CS 81.61 Course Outline as of Fall 2009

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	2.00	8	Lecture Scheduled	16.00
Minimum	1.50		Lab Scheduled	0	8	Lab Scheduled	0
			Contact DHR	3.50		Contact DHR	28.00
			Contact Total	5.50		Contact Total	44.00
			Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 32.00   Total Student Learning Hours: 76.00

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. The course includes concepts and
practice.

Prerequisites/Corequisites:
Completion of CS 63.11 (formerly CIS 69.31 or CIS 82.21) OR CIS 69.51 (formerly CIS 82.15)
with a grade of 'C' or better.

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
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Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

				Effective:		Inactive:	
AS Degree:	**Area**			Effective:		Inactive:	
CSU GE:	**Transfer Area**			Effective:		Inactive:	
IGETC:	**Transfer Area**			Effective:		Inactive:	
CSU Transfer:	Transferable	Effective:	Spring 1999	Inactive:	Fall 2015
UC Transfer:		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 Structured Query Language (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 statement, using specified selection criteria.
4. Compare and contrast the join types, INNER, OUTER, LEFT and RIGHT
5. Use a SQL statement to:
    a. Append records from another source.
    b. Update the field contents in a database based on an expression in a SQL statement.
6. Access SQL data via Microsoft Technologies Open Data Base Connecting (ODBC).
7. Solve problems using SQL such that foundation of understanding of the theory and uses of SQL is demonstrated.

Topics and Scope:

1. Review of query by example.
    a. Selecting fields
    b. Selecting records using:
        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/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/RIGHT) --- JOIN----ON
 b. Combining result set of two or more SELECT queries into a single
  result.
   1) UNION SELECT ---GROUP BY ---- HAVING
 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 lab assignments practicing the concepts of the week.
3. Homework, quizzes, and 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.

	Writing 0 - 0%
None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.	

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

	Problem solving 20 - 40%
Homework problems	

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

	Skill Demonstrations 20 - 40%
Class performances, Performance exams	

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

	Exams 20 - 40%
Multiple choice, True/false, Matching items, Completion	

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

	Other Category 0 - 0%
None	

Representative Textbooks and Materials:
"The Practical SQL Handbook", by Judith S. Bowman et al, 4th edition
Addison Wesley 2000