**CMPS 490A Senior Project**

**Catalog Description**

**CMPS 490A Senior Project (3)**

After consultation with the faculty supervisor and investigation of relevant literature, the student(s) shall prepare a substantial project with significance in the designated area. The timeline, teamwork responsibilities, milestones, and presentation(s) will be scheduled. Prerequisites: Upper-division standing.

**Prerequisites by Topic**

The students should have done almost all intermediate level courses and some advanced courses, and have ability to work on substantial project.

**Units and Contact Time**

3 quarter units. The class times will be used for discussions and presentations.

**Type**

Required for CS

**Required Textbook**

**None**

**Coordinator(s)**

Huaqing Wang

**Student Learning Outcomes**

CMPS 490A is the first part of 2-quarter class, and will complete the problem analysis and project design part emphasizing problem analysis and applying the knowledge of computer science areas to design solution. In this 2-quarater class, student will do the followings:

* Students will work as teams.
* Look for a problem, analyze the problem, apply the knowledge of computer science areas and propose a solution to the problem.
* Analyze the possible solution and discuss the solutions with class.
* Plan the project such as timeline, individual responsibility, and milestones of the project.
* Presentations of the finalized the problems to solve, and the proposed solutions to the class.
* Implementations of projects. Teams work on their projects, discuss faculty with their projects.
* Class meets during the project implementation period and teams present their implementations difficulties/problems, solutions, share their experiences, and listen for suggestions from others.
* At the end of project implementation, each team will present the finished project to the class and a final written report .

During the project’s problem description, design and implementation, the students will

* Orally present their projects to the class at least 3 times. Students will see different projects and different solutions others used.
* Write down problem description, design, and implementation processes, especially the problems/difficulties and possible ways of solutions during whole process. A final written report will be given to the instructor.
* The instructor may invite professionals to give seminars on specific topics on software designs and implementations.

**ABET Outcome Coverage**

**3b. An ability to analyze a problem, and identify and deﬁne the computing requirements and**

**speciﬁcations appropriate to its solution.**

**3c. An ability to design, implement and evaluate a computer-based system, process, component,**

**or program to meet desired needs.**

**3d. An ability to function eﬀectively on teams to accomplish a common goal.**

**3h. Recognition of the need for and an ability to engage in continuing professional development.**

**3k. An ability to apply design and development principles in the construction of software systems**

**of varying complexity.**

**Lecture Topics and Rough Schedule**

See **Student Learning Outcomes**.

**Prepared By**

Huaqing Wang on [date]

**Approval**

Approved by CEE/CS Department on [date]   
Effective [term]