

COURSE DESCRIPTION

Department and Course Number: CSCI 487.

Course Title: Senior Project

Current Catalog Description: Each student conducts an in-depth study of a current problem in computer science or related area. Upon completion, the student presents the results in both oral and written forms.

Total Credits: 3 hours

Coordinator: Dawn Wilkins, Associate Professor of Computer and Information Science

Textbook: None

Other required materials: None

References: <http://www.cs.olemiss.edu/~dwilkins/CSCI487/>

Course Goals: This is the capstone course for the undergraduate program in Computer and Information Science, typically taken in the student's final semester. Each student must bring the knowledge, understanding, and skills he or she has attained in the undergraduate program to bear on a nontrivial problem in computing science and technology. Each student is expected to solve the problem and present his or her solution in a professional manner.

Prerequisites by Topic:

1. Programming (CSCI 111, 112, 211)
2. Computer Organization and Assembly Language (CSCI 223)
3. Models of Computation (CSCI 311)
4. Software Design and Development (CSCI 387)

Preference is for students to take the course in their final semester.

Major Topics Covered in the Course: Because this is a capstone design course, there are no formal lectures. There are two main uses for class time. First, the process (software design steps) are discussed and students bring up problems they are facing (for example, technical issues or working with their sponsor). The second major use of class time is for student presentations. During the course of the semester, each student is required to give an oral design presentation, two oral progress reports, and a final oral presentation which is open to the public. The written milestones are described in "Solution Design" below.

Laboratory projects: Varies with student project.

Estimate of ABET/CAC Category Content:

| | CORE | ADVANCED | | CORE | ADVANCED |
|-----------------|-------|------------|--|-------|----------|
| Data Structures | _____ | _____ | Computer Organization and Architecture | _____ | _____ |
| Algorithms | _____ | _____ | Concepts of Programming Languages | _____ | _____ |
| Software Design | _____ | 3 _____ | | _____ | _____ |

Oral and Written Communications:

Every student is required to submit at least 4 written reports (not including exams, tests, quizzes, or commented programs) of typically 2-3 pages and to make 4 oral presentations of typically 15-20 minutes duration. This includes only material that is graded for grammar, spelling, style, and so forth, as well as for technical content, completeness, and accuracy.

Social and Ethical Issues:

Each student is required to produce a license agreement that is acceptable to their sponsor. Generally one class period is devoted to intellectual property issues, and what should be included in a license agreement. BSCS students have had this material in the Social Responsibility and Ethics class, but BA students generally have not.

Theoretical Content (Foundations):

None

Problem Analysis:

Each student has a different project, so there are no required or standard problems.

Solution Design:

1. Prospectus (written report)
2. Bibliography
3. Design Specification (written report)
4. License Agreement
5. Users' Manual (written report)
6. Product Implementation and Documentation
7. Final Report (written report)