

**Price:** R8,600.00 excl. VAT  
**Duration:** 5 days  
**Code:** J2EED

## JEE Development

### Description

The JEE Development course focuses on the development of applications using Java Enterprise Edition. Topics include a JEE technology overview, Java servlets and Java Server Pages, Enterprise JavaBeans, JMS messaging, JDBC, RMI, JNDI and JEE security.

### Objectives

Delegates who complete the JEE Development course will be able to:

- Understand the JEE architecture and choose appropriate JEE technology.
- Develop applications using the JEE platform.
- Write Java Server Pages and servlets, and deploy them on a application server.
- Write an Enterprise JavaBean and deploy it on an application server.

### Intended Audience

Experienced Java programmers who need to understand the JEE architecture. The course is aimed at companies and individuals who are entering the JEE field for the first time, and require a detailed JEE overview to understand the use of the appropriate technologies.

If you are already doing JEE development, we recommend that you attend the more specialised Java Servlets and JSP course and the Enterprise JavaBeans course.

### Prerequisites

Our Java Programming course and at least 1 year of Java programming experience, with knowledge of basic HTML.

### Course Contents

*The lecturer reserves the right to modify the contents of the course to suit the needs of the delegates.*

**JEE Technology** • Servlets and Java Server Pages (JSP). • Enterprise JavaBeans (EJB). • Java Transaction API (JTA) and Transaction Service (JTS). • Java Naming and Directory Interface (JNDI). • Remote Method Invocation (RMI) and RMI-IIOP. • Java Database Connectivity (JDBC). • Java Message Service (JMS). • JEE Connector Architecture (JCA). • JavaMail.

**Java Servlets and JSPs** • The role and use of servlets and JSPs. • Servlet lifecycle. • Request, response, cookie and session objects. • JSP scriptlets, declarations, expressions, directives. • Custom tags and the JSP Standard Tag Library (JSTL). • MVC architecture. • Filters and event listeners. • Expression Language (EL). • Web applications and deployment descriptors.

**Enterprise JavaBeans** • EJB interfaces and components. • EJB Lifecycle. • Stateless and stateful session beans. • BMP entity beans (bean-managed persistence) with JDBC. • CMP entity beans (container-managed persistence) and EJB Query Language. • Message Driven Beans. • Programmatic vs declarative transactions with JTA and JTS. • Bean-managed relationships (BMR) vs container-managed relationships (CMR).

**Messaging with JMS** • Message driven beans and message queue (MQ) servers. • Message types and usages. • Point-to-point versus publish and subscribe messaging.

**JNDI, RMI and CORBA** • Referencing remote objects with JNDI. • Serialization. • RMI and RMI-IIOP. • CORBA and Java IDL.

**Additional JEE Topics** • EJB2 versus EJB3. • JEE core design patterns. • Best Practices.