Objective

In this course students will learn to build high-quality, reliable, and extensible software systems that are too large for a single programmer. Emphasis is placed upon good programming practices (object-oriented design and clean, well-documented code), teamwork skills (planning, communicating, and interacting), and bringing the project to completion (testing and verification). A semester-long project complements the theory with practice.

Text


Instructor

Prof. Stan Birchfield
207A Riggs Hall
656-5912
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Office Hours: Tuesday 2-3pm, Thursday 2-3pm, or by appointment

Grading Assistant

Saurabh Zadgaonkar
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Topics

- requirements and specification
- software system design
- project planning
- project organization and communication
- C++ and object-oriented concepts
- UML
- software testing
- software tools
• user interface design
• software life cycle
• software methodologies

Grading

Grades will be assigned as follows:

• 60% Projects
  o 20% documents
    ▪ 2% project web page
    ▪ 2% problem statement
    ▪ 2% Requirements Analysis Document (RAD)
    ▪ 2% Software Project Management Plan (SPMP)
    ▪ 2% System Design Document (SDD)
    ▪ 10% final report
  o 20% code quality and procedure
    ▪ 8% Four bi-weekly milestone presentations
    ▪ 5% clean, well-documented source code
    ▪ 5% design and code reviews
    ▪ 2% process and teamwork
  o 20% final demo of working, stable software system
• 40% Quizzes, covering both class and reading material

Website

Course website:  http://www.ces.clemson.edu/~stb/ece417
Additional material may be placed on MyCLE site

Academic integrity

When legally allowed, students are encouraged to incorporate existing libraries and source code, and materials written by others, into their projects in order to achieve the desired functionality. All such borrowing, however, should be clearly documented and communicated to the instructor. To present someone else’s work as your own is dishonest, unethical, and a violation of God’s moral law.

“As members of the Clemson University community, we have inherited Thomas Green Clemson’s vision of this institution as a ‘high seminary of learning.’ Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.” – from the university’s web page on academic integrity: http://www.cs.clemson.edu/html/academics/academic_integrity_2002.html