

# Oracle Database 12C Introduction

Course: **00009**

Filter: **Beginner**

Duration: **3 days**

Category:: **Oracle Database**

Price: **3000,00 €**

## About Course

To efficiently handle today's business-critical information, organizations need database systems that are reliable and scalable, as well as experienced professionals to manage them. In this training course, you gain the skills to unleash the power and flexibility of Oracle Database 12c, while gaining a solid foundation of database concepts, SQL, and PL/SQL, so you can develop robust databases.

## What you'll learn

- Build robust and scalable Oracle Database 12c applications
- Write efficient data manipulation statements using SQL Developer
- Create databases, external tables, sequences, and synonyms
- Ensure data integrity, establish security, and enhance performance
- Improve cursor processing with FOR LOOPS and parameters

## Pre-requisites

- This course is currently running on Oracle 12c, on the Windows Server 2008, R2 platform

## Curriculum

### Module 1: Introduction to Oracle Database 12

- Relational database concepts
- Applying data modeling techniques
- Defining entities, attributes and relationships
- Oracle database tools: SQL Developer and SQL\*Plus

## **Module 2: Configuring the Database Environment**

- Assessing memory structures, processes and files
- Establishing a storage hierarchy
- Reviewing the Oracle Database 12c installation
- Generating DBA scripts with the data dictionary
- Working with Oracle SQL Developer

## **Module 3: Retrieving and Controlling Data**

- Selecting, filtering and ordering results
- Avoiding pitfalls in null value
- Deploying built-in SQL functions
- Comparing CASE and DECODE functions
- Joining table data using inner and outer ANSI joins
- Grouping and aggregating data
- Combining result sets with set operators
- Performing simple and correlated subqueries
- Inserting, updating, deleting and merging data
- Locking data and managing transactions

## **Module 4: Designing and Formulating the Database**

- Mapping entities and relationships to tables and keys
- Creating users and schemas
- Creating, altering and dropping tables and columns
- Restoring data with Flashback and the recycle bin
- Creating views to implement security
- Comparing identity columns with sequences

## **Module 5: Enhancing Security, Integrity and Performance**

- Determining referential integrity with primary, unique and foreign keys
- Implementing deferred and enforced constraints
- Authenticating users with password controls
- Controlling access with system and object privileges
- Simplifying object usage with synonyms
- Improving privilege management with roles
- Guidelines for defining appropriate indexes
- Indexing the data for efficient retrieval
- Managing unique, no unique and composite indexes

## **Module 6: Server Programming with PL/SQL**

- Declaring variables, constants and records
- Establishing conditional control with IF and CASE
- Controlling iterations with WHILE and FOR LOOPS
- Creating exception handlers for predefined exceptions
- Controlling implicit and explicit cursors
- Increasing flexibility with cursor parameters
- Simplifying cursors with FOR LOOPS
- Improving update and delete performance with CURRENT OF or ROWID

## **Module 7: Developing Server-Side Logic**

- Developing procedures and functions
- Debugging programs with DBMS\_OUTPUT
- Advantages of bundling subprograms in packages
- Creating compound-, statement- and row-level triggers
- Controlling triggers with conditional predicates
- Returning data to web applications with REF cursors
- Saving application data to the database