

COURSE SYLLABUS
CS 147.01
Programming Algorithms and Data Structures
Dr. Tim McGuire
4 Credit Hours
Spring Semester 2008

Section 01 – AB1-206, 10:00a.m. – 10:50p.m., MWF; Also a required lab section

Office: AB1-212G

Office Hours: 9:00 – 10:00 a.m. MWF; 9:30 a.m – noon, TTh; 1- 2p.m MW; other times by arrangement

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Description: This course is a continuation of CS 146 and emphasizes the relationships between the data objects in computer programs. Re-usability is stressed through the use of generic abstractions. This course includes a 2-hour lab-based component.

Prerequisite: CS 146 or equivalent, MTH 199 or 170 or 142.

Methodology: Lecture with outside laboratory assignments. The examinations will cover the material in the lectures, and will require that the student understand, apply, and extend that knowledge.

Objectives: This course will be an introduction to the design and analysis of computer algorithms and to abstract data types. In addition, topics in intermediate programming and software engineering will be covered. The modular approach introduced in CS 146 will be continued. Along the way, such topics as the software lifecycle, computer organization and architecture, structured programming, networking, and operating systems will be addressed in a manner appropriate to the level of the course.

Required Textbook and Supplies:

Frank M. Carrano and Janet J. Prichard, *Data Abstraction and Problems Solving with Java: Walls and Mirrors*, 2nd edition, Addison-Wesley, 2006.

Additional materials will be available from the course web page.

Grading: There will be 3 major tests during the course of the semester. Each will count as 15% of the grade. The lab component will count as 25% of your grade. A comprehensive final exam will count as 30% of your grade. Late lab assignments will be accepted up to one week from the due date with a 20% late penalty.

The following grade scale is used:

90 < A < 100

80 < B < 90

70 < C < 80

60 < **D** < 70

0 < **F** < 60

Academic dishonesty: All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The university and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials. No cheating on an examination or assignments is allowed. A score of zero will be given to the student if such a case occurred.

Rules of conduct: Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Please turn off or mute your cellular phone and/or pager before class begins. Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking among each other at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a, minimally, a directive to leave class or being reported to the Dean of Students for disciplinary action in accordance with university policy.

Visitors in the classroom: Occasion visiting of classes by responsible persons is allowed with prior arrangement with the instructor, as long as it does not interfere with the registered members of the class or the educational process.

Other administrative matters:

Americans with Disabilities Act: According to University policy requests for accommodations must be initiated by the student. A student seeking accommodations should go to the Counseling Center and Services for Students with Disabilities (SSD) for instructions.

Religious Holidays: An institution of higher education shall excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.