

Dr. Dichter
2008
CS 101
Bridgeport

Fall

University of

Office: Technology Building
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Required Text:

Nell Dale, Chip Weems, Programming and Problem Solving with Java, Second Edition, Jones and Bartlett Publishers, 2008.

This course is an introduction to Computer Science. It will cover all major aspects of object-oriented programming concepts including classes, objects, properties, and methods. We will also introduce OO design techniques. Algorithm development and pseudo code will be introduced.

The language will be Java. There will be programming assignments to implement all programming concepts introduced. Students should expect to always be working on a programming assignment. All assignments must be submitted in order to pass the course. Any late assignments will result in reduced credit for the work – one letter grade per day late.

In addition to the programming assignments, there will be three tests, a midterm exam and a final exam. Each test will count 10 percent of the grade, the midterm and will count 25 percent of the grade and the final will count 30 percent of the grade. The programming assignments will count 10 percent of the final grade. Even though the programming assignments will count only 10% of the grade, most of the material on the tests and exams will depend on the time students spend programming. It is important to do the programming assignments on time, because the tests and exams will have questions covering the concepts practiced in the programs. There will also be a short paper and presentation on Computer Ethics. This will be count for 5 percent of the final grade.

The students are advised that the programs will usually take a considerable period of time. Therefore it is important that students get working on assigned programs as soon as possible. Be aware of the following Computer Science realities:

1. Programming will always take you more time than you thought
2. Your compiler will be less dependable toward the end of any assignment
3. The lab will be full with students and the printer will be out of paper when you need them the most
4. Your professor has heard all possible excuses why programs are not done

CS 101 - Topics Covered

- Introduction to Object-Oriented Programming and Problem Solving
- History of Computing and Hardware Basics
- The Elements of Java
- Classes and Methods
- Numeric Types
- Branching and Method Algorithm Design
- Loops and Files
- Additional Control Structures
- Object-Oriented Software Engineering
- Arrays
- Inheritance, Polymorphism, and Scope
- Array-Based Lists
- Data Structures and Collections
- Recursion
- Applets
- Ethical Considerations of Computing: ACM, IEEE codes of Ethics