SYLLABUS

DIVISION: Business and Engineering Technology **REVISED:** Spring 2014
CURRICULA IN WHICH COURSE IS TAUGHT: IST, Information Systems Technology
COURSE NUMBER AND TITLE: **ITD 134 –** PL/SQL Programming
CREDIT HOURS: 3 **HOURS** **CONTACT HOURS 3: LEC:** 2, **LAB:** 1

I. CATALOG DESCRIPTION: Incorporates a working introduction to commands, functions, and operators used in SQL for extracting data from standard databases. Provides students with a hands-on experience for developing code, functions, triggers, and stored procedures for SQL Server. Prerequisite ITE 115 or equivalent. Class requires Internet access and Oracle account.

II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES: ITD 134 will address the following IST program outcomes:

- Implement Information Technology skills required by software applications.
- Apply methodologies to stay current in IT offerings, trends, and certifications.
- Apply analytical and problem solving skills for computer system designs, planning, andsupport.
- Design, code, test, debug, and document software needed for computer system implementation and maintenance.
- Apply current IT industry standards, protocols, and techniques.

III. REQUIRED BACKGROUND: Prerequisite ITE 115 or equivalent.

IV. COURSE CONTENT:

- Creating and using databases
- Creating and modifying tables
- Creating and modifying queries
- Creating and modifying forms
- Viewing and organizing data
- Defining relationships
- Debugging PL/SQL code
- Data management applications
- Oracle application tools

V. THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE ADDRESSED IN THIS COURSE.

__X__ Communication
_____Cultural and Social Understanding
_____Personal Development
__X__ Scientific Reasoning
__X__ Critical Thinking
__X__ Information Literacy
__X__ Quantitative Reasoning

VI. LEARNER OUTCOMES	VII. EVALUATION
Creating and using databases • Create relational database model • Open database objects in multiple views • Record navigation and searching • Modify structures and fields • Distinguish entities, instances, attributes, and identifiers	Lab exercises Online test Create ERD of database relationship of 2 tables Open 3 queries, 1 form, 1 report Change format field property
Creating and Modifying Tables • Create and modify tables/names • Working with composite data types • Create simple procedures and functions • Declaring PL/SQL Identifiers	Lab exercises In class assignments Online test Add a field to a table Identify short date field Code syntax to build a table Code syntax to delete a view Code relationships in database tables
Creating PL/SQL packages • Group and relate constructs • Generate screen output	Lab exercises In class assignments Online test Develop database through 3NF Document 3 business rules Identify fields to include business rules
Writing SQL • Supply code to interface with the database • Establish triggers for business needs • Identify date, number, and conversion functions	Lab exercises In class assignments Online test Code and debug 5 PL/SQL statements Code concatenation of first and last name in a table Sort table by descending sequence Convert text to numeric field
Viewing and Organizing Information • Enter, edit and delete records • Create tables • Sort records • Filter records • Establish views for forms	Lab exercises In class assignments Online test Supply statement to limit rows selected Explain all logical comparisons > < = Demo sorting a table for single and multiple rows Code Having clause to filter records Code natural and cross joins Code Group By statement Code Count function
Defining Relationships • Join tables • Manage dependencies	In class presentation/project Online test