PARKLAND COLLEGE

Course Information Form (CIF)

Course Code: CSC 191

Course Title: SQL Fundamentals ll

Department: Business/Computer Science and Technologies
Effective Date: Summer 2026
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 11.0802
Repeatability: 0

Credit Hours

Catalog Notation: 3-2-4
Credit Hour Distribution:

Lecture: 3	Lab: 2	Clinical: 0	**Total: 4**

General Course Information

Catalog Description

Using what was learned in SQL Fundamentals l (CSC 176), students will master stored procedures and functions, query performance approaches (including indexes and query plans), and write analytical SQL used for data science and data warehouses.

General Course Objectives

To provide students with advanced working knowledge of SQL and associated software.

Minimum Placement Levels

English	Reading	Math
None	None	None

Prerequisites

Credit in CSC 176

Methods of Evaluation

3 projects will be assigned through the semester, and the project for each will be assessed to determine the student's mastery.

Instructional Materials and Additional Supplies

None.

Course Content

General Learning Outcomes (GLOs)

- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.
- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Stored Procedures	1. Describe and develop procedural code stored within the database.	5	3	0
Development Tools	1. Identify various tools for working with SQL.	6	3	0
Troubleshooting Performance Issues	1. Demonstrate how to isolate and resolve slowdowns in both the database and the queries.	6	4	0
Indexes	1. Demonstrate creating and building indexes to enhance performance. 2. Determine if an index is needed or not.	5	3	0
User-defined Functions	1. Design and develop a custom stored procedure that returns a desirable result.	5	4	0
Cursors	1. Demonstrate how to fetch multiple records from tables using implicit and explicit cursors.	5	3	0
Error Handling	1. Demonstrate how to handle built-in SQL exceptions and declare new ones.	2	3	0
Query Plans	1. Demonstrate how to generate and decipher query plans to determine if the optimal join conditions and access paths are used.	3	3	0
Analytical SQL	1. Demonstrate how to combine subqueries, views, and windowing functions to build complicated analyses or data.	8	4	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
45	30	0