



GUJARAT TECHNOLOGICAL UNIVERSITY
(Established under Gujarat Act No. 20 of 2007)

ગુજરાત ટેકનોલોજીકલ યુનિવર્સિટી
(ગુજરાત અધિનિયમ ક્રમાંક: ૨૦/૨૦૦૭ દ્વારા સ્થાપિત)

No: GTU/CCE/10219

Date: 14/10/2019

CIRCULAR

GTU-Graduate School of Engineering and Technology (GTU-GSET) is going to start a **short term certificate course** under Centre for Continuing Education (CCE) of GTU. The detail is mentioned below.

Course Title: Database Programming with PL/SQL

Place where classes conducted: GTU, Chandkheda

Significance, Objective and Outcome: Annexure-1

Course Syllabus: Annexure-2

Course Duration

50 hours (Teaching- on campus)

30 hours (Project- on campus/off campus)

4 hours (Evaluation- on campus)

Course Period: From 9th Nov., 2019 to 18th Jan., 2020 (6 hours per week)

Course Fees: Rs.2,700/- per candidate (to be paid online as per process described below)

Who can join? Any candidate having basic knowledge of SQL and database management can join the course

Certification: After successful completion of this course, a certificate will be issued by GTU to eligible candidates.

Interested candidates have to

- Pay fees of Rs.2,700/- online (STEP-1)
- Register in course latest by 31st October, 2019 (STEP-2)



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STEP-1 For online payment of fees

- Visit <https://www.onlinesbi.com/sbicollect/icollecthome.htm>
- Select state as **Gujarat** and type of institution as **Educational Institutions**.
- On next page, select **Gujarat Technological University**.
- On next page, select payment category as **Fees Under Centre for Continuing Education**.
- Write **NA** in **Name of Proposing Institute/Organization/Centre**
- Write **Database Programming with PL/SQL** in **Title of Course**.
- Write **NA** in
 - Course Co-ordinator name
 - Contact No of course co-ordinator
 - Email Id of course co-ordinator
 - Number of candidates enrolled
- Write **2700** in **Fees per candidate** and **Fees to be deposited in GTU**.
- Write **current date** in **Date of Birth of course co-ordinator**.
- **In last five fields**, write **Your name, Date of birth, Mobile number, E-mail ID** and enter captcha.

After online payment, note down the bank reference number starting with "DUxxxxxx".

STEP-2 Click on below given link

[Apply online](#)

Last date to apply online for this course: 31st Oct., 2019

For any query, call us on 9824642969 (Mahesh Panchal) or write to us at: cce@gtu.edu.in

Sd/-
Registrar



Annexure-1

Short Term Course on

Database Programming with PL/SQL

1.1 Significance

This course will make the candidates' fundamental knowledge of databases, querying the databases strong. It also prepares the candidates for managing the database projects ranging from a single unit level to enterprise level.

1.2 Objectives

- To provide practical knowledge of procedural extension language for SQL.
- To examine the characteristics of PL/SQL and how it is used to extend and automate SQL to administer the database.
- To apply the database programming skills in a project that challenges candidates to program, implement, and demonstrate a database solution for a business or organization.

1.3 Outcome

After successfully completion of this course, a candidate will able to:

- design, build and manage database applications
- write PL/SQL codes for developing stored procedures, functions, triggers and packages
- improve data security, performance and integrity
- perform OLAP functions on data cube



Annexure-2

Short Term Course on

Database Programming with PL/SQL

Detailed Course Syllabus

Sr. No.	Topic	Sub-topic(s)	Planned No. of Hours (Theory/Practical)
1.	Fundamentals	<ul style="list-style-type: none">• Introduction to PL/SQL• Benefits of PL/SQL• Creating PL/SQL Blocks	2
2.	Defining Variables and Datatypes	<ul style="list-style-type: none">• Using Variables in PL/SQL• Recognizing PL/SQL Lexical Units• Recognizing Data Types• Using Scalar Data Types• Writing PL/SQL Executable Statements• Nested Blocks and Variable Scope• Good Programming Practices	3
3.	Using SQL in PL/SQL	<ul style="list-style-type: none">• Review of SQL DML• Retrieving Data in PL/SQL• Manipulating Data in PL/SQL• Using Transaction Control Statements	3
4.	Program Structures to Control Execution Flow	<ul style="list-style-type: none">• Conditional Control: IF Statements• Conditional Control: CASE Statements• Iterative Control: Basic Loops• Iterative Control: WHILE and FOR Loops• Iterative Control: Nested Loops	2
5.	Using Composite Datatypes	<ul style="list-style-type: none">• User-Defined Records• Indexing Tables of Records	2
6.	Using Cursors and Parameters	<ul style="list-style-type: none">• Introduction to Explicit Cursors• Using Explicit Cursor Attributes• Cursor FOR Loops• Cursors with Parameters• Using Cursors for UPDATE• Using Multiple Cursors	5
7.	Exception Handling	<ul style="list-style-type: none">• Handling Exceptions• Trapping Oracle Server Exceptions• Trapping User-Defined Exceptions• Recognizing the Scope of Exceptions	4
8.	Using and Managing Procedures	<ul style="list-style-type: none">• Creating Procedures• Using Parameters in Procedures• Passing Parameters	5



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9.	Using and Managing Functions	<ul style="list-style-type: none">• Creating Functions• Using Functions in SQL Statements• Review of the Data Dictionary• Managing Procedures and Functions• Review of Object Privileges• Using Invoker's Rights and Autonomous Transactions	6
10.	Using and Managing Packages	<ul style="list-style-type: none">• Creating Packages• Managing Package Concepts• Advanced Package Concepts	5
11.	OLAP Functions	The various OLAP functions, cube, model clause, roll up and grouping functions	3
12.	Improving PL/SQL Performance	<ul style="list-style-type: none">• Using Dynamic SQL• Improving PL/SQL Performance	3
13.	Using and Managing Triggers	<ul style="list-style-type: none">• Introduction To Triggers• Creating DML Triggers, Part I• Creating DML Triggers, Part II• Creating DDL and Database Event Triggers• Managing Triggers	4
15.	Using the PL/SQL Compiler	<ul style="list-style-type: none">• Using PL/SQL Initialization Parameters• Displaying Compiler Warning Messages• Using Conditional Compilation• Hiding Your Source Code	3
