

# Course : Oracle SQL for Business Intelligence

*Practical course - 3d - 21h00 - Ref. ROD*  
*Price : 2040 CHF E.T.*

Oracle's SQL language has been endowed with specific features for designing Business Intelligence environments. Before you can use it, you need to understand star and flake models, constellations, the difference between fact tables and dimension tables, and the proper use of keys and joins. Once the Data Warehouse has been designed, mastery of SQL, groupings, aggregations and possible functionalities will enable the warehouse to be fed for analysis purposes. We invite you to discover and master Oracle SQL for Business Intelligence.

## Teaching objectives

**At the end of the training, the participant will be able to:**

- ✓ Understand the fundamentals of business intelligence architecture and modeling
- ✓ Master data grouping and analytical functions
- ✓ Know how to use objects and updates (ETL, external tables, views, etc.)
- ✓ Perform data analysis with the MODEL clause

## Intended audience

This course is aimed at developers of Oracle BI applications who want to make the most of Oracle's SQL potential.

## Prerequisites

Good knowledge of SQL.

## Course schedule

### 1 Introduction

- Business intelligence. The state of the SQL standard. The SQL3 standard and business intelligence.
- Reminders of datawarehouse concepts. CUBE concepts. OLAP concept. Multidimensional analysis.
- Star and constellation modeling. Notions of dimension. Table of facts.

### Case study

Presentation: the model, the issues.

## PARTICIPANTS

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## PREREQUISITES

Good knowledge of SQL.

## TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

## ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more. Participants also complete a placement test before and after the course to measure the skills they've developed.

## TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

## 2 Data grouping

- Horizontal, vertical and aggregate functions.
- The group. Reminders: how GROUP BY works, how HAVING works.
- GROUPING functions, syntax, examples, handling NULL values.
- The two-level group.

### Hands-on work

Manipulate grouping syntax and functions.

## 3 Data aggregation and analysis

- ROLLUP and CUBE extensions. GROUPING SET expression.
- Group functions. Analytic functions. Partitioning clause.
- The order clause. The windowing clause. Sorting functions.
- Scheduling: sorting. Filing and window functions.
- Tabular representation with PIVOT and UNPIVOT.

### Hands-on work

Manipulation of syntax and aggregation functions.

## 4 The MODEL clause

- Implementation. The CV function.
- The ITERATION\_NUMBER function. The PRESENTNNV function.
- The PRESENTV function. The PREVIOUS function.

### Hands-on work

Manipulating MODEL clause syntax.

## 5 Data update

- Multi-table insertion. Unconditional insertion.
- INSERT\_ALL, INSERT\_FIRST. Conditional updates.
- INSERT and UPDATE a table from other tables: use MERGE.

### Hands-on work

Star model power supply.

## 6 Objects

- ETL (Extraction, Transformation, Loading).
- Querying external tables. Data dictionary views.
- Materialized Views (VM): interest, creation syntax and options.
- Materialized views and optimization. Query rewriting. Dimensions and hierarchies.

### Hands-on work

Use external tables to move data. Create materialized views to optimize queries.

### TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

### ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.