Course Number: 210
Course Name: Data Structures and Algorithms I
Course Credits: 4
Schedule: Fall, Spring, sometimes Summer

Syllabus Date: August 28, 2006
Prepared By: Zhong-Hui Duan

Prerequisites: Completion of 3450:208 and 3460:209 with a grade of C- or better or equivalent


Bulletin Description: Interfaces, inheritance and polymorphism, graphic user interfaces, event and exception handing, files and streams, elementary data structures and associated algorithms. Topics include lists, stacks, queues, and sorting methods.

Detailed Description: A continuation of the study of programming theory and practice studied in Introduction to Computer Science. Some elementary data structures, their implementation and basic searching and sorting algorithms are introduced. There is also a laboratory component to this course.

Course Goals: To reinforce problem solving and programming skills through programming in Java and to introduce basic data structures and algorithms that are needed for more advanced courses.

Topics:
- Interfaces and Polymorphism
- Event Handling
- Inheritance
- Graphical User Interfaces
- Exception Handling
- Streams
- Recursion
- Searching and Sorting
- Linked Lists, Stacks and Queues

Computer Usage: Students use a Java IDE to develop programs and work through lab exercises and programming assignments.

References: