

Department of Computer Engineering
Atal Bihari Vajpayee Govt. Institute of Engineering & Technolog,
Pragatinagar, Gumma (H.P) – 171202

LESSON PLAN

| | |
|----------------------|----------------------------|
| Program Name | Computer Engineering |
| Subject Name | Database Management System |
| Subject Code | ITPC204 |
| Semester | 4th |
| Subject Teacher Name | Er. Sweety Rangta |

Evaluation Scheme

| Sr. No. | Subject Name | Study Scheme (Hrs/Week) | | Marks in Evaluation Scheme | |
|-----------------|--|-------------------------|----|----------------------------|------------------|
| | | Th | Pr | Internal Assessment | External Asement |
| 1 | Database Management System | 4 | – | 40 | 60 |
| Reference Books | 1. Fundamentals of Database Systems by ElmasriRamez&NavatheShamkant, Pearson Education | | | | |
| | 2, MySQL online documentation at https://dev.mysql.com/doc/ | | | | |
| | 3.. https://www.geeksforgeeks.org/dbms/ | | | | |
| | 4. https://www.javatpoint.com/dbms-tutorial | | | | |

Course Outcomes (COs)

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|-------|---|
| CO-1. | Understand the basic terminology associated with database management. |
| CO-2. | Design an optimal database for a given basic application. |
| CO-3. | Apply normalization techniques while designing databases. |
| CO-4. | Use SQL commands to carry out various database operations |

Teaching Plan

| Unit No. | Name of Topic | Proposed Date | Actual Date | Remarks |
|----------|---|----------------------------|-------------|---------|
| 1 | Database Systems, Database and its Purpose | 27 Jan 2026 | | |
| | Comparison of Database Approach with File-based and Traditional Record Keeping Approaches | 28 Jan 2026 | | |
| | Advantages and Disadvantages of Database Approach, Classification of Database Users | 30 Jan, 2 Feb 2026 | | |
| | Role of DBA | 3 Feb 2026 | | |
| | Revision – Unit 1 | 5 Feb 2026 | | |
| 2 | Data Models, Schemas, and Instances | 6 Feb 2026 | | |
| | ANSI/SPARC Architecture of a Database System | 9 Feb, 10 Feb 2026 | | |
| | External, Conceptual, Internal Levels, and Mappings | 12 Feb 2026 | | |
| | Data Independence (Logical & Physical) | 13 Feb 2026 | | |
| | Revision – Unit 2 | 16 Feb 2026 | | |
| 3 | Relational Database Model: Relations, Attributes, Tuples, Domains | 17 Feb, 19 Feb 2026 | | |
| | Keys: Primary, Candidate, Alternate, Super Key | 20 Feb, 23 Feb 2026 | | |
| | Foreign Keys, Constraints | 24 Feb 2026 | | |
| | ER Model: Entities, Attributes, Keys | 26 Feb 2026 | | |
| | Relationships, Roles, Structural Constraints | 27 Feb 2026 | | |
| | ER Diagrams | 2 Mar, 3 Mar 2026 | | |
| | Revision – Unit 3 | 5 Mar 2026 | | |
| – | Class Test 1 (Units 1–3) | 10 Mar 2026 | | |
| 4 | Functional Dependencies | 12 Mar 2026 | | |
| | Non-Loss Decomposition | 13 Mar 2026 | | |
| | Normal Forms (1NF, 2NF, 3NF) | 16 Mar, 17 Mar 2026 | | |
| | BCNF | 19 Mar 2026 | | |
| | Revision – Unit 4 | 20 Mar 2026 | | |
| 5 | Introduction to MySQL and Features | 23 Mar 2026 | | |
| | Database Objects | 24 Mar 2026 | | |
| | MySQL Naming Rules, Data Types | 26 Mar, 27 Mar 2026 | | |
| | Operators in MySQL | 30 Mar 2026 | | |
| | MySQL System Schema, Users and Roles | 31 Mar, 2 Apr 2026 | | |
| | Revision – Unit 5 | 3 Apr 2026 | | |
| – | Class Test 2 (Units 4–5) | 9 Apr 2026 | | |
| 6 | DDL Statements | 13 Apr 2026 | | |
| | DML Statements | 14 Apr 2026 | | |

| Unit No. | Name of Topic | Proposed Date | Actual Date | Remarks |
|----------|---|---------------------|-------------|---------|
| | SELECT Clauses | 16 Apr, 17 Apr 2026 | | |
| | Join Operations | 20 Apr 2026 | | |
| | Subqueries and Set Operations | 21 Apr 2026 | | |
| | Transaction Control Statements | 23 Apr 2026 | | |
| | SQL Numeric Functions | 24 Apr 2026 | | |
| | SQL Date & Time Functions | 27 Apr, 28 Apr 2026 | | |
| | SQL String & Aggregate Functions | 30 Apr, 4 May 2026 | | |
| | Revision – Unit 6 | 5 May 2026 | | |
| – | House Test (All Units) | 12 May 2026 | | |
| – | Discussion of House Test & Doubt Clearing | 14 May 2026 | | |
| – | Final Revision | 18 May 2026 | | |
| – | Buffer Week | 21 May 2026 | | |
| – | Final Revision & Preparation | 27 May 2026 | | |

Assignment

| Assignment No | Contents of Syllabus Covered | Proposed Date | Actual Date | Remarks |
|---------------|------------------------------|----------------|-------------|---------|
| A-1 | Unit -1 and Unit - 2 | Feb 11, 2026 | | |
| A-2 | Unit-3 and Unit-4 | Mar 04, 2026 | | |
| A-3 | Unit-5 and unit-6 | April 22, 2026 | | |

House Test/Class Test

| Name of Test | Syllabus for Test | Proposed Date | Actual Date | Remarks |
|----------------|-------------------|--------------------------------|-------------|---------|
| Class Test - 1 | Unit -1,2,3 | As per HPTSB Academic Schedule | | |
| Class Test - 2 | Unit 4 ,5 | | | |
| House Test - 1 | Unit-1,2,3,4,5,6 | | | |

Signature of Course Teacher with Name

Sweety Ranga

Approved By
OIC/HOD/Principal