

CPL-101: Fundamentals of Java Programming

Description:

3 credits/126 hours

Prerequisite: None

This course will teach students how to build applications from the bottom up, rather than starting with existing objects. Students will gain a deeper understanding of the concepts used in object-oriented programming and will help foster a greater appreciation for the existing objects programmers use as a student's programming knowledge advances. Students will learn to modify and create simple Java programs and will have experience with the tools used to create more complex examples.

Textbook: Java Programming, 9th ed., Farrell – ISBN: 978-1-337-39707-0

Course objectives:

Throughout the course, you will meet the following goals:

- Define basic programming terminology and describe the features of the Java programming language
- Understand procedural and object-oriented programming
- Understand input and repetition structures and learn special considerations of string and array manipulation
- Develop a comprehensive understanding of inheritance and exception handling.
- Gain a deeper understanding of GUI Swing components, JavaFX, and other useful tools for Java programming

Contents:

Chapter 1: Creating Java Programs

Chapter 2: Using Data

Chapter 3: Using Methods, Classes, and Objects

Chapter 4: More Object Concepts

Chapter 5: Making Decisions

Chapter 6: Looping

Chapter 7: Characters, Strings, and the StringBuilder

Chapter 8: Arrays

Chapter 9: Advanced Array Concepts

Chapter 10: Introduction to Inheritance

Chapter 11: Advanced Inheritance Concepts

Chapter 12: Exception Handling

Chapter 13: File Input and Output

Chapter 14: Introduction to Swing Components

Chapter 15: Using JavaFX and Scene Builder

Grading Scale (70% required for passing)

A = 90-100%
B = 80-89.9%
C = 70-79.9%
F = Below 70%

Grade Weighting

Chapter Quizzes..... 50%
Activities 20%
Final Exam 30%
100%