CSC 151: JAVA PROGRAMMING

COURSE DESCRIPTION:

Prerequisites: None
Corequisites: None

This course introduces computer programming using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion students should be able to design, code, test, and debug JAVA language programs.
Course Hours per Week: Class, 2. Lab, 3. Semester Hours Credit, 3.

LEARNING OUTCOMES:

Upon completing requirements for this course, the student will be able to:

A.   Create a software application using the Java programming language.
B.   Debug a software application written in the Java programming language.
C.   Test a software application written in the Java programming language.

OUTLINE OF INSTRUCTION:

    I.   Introduction to Computers and Java
    II.   Java Fundamentals
    III.   Decision Structures
    IV.   Loops and Files
    V.   Methods
    VI.   Arrays and the ArrayList Class
    VII.   Classes and Objects
    VIII.   Text Processing
    IX.   Wrapper Classes
    X.   Inheritance
    XI.   Exceptions
    XII.   Advanced File I/O
    XIII.   GUI Applications
    XIV.   Applets
    XV.   Creating GUI Applications with JavaFX and Scene Builder
    XVI.   Recursion
    XVII.   Databases