CoSc 490 **Senior Capstone** Spring, 2017
Syllabus

Instructor
Stan Warford Office: RAC 112
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Office hours
Monday, 11:00 – 11:50 Tuesday, 9:00 – 9:50
Thursday 1:00 – 1:50 Friday, 11:00 – 11:50
And by appointment

Course Web page
The course Web page will be used to post the assignments and late-breaking announcements. You are responsible for checking it regularly.
http://www.cslab.pepperdine.edu/warford/cosc490/

Catalog course description
CoSc 490. Senior Capstone (4)

A large software team project based on a topic that may vary from year to year and that builds on one or more of the prerequisites. Possible topics include but are not limited to database, computer graphics, artificial intelligence, compiler construction, distributed computing. Oral presentation required. Prerequisites: COSC 475, COSC 450, MATH 330, and MATH 460.

Objective
The primary objective of this course is for you to experience the process of developing a large software application in a team-based environment. As in all academic disciplines, computer science has a body of literature. Before embarking on your software development task, you must assess the state of the art in the software development community. You will research the primary literature to determine those methodologies that are applicable to your software development task. Areas to investigate include source control versioning, collaborative software development methodologies, quality assurance testing, and application programming interfaces.

Learning outcomes
The program learning outcomes (PLO) for the computer science/mathematics major are the ability to:
1. Implement algorithms
2. Prove computational theorems
3. Analyze computational systems
4. Communicate technical results

The course student learning outcomes (SLO) for CoSc 490, Senior Capstone are the ability to:
Implement a large software project. (PLO 1)
Present project results in written and oral form. (PLO 4)

Required texts
The two required texts describe the software development process. Brooks is a classic work that is still relevant despite its age. Lippert et al. is a description of what has evolved to become standard practice in software development.

The Mythical Man-Month, Fredrick P. Brooks, Jr., Addison-Wesley.

eXtreme Programming in Action: Practical Experiences from Real World Projects, Martin Lippert, Stefan Roock, Henning Wolf, John Wiley and Sons, Ltd.

Writing requirement
This course is one that is designated a writing course for the major. At the end of the semester two written documents are required. Assignment details are on the course web page.

Final grade
10% Class participation
30% Presentations
30% Written reports
30% Contributions to the project

Course evaluations
Course evaluations are required online near the end of the semester and count as a homework assignment. After you complete the evaluation, save your proof of completion for this course as a PDF document and email it to me.

Attendance policy
Attendance is important and may affect your final grade. You are responsible for making sure that your attendance has been recorded. Please provide written documentation for excused absences. There will be no makeup exams. If you miss an exam due to illness or an unexpected major emergency, the final exam score will be substituted for your missed exam score. Doctor's note required for all missed exams.

Disability notice
Any student with a documented disability (physical, learning, or psychological) needing academic accommodations should contact the Disability Services Office (Main Campus, Tyler Campus Center 264, x6500) as early in the semester as possible. All discussions will remain confidential. Please visit http://www.pepperdine.edu/disabilityservices/ for additional information.

Academic integrity
See http://seaver.pepperdine.edu/academicintegrity/ for the academic integrity standards at Seaver College.

Mission support
See http://www.pepperdine.edu/about/mission-vision/ for the mission statement of the university and http://seaver.pepperdine.edu/about/mission/ for the mission statement of Seaver College. This course supports these mission statements by investigating the truth of its discipline and by preparing students for lives of service to others in the field of computer science.