Course Specification
(Bachelor)

Course Title:	Database Administration
Course Code:	297CIS-3
Program:	Programming and Database
Department:	Computer Department
College:	Applied College
Institution:	Najran University
Version:	TP-153 20274
Last Revision Date:	1 January 2026

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (.....)					
3H (2+1)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (.....)					
Second Year, Level 4					
4. Course General Description:					
The course provides a basic overview of managing and maintaining a database system, focusing on Oracle database management. Students will learn the fundamental concepts and techniques required for effective database administration. Topics covered include an introduction to database administration, multitenant administration in Oracle, Oracle tablespace management, Oracle user administration, Oracle roles, and Oracle profile administration. Through hands-on exercises and practical examples, students will develop the skills necessary to administer and manage Oracle databases.					
5. Pre-requirements for this course (if any)**:**					
173CIS-3 Database Management systems					
6. Co-requisites for this course (if any)**:**					
None					
7. Course Main Objective(s):					

- Gain a thorough understanding of the fundamental principles and concepts of database administration.
- Develop practical skills in managing and maintaining Oracle databases, with a focus on multitenant administration, tablespace management, user administration, roles, and profiles.
- Learn how to effectively provision and manage pluggable databases within a multitenant environment.

- Acquire the knowledge and techniques necessary to secure and control access to Oracle databases through user administration, role-based access control, and profile management.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	4 Hours per Week	100%
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	30
2.	**Laboratory/Studio**	30
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		60

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	**Demonstrate a solid understanding of the fundamental principles and concepts of database administration.**	**K1**	Lecture Discussion	Directed Methods: - Exams - Assignments - Quizzes

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.2	**Explain the architecture and features of Oracle databases, with a specific focus on multitenant administration, tablespace management, user administration, roles, and profiles.**	**K2**		
2.0	**Skills**			
2.1	**Apply practical techniques for provisioning and managing pluggable databases within a multitenant environment.**	**S1**	•Lecture •Discussion •Lab work •Brainstorming	Directed Methods: - Exams - Assignments - Quizzes
2.2	**Utilize effective methods for securing Oracle databases through user administration, role-based access control, and profile management**	**S2**		
3.0	**Values, autonomy, and responsibility**			
3.1	**Take responsibility for effective time management to ensure meeting the deadlines for course deliverables**	**V1**	**Milestone-based Structure**	**Directed Methods: LMS & Version Control Logs**
3.2				
...				

C. Course Content

No	List of Topics	Contact Hours
1.	**Introduction** • Types of Oracle Database Users • Tasks of a Database Administrator • Install Oracle on Windows and Linux (using Docker) • SQL Statements • About Database Administrator Security and Privileges • Database Administrator Authentication	15
2.	**Multitenant Administration** • The CDB Root and System Container • PDBs • Types of PDBs • Purpose of PDBs • Create a standard PDB • An application container • Key Benefits of Application Containers • Create application container and its PDBs • Create application container • Create Application seed	15
3.	**Mid-Term Exam**	1
4.	**Oracle Tablespace** • CREATE TABLESPACE • DROP TABLESPACE • Extend Tablespace • Temporary Tablespace Tablespace Group	8
5.	**Oracle Users** • CREATE USER • GRANT • REVOKE • ALTER USER • DROP USER • Grant All Privileges to a User • Grant SELECT Object Privilege on One or More Tables to a User • Unlock a User • List Users	9
6.	**Oracle Roles** • CREATE ROLE • SET ROLE	6

	• ALTER ROLE DROP ROLE	
7.	**Oracle Profile** • CREATE PROFILE • ALTER PROFILE • DROP PROFILE	4
8.	**Lab Exam**	2
Total		**60**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm exam	8	20%
2.	Homework's	From 4 to 11	10%
3.	Practical exam	15	20%
4.	Final exam	16	50%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Usha Krishnamurthy, Oracle Database SQL Language Reference, 23c. Oracle®. F47038-10. December 2023 https://docs.oracle.com/en/database/oracle/oracle-database/23/sqlrf/sql-language-reference.pdf
Supportive References	Mark Doran, Padmaja Potineni, Rajesh Bhatiya, Oracle Database Administrator's Guide, 23c, Oracle®. F47036-04. December 2023 https://docs.oracle.com/en/database/oracle//oracle-database/23/admin/database-administrators-guide.pdf
Electronic Materials	https://www.oracletutorial.com/oracle-administration/
Other Learning Materials	Oracle Developer Tools for VS Code (SQL and PLSQL) https://marketplace.visualstudio.com/items?itemName=Oracle.oracledevtools

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	• Computer lab equipped with a sufficient number of Desktop or laptop computers

Items	Resources
	with specifications suitable for running development environments • Internet
Technology equipment (projector, smart board, software)	• Whiteboard • Projector • Software: Oracle 23C, Docker, vscode
Other equipment (depending on the nature of the specialty)	None

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	**Student**	**Direct: Questioners**
Effectiveness of Students assessment	• **Teacher** • **Audit and review committees**	• **Direct: CW & HW** • **Exercises and short quizzes** • **Projects** • **Mid and final paper exams.**
Quality of learning resources	**Teachers and course description committees**	• **Indirect: Benchmarking** • **Self-evaluation** • **External evaluation**
The extent to which CLOs have been achieved	**Teacher**	**Direct: Measuring the learning outcomes**
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	