

CSE12113	Database Management Systems Lab	L	T	P	C
Version 1.0	Contact Hours -30	0	0	2	1
Pre-requisites/Exposure	Basic human ethics				
Co-requisites	--				

Course Objectives:

- To explain basic database concepts, applications, data models, schemas and instances.
- To demonstrate the use of constraints and relational algebra operations.
- To describe the basics of SQL and construct queries using SQL.
- To emphasize the importance of normalization in databases.
- To facilitate students in Database design
- To familiarize issues of concurrency control and transaction management.

Course Outcomes:

On completion of this course, the students will be able to

CO1. Organize the basic concepts of Database Systems and Applications.

CO2. Construct the basics of SQL and construct queries using SQL in database creation interaction.

CO3. Define a commercial relational database system (Oracle, MySQL) by writing SQL using the system.

Course Description:

This course introduces the core principles and techniques required in the design and implementation of database systems. This introductory application-oriented course covers the relational database systems RDBMS - the predominant system for business scientific and engineering applications at present. It includes Entity-Relational model, Normalization, Relational model, Relational algebra, and data access queries as well as an introduction to SQL. It also covers essential DBMS concepts such as: Transaction Processing, Concurrency Control and Recovery. It also provides students with theoretical knowledge and practical skills in the use of databases and database management systems in information technology applications.

Course Content:

Units	Lecture Hours
Experiment 1: Familiarization of structured query language. Experiment 2: Table Creation. Experiment 3: Insertion, Updation, Deletion of tuples. Experiment 4: Executing different queries based on different functions. Experiment 5: Performing joining operations. Experiment 6: Nested Queries. Experiment 7:	

Units	Lecture Hours
Use of aggregate functions. Experiment 8: Use of group functions. Experiment 9: Use of order by functions. Experiment 10: Arithmetic operations. Experiment 11: Trigger using SQL. Experiment 12: Introduction to PL/SQL. Experiment 13: Report generation of various queries. Experiment 14: Merging Data Bases with front end using ODBC connection. Experiment 15: SQL Injection on a non-harmful test page.	

Text Books:

- Database System Concepts, 6th Edition by Abraham Silberschatz, Henry F. Korth, S. Sudarshan, McGraw-Hill
- Principles of Database and Knowledge – Base Systems, Vol 1 by J. D. Ullman, Computer Science Press.

Reference Books:

- Fundamentals of Database Systems, 5th Edition by R. Elmasri and S. Navathe, Pearson Education
- Foundations of Databases, Reprint by Serge Abiteboul, Richard Hull, Victor Vianu, Addison-Wesley.

Modes of Evaluation:

Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Continuous Assessment	ETE
Weightage (%)	50	50

Relationship between Course Outcomes (COs) and Program Outcomes (POs):

1=weakly mapped

2= moderately mapped 3=strongly mapped

Course Code	Course Name	COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3
CSE12113	Database Management Systems Lab	CO12111 3.1	3	1	3	2	3	1	1	-	3	-	-	2	3	3	2
CSE12113	Database Management Systems Lab	CO12111 3.2	2	1	3	2	2	3	1	-	2	-	-	2	2	3	2

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CSE12113	Database Management Systems Lab	CO12113.3	1	2	3	2	3	2	1	-	2	-	-	1	2	3	2
CSE12113	Database Management Systems Lab	CO12113	2.0	1.33	3.0	2.0	2.67	2.0	1.0	-	2.33	-	-	1.67	2.33	3.0	2.0