuration with documents.  Summarize how the configuration will be managed.

# Implementation Outline - Include a summary of proposed deliverables

Project Management – Show:

- project management structure
- schedule of milestones and reviews
- estimated projected costs
- tasks
- plans

# Final Report

1. Items 1-10 above from CDR (final)
2. Project Management – Milestones obtained, missed, if appropriate - 5W+H to continue
3. Conclusions & Recommendations
4. References
5. Appendix

## Grading Breakdown

| Course Component | Weight |
|---|---|
| Progress Update Reports emailed to client & coaches<br><br>(4 submissions at 2% each) | 8% |
| Critical Design Review<br><br>• Readiness Review (Coach) (5%)<br>• Client Presentation (10%)<br>• Report (5%) | 20% |
| Implementation / Final<br><br>• Readiness Review (Coach) (5%)<br>• Client Presentation (10%)<br>• Report (15%) | 30% |
| Quality of peer Evaluations you provide | 2% |
| Sponsor Evaluation | 20% |
| Module 7-12 Quiz | 5% |
| Instructors' Evaluation<br><br>• Interim feedback from the sponsor<br>• Individual contributions to each progress report<br>• Quality of Interaction with other team members | 15% |
| Total | 100% |