

Course code	Course Title	L	T	P	C
BITE302P	Database Systems Lab	0	0	2	1
Pre-requisite	BITE201L, BITE201P	Syllabus version			
		1.0			
<b>Course Objectives:</b>					
1. To understand, analyze and design databases 2. To work on existing database system, and create new relational database and analyse the design.					
<b>Course Outcomes:</b>					
1. Use of SQL interface of a RDBMS package to create, secure, populate and query of DB 2. Formulate query using SQL, solutions to a usage of query and data update problem 3. Use procedural language to develop comprehensive solutions for all type of applications					
<b>Indicative Experiments</b>					<b>Hours</b>
1.	<b>Database creation</b> Viewing all databases - Creating a Database - Viewing all Tables in a Database - Creating Tables - Dropping / Truncating/Renaming Tables.				2 Hours
2.	<b>Schema Refinement</b> Alter table for new column - new domain size - rename a column with new domain type - set the new constraints to the table - drop the constraints/modify constraints, etc.				4 Hours
3.	<b>Database manipulation</b> Inserting / Updating / Deleting Records in a Table - Using transaction control commands – commit, rollback and save point				2 Hours
4.	<b>For a given set of relational schemas, perform the following</b> Simple Queries - Simple Queries with Aggregate functions - Queries with Aggregate functions (group by and having clause).				4 Hours
5.	<b>SET Operators and Built-in Functions</b> Union, Intersection, Minus, and Queries involving Date Functions - String Functions and Math Functions				4 Hours
6.	<b>Complex Queries (Nested and Join Queries)</b> Join Queries-Inner Join, Outer Join - Subqueries-With IN clause - With EXISTS clause				6 Hours
7.	<b>Views</b> Creating Views (with and without check option) - Dropping views - Selecting from a view.				2 Hours
8.	<b>PL/SQL Programs</b> <ul style="list-style-type: none"> <li>• Variables, Constants, loops, conditionals, etc.</li> <li>• Sample program using FOR loop to insert ten rows into a database table.</li> </ul>				2 Hours
9.	<b>PL/SQL</b> Block, Cursor, Procedure, and Functions				2 Hours
10.	<b>PL/SQL – Trigger</b>				2 Hours
<b>Total Laboratory Hours</b>					<b>30 hours</b>
<b>Text Books</b>					
1	Bob Bryla, Kevin Loney, "Oracle Database 12c The Complete Reference", 2013,				

2	Illustrated Edition, McGraw-Hill Education, (Oracle Press). Steven Feuerstein, Bill Pribyl, "Oracle PL/SQL Programming", 2014, 6 <sup>th</sup> Edition, O'Reilly Media, Inc.				
Mode of Assessment: Continuous Assessments, Final Assessment Test					
Recommended by Board of Studies		20-05-2022			
Approved by Academic Council		No. 66	<table border="1"> <tr> <td data-bbox="928 396 1046 430">Date</td> <td data-bbox="1046 396 1406 430">16-06-2022</td> </tr> </table>	Date	16-06-2022
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