



BAKER COLLEGE

STUDENT LEARNING OUTCOMES

CS4220 Database Programming II
3 Semester Hours

SLO1: Demonstrate an understanding of Database terminology

- A. Explain use of software tools and SQL queries.
- B. Describe database triggers and syntax
- C. Explain host or bin variables and how to use %TYPE and %ROWTYPE attribute.
- D. Explain dynamic SQL and PL/SQL
- E. Explain direct and indirect dependencies

SLO 2: Manage Oracle Software

- A. Load data into Oracle tables from external files using SQL *Loader utility
- B. Demonstrate exception-handling
- C. Construct looping action and decision structures: IF-THEN and CASE.

SLO 3: Develop database programs

- A. Explain techniques for debugging PL/SQL programs.
- B. Manage errors with exception handlers

SLO 4: Work with dependences

- A. Demonstrate local program unit program dependencies and database object dependencies
- B. Identify the unique nature of packaging dependencies
- C. Manipulate remote object dependency actions and remote dependency invalidation methods.

SLO 5: Use procedures

- A. Explain the use of IN/OUT and passing of parameter values
- B. Describe how to trap common runtime errors

SLO 6: Display proficiency in coding PL/SQL programs

- A. Write SQL queries within PL/SQL and the use of SQL single-row functions in PL/SQL.
 - B. Demonstrate how to embed DML statements within PL/SQL.
 - C. Use PL/SQL to procedurally manipulate the data with cursors
 - D. Create triggers
 - E. Create Procedures and Functions
 - F. Create program units
 - G. Create package specifications and bodies
-

Big Ideas and Essential Questions

Big Ideas

- Evolution of Databases
- Core Principles of Oracle Databases
- Problem Solving using PL/SQL programming environment

Essential Questions

1. What are the elements of Oracle Databases
2. How does PL/SQL handle exceptions
3. Why do programmers use PL/SQL rather than other programming languages?

These SLOs are approved for experiential credit.

Effective: Fall 2017