CIT 271
SQL II

Course Description

This course is designed to provide students with the knowledge and skills needed to write PL/SQL procedures. The procedures will incorporate SQL statements to create and manage PL/SQL program units and database triggers. Students will work in both the Procedure Builder and SQL *Plus environments. Students will use advanced features of PL/SQL to design and interface with the database and other applications. Prerequisites: CIT171; or consent of instructor.

Course Competencies

Upon successful completion of this course, the student can:
1. manage PL/SQL program constructs.
2. create, execute, and maintain procedures, functions, packages and database triggers.
3. describe the PL/SQL development environment.
4. design and write PL/SQL packages and program units effectively.
5. create applications that use objects in the Oracle database.

Course Outline

I. Overview Of Procedural Language/SQL (PL/SQL)
   A. Distinguish Between Anonymous PL/SQL Blocks and PL/SQL Subprograms
   B. Describe The PL/SQL Development Environments
II. Procedures
   A. Working with Procedure Builder
   B. Creating Procedures
III. Functions
   A. Differentiating between a Procedure and a Function
   B. Creating Client-Side Functions
   C. Creating Server-Side Functions
IV. Database Triggers
   A. Defining Database Triggers
   B. Creating Database Triggers
   C. Defining Additional Package Concepts
V. Subprograms
   A. Using System Privilege Requirements
   B. Debugging Client-Side Subprograms
   C. Debugging Server-Side Subprograms
VI. PL/SQL Program Units
   A. Creating Subtypes
   B. Using Local Subprograms
   C. Creating and Using Cursor Variables
VII. Advanced Interface Methods
   A. Calling PL/SQL from Other Programming Environments
   B. Calling External Procedures From PL/SQL
   C. Using PL/SQL in Oracle Tools