

## Basic Java 11 and OO Programming for Developers New to OO (TT2120-J11)

### Overview

This course provides hands-on Java 11 training for developers who have little or no prior working knowledge of object-oriented programming languages such as C, COBOL, and 4GL. You will learn the best practices for writing great object-oriented programs in Java 11, using sound development techniques, new improved features for better performance, and new capabilities for addressing rapid application development. Special emphasis is placed on object oriented concepts and best practices.

### Prerequisite Comments

Continued Java & JEE training: Intermediate to Advanced Java, JEE Essentials, Java for Web, Spring / Spring Boot, Microservices / Web Services / REST, RXJava, Tuning, Patterns & More  
TDD / Test Driven Development, JUnit / Unit Testing, Agile development training  
Secure Java Coding / Java Security and secure application development training  
Mobile developer / Android training  
Please contact us for recommended next steps tailored to your longer-term education, project, role or development objectives.

### Target Audience

This is a basic-level programming course designed for attendees with prior development experience in another language, such as COBOL, 4GL, Mainframe or other non-object oriented languages. This course is not geared for non-developers.

### Course Objectives

This "skills-centric" course is about 50% hands-on lab and 50% lecture, designed to train attendees in core OO coding and Java development skills, coupling the most current, effective techniques with the soundest industry practices. Our engaging instructors and mentors are highly experienced practitioners who bring years of current "on-the-job" experience into every classroom.

Working within in a hands-on learning environment, guided by our expert team, attendees will learn to:

Understand what OO programming is and what the advantages of OO are in today's world

[Register Online](#)

Schedule

Class Length: 5 Days

G2R = "Guaranteed to Run" | OLL = "Online LIVE"  
ILT = "Instructor-Led-Training"

*This course is not currently available on the public schedule. Please contact us using the information in the footer below to inquire about future dates or to schedule a private class.*

Work with objects, classes, and OO implementations  
Understand the basic concepts of OO such as encapsulation, inheritance, polymorphism, and abstraction  
Understand not only the fundamentals of the Java language, but also its importance, uses, strengths and weaknesses  
Understand the basics of the Java language and how it relates to OO programming and the Object Model  
Work with the Modular system (Project Jigsaw)  
Understand and use classes, inheritance and polymorphism  
Understand and use collections, generics, autoboxing, and enumerations  
Process large amount of data using Lambda expressions and the Stream API  
Abstract, static and private methods in interfaces  
Take advantage of the Java tooling that is available with the programming environment being used in the class  
Java 11 features covered: Using the Local Variable Type in Lambda expressions; Updates made to the String API

## Course Outline

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### 1 - A First Look

The Java Platform  
Using the JDK  
The Eclipse Paradigm

### 2 - Getting Started with Java

Writing a Simple Class  
Adding Methods to the Class

### 3 - OO Concepts

Object-Oriented Programming  
Inheritance, Abstraction, and Polymorphism

### 4 - Essential Java Programming

Language Statements  
Using Strings  
Specializing in a Subclass  
Fields and Variables  
Using Arrays  
Local-Variable Type Inference  
Java Packages and Visibility

## 5 - Object Oriented Development

Inheritance and Polymorphism  
Interfaces and Abstract Classes  
Introduction to Exception Handling  
Exceptions

## 6 - Java Developer's Toolbox

Utility Classes  
Java Date/Time

## 7 - Advanced Java Programming

Introduction to Generics  
Lambda Expressions and Functional Interface

## 8 - Working with Collections

Collections  
Using Collections

## 9 - Stream API

Streams  
Collectors

## 10 - The Java Module System

Introduction to the Module System

## 11 - Time Permitting

Formatting Strings  
Introduction to Annotations  
Java 12 and beyond

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