



Oracle SQL Fundamentals

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Learn by Doing



Oracle SQL Fundamentals

Course Overview

Oracle Database: SQL Fundamentals is a hands-on, introductory course designed to equip participants with the essential skills required to work confidently with Oracle databases using SQL.

Throughout this 3-day course, participants will understand database structure & learn how to retrieve, filter, and manipulate data using industry-standard SQL commands. They will gain a solid understanding of relational database concepts, Oracle database architecture basics, and how SQL is used to interact with database objects. The course covers writing queries using joins, functions, grouping, and subqueries, as well as performing data manipulation tasks such as inserting, updating, and deleting records.

This course will act as a wonderful starting point for anyone looking at preparing themselves for data analytics and dashboarding skills because querying the database efficiently is the first step in data gathering.

Duration & Module Coverage

Duration: 3 Day (24 hrs)
Time: 9.30 am to 5.30 pm

<u>Per Day Schedule</u>	<u>Module Coverage</u>
<u>Session 1:</u> 09.30 - 11.00 Theory 11.00 - 11.10 Break 11.10 - 13.10 Practical 13.10 - 13.50 Break <u>Session 2:</u> 13.50 - 15.50 Theory 15.50 - 16.00 Break 16.00 - 17.30 Practical	Day 1 – Modules 1 to 4 Day 2 - Modules 5 to 8 Day 3 – Modules 9 to 12
Click here to view full detailed module list	

Learning Goals

By the end of the course, participants will be able to write efficient SQL queries, analyze data from multiple tables, manage basic database objects, and apply SQL best practices in real-world scenarios. This course also provides a strong foundation for further Oracle Database training and Oracle SQL certification preparation.

Pre-Requisites

Experience in any field of IT and foundational IT knowledge will be helpful.

Teaching Methodology

This is a very hands-on course where participants carry out practical exercises in the classroom. The concepts are taught through implementation of real-world use-cases. Our exercises have been carefully designed to replicate scenarios participants will face in real life work conditions. We have adopted a 'Learn by Doing' pedagogical approach - Class room training with practical. Our trainings are not only PPT based.

Who Should Take This Course?

This course is ideal for students, fresh graduates, and entry-level professionals seeking a strong foundation in SQL and Oracle database concepts. It is also well suited for developers, application support engineers, and analysts who need to efficiently query, manage, and analyze data using SQL.

Course Content

Day 1 - SQL Basics & Data Retrieval

Learning Outcomes:

- ❖ Understand core database and relational concepts
- ❖ Write and execute basic SQL queries
- ❖ Retrieve, filter, and organize database data

<u>Session 1: Modules 1 & 2</u> <u>Time: 09.30 to 13.10</u>	<u>Session 2: Modules 3 & 4</u> <u>Time: 13.50 to 17.30</u>
1. Introduction to Databases & SQL <ul style="list-style-type: none"> Database concepts Relational databases Oracle Database overview SQL basics 2. Oracle Database Environment <ul style="list-style-type: none"> Connecting to Oracle Database SQL Developer / SQL*Plus Schemas and users 	3. Retrieving Data Using SELECT <ul style="list-style-type: none"> SELECT statement Column aliases DISTINCT 4. Filtering Data <ul style="list-style-type: none"> WHERE clause Operators ORDER BY

Day 2 - Functions, Joins & Aggregation

Learning Outcomes:

- ❖ Apply single-row and group functions effectively
- ❖ Combine data from multiple tables using joins
- ❖ Use subqueries to solve complex queries

<u>Session 1: Modules 5 & 6</u> <u>Time: 09.30 to 13.10</u>	<u>Session 2: Modules 7 & 8</u> <u>Time: 13.50 to 17.30</u>
5. Single-Row Functions <ul style="list-style-type: none"> Character Number Date functions NULL handling 6. Group Functions <ul style="list-style-type: none"> COUNT SUM AVG GROUP BY HAVING 	7. Joins <ul style="list-style-type: none"> Inner Join Outer Join Self joins 8. Subqueries <ul style="list-style-type: none"> Single row subqueries Multiple row subqueries

Day 3 - Data Manipulation & Database Objects

Learning Outcomes:

- ❖ Perform reliable data manipulation transactions
- ❖ Enforce data integrity using constraints
- ❖ Manage database objects using SQL best practices

<u>Session 1: Modules 9 & 10</u> <u>Time: 09.30 to 13.10</u>	<u>Session 2: Modules 11 & 12</u> <u>Time: 13.50 to 17.30</u>
9. DML Statements <ul style="list-style-type: none"> • INSERT • UPDATE • DELETE • COMMIT • ROLLBACK 10. Constraints <ul style="list-style-type: none"> • PRIMARY KEY • FOREIGN KEY • UNIQUE • CHECK 	11. Database Objects <ul style="list-style-type: none"> • CREATE • ALTER • DROP • Views • Indexes • Sequences 12. Best Practices & Wrap-Up <ul style="list-style-type: none"> • Data dictionary • SQL best practices • Course review