

**CS 81.61 Course Outline as of Fall 2015****CATALOG INFORMATION**

Dept and Nbr: CS 81.61 Title: SQL

Full Title: Structured Query Language

Last Reviewed: 9/27/2010

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.50	Lecture Scheduled	1.50	17.5	Lecture Scheduled	26.25
Minimum	1.50	Lab Scheduled	0	4	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	1.50		Contact Total	26.25
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 52.50

Total Student Learning Hours: 78.75

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: CIS 69.53

**Catalog Description:**

This course is designed for the student who has experience with a database management program such as Access or FileMaker Pro and wants to learn Structured Query Language (SQL), the common language of client server database management.

**Prerequisites/Corequisites:**

Course Completion of CS 63.11 ( or CIS 69.31)

**Recommended Preparation:**

Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:****Schedule of Classes Information:**

Description: This course is designed for the student who has experience with a database management program such as Access or FileMaker Pro and wants to learn Structured Query Language (SQL), the common language of client server database management. (Grade or P/NP)

Prerequisites/Corequisites: Course Completion of CS 63.11 ( or CIS 69.31)

Recommended: Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>		Effective:	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

**CID:**

**Certificate/Major Applicable:**

Certificate Applicable Course

## **COURSE CONTENT**

### **Outcomes and Objectives:**

Upon completion of the course, students will be able to:

1. Apply the basic vocabulary and functions of SQL to a variety of database tasks.
2. Given a Query By Example (QBE) screen, write the corresponding SQL statement.
3. Select records from an existing database using SQL based on specified selection criteria.
4. Compare and contrast the join types, INNER, OUTER, LEFT and RIGHT
5. Use an SQL statement to append records from another source.
6. Use an SQL statement to update the field contents in a database based on an expression in an SQL statement.
7. Access SQL data via Microsoft Technologies Open Data Base Connectivity (ODBC).
8. Solve problems using SQL to demonstrate understanding of the theory and uses of SQL.

### **Topics and Scope:**

1. Review of query by example
  - a. Selecting fields
  - b. Selecting records
    - 1) relational operators
      - a) equal
      - b) not equal
      - c) less than
      - d) greater than
      - e) less than or equal to
      - f) greater than or equal to
    - 2) logical operators
      - a) and
      - b) or
      - c) not
2. Categories of SQL keywords
  - a. Commands

- b. Clauses
- c. Qualifiers
- d. Operators
- e. Group aggregate functions
- 3. SQL statements to create queries
  - a. SELECT (ALL, DISTINCT, and DISTINCTROW) FROM
  - b. WHERE
  - c. LIKE (proper use of wild cards)
  - d. ORDER BY (DESC)
  - e. GROUP BY
  - f. AND
  - g. BETWEEN
  - h. SUM
- 4. Join types
  - a. INNER
  - b. LEFT
  - c. RIGHT
  - d. OUTER
- 5. SQL statements to create joins between tables
  - a. (INNER, LEFT, and RIGHT) JOIN ON
  - b. Combining result set of two or more SELECT queries into a single result
  - c. Action queries
    - 1) INSERT INTO - append from other source
    - 2) DELETE FROM - delete from table
    - 3) SELECT INTO - create a new table from existing table
    - 4) UPDATE SET WHERE

### Assignment:

- 1. Reading approximately 25 pages per week from text book
- 2. Weekly assignments practicing SQL concepts
- 3. 2 to 4 exams

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments are more appropriate for this course.

Writing  
0 - 0%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Weekly assignments

Problem solving  
30 - 70%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations  
0 - 0%

**Exams:** All forms of formal testing, other than skill performance exams.

Multiple choice, true/false, matching items, completion

Exams  
30 - 70%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation

Other Category  
0 - 10%

**Representative Textbooks and Materials:**

The Practical SQL Handbook, by Judith S. Bowman et al. 4th edition, Addison Wesley 2001 (classic in field).