COMP 1210, Fundamentals of Computing I

Credit hours: 3 lecture
Contact hours: 2 lecture, 3 lab

Catalog Description: Introduction to the fundamental concepts of programming from an object-oriented perspective. Emphasis on good software engineering principles and development of the fundamental programming skills in the context of a language that supports the object-oriented paradigm.

Prerequisites: None
Corequisites: None

Required Course (CSCI, ECPE, SWEN, WIRS)

Instructor or Course Coordinator: Dr. James Cross

Required Textbook

Software Used (if applicable)
- Java 2 (J2SE) Development Kit (JDK) 8u66 or later (http://www.oracle.com/technetwork/java/javase/downloads/index.html)
- jGRASP IDE (http://www.jgrasp.org/)
- JUnit testing framework (http://junit.org/junit4)
- Checkstyle static code analysis tool (http://checkstyle.sourceforge.net/)

Course Outcomes
The student will be able to
- design and implement simple programs based on informal problem specification.
- implement classes and methods when provided the informal specification.
- apply concepts and techniques of object-oriented programming.
- perform informal testing and debugging techniques.
- understand the interdependencies of an object-oriented program.

Topics Covered
- Introduction and Overview (2 hours)
- Data and Expressions (2 hours)
- Using Classes and Objects (2 hours)
- Writing Classes (4 hours)
- Conditionals and Loops (4 hours)
- Enhancing Classes (4 hours)
- Arrays (4 hours)
- Inheritance and Polymorphism (4 hours)
- Exceptions (2 hours)
• Exams (2 hours)

Course Requirements
• Exam 1 (15%)
• Exam 2 (15%)
• Final Exam (30%)
• Lab Activities (10%)
• Lab Quizzes (10%)
• Lab Projects (20%)

Syllabus prepared: Spring 2016