

NorthWest Arkansas Community College
Division of Business and Computer Information

PROG 1403 JAVA PROGRAMMING (Fall, and On Demand)

Course Number and Title

PROG 1403 JAVA Programming

Catalog Description

The student will gain greater knowledge in the use of high-level programming languages including the use of objects, the creation of Java applications and applets, and Windows programming techniques. Specific features of the Java language covered include variables, input and output, data types, various flow-of-control constructs, arrays, strings, methods and classes, GUI components, exception handling, and file I/O. The use of Java to enhance the World Wide Web and Object-Oriented Programming concepts will be covered. (Outside lab time will be required.)

Prerequisites

PROG 1003 Introduction to Programming Logic or equivalent programming experience with instructor approval.

Credit hours/Contact hours/Load hours

3/3/3

Target Audience/Transferability

This course is for students seeking training in application development, and is applicable to students seeking self-improvement or an AAS Degree in Computer Information.

Student Learning Outcomes

The student will:

- Develop and design appropriate decision and looping structures, procedures, functions and classes given a task.
- Debug a given program.
- Create a program to read and write a given set of data to/from an external file
- Use the Java Collection Framework to manipulate data and perform a given task
- Design appropriate classes for a given set of related data
- Use JavaDoc to document classes
- Apply object oriented design techniques of encapsulation, polymorphism, and data abstraction using classes to represent objects.

Topics

- Program Development using an object oriented approach
- Encapsulation
- Polymorphism
- Classes and Objects
- File IO
- Arithmetic Calculations
- Data manipulation
- Programming Control Sequence, selection, and repetition
- Collections framework

Forms of Assessment

Chapter quizzes or programs
Programming projects
Exams