



MERCER
COUNTY COMMUNITY COLLEGE

COURSE OUTLINE

Course Number	Course Title	Credits
IST 262	Oracle SOL	4
Hours: Lecture/Lab/Other 3/2/0	Co- or Pre-requisite IST 253 IST 109	Implementation Semester & Year Fall 2022

Catalog description:

Introduces Oracle services, including writing SQL statements, creating databases, manipulating data and tables, working with log files, and performing general database administration. Assists students with preparing for series of examinations leading to the Oracle Certified Associate (OCA) Certificate.

General Education Category:

Not GenEd

Course coordinator:

Queen E. Okike, Ed.D.
(609) 570-3464 or Ext. 3464.
okikeq@mccc.edu

Required texts & Other materials:

Introduction to Oracle SQL Expert and Oracle Database Fundamentals 1 Packages from Oracle Corporation.

Course Student Learning Outcomes (SLO):

1. Install and use Oracle services to implement Oracle relational database. [Support ILG# 1, 4, 10, 11; PO# 2, 3]
2. Write simple to advanced readable output of Oracle SQL statements [Support ILG# 1, 2, 4, 10, 11]; PO# 2, 3
3. Display data from multiple tables. [Support ILG# 2, 4, 10, 11; PO# 2, 3]
4. Describe Oracle Architectural Components and Create Oracle Database. [Support ILG# 4, 10, 11; PO# 1]
5. Explain how to use data dictionary; maintain Oracle control and redo log files. [Support LG# 1, 4, 10, 11; PO #1]
6. Illustrate how to manage undo data and Oracle Tables. [Support ILG# 2, 4, 10, 11; PO#1]

Course-specific Institutional Learning Goals (ILG):

Institutional Learning Goal 1. Written and Oral Communication in English. Students will communicate effectively in both speech and writing.

Institutional Learning Goal 2. Mathematics. Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.

Institutional Learning Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.

Institutional Learning Goal 10. Information Literacy: Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.

Institutional Learning Goal 11. Critical Thinking: Students will use critical thinking skills understand, analyze, or apply information or solve problems.

Program Learning Outcomes for Information Technology Database Certificate (PLO)

1. Explain basic concepts of databases;
2. Code using Oracle Structured Query (SQL) Language;
3. Deploy databases on cloud platform.

Units of study in detail – Unit Student Learning Outcomes:

Course Content Details.

Unit I Demonstrate basic skills/knowledge of Oracle relational database and Oracle services.

[Supports Course SLOs # 1]

Learning Objectives

The student will be able to:

- Demonstrate how to do data modeling and normalization.
- Write SELECT statements.
- Illustrate how to sort and restrict data.
- Explain how to limit and sort rows.
- Use single row functions and SQL functions

Unit II Display of Data from Multiple Tables[Supports Course SLOs #2, 3]

Learning Objectives

The student will be able to:

- Create complex statements.
- Identify aggregate data from using group.
- Create subqueries.
- Solve problems with subqueries.

Unit III Write Readable Output with SQL Expert. [Supports Course SLOs # 3]

Learning Objectives

The student will be able to:

- Create substitution variables.
- Write Data Manipulation Language.
- Create and manage tables including constraints.
- Create database objects and define Oracle 9i constraints.

Unit IV

Explain Oracle Architectural Components and Create Oracle Database. [Supports Course SLOs # 4]

Learning Objectives

The student will be able to:

- Explain primary components and database administration tools.
- Manipulate an Oracle instance and create a database.
- Design parameter files, plan and organize a database.

Unit V

Use Data Dictionary, Manage Undo Data and Maintain Control files. [Supports Course SLOs #5, 6]

Learning Objectives

The student will be able to:

- Use data dictionary and maintain control files.
- Use built-in database objects and Control file.
- Explain how to maintain redo log file and manage tablespaces and data files.
- Use online redo log file and manage tablespaces and data files.
- Discuss storage structures and relation, manage undo data and manage table.
- Use logical database, obtaining undo info. and types of indexes.

Evaluation of student learning:

Average of weekly homework assignments (10% per units)	50%
Four Units of Tests:	
Unit 1 & 2	10%
Unit 3	10%
Unit 4	10%
Unit 5	10%
Final Evaluation Examination	10%
Total Structure of Evaluation:	100%