# Object-Oriented Software Engineering

EE 467 -- Fall 2002

## Syllabus

Instructor: Prof. Nancy Reed, 439 Holmes Hall, nreed@spectra.eng.hawaii.edu
(or nreed@wiliki), (808) 956-9735.
Lectures: MWF 11:30-12:20, POST 214 (Kim Lab).
Office hours: MWF 1:00-2:00, Holmes 439.
Credits: 3.
Textbook: "C++ How to Program" by H. M. Deitel and P. J. Deitel, Prentice Hall,
Upper Saddle River, NJ, 2001. ISBN: 0-13-089571-7.

Quick Links: <u>Messages</u>, <u>Important Dates</u>, <u>Course Description (pdf)</u>, <u>Exam</u> <u>Information</u>, <u>Lecture Material</u>, <u>Assignments and Projects</u>, <u>Groups</u>, <u>Grading</u> <u>Criteria</u>, <u>Help</u>, <u>Code Examples</u>.

#### **Overview**

This course is designed for upper-division electrical engineering students. The course covers the development of large software projects using software engineering and object-oriented programming techniques. During the term, the students will complete several individual programming exercises, team projects, and examinations. The C++ programming language is used.

#### Prerequisites

Prerequisites include a grade of C or better (or equivalent knowledge) in EE160 (introductory programming in C), EE260 (basic circuit design), and EE367 (data structures in C). A minimum of 1 year of programming experience in C or C++ is expected.

#### Messages

Read messages frequently here .

#### Course Requirements

There are three components to your grade in this course, individual programming assignments (25%), team projects (35%), and exams (40%). See the grading criteria and assignment descriptions for more details.

**Lectures.** You are expected to attend lectures and you are responsible for all information given out in lecture. Available lecture material will be posted <u>here.</u>

**Programming assignments and team projects.** Programming assignments will be done **individually**. See the <u>assignments</u> page for more details. Programming projects will be done in **groups** of approximately 4 students. For more information see the <u>assignments</u> page.

**Exams.** There will be two in-class midterm exams and one final exam. There may be pop quizzes during lectures.

### **Topics Covered**

- Review of control structures, functions, and primitive data types
- Object-oriented programming: Object-oriented design; encapsulation and information hiding; separation of behavior and implementation; classes, subclasses, and inheritance; polymorphism; class hierarchies
- Fundamental computing algorithms: simple searching and sorting algorithms (linear and binary search, selection and insertion sort)
- Software engineering and evolution: Software maintenance; characteristics of maintainable software; reengineering; legacy systems; software reuse

The expanded course description can be found <u>here (pdf)</u>.

Enjoy!

Back to the top

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