

Computer Science 120 – Fall 2006

Computer Science I

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Course Description

This course covers the fundamental concepts of Computer Science. These include problem solving, algorithms, programming in a high-level language, debugging, characteristics and organization of computers, data structures, and program style.

Goals

- Design programs using problem-solving techniques
- Implement programs in C++ using variables, conditions, loops, functions, arrays and structured data
- Read source code, critique its form, and describe its functionality
- Find and correct compile-time and run-time errors

Reading

The text for this course, *Problem Solving with C++*, 6th edition by Walter Savitch, gives a very readable discussion of all the programming topics. It gives numerous examples and will be your primary reference during the semester. You will be assigned regular readings from this book.

I will also distribute a collection of supplemental readings. These texts cover the problem solving topics we will consider as well as introduce interesting programming applications including graphics.

In classroom activities, I will assume that you have read the assigned text.

Team Work

Much of the work we do this semester will be completed in teams. Shortly after the add/drop period ends, I will form you into groups. Group work will include both in and out-of-class activities, laboratory activities, projects, and a portion of the tests (see below for details).

Graded Material

- **Laboratory exercises** – Group results from many of the in-class exercises will be used directly in the labs. In your group, you will work together at one or more computers to implement, debug, and test various programs.
- **Programming exercises** – Approximately once a week, you will be assigned small programs to write on your own. The purpose of these activities is to give you the opportunity to write “simple” examples of the programming feature we are currently studying. These programs will be graded solely on whether you submit a working program. Instead of returning the program with comments, I will provide a working solution. These assignments will not be accepted late.
- **Projects** – Larger programming assignments will be assigned approximately three times during the semester. These group projects emphasize all aspects of program development, including design, implementation, testing, and documentation. It is especially important that your group begin these projects as soon as they are assigned. You must talk to me for late work to be accepted.
- **Midterms** – Three tests will be given in class during the semester. We will discuss further details in class as the first test approaches.
- **Final exam** – The final exam will be given in class during the final exam period. We will discuss the format of this test toward the end of the semester.

Grade Determination

Labs	20%
Programming exercises	10%
Projects	30%
Tests	30%
Final	10%

All grades will be calculated on the standard scale using pluses and minuses.

If you have a disability that may affect your participation in this course, please contact me immediately to discuss academic accommodations.