Course Syllabus Part I
CSD 402 Java for Programmers

3 credit hours

Course Description

This course introduces the concepts of programming using Java 10. This course will cover the basics of the Java programming language syntax. Additional topics covered will be elementary data structures, input/output statements, selection, iteration, methods, and arrays, principles of Object-Oriented (OO). Topics include the language syntax, OO concepts, and advanced features of the Java programming language. Additional topics are inheritance, polymorphisms, abstracts, exception handling, and basic input and output. Students will write programs using all the above-mentioned topics.

Course Prerequisites

CSD 205 Introduction to Programming with Python

Course Skills

- Write simple software routines using the Java programming language
- Design, document, and debug basic software programs

Course Objectives

1. Describe the fundamental concepts in Java programming
2. Install and configure Java and an IDE (Integrated Development Environment)
3. Write programs with basic input and output functionality
4. Demonstrate use of the Math and String Classes
5. Use control statements, loops, and arrays to solve problems
6. Implement Object-Oriented Paradigms including Inheritance and Polymorphism
7. Demonstrate use of Exception Handling

Grading Scale

Letter Grade	Percentage Grade	Letter Grade	Percentage Grade
A	≥ 92.5%	C	< 76.5% and ≥ 72.5%
A-	< 92.5% and ≥ 89.5%	C-	< 72.5% and ≥ 69.5%
B+	< 89.5% and ≥ 86.5%	D+	< 69.5% and ≥ 66.5%
B	< 86.5% and ≥ 82.5%	D	< 66.5% and ≥ 62.5%
B-	< 82.5% and ≥ 79.5%	D-	< 62.5% and ≥ 59.5%
C+	< 79.5% and ≥ 76.5%	F	< 59.5%

Topic Outline

I. Introduction to Java
II. Selection
    A. If
    B. If/Else
    C. Switch
III. Mathematical Function
IV. Strings
    A. + Operator
    B. Length
    C. Equals and Compare To
V. Loops
    A. While
    B. For and Foreach
    C. Do/While
VI. Methods
    A. Defining
    B. Invoking
    C. Arguments
VII. Arrays
    A. Single-Dimensional
    B. Multidimensional
VIII. Object-Oriented Paradigms
    A. Objects and Classes
    B. Constructor
    C. Static contents
IX. Inheritance and Polymorphism
    A. Super and Sub classes
    B. Overriding Methods
X. Exception Handling
    A. Exception Types
    B. Throwing and Catching
    C. Finally

This syllabi update reflects grading scale policy updates effective 4/1/2024.