



Course Name: SQL Fundamentals

Course Number: CSC* E238

Credits: 3

Catalog description: A comprehensive introduction to Structured Query Language (SQL), the industry standard computer language for manipulating information stored in relational databases. The course will emphasize the SQL select statement and the associated concepts of inner joins, outer joins, self-joins, unions, data summarization, functions, data types, subqueries, and views. Other topics include the creation, deletion, and modification of tables; the insertion, deletion, and modification of rows and columns; and the implementation of indexes and constraints. Course content is continually updated to reflect the current state of the art in SQL programming.

The course requires substantial hands-on computer work writing SQL code in a computerized classroom environment.

Prerequisite: The ability to perform basic file management and word processing tasks on a personal computer

Corequisite or Parallel:

General Education Competencies Satisfied:

HCC General Education Requirement Designated Competency Attribute Code(s):

None

Additional CSCU General Education Requirements for CSCU Transfer Degree Programs:

None

Embedded Competency(ies):

None

Discipline-Specific Attribute Code(s):

COMP Computer Science Elective

Course objectives:

General Education Goals and Outcomes:

None



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Course Specific Objectives:

1. Write SQL select statements that incorporate the select, from, where, on, group by, having, and order by clauses
2. Write SQL select statements that perform inner joins using both the traditional syntax as well as the inner join syntax.
3. Write SQL select statements that perform inner joins, outer joins, and self joins with multiple tables
4. Write SQL select statements that incorporate row functions involving numbers, strings, dates, and formulas.
5. Write SQL statements that use aggregate column functions to summarize data and that do multi-level summarization using the group by and having clauses
6. Write SQL select statements that incorporate unions of multiple tables and that utilize unions to implement if-then-else conditions
7. Write SQL statements that incorporate subqueries.
8. Write SQL statements that create and incorporate views.
9. Write SQL statements that create, delete, and alter tables, including tables with primary key constraints, index constraints, referential integrity constraints, and not-null constraints.
10. Write SQL statements create, delete, and modify the data in rows and columns

Course Content:

- The select, from, where, on, group by, having and order by clauses
- SQL select statements that perform inner joins using both the traditional syntax as well as the inner join syntax.
- SQL select statements that perform inner joins, outer joins, and self joins with multiple tables
- SQL select statements that incorporate row functions involving numbers, strings, dates, and formulas.
- SQL statements that use aggregate column functions to summarize data and that do multi-level summarization using the group by and having clauses
- SQL select statements that incorporate unions of multiple tables and that utilize unions to implement if-then-else conditions
- SQL statements that incorporate subqueries.
- SQL statements that create and incorporate views.
- SQL statements that create, delete, and alter tables, including tables with primary key constraints, index constraints, referential integrity constraints, and not null constraints.
- SQL statements create, delete, and modify the data in rows and columns

Date Course Created: Spring 2015

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