CISC 7124 [*709.2X] Object-Oriented Programming
37½ hours plus conference and independent work; 3 credits

Object-oriented programming concepts and techniques: data abstraction and encapsulation, classes, inheritance, overloading, polymorphism, interfaces. Introduction to and use of one or more object-oriented languages such as C++ or Smalltalk. An introduction to object-oriented design.

Syllabus

- Procedural programming in Java
- Introduction to object-oriented design and programming
- View classes as abstract data types
  - Int class
  - Rectangle class
  - Stack class
  - Queue class
- Object-oriented programming in Java (Classes, Methods, Messages, and Instances)
  - Built-in classes
    - Boolean, Character, Byte, Short, Integer, Long, Float, Double, String & StringBuffer, Vector, Hashtable
- Interfaces and Packages
- Collections
- Inheritance
- Midterm exam (BinaryTree.java | SumLines.java)
- I/O
  - Echo.java
  - CopyTextFile.java
- Graphics programming with AWT (Components & Graphic & Layout managers)
  - TestDrawString.java
  - TestImage.java
- Event handling
  - TestEvent.java
  - TestCardLayout.java
  - TestImageCards.java
- Applets
- Advanced topics
  - Network programming with sockets
  - Multithreaded programming and animation
- DigitClock.java
- Greeting1.java
- AnimatedImage.java
- PingPong.java
- ProducerConsumer.java
- Clocks.java
  - JDBC and MySql
  - Servlet programming

Textbook:

*The Java Tutorial: A Short Course on the Basics, 4th Edition*

Bibliography:


