

Java Programming – Course Description

Overview

This course of study builds on the skills gained by students in Java Fundamentals and helps to advance Java programming skills. Students will design object-oriented applications with Java and will create Java programs using hands-on, engaging activities.

Available Curriculum Languages:

- English

Duration

- Recommended total course time: 90 hours*
- Professional education credit hours for educators who complete Oracle Academy training: 30

** Course time includes instruction, self-study/homework, practices, projects and assessment*

Target Audiences

Educators

- Technical, vocational, and 2- and 4-year college and university faculty members who teach computer programming or a related subject
- Secondary and vocational school teachers who teach computer programming

Students

- Students who wish to extend their programming experience in Java and develop more complex Java applications
- This course is a suitable foundational class for computer science majors and non-majors alike, and when taught in sequence with Java Fundamentals may be used to prepare students for the AP Computer Science A exam.

Prerequisites

Required:

- Fundamental knowledge of object-oriented concepts, terminology, and syntax, and the steps required to create basic Java programs.

Suggested:

- Oracle Academy Course - Java Fundamentals
- Previous experience with at least one programming language

Suggested Next Courses

- Advanced computer programming courses

Lesson-by-Lesson Topics

Introduction

- Fundamentals of Java – What I should know
- Working with Pre-Written Code

Classes and Collections

- Java class Design – Interfaces
- Java class Design – Abstract Classes
- Generics
- Collections – Part I
- Collections – Part II
- Sorting and Searching

Strings and Recursion

- String Processing
- Use regular expressions
- Recursion
- Basics of Input and Output
- Input and Output Fundamentals
- Exceptions and Assertions

Deploying an Application

- Deploying an Application

Final Project

- Final project

To search and register for events scheduled in your area, visit the [Academy events calendar](#).