

Course: VSC
Database Management System

Semester: I	Credits: 2	Subject Code: BCVSC12301	Lectures: 30
--------------------	-------------------	---------------------------------	---------------------

Course Outcomes:

At the end of this course the learner will be able to,

- CO1: Recognize the basics of SQL queries.
- CO2: Relate and gain knowledge of database concepts.
- CO3-Design the database by using normalization concepts.
- CO4: Apply SQL queries and solve the basic problems related to database.

Unit 1:Introduction to Database Management System	15
<ul style="list-style-type: none"> • File structure • Disadvantages of file processing system • Introduction to Database • Basic Concept and Definitions : Data and Information , Data Vs Information, Data Dictionary, Data Item or Field, Record • Definition of DBMS • Applications of DBMS • File processing system Vs DBMS • Advantages and Disadvantages of DBMS • Users of DBM-: Database Designers, Application programmer, Sophisticated Users, End Users • Views of Data • Entity, Attributes, • Constraint : Entity, Referential, User • Data Models - Object Based Logical Model, Entity Relationship Data Model • Record Base Logical Model - Relational Model, Network Model, Hierarchical Model • Entity Relationship Diagram (ERD): Extended features of ERD • Overall system structure 	

Unit2:Relational Model , SQL and Relational Database Design	15
<ul style="list-style-type: none"> • Introduction • Terms: Relation, Tuple, Attribute,Cardinality,Degree of relationship set, Domain • Keys : Super Key, Candidate Key, Primary Key, Foreign Key • Relational Algebra Operations : Select, Project, Union, Difference, Intersection, Cartesian Product, Natural Join • Examples on the operations • Types of Database- Centralized Database, Distributed Database, NoSQL database 	



Board of Studies	Department	Name	Signature
Chairperson (HoD)	BBA(CA)	Mrs. SmitaBorkar	<i>[Handwritten Signature]</i>

7/6/23

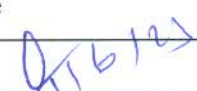
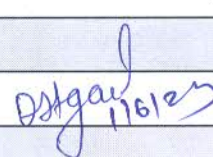
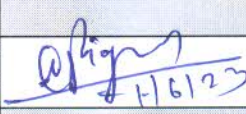
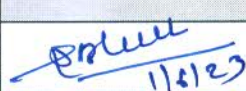
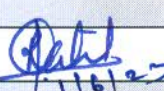
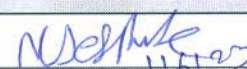
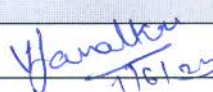
<ul style="list-style-type: none"> • Introduction • History Of SQL, Features of SQL • Data types • Basic structure: select, from clause • Components of SQL- DDL, DML, DCL • Simple Queries: • Using and , or, not • Pattern matching –like operator • Between, distinct , order by • Nested Queries • Aggregate functions • Introduction • Anomalies of unnormalized database • Functional Dependency: Decomposition • Normalization: • Normal Form -1 NF, 2 NF, 3 NF 	
--	--

Recommended Text Books:

- Henry, korth, A Silberschatz, *Database System Concepts*, Tata McGraw-Hill publication fifth edition 2006.
- BayrossIvan, *SQL, PL/SQL The Programming Language* , BPB Publication

Reference Books:

- Henry korth, A Silberschatz, *Database System Concepts*, Tata McGraw-Hill publication fifth edition 2006.
- BayrossIvan, *SQL, PL/SQL The Programming Language* , BPB Publication

Board Of Studies	Name	Signature	
Chairperson (HoD)	Asst. Prof. Smita Borkar		
Faculty	Asst Prof Deepali Gupta		
Faculty	Asst. Prof. Monika Rajguru		
Subject Expert (Outside SPPU)	Dr. Sagar Jambhorkar		
Subject Expert (Outside SPPU)	Dr. Sachin Bhoite		
VC Nominee(SPPU)	Prof. Ranjit Patil		
Industry Expert	Mr. Nilkanth Deshpande		
Alumni	Ms. Vaishanvi Javalkar		



Board of Studies	Department	Name	Signature
Chairperson (HoD)	BBA(CA)	Mrs. Smita Borkar	