

CSCI 121: Computer Science II

Syllabus – Spring 2008

Ben Coleman
coleman@cs.moravian.edu
214 PPHAC
Office Phone: 610-625-7781

Office Hours: MWRF 9:00 - 10:00
or by appointment
AIM: bjcoleman15

Course Description

This course is a continuation of Computer Science I with emphasis on data and procedural abstraction. The two major themes for the course are programming in the object-oriented paradigm and a detailed study of classic linear data structures.

Course Goals

Upon completion of this course, a successful student will be able to:

- implement complete programs in Java using appropriate object-oriented style.
- demonstrate the correctness of a class by implementing unit tests.
- select the appropriate linear data structure for a given task.
- design small to mid-sized software applications using OO techniques including polymorphism.

Required Text

In addition to the following required text, supplementary readings will be given periodically during the semester.

- *Java Foundations: Introduction to Program Design and Data Structures* by John Lewis, Peter J. DePasquale, and Joseph Chase

You should expect to spend about an hour before each class session working through the readings. This means reading the text for detail, studying the syntax for new language features, and working to learn vocabulary – not just skimming through the material before class.

Graded Material

- **Homework** – Homework problems will be assigned nearly every class and will vary from simple written problems from the book to full-scale programming assignments. For larger assignments you will be given more time to work, but you should expect some form of homework nearly for every class session.

- **Labs** – Each Thursday session will be held in the Computer Science Computer lab, PPHAC 114. During the lab, you will be given a series of activities to complete, individually or with a partner, depending on the lab. As our understanding of the course content grows, the complexity of labs will increase and labs will span multiple weeks. In addition to writing programs to solve the problems, you will collect data from the program and write-up answers to questions.
- **Tests** – Two tests will be given during the semester. Dates for these tests will be discussed in class, but will fall approximately one third and two thirds of the way through the semester.
- **Final** – The final will be cumulative and will be given in-class on the date assigned by the registrar. Any change to the final exam schedule must be approved by both me and the dean of students.

Grade Determination

- 40% – Homework
- 20% – Labs
- 25% – Tests
- 15% – Final

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

Responsibilities

Your attendance is expected at each class meeting. You are also responsible for the contents of reading assignments, handouts, class activities, and class email.

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

Academic Honesty

Except on tests, you are encouraged to discuss the material and work with other students in the course. Specifically, on homework and labs you may discuss any portion of the assignment with your fellow students. This policy does not allow you to copy another student's work verbatim – you must produce your own code or write-up of the material. Work together to learn the concepts, but keep in mind that you are ultimately responsible for the material on the tests.

Schedule

We will cover the material in the first fifteen chapters of the course text. Chapters 1 through 4 are essentially review and will be covered quickly. Chapters 5 through 7 consider language features we have seen but are substantially different from Python, and will require closer consideration. Chapters 8 through 15 cover the substantial material for the course, and each will be considered in detail.