

CSC - Special Research Problem

This describes the general steps to a special problem project. A specific problem description should be attached. Students interested in a special problems course should review this and agree to the project outline and criteria by signing at the bottom.

Student should realize that Special Problems assignments are usually implemented in a lab environment, but are different from many regular lab courses. The special problems class will not usually have an existing solution, and will require extra effort to find the necessary resources to complete the project. Students are expected to have the initiative to pursue solutions without step-by-step guidance.

Also, special problems classes within CSC are often done in conjunction with lab equipment that is used for research projects, and is not dedicated to student use. Students must be willing to cooperate and coordinate schedules to avoid interfering with other projects. Students will not use CSC resources for any purpose other than accomplishing this project. No tools, equipment, books, documentation, or software is to be removed from the facilities without written permission from a full-time CSC employee. As with lab courses, it is generally expected that it will take about 3 hours per week per credit hour. Therefore, for a 3 credit special problems class, you should spend 9 hours per week working on the project.

Often, students may be assigned to work on a project that a CSC graduate student or Research Engineer has outlined. In this case students will need to coordinate with that individual as well as with Dr Copeland on determining the course outline, schedule, and goals. The graduate student or Research Engineer may grade some of the project.

Students will submit a brief email report by 5pm each Friday detailing

- The work accomplished that week
- The expected things to be addressed next week
- Issues that have arisen during the week
- Issues that have been resolved

The email reports will count for 10% of the final grade. Email after 5pm Friday will not receive credit. In lieu of a weekly email, students may attend the weekly CSC meeting and give an oral report.

General Outline:

This outlines the general steps and schedule for one quarter projects.

Phase 1: Design – 20%, due by 5pm Friday on the 4th week of classes

(Note that the first week of classes is usually not a full week)

For this portion of the project, the student shall complete a design document detailing the steps to be accomplished. This document should be a complete description of the problem, and the solution that will be tested. This document should include diagrams, needed equipment, a project schedule, and a description of the expected outcome. This will usually require significant research in reading vendors web pages, reviewing systems, and planning. A fellow classmate should be able to pick up the document and clearly understand what you intend to accomplish and how you are proceeding. This report will be graded.

Phase II: Implementation – 20%, due by 5pm Friday on the 9th week of classes

During this phase the student will implement the design as outlined in the above. A demonstration of the implementation, as compared to the design document, will be graded.

Phase III: testing – 20%, due by the 5pm Wednesday of the last week of classes

During this phase the student will test the design for completeness, error rates, failures, etc, as appropriate. A final testing document will be prepared describing the test methodology, test setup, test limitations, and the test results.

Final Report: - 30%, due by 5pm on the first day of finals

By the Monday (first day) of Finals, the student shall submit a final report. The final report should:

- Include copies of the Phase I design document and Phase III testing document as appendixes
- State whether the goals of the project were met, and what difficulties were encountered.
- Additional accomplishments beyond the original problem statement
- State any variations from the design document in how the project was accomplished, and explain why
- Outline potential applications and used of the project
- Summarize what was learned in working on this project

Grading

Email: 10%

Phase I: 20%

Phase II: 20%

Phase III: 20%

Final Report: 30%

Total Credit Hours: _____

Project Name _____

Student Signature _____ Date: _____

For information on registration for academic credit, look up the following courses:

Undergraduate: ECE4901 / 2 / 3

Graduate: ECE8901 / 2 / 3