

Database Administration and Management

Credit Hours:	3+1	Course Code:	INFT-3104	Prerequisites:	INFT-2109
----------------------	-----	---------------------	-----------	-----------------------	-----------

Course Learning Outcomes (CLOs):

At the end of the course, the students will be able to:	Domain	BT Level*
1. Understand the principles and practice of administering enterprise-level database systems	C	1
2. Explain complex database administration concepts, relevant alternatives and decision recommendations to IT specialists.	C	2
3. Identify Design and implement plans for installing, configuring, and tuning a DBMS, and security, back-up and recovery measures	C	3
4. Analyze the DBMS requirements for specific scenarios	C	3
5. Install/Establish configure, optimize and tune the performance of a DBMS	C	4

* BT= Bloom's Taxonomy, C=Cognitive Domain, P=Psychomotor Domain, A=Affective

Course Contents:

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, Database Administration, Physical database Design and Tuning, Distributed database Systems, Emerging Research Trends in Database Systems, Oracle Database Architecture, Database Installation, Creating Database Using DBCA, Database Instances, ASM Instances, Network Environment, Storage Structures, User Security, Database Auditing and Maintenance, Performance Management, Backup and Recovery Concepts, Moving Data, Database Restart, multi-platform DBA issues, DBA tools

Teaching Methodology:

Lectures, Written Assignments, Practical Labs, Semester Project, Presentations.

Course Assessment:

Mid Term Exam, Home Assignments, Quizzes, Project, Presentations, Final Exam.

Reference Material:

1. Fundamentals of Database Systems by Ramez Elmasri and Shamkant Navathe, Addison Wesley, 7th Edition, 2015; ISBN: 0133970779
2. Database System Concepts by Henry F. Korth and Abraham Silberschatz, McGraw Hill, 6th Edition, 2011, ISBN: 0073523321
3. Concurrency Control and Recovery in Database Systems by Bernstein/Hadzilacos/Goodman, 1987, Addison-Wesley, ISBN: 0201107155
4. Data Base Systems, Design, Implementation and Management , Rob, Coronel, Thomson Course Technology 10th Edition, ISBN: 1111969604
5. Databases and Transaction Processing, Lewis, Bernstein, Kifer, Addison Wesley, 2nd Edition, ISBN: 032126

