CIS 406 – Java Programming I

Course Description

This course introduces students to the fundamental constructs of the Java object-oriented programming language. Students will test, document, and design business-oriented programs. Topics include objects, classes, iteration, encapsulation, polymorphism, and inheritance.

Instructional Materials

Hortsman, C. (2010). *Big Java: compatible with Java 5, 6, and 7, 4th edition*. Danvers, MA: John Wiley and Sons, Inc.

Course Learning Outcomes

1. Demonstrate the proper use and application of syntax in the Java programming language.
2. Demonstrate the ability to design, compile, implement, test, and debug simple programs in Java.
3. Compare and contrast classes and objects in Java.
4. Construct classes through systematic procedures.
5. Demonstrate the ability to manipulate numbers and character strings in Java.
6. Demonstrate the ability to program simple and complex decisions in Java.
7. Discuss the concepts of inheritance and polymorphism.
8. Discuss exception handling and basic file input / output.
9. Describe and implement iteration in Java.
10. Compare and contrast arrays and array lists in Java.
11. Differentiate between static methods and variables.
12. Declare and use interface types.
13. Discuss object-oriented design principles.
14. Use technology and information resources to research issues in Java programming.
15. Write clearly and concisely about Java programming using proper writing mechanics and technical style conventions.