



**PARVATHANENI BRAHMAYYA
SIDDHARTHA COLLEGE OF ARTS & SCIENCE**

Autonomous

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Re-accredited at 'A+' by the NAAC

Course Code				22ANP301			
Title of the Course				Database Management using SQL Lab			
Offered to:				MBA Business Analytics			
L	0	T	0	P	4	C	2
Year of Introduction:		2024-25		Semester:			3
Course Category:		CORE LAB		Course Relates to:		Global	
Year of Revision:		NA		Percentage:		NA	
Type of the Course:				Skill Development			
Crosscutting Issues of the Course :				NA			
Pre-requisites, if any				Basic Computer Knowledge			

Legend:

Course Description:

This course provides a comprehensive introduction to SQL, covering both basic and advanced topics related to querying and manipulating databases. You'll learn how to work with large datasets and how to design efficient queries to retrieve meaningful insights. The course is practical in nature and will involve hands-on exercises with database systems like MySQL, PostgreSQL, or SQL Server.

Course Aims and Objectives:

S. N O	COURSE OBJECTIVES
1	Explain the structure and components of a relational database, including tables, rows, columns, keys (primary and foreign), and relationships between tables.
2	Understand and apply different SQL data types (e.g., strings, numbers, dates) correctly in queries.
3	Use bulk operations to manage large datasets efficiently.
4	Construct subqueries and nested queries to retrieve complex data from related tables.
5	Apply built-in SQL functions such as aggregation functions (COUNT, SUM, AVG, MIN, MAX), string manipulation, date/time functions, and mathematical functions.

Course Outcomes

At the end of the course, the student will be able to...

CO NO	COURSE OUTCOME	B T L	P O	P S O
CO1	Define a well-structured relational database schema that efficiently organizes data using tables, primary keys, and foreign keys.	K 1	2, 3,7	1
CO2	Apply complex queries, including subqueries, unions, and set operations.	K 3	2,3	1
CO3	Choose bulk data operations and handle large datasets effectively.	K 1	1, 3	2

CO4	Apply SQL functions to manipulate strings, dates, numbers, and perform calculations.	K3	3,7	2
CO5	Build SQL security features to protect sensitive data and manage user permissions.	K3	3,7	2

For BTL: **K1: Remember; K2: Understand; K3: Apply; K4: Analyze; K5: Evaluate; K6: Create**

CO-PO MATRIX									
CO NO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
CO1		3	2				3	3	
CO2		3	3					2	
CO3	2		3						3
CO4			3				3		3
CO5			3				3		3

Use the codes 3, 2, 1 for High, Moderate and Low correlation Between CO-PO-PSO respectively

Course Structure

This lab list covers the key areas of a Database management using SQL lab course, providing hands-on practice with SQL Server Express edition.

S.no	Program Name
1	Installation of SQL Software.
2	DDL commands, DML commands, DCL commands.
3	SQL constraints.
4	Insert the values to creating tables.
5	Select statement.
6	Where clause
7	Comparison operators
8	Logical Operators
9	Order by Clause
10	SQL functions
11	Displaying data from multiple tables. (joins)
12	Group by clause.
13	Update, delete.
14	Sub queries

Lab Manual:

1. Dusan Petkovic, 2020, Microsoft SQL Server 2019: A Beginner's Guide, Seventh Edition - McGraw Hill

References:

1. Alan Beaulieu – 2009, Learning SQL, 2nd Edition, O'Reilly Media, Inc.
2. Paul Wilton, John Colby – 2005, Beginning SQL, Wiley Publishing, Inc.

Evaluation Procedure for Lab Examination

Internal Continuous Assessment (30 Marks)

- **Total:** 30 Marks
 - 30 marks will be awarded based on continuous assessment.
 - Day-to-day work in the laboratory will be evaluated by the concerned laboratory teacher based on rubrics, including results, regularity, record maintenance, and viva.
 - Laboratory teachers must ensure that every student completes at least 90% of the lab assessments.
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Semester End Practical Examination (Max. Marks: 70)

- **Evaluation Procedure:** 70 Marks
 - **I. Experiments (Exam & Execution):** 55 Marks
 - **II. Viva:** 10 Marks
 - **III. Record:** 5 Marks
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