

Pellissippi State Community College
Master Syllabus

**SQL Applications using Oracle
CSIT 2425**

Class Hours: 3.0

Instructor:

Laboratory Hours: 3.0

Office:

Credit Hours: 4.0

Phone:

Revised: July, 2009

Email:

Catalog Course Description:

A comprehensive study of SQL using the Oracle relational database management system. Hands-on training will include database creation and management, data queries, view definition and use, operators and functions, procedures, security, calculation, indexing, utilities and data transport.

Entry-level Standards:

The student should be able to use a standard keyboard and maintain 28 words per minute error-free typing rate. The student must have math, writing, verbal and English language skills at the college entry level.

Pre-requisites: CSIT 1810 and one programming course or department approval.

Textbook(s) and Other Materials Basic to the Course:

- Required Textbook: *Oracle Database 11g SQL*, by Jason Price, McGraw-Hill, 2008.
- Recommended Textbook: *Oracle Database 11g: The Complete Reference (w/CD)*, by Kevin Loney, McGraw-Hill, 2009. The 10g version is also acceptable.
- Recommended Text: *Oracle Database 11g PL/SQL Programming*, by Michael McLaughlin, McGraw-Hill, 2008.
- Removable storage device such as a USB flash drive.

I. WEEK/UNIT/TOPIC BASIS:

Week Topic(s)

- 1 Syllabus review; course accounts and tools – online course software, SQL query tools; review of DBMS concepts - relational and object-oriented databases, ERDs, normalization
- 2 SQL queries; SELECT clauses – from, where, order by
- 3 Joining tables
- 4 Data manipulation commands
- 5 Formatted output - reports
- 6 Single-row functions

- 7 Group functions
- 8 Subqueries; advanced queries
- 9 SQL object creation – tables, constraints, sequences, indexes
- 10 Views
- 11 Database management commands; security; data sharing
- 12-13 PL/SQL language - data types, cursors, exceptions, triggers, procedures, functions, packages
- 14 Running SQL using Java
- 15 Final Exam

II. COURSE OBJECTIVES:

- A. Develop a working understanding of the terminology associated with relational database processing. III, VII, VIII, IX
- B. Become familiar with, have a working knowledge of, and demonstrate efficient use of Oracle SQL and Oracle developer tools. IV, VI, V, VII, VIII, IX, XII
- C. Develop a working relational database and develop restrictive access conditions appropriate for entering, modifying and producing output to an I/O device. III, IV, VI
- D. Provide environmental conditions to provide a user with a working SQL relational database. III, IV
- E. Become familiar with, have a working knowledge of, and demonstrate efficient use of PL/SQL. IV, VI, V, VII, VIII, IX, XII
- F. Become familiar with issues related to data access, security, file allocation and process control. III, VII, VIII, IX

III. INSTRUCTIONAL PROCESSES: Students will:

- 1. Use professional tools to produce software components and documentation. *Technological Literacy, Transitional Strategy, Active Learning.*
- 2. Participate in a team using shared resources. *Communication, Transitional Strategy, Active Learning.*
- 3. Use professionally accepted methods and materials in their approach to completion of applications. *Technological Literacy, Transitional Strategy, Active Learning.*
- 4. Create database tables and views based on client input. *Communication, Technological Literacy, Transitional Strategy, Active Learning.*

IV. EXPECTATIONS FOR STUDENT PERFORMANCE:

The student should be able to

- 1. Demonstrate proficient use of terminology associated with computers, software and database applications products. (A,B,C,D,E,F)
- 2. Demonstrate an understanding of the use of hardware, firmware and systems terminology. (A,B,C,D,E,F)

3. Demonstrate effective use of various manuals, documentation, tutorials, on-line directives and guides. (A,B,C,D,E)
4. Demonstrate knowledge and use of major Oracle functions, commands and processes. (A,B,C,D,E,F)
5. Demonstrate proficient use of the keyboard and mouse in accessing programs, data and/or files. (A,B,C,D,E,F)
6. Demonstrate use of major SQL* Plus commands and processes. (B,D,E,F)
7. Demonstrate use of all major SQL programming commands and selections. (B,D,E,F)
8. Demonstrate effective use of Oracle as a business tool. (A,B,C,D,E,F)

V. **EVALUATION:**

A. **Testing Procedures: 50% of grade**

A minimum of two tests is recommended. Tests will cover material presented in class. Tests are not to be missed without a valid excuse. Each instructor will include details of his/her testing procedures in a syllabus addendum.

B. **Laboratory Expectations: 40% of grade**

Lab attendance is required. Assignments will be given and must be completed and handed in at the designated date and time.

C. **Field Work: N/A**

D. **Other Evaluation Methods: 10% of grade**

Class participation, quizzes and homework will also comprise the final grade for the course.

E. **Grading Scale:**

93 – 100	A
88 – 92	B+
83 – 87	B
78 – 82	C+
73 – 77	C
65 – 72	D
Below 65	F

VI. **POLICIES:**

A. **Attendance Policy:**

Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. (*Pellissippi State Online Catalog*)

B. **Academic Dishonesty:**

Plagiarism, cheating and other forms of academic dishonesty are prohibited. A student guilty of academic misconduct, either directly or indirectly through participation or assistance, is immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions that may be imposed through the regular Pellissippi State procedures as a result of academic misconduct, the instructor has the authority to assign

an F or a zero for the exercise or examination or to assign an F in the course. (*Pellissippi State Online Catalog*)

C. Computer Usage Guidelines:

College-owned or –operated computing resources are provided for use by students of Pellissippi State. All students are responsible for the usage of Pellissippi State's computing resources in an effective, efficient, ethical and lawful manner. (*Pellissippi State Online Catalog*)

D. Accommodation for Disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins134 or 126 or by phone: 694-6751 (Voice/TTY) or 539-7153. More information is available at www.pstcc.edu/departments/swd/.

E. Other:

1. Plagiarism, cheating, software piracy, non-educational use of computer systems and other forms of academic dishonesty are strictly prohibited. A student caught cheating or infracting specific rules will be given a grade of "F" for the course.
2. Make-up exams: All exams are required, and make-ups will be allowed only in the rarest of cases. In the event of an emergency, notification of the instructor must be made in advance.
3. It is the student's responsibility to request help from the instructor prior to an assignment's due date.