

# Java Advanced

## Prerequisites / Further Training

- [Java Beginner](#)
- [Beginning SQL](#)

Also have a look at our [Java Bootcamp](#)

## Alignment

Oracle OCP Certification aligned to Oracle OCP Java Exam

## After this course you should be able to

- Have a good understanding of programming and the building blocks of an OO programming language, with an emphasis on JAVA.
- Build small apps in Java, making use of I/O, Networking, GUI
- Prepare for Oracle OCA and OCP exams

## Course Material

Course Material Provided

## Course Contents

### Day 1:

#### Static Classes

- Static Methods,
- Static Variables
- Math Class
- Math Methods
- Static Imports

#### Wrapper classes

- Autoboxing

- Number formatting

## Day 2

### Exception Handling

- What if you need to call risky code?
- Checked Exceptions
- Flow control in try/catch blocks
- Exceptions are polymorphic
- When you don't want to handle an exception...
- Ducking (by declaring) only delays the inevitable

### Nested Classes

- Getting GUI: A Very Graphic Story
- Getting a user event
- Listeners, Sources, and Events
- An inner class instance must be tied to an outer class instance
- How to make an instance of an inner class

## Day 3:

### I/O Fundamentals

- Saving Object state
- Implement Serializable
- Transient variables

### Highlights of the Calendar API

- Getting an object that extends Calendar
- Working with Calendar objects

### Date / Time API

- Moving backward and forward in time

## Day 4:

### Networking

- Connecting, Sending, and Receiving
- Network Sockets
- Writing a simple server
- Writing a Chat Client

## **Threads & Concurrency**

- Thread class
- Runnable interface
- The Thread Scheduler
- Putting a thread to sleep
- Atomic methods
- Using an object's lock
- Synchronization

## **Day 5:**

### **Collections and Generics**

- Collections
- Sorting an ArrayList with Collections.sort()
- Generics and type-safety
- Comparable interface
- A Custom Comparator
- Collection API : lists, sets, maps
- HashSet
- HashMap
- Polymorphism wildcards

### **Packaging**

- Command-line Java
- Classpath
- Jars

### **Duration and pricing**

[Price Group A](#)

### **Certificate**

## [Read About Our Certificates](#)

### **Bookings**

You can download the course registration form on our home page or by clicking [here](#)

### **Brochure**

You may download a pdf copy of this page by clicking on the pdf icon at the top of the page.

### **Questions**

Please [email us](#)

### **Schedule**

On the calendar below. If your browser doesn't display the calendar below, please click on [this link](#) or try using [Google Chrome](#), alternatively please enquire via our [Contact Us](#) page.