

## Oracle SQL & PL/SQL

(5 day Instructor-Led Course)

### Course Description

In this hands-on course, you will gain the skills necessary to understand Oracle's SQL and PL/SQL languages using SQL\*Plus and iSQL\*Plus tools. Through extensive hands-on labs, you will learn how to use SQL commands for DML, DDL, query, and transaction control operations. You will learn how to retrieve information from multiple tables and to use the Oracle built-in functions. You will use SQL to insert, update and delete records and maintain existing tables. In addition, you will use PL/SQL to query and manipulate data, to handle exceptions and work with cursors. Course topics are applicable to users of Oracle8i and Oracle9i.

### Who Should Attend

This course is intended for:

- This course is intended for applications designers/developers, end users and database administrators/operators

### Prerequisites

In order to successfully complete this course, students should have:

- A background in data processing, relational database concepts and programming is strongly recommended.

### What You Will Accomplish

At the end of the course, students will be able to:

- Write basic SQL queries to retrieve desired data from a database
- Use DML and DDL statements
- Use transaction control statements to commit, rollback and create savepoints
- Write advanced queries
- Write scripts to do queries and display SQL\*PLUS reports
- Control access to your database objects
- Write a PL/SQL block using all elements of the block structure
- Write PL/SQL statements using lexical units, declared variables and assignment statements
- Use control structures to loop, branch and jump
- Utilize PL/SQL named and user-defined exceptions

### What You Will Receive

Each student receives:

- a copy of the course manual for post-class reference and review.

### Follow-Up Courses

- WEB Development with Oracle

<b>Course Outline: Oracle SQL &amp; PL/SQL</b>	
<p><b>Write Basic Queries using SQL</b></p> <ul style="list-style-type: none"> <li>▪ Select data from a database</li> <li>▪ Apply conditions to the selected data</li> <li>▪ Order the selected data</li> </ul> <p><b>Use DML and DDL Statements to Manipulate Data</b></p> <ul style="list-style-type: none"> <li>▪ INSERT and UPDAT data into an existing table</li> <li>▪ DELET records from an existing table</li> <li>▪ CREAT a table</li> <li>▪ ALTER the structure of a table</li> <li>▪ DROPP a table</li> <li>▪ Use substitution variables</li> </ul> <p><b>Work with Transaction Control Statements</b></p> <ul style="list-style-type: none"> <li>▪ Utilize COMMIT</li> <li>▪ Use ROLLBACK and SAVEPOINT</li> </ul> <p><b>Implement Advanced Queries</b></p> <ul style="list-style-type: none"> <li>▪ Use pseudo columns</li> <li>▪ Group data</li> <li>▪ Use CONNECT by</li> <li>▪ Work with functions</li> <li>▪ Incorporate nested queries</li> <li>▪ Select data from multiple tables</li> </ul> <p><b>Create other Database Objects and Controlling Database Access</b></p> <ul style="list-style-type: none"> <li>▪ Apply sequences, views and indexes</li> <li>▪ Use the data dictionary to obtain information about database objects</li> <li>▪ Create synonyms</li> <li>▪ Develop, grant and revoke database privileges</li> </ul>	<p><b>Apply SQL*Plus to access an Oracle Database</b></p> <ul style="list-style-type: none"> <li>▪ Start SQL*Plus</li> <li>▪ Connect to and disconnecting from a database</li> <li>▪ Use HOST and SPOOL command</li> </ul> <p><b>Use SQL*Plus Commands to Format Database Output</b></p> <ul style="list-style-type: none"> <li>▪ Format column commands</li> <li>▪ Create and using variables</li> <li>▪ Use substitution variables</li> <li>▪ Develop and using scripts</li> <li>▪ Design reports</li> </ul> <p><b>Understand PL/SQL and using Basic Programming Tools</b></p> <ul style="list-style-type: none"> <li>▪ Determine PL/SQL capabilities</li> <li>▪ Work with PL/SQL block structure</li> <li>▪ Examine lexical units</li> <li>▪ Make variable declarations</li> </ul> <p><b>Use Program Control Tools</b></p> <ul style="list-style-type: none"> <li>▪ Implement conditional control – branching</li> <li>▪ Examine iterative control – looping</li> </ul> <p><b>Handle PL/SQL Errors and Using Cursors</b></p> <ul style="list-style-type: none"> <li>▪ Manage Oracle and user-defined exceptions</li> <li>▪ Define cursor attributes</li> <li>▪ Work with cursor records and parameters</li> <li>▪ Use a cursor FOR loop</li> </ul>