

## Bridge Course

### PL-SQL Programming Language

**Class: TE – IT (A&B)**

**July 14, 2017**

#### **Gap Identification:**

Subjects like Database System & Advanced Database System from academics providing only core implementation of database. To work as a Database Professionals (DBA, Analyst), It is required to have a working knowledge of the programming process and understanding of the functional constructs in programming with database.

#### **Course Description:**

PL/SQL is a combination of SQL along with the procedural features of programming languages. PL/SQL is one of three key programming languages embedded in the Oracle Database, along with SQL itself and Java. Completion of this course prepares the student for a position as an entry level Database Programmer and acts as preparation for Oracle Certification.

#### **Prerequisites:**

Basic understanding of database, source code, text editor and execution of programs and SQL etc.

#### **Course Objectives:**

- Understand the environment and context in which PL/SQL operates.
- Developing logic within PL/SQL program blocks
- Use the PL/SQL conditional constructs and command functions.
- Manage data retrieval with cursors and cursor variables.
- Understand PL/SQL Collections & Object Oriented Concepts

#### **Course Outcomes:**

After Completion of this course, Students will be able to,

- Configure PL/SQL environment.
- Write a simple PL/SQL program and execute it
- Implement PL/SQL program with conditional constructs
- Retrieve data with cursors line by line.
- Use PL/SQL Collections & Object Oriented Concepts in real life applications.

**Details for Course Conduction:**

Sr.No.	No. of Hours	Date		Units Covered
		TEIT A	TEIT B	
1.	2	24/7/17 28/7/17	24/7/17 28/7/17	<b>PL/SQL - Overview</b> Review of Basic SQL Difference between SQL and PL/SQL Features of PL/SQL PL/SQL - Environment Setup
2.	2	31/7/17	31/7/17	<b>PL/SQL Introduction:</b> Basic Syntax Data Types Variables Types & Scope in PL/SQL
		4/8/17	4/8/17	<b>Basics of PL/SQL:</b> Constants and Literals Operators
3.	3	7/8/17 11/8/17	7/8/17 11/8/17	<b>PL/SQL – Control Structure &amp; Loops</b> IF - THEN statement IF-THEN-ELSE statement CASE Statement Basic Loop Statement WHILE ,FOR LOOP Statement The Loop Control Statements
		14/8/17	14/8/17	<b>PL/SQL –Strings Functions and Operators</b> Declaring String Variables
4.	3	18/8/17	18/8/17	<b>PL/SQL – Arrays</b> Creating a Varray Type
		1/9/17 4/9/17	1/9/17 4/9/17	<b>PL/SQL –standalone Procedures &amp; - Functions</b> Parts of a PL/SQL Subprogram Creating and deleting standalone Procedure Parameter Modes Methods for Passing Parameters Creating and Calling a Function Recursive Functions
5.	1	8/9/17	8/9/17	<b>PL/SQL – Cursors</b> Cursors Types Cursor Example
6.	2	11/9/17 15/9/17	11/9/17 15/9/17	<b>PL/SQL - Exceptions handling</b> Defining exceptions User-defined Exceptions

7.	1	18/9/17	18/9/17	<b>PL/SQL – Packages</b> Package Specification Using the Package Elements
8.	1	22/9/17	22/9/17	<b>PL/SQL -Records</b> Table-based Cursor-based records User-defined records
9.	2	25/9/17 6/10/17	25/9/17 6/10/17	<b>PL/SQL -Using LOBS</b> Large Objects (LOBs) Creating Tables-LOB Working with LOB values Inserting, Updating & Deleting Values in LOBs Populating Lobs DBMS_LOB Routines Using B-FILE
10.	1	13/10/17	13/10/17	<b>Review Test</b>

#### Reference Books:

1. Oracle PL/SQL Programming, 6th Edition by Steven Feuerstein, Bill Pribyl
2. Oracle PL/SQL by Example by Benjamin Rosenzweig; Elena Rakhimov
3. Advanced Oracle PL/SQL Developer's Guide - Saurabh K. Gupta.

**E-Books:** [//allthingsoracle.com/oracle-plsql-programming](http://allthingsoracle.com/oracle-plsql-programming)

#### Digital Reference:

1. [www.tutorialspoint.com/plsql](http://www.tutorialspoint.com/plsql)
2. [www.plsqltutorial.com/](http://www.plsqltutorial.com/)

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**Faculty Coordinators:HOD-IT      Dean academic/Principal**

Ms.Vandana Munde    Dr. Rajesh Bansode

Mr. Namdeo Badhe



**TCET**  
**DEPARTMENT OF INFORMATION TECHNOLOGY (IT)**  
Credit Based Grading Scheme(Revised - 2012) - University of Mumbai  
**CBGS-2012(R)**

