Catalog Description

This course is a continuation of MAT 201; this is a second course in object-oriented programming using the Java programming language (standard edition). Topics will include a further study of classes and objects, inheritance, polymorphism, exceptions, file I/O, threads, and a continuation of the implementation of graphical user interfaces. This course will also provide an introduction to the Java Micro Edition through the use of Sun SPOTS (Small Programmable Object Technology) and the interaction between programs and other languages/applications such as (X)HTML, PHP and MySQL.

**Prerequisite:** MAT 201 Computer Science I or equivalent.

Evan’s Comments

This course is intended to be a further introduction to computer science predominantly through Java. After the gentle introduction in MAT 201 we will now get down to more interesting programming so that the programs actually accomplish things we could not otherwise do. Upon successful completion of this course you should be able to write, edit, debug and run some rather sophisticated Java programs and do some serious problem solving with Java. We will continue to discuss many abstract topics, and you will be expected to spend an even more significant amount of time programming out of class.

**Prerequisite:** The ability to write, edit, save, compile and run Java programs; a rudimentary knowledge of Java and personal computers; the ability to do elementary algebra and geometry

Course Goals

The goals of this course are to enable the students:

- To solve problems through computer programming.
- To see a bigger picture of how computer programming is used.
- To hone their skills at writing efficient code.
- To master the object oriented programming paradigm.
- To present completed programming projects to a peer group.
- To contribute to a group programming project.
- To constructively critique the work of peers.
- To gain experience using Java as a tool to program devices.
Course Information – MAT 202 Computer Science II

Required Materials:
Texts: Starting Out with Java: Early Objects (3rd Ed.) by Tony Gaddis
Technology: Access to the Internet, e-mail, shared drive space, portable storage.

Course Structure

• Course Overview

  I will assume that you have read the required material before class. We will begin with a quick review of the topics covered in MAT201 predominantly through an introduction to GUIs. We will then investigate other programming topics (as listed in the Catalog Description) in the form of individual and group programming projects. We will also consider how Java is used in specific devices (Sun SPOTs, Android devices) and implement code via a more advanced IDE (like Netbeans and/or Eclipse).

• Class

  Arrive on time, prepared and with appropriate materials or assignments ready. Class time will be spent in a variety of ways. Most classes will include a brief lecture, demonstration, or discussion. Infrequently the entire class will consist of a lecture. Periodically, I will meet individually with each student to review progress. We will also spend some time going over specific programs/projects. However, the bulk of class time will be spent with you working at the computer. While in class I expect you to stay on task and (even if you work on your own computer) everything you do on the computer during class should be course-related material. Finally, all I ask is that you treat everyone in the class with respect, and at times remember that I am the one in charge.

• Assessment

  Exercises/programs will be assigned regularly. Some designated programs will be turned in for a grade and others will be assigned for class presentation. Every two weeks each student will turn in a Progress Report delineating precisely what s/he has learned and accomplished as well as expressing short and long term goals. I will then meet with each student individually to discuss her/his progress.

Final Grades

Your final grade will be determined by a combination of your participation, programming and progress. I will provide you with a written evaluation after the 4th, 8th and 12th weeks of class (leading to your final evaluation after the 16th week of class).

A Few Important Dates

January 18 (M) Triad Day – MLK Day Celebration
January 21 (Th) Deadline for Semester 1/Term 1 add/drops (4:30pm)
March 13 – 21 Spring Break
March 26 (F) Deadline to Withdraw (non-punitive)
April 7 (W) Work Day (No Classes)
May 13 (Th) Last Day of Classes