

Lesson Plan

Name of the Faculty : **Ms. Gurpreet Bansal (Asstt. Professor)**

Discipline : **BCA**

Semester : **3rd**

Subject : **Fundamentals of DBMS (BCA-205 B)**

Lesson Plan Duration : **15 weeks (from July, 2018 to Dec., 2018)**

Work Load (Lecture/Practical) per week (in hours):Lecture: 3, Practical:2

| Week | Theory | | Practical – Software Lab -I | |
|------|-----------------|---|-----------------------------|------------------------------|
| | Lecture Day | Topic(including Assignment/Test) | Practical Day | Topic |
| 1st | 1 st | Data, Information, Records and files. | 1 | Basic Database Concepts |
| | 2 nd | Traditional file –based Systems-File Based Approach-Limitations of File Based Approach, | 2 | Intro to MS Access |
| | 3 rd | Database Approach- Characteristics of Database Approach, | | |
| | T1 | Tutorial---review of lectures | | |
| 2nd | 4 th | Advantages and disadvantages of database system, | 3 | Creating Databases In Access |
| | 5 th | components of database system, | 4 | Creating Databases In Access |
| | 6 th | Database Management System (DBMS), Components of DBMS Environment, | | |
| | T2 | Tutorial---problem/review of lectures | | |
| 3rd | 7 th | DBMS Functions and Components | 5 | Creating Databases In Access |
| | 8 th | DBMS users, Advantages and Disadvantages of DBMS, | 6 | Creating Databases In Access |
| | 9 th | DBMS languages. | | |
| | T3 | Tutorial---problem/ | | |

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| | | review of lectures | | |
| 4th | 10 th | Roles in the Database Environment - Data and Database Administrator, Database Designers, Applications Developers and Users | 7 | Build a new database with related tables. |
| | 11 th | Three Levels of Architecture, External, Conceptual and Internal Levels,. | 8 | Build a new database with related tables. |
| | 12 th | Schemas, Mappings and Instances | | |
| | T4 | Tutorial---problem/review of lectures | | |
| 5th | 13 th | Data Independence – Logical and Physical Data Independence. | 9 | Manage the data in a table. |
| | 14 th | Classification of Database Management System, | 10 | Manage the data in a table. |
| | 15 th | Centralized and Client Server architecture to DBMS. | | |
| | T5 | Tutorial---problem/review of lectures | | |
| 6th | 16 th | Data Models: Records-based Data Models, | 11 | Query a database using different methods. |
| | 17 th | Object-based Data Models, | 12 | Query a database using different methods. |
| | 18 th | Assignment on above topics/ Test | | |
| 7th | 19 th | Physical Data Models and Conceptual Modeling. | 13 | Design a form |
| | 20 th | Intro to Entity-Relationship Model | 14 | Design a form |
| | 21 st | Entity Types, Entity Sets, Attributes | | |
| | T6 | Tutorial---problem/review of lectures | | |
| 8th | 22 nd | RelationshipTypes, Relationship Instances | 15 | Sort, Retrieve, Analyze Data |

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| | 23 rd | ER Diagrams, | 16 | Sort, Retrieve, Analyze Data |
| | 24 th | Assignment on above topics/ Test | | |
| | T7 | Tutorial---problem/review of lectures | | |
| 9th | 25 th | ER Diagrams, | 17 | Revision / Exercises |
| | 26 th | Abstraction and integration | 18 | Revision / Exercises |
| | 27 th | Basic Concepts of Hierarchical Data Model, | | |
| | T8 | Tutorial---problem/review of lectures | | |
| 10th | 28 th | Network Data Model | 19 | Generate a report. |
| | 29 th | Relational Data Model:- Introduction | 20 | Generate a report. |
| | 30 th | Relational Model Terminology- Relational Data Structure, Database Relations | | |
| | T9 | Tutorial---problem/review of lectures | | |
| 11th | 31 st | Properties of Relations,Keys, Domains, Integrity Constraints over Relations | 21 | Import and export data. |
| | 32 nd | Functional Dependencies | 22 | Import and export data. |
| | 33 rd | Normalization | | |
| | T10 | Tutorial---problem/review of lectures | | |
| 12th | 34 th | Normalization | 23 | Access with Other Applications |
| | 35 th | Database protection | 24 | Exercises to create Databases |
| | 36 th | Database protection | | |
| | T11 | Tutorial---problem/review of lectures | | |
| 13th | 37 th | Transaction management | 25 | Exercises to create Databases |
| | 38 th | Concurrency | 26 | Exercise- creating queries & Forms |
| | 39 th | Assignment on above topics/ Test | | |
| | T12 | Tutorial---problem/ review of lectures | | |

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| 14th | 40 th | Distributed database: Structure of distributed database | 27 | Exercise- summarizing data and creating reports. |
| | 41 st | Parallel databases | 28 | Exercise- printing and exporting reports. |
| | 42 nd | Revision | | |
| 15th | 43 rd | Problem session | 29 | Revision & Exercises |
| | 44 th | Problem session | 30 | Revision & Exercises |
| | 45 th | Problem session | | |

(Ms. Gurpreet Bansal)

Asstt . PROFESSOR