

**DBA 120**  
**DATABASE PROGRAMMING I**

**COURSE DESCRIPTION:**

Prerequisites: CIS 110 or CIS 115

Corequisites: None

This course is designed to develop SQL programming proficiency. Emphasis is placed on data definition, data manipulation, and data control statements as well as on report generation. Upon completion, students should be able to write programs which create, update, and produce reports. Course Hours Per Week: Class, 2. Lab, 2. Semester Hours Credit, 3.

**COURSE OBJECTIVES:**

Upon completion of this course, the student will be able to:

- a. List the major aspects of relational database software.
- b. Explain the advantages of using Oracle.
- c. Build a database structure.
- d. Display database data.
- e. Use Data Definition Language commands.
- f. Use Data Manipulation Language commands.
- g. Utilize database security.
- h. Audit the database.
- i. Handle run-time exceptions.
- j. Create a report on the screen using SQL\*Plus.

**OUTLINE OF INSTRUCTION:**

- I. Introduction
  - A. Terminology
    1. Database management systems
    2. Structures
    3. SQL
    4. Data Definition Language (DDL)
    5. Data Manipulation Language (DML)
  - B. SQL operators
    1. Syntax
    2. Value
    3. Logical
    4. Query expression
  - C. SQL functions, variables, and pseudo-columns
    1. Functions
    2. Variable types
    3. Pseudo-columns

## D. Starting Oracle

## II. Using SQL

### A. Basic commands

1. Creating tables
2. Retrieving information
3. Inserting rows
4. Deleting entries
5. Storing and printing query results
6. Saving and retrieving commands
7. Formatting reports

### B. More Advanced features

1. Joining tables
2. Displaying character values
3. Data values
4. NULL values
5. Using subqueries
6. Tree structured information in tables
7. Advanced reporting techniques
8. Data sharing
9. Data security
10. Using views
11. Data Manipulation Language
12. Data Definition Language
13. Data Control Language
14. Indexes and sequences
15. Snapshots
16. Triggers

### C. Create SQL\* Plus Report 5

## **REQUIRED TEXTBOOKS AND MATERIALS:**

Morrison. A Guide to Oracle 10g. Thomson/Course Technology. ISBN 0619216298.

Bundled with Oracle 10g Database Software. Thomson/Course Technology. ISBN 1418895164

## **STATEMENT FOR STUDENTS WITH DISABILITIES:**

Students who require academic accommodations due to any physical, psychological, or learning disability are encouraged to request assistance from a disability services counselor within the first two weeks of class. Likewise, students who potentially require emergency medical attention due to any chronic health condition are encouraged to disclose this information to a disability services counselor within the first two weeks of class. Counselors can be contacted by calling 686-3652 or by visiting the Student Development Office in the Phail Wynn Jr. Student Services Center, room 1309.