Course Title: Java Programming III

Course Description:
Expand your Java and Object-Oriented knowledge base and take your Java programming to a higher level. Topics to be covered include: unit testing and debugging, multithreading and concurrency, advanced collections, generic programming, graphical user interfaces (Swing) and Java reflection and Type information, and other advanced topic to be decided.

Course Prerequisite(s):
Java Programming II or a fundamental knowledge of Java

Course Objectives:
Upon completion, you will:
- Be able to design and develop efficient complex Java applications
- Understand Java best-practice design and development concepts
- Have a firm foundation of all important Java concepts
- Be able to develop Java applications with a graphic user interface

Textbook(s): OPTIONAL
Murach’s Java Programming 4th ed.
Prentice Hall; Joel Murach

Next Class Possibilities
Introduction to Spring, Design Patterns, Agile Design with Test-Driven Development

Instructor Notes:
Do not purchase text before first class meeting

Lesson Plan – by week or session
Session 1: Unit-testing and debugging
Session 2: Multithreading and Concurrency 1
Session 3: Multithreading and Concurrency 2
Session 4: Generics and Collections in depth
Session 5: Reflection, Class class, and Type information
Session 6: Best practice discussion, practical Java examples and exercises
Session 7: Graphical user interfaces using Swing 1
Session 8: Graphical user interfaces using Swing 2