Course Title	**Advanced Database Management Systems Lab**		
Course Code	**DC-220-L**		
Credit Hours	3 (2,1)		
Category	Computer Science Elective		
Prerequisite	CC-215 Database Systems		
Co-Requisite	None		
Follow Up	None		
Course Learning Outcomes (CLOs)	At the end of the course, the students will be able to:	**BT**	**PLO**
	CLO1: Understanding advance data models, technologies and approaches for building distributed database systems.	C2 (Understand)	1, 2
	CLO2: Applying the models and approaches in order to become enabled to select and apply appropriate methods for a particular case	C3 (Apply)	3, 4
	CLO3: To develop a database solution for a given scenario/ challenging problem in the domain of distributed database systems.	C3 (Apply)	3, 4
Course Description	Introduction to advance data models such as object relational, object oriented. File organizations concepts, Transactional processing and Concurrency control techniques, Recovery techniques, Query processing and optimization, Database Programming (PL/SQL, T-SQL or similar technology), Integrity and security, Database Administration (Role management, managing database access, views), Physical database design and tuning, Distributed database systems, Emerging research trends in database systems, MONGO DB, NO SQL (or similar technologies)		
Text Book(s)	1. Database Systems: A Practical Approach to Design, Implementation, and Management, 6th Edition by Thomas Connolly and Carolyn Begg 2. Database Management Systems, 3rd Edition by Raghu Ramakrishnan, Johannes Gehrke 3. Database System Concepts, 6th Edition by Avi Silberschatz, Henry F. Korth and S. Sudarshan. 4. Database Systems: The Complete Book, 2nd Edition by Hector Garcia-Molina, Jeffrey D. Ullman, Jennifer Widom		
Reference Material			