M.C.A. (Commerce)
Part II, Semester III.
Course Title -: Advanced Database Management System.
Course Code -: 302.
(2013 Pattern)

Objectives -:
1. To know OODBMS and ORDBMS concepts
2. To know ADBMS concepts

Chapter No.	Topics	No. of Lectures	Reference books
1	**OODBMS & ORDBMS** 1.1 Overview of Object-Oriented concepts & characteristics 1.2 Objects, OIDs and reference types 1.3 Database design for ORDBMS 1.4 Comparing RDBMS, OODBMS & ORDBMS	8	1,2
2	**Advanced Database Management System –** **Concepts & Architecture** 2.1 Spatial data management 2.2 Web based systems Overview of client server architecture, Databases and web architecture, N-tier Architecture, Business logic – SOAP 2.3 Multimedia databases 2.4 Mobile database	6	1,4

3	**Querry Processing :**
	3.1 Steps for processing a query.
	3.2 Sorting
	3.3 Join Operation
	   3.3.1 Nested Loop Join
	   3.3.2 Block Nested Loop Join
	3.4 Hash Join
	   3.4.1 Basics
	   3.4.2 Recursive partioning
	   3.4.3 Handling of overflow
		6	1,3

4	**Parallel databases** 4.1 Introduction 4.2 Parallel database architecture 4.3 I/O parallelism	6	1,5

	Inter-query and Intra-query parallelism, Interoperational and Intra-operational parallelism 4.4 Design of parallel systems		
5	**Distributed Databases** 5.1 Introduction, 5.2 DDBMS architectures 5.3 Homogeneous and Heterogeneous Databases 5.4 Distributed data storage, 5.5 Distributed transactions 5.6 Commit protocols 5.7 Concurrency control & recovery in distributed databases 5.8 Directory systems	**6**	1,4
6	**Information Retrieval & XML data** 6.1 Introduction to information retrival 6.2 Indexing for Text search 6.3 Web search engines 6.4 Managing text in DBMS 6.5 Data model for XML 6.6 XML DTD's, 6.7 Domain specific DTD's 6.8 Querying XML data	**18**	1,5
	Total	**50**	

Recommended Books :-
1. Database system concepts', 5th Edition –Abraham Silberschatz, Henry Korth, S, Sudarshan, (McGraw Hill International)
2. Data Mining: Concepts and systems - Jiawei nan, Micheline Kamber, (Morgan Kaufmann publishers)
3. Database systems : "Design implementation and management"- Rob Coronel, 4th Edition, (Thomson Learning Press)
4. Database Management Systems - Raghu Ramkrishnan, Johannes Gehrke Second Edition, (McGraw Hill International)
5. Database Management System - Alexis Leaon, Mathews Leon, (leon press)
6. Fundamentals of Database Systems - Remez Elmasri , Shamkant Navathe