



SYLLABUS

CIS 182, SQL Fundamentals, 5 Credits

Winter 2025

Section 5270 (Online Asynchronous)

Course Information

Course Catalog Description:

Introduces Structured Query Language (SQL). Emphasizes techniques for writing efficient SQL queries using a common commercial implementation of SQL. CIS 110 recommended

Course Prerequisites:

None.

Course-Level Student Outcomes:

- Apply basic relational database terminology and concepts (T, Q)
- Create and modify database objects using SQL (T, Q)
- Edit and retrieve data from relational database table

College-Wide Abilities:

- Think logically and critically (T)
- Evaluate and process quantitative and symbolic data (Q)

Course Modality, Meeting Times, and Locations:

Modality: Online Asynchronous. Classes conducted entirely online without set meeting times, allowing students to complete coursework within a specified timeframe.

Quarter Dates: First day of instruction: Monday, Jan 6, 2025
Last day of instruction: Friday, Mar 21, 2025

Canvas Shell: [Click here](#)

Instructor: Ashraf Alattar

Office Location: Building 34, Room 122

Student Hours (Office Hours):

- **Mon/Wed:** 1:00 pm - 2:00 pm, Zoom only

- **Tue/Thu:** 4:00 pm - 5:00 pm, Zoom only
- **Staturday:** 11:00 am - 12:00 pm, Zoom only

Quarter Dates:

- **First day of instruction:** Monday, Jan 6, 2025
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Please note:

- These are times when you can meet with me to ask questions related to graded work, or get clarifications on class topics.
- For appointments, please phone or email at least 3 hours in advance.
- Appointments can be in-person or on Zoom.
- For both class and office hours, I use the same Zoom link. You can find this link in the "Start Here" module on Canvas.
- Office hours remain available until the last day of instruction in the quarter.

Contact Information:

You can reach me through:

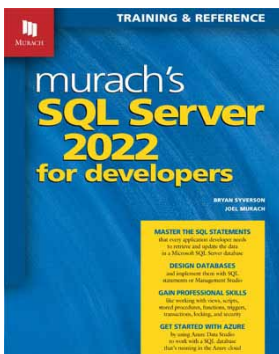
- Canvas inbox
- Office Phone: (360) 596-5278
- Email: ashraf.alattar@spsc.edu
- Zoom: My Zoom link is posted in the Start Here module on Canvas

Please see Class Communication and Response Times under Class Policies for more details on how to contact me.

Textbooks, Software, and Materials

Textbook

Murach's SQL Server 2022 for Developers, 1st Edition (2023) (Required)



Authors: Bryan Syverson, Joel Murach

Edition: 1st Edition (2023)

Publisher: Murach Publishing

ISBN 13: 978-1-943873-06-7

Software

1. SQL Server 2022 Express



SQL Server 2022 Express includes the database engine that provides the features covered in this class. The database engine doesn't have user interface, and that's where SSMS comes in.

2. SQL Server Management Studio



SSMS is the tool you use to work with your SQL Server 2019 or any edition of SQL Server including non-Express editions such as the Enterprise edition.

Materials

- Additional course materials may be posted on Canvas as needed.

Grading and Assignments

Grading Scheme

The following table lists and describes the activities you will need to complete in this course and how many points each activity weighs.

Activity	Points
Homework Exercises Each homework exercise has an assigned due date. Due dates and assignment requirements can be found at the course website. Homework files must be turned in to the course website prior to the end of the due date for full credit.	400
Quizzes Ten weekly Canvas quizzes, each worth 20 points. See Canvas Quizzes in the Class Policies section below for more details.	200
Team Project One team project assigned and due during Week 6. See Course Calendar section below.	100
Final Exam The final and tests are in-class, open book. Each test will cover material from the textbook, assignments, and lectures. Questions may be a combination of multiple choice, true/false, and short answer.	200
Extra Credit Extra credit may be available throughout the quarter as part of scheduled assignments or during in-class. Any points earned through extra credit apply to the total points of the student; there is no difference in points by assignment type or extra credit.	
Total:	900

Grading Scale

Your final letter grade in the course is based on your percentage score, which is the total points you earn divided by the maximum total points. Your letter grade is determined based on the following scale:

90-100%: A
80-89%: B
70-79%: C
60-69%: D
0-59%: F

Course Calendar

Module 1: Introduction to Relational Databases and SQL

Topics:

- An introduction to relational databases and SQL
- An introduction to the relational database model
- An introduction to SQL and SQL-based systems
- The Transact-SQL statements

Activities

- TBD: Please see course shell for updates.

Important dates for Week 1:

- **Monday, January 6:** First Day of SPSCC, Hybrid and OL (SPSCC Online) Classes
- **Tuesday, January 7:** Web Registration turns off at Midnight
- **Wednesday, January 8:** Instructor Sign. Required to Add Classes (Dean Signature Required for Prerequisite Overrides)
- **Thursday, January 9:** WAOL CLASSES ONLY - Last Day for 100% Refund for Drop Classes
- **Friday, January 10:** Last Day for 100% Refund

Module 2: SQL Server Management Studio

Topics:

- An introduction to SQL Server 2022
- An introduction to Management Studio
- How to view and modify the database
- How to work with queries
- How to view the documentation for SQL Server

Activities

- TBD: Please see course shell for updates.

Important dates for Week 2:

- **Monday, January 13:** Begin 40% Refund
- **Thursday, January 16:** WAOL CLASSES ONLY - Last Day to Drop without a "W" on transcript
- **Thursday, January 16:** Last Day to Drop CCS 102/103/104 Class
- **Friday, January 17:** Last Day to Drop without a "W" on transcript

Module 3: Retrieving Data **single table**

Topics:

- An introduction to the SELECT statement
- How to code the SELECT clause
- How to code the WHERE clause
- How to code the ORDER BY clause

Activities

- TBD: Please see course shell for updates.

Important dates for Week 3:

- None!

Module 4: Retrieving Data **two or more tables**

Topics:

- How to work with inner joins
- How to work with outer joins
- Othe skills for working with joins
- How to work with unions

Activities

- TBD: Please see course shell for updates.

Important dates for Week 4:

- None!

Module 5: Summary Queries

Topics:

- How to work with aggregate functions
- How to group and summarize data
- How to summarize data using SQL Server exstensions

Activities

- TBD: Please see course shell for updates.

Important dates for Week 5:

- None!

Module 6: Subqueries

Topics:

- An introduction to subqueries
- How to code subqueries in search conditions
- Other ways to use subqueries
- Guidelines for working with complex queries
- How to work with common table expressions

Activities

- TBD: Please see course shell for updates.

Important dates for Week 6:

- None!

Module 7: Inserting, Updating, and Deleting Data

Topics:

- How to create test tables
- How to insert new rows
- How to modify existing rows
- How to delete existing rows
- How to merge rows

Activities

- TBD: Please see course shell for updates.

Important dates for Week 7:

- None!

Module 8: SQL Datatypes

Topics:

- A review of SQL data types
- How to convert data

Activities

- TBD: Please see course shell for updates.

Important dates for Week 8:

- None!

Module 9: Functions

Topics:

- How to use string functions
- How to use numeric functions
- How to use date/time functions
- Other functions you should know about

Activities

- TBD: Please see course shell for updates.

Important dates for Week 9:

- None!

Module 10: How to design a database

Topics:

- How to design a data structure
- How to normalize a data structure

Activities

- TBD: Please see course shell for updates.

Important dates for Week 10:

- None!

Important dates for Week 11:

- **Tuesday, March 18:** Last Day of Instruction SPSCC, Hybrid and OL Classes
- **Wednesday, March 19:** SPSCC Campus Finals Week
- **Thursday, March 20:** SPSCC Campus Finals Week
- **Friday, March 21:** SPSCC Campus Finals Week

Class Policies

Attendance:

- This class is asynchronous (fully on-line). Asynchronous classes don't have scheduled meetings, so there is no attendance for this class. However, all students must meet the published assignment schedule.

Class Communication and Response Times

- For class-related matters, I would like you to contact me only through Canvas (not Teams, phone, or e-mail).
- I typically check and respond to messages during my office hours.
- Please follow these best practices when you send me a message on Canvas or by email:
 - Identify Your Course and Section:

- Use the subject line to mention your course and section.
- For example: "CIS166-5343 - [... add the subject of your message...]"
- Start with a Proper Greeting:
 - Begin your message with a friendly greeting.
 - For instance: "Hello Professor Alattar,"
- State Your Request Clearly:
 - Put your request on a separate line.
 - For instance: "I need an extension for Assignment 2" or "Could you clarify the due date for the project?"
- Explanation Before Request:
 - If you need to explain something before stating your request, ensure that your request comes on a separate line after the explanation.
 - Example:

Hi Dr. Alattar,
 I hope you're doing well. I wanted to discuss my project proposal before finalizing it. Could we schedule a brief meeting to go over the details?
 Thank you!
 John Doe

Face masks/coverings

- I occasionally wear face masks in office hours meetings. Students may wear one at their discretion.

Late Work:

- Each week runs from Monday through Sunday. Whatever day the course first meets, the Sunday that follows is the end of week 1.
- For weeks 1, 2 and 3, late homework may be accepted within two days after the due date. Late work is graded with a 6% deduction per day. After Week 3, no late work is accepted.
- However, students receive 50% free credit for one missed lab or quiz.
 - The student doesn't need to request this credit. It will be accounted for the student when the student's final grade is determined at the end of the quarter.
 - This credit will be entered in the student's Gradebook under "Missed Work Credit".
 - If there are more than one missed work, the replacement grade is applied towards the work with the lesser points.
 - If there is a double-content week on the schedule, the replacement grade only covers one of the two labs.
- If all homework assignments and quizzes are submitted on time, the student gets 5 free bonus points under "Missed Work Credit" at the end of the quarter. Thank you for keeping up with the course schedule!
- No homework or quizzes are accepted after the last day of instruction. For the last week of class, homework and/or quizzes are usually due early. Check Canvas to be aware of dates!
- Because this class is very fast-paced, you are strongly encouraged to keep up with the course schedule to avoid becoming overloaded.

Canvas quizzes

- Each quiz has a time limit. Suppose you start a 30-minute quiz at 1:00. The quiz ends at 1:30. Leaving the quiz does not stop the timer. At 1:30, Canvas will kick you out of the quiz and/or stop accepting new responses.
- However, if you accidentally close the window or lose your internet connection, you can still re-enter the quiz and continue working until 1:30.
- Clicking "Submit" ends the quiz completely and forfeits any remaining time.
- At end-of-day on the due date, Canvas will kick you out of the quiz and/or stop accepting new responses. The quiz time limit doesn't matter here. End-of-day is however Canvas defines it, usually 11:50 p.m.

Double-Content Weeks

Usually in summer quarter classes, and less likely spring or fall, you will notice some weeks in the course calendar in the syllabus and their corresponding weekly modules on Canvas designated as "DOUBLE CONTENT" weeks/modules. Here is the logic behind it:

- The content is originally designed for a 10-week duration. Each week corresponds to a specific content unit.
- However, the summer quarter is typically only 7 calendar weeks long.
- To fit the course into the shorter summer quarter, some weeks are designated as "DOUBLE CONTENT" modules.
- These weeks cover two content units instead of one. It's like getting two weeks' worth of material in one week.
- Another option would be to evenly distribute the topics across the 7 weeks.
- But this would require significant changes, including adjusting lectures, quizzes, and labs.
- Despite uneven distribution, the double-content approach is more practical. It provides a week of relief after a challenging week.

So, the double-content approach balances practicality with workload, ensuring you get through the material effectively during the shorter summer quarter.

Academic Honesty:

- Assignments must be the work of each individual student. Group-work assignments will be clearly identified.
- Using someone else's non-trivial code without citation, and/or turning in assignments that match labs for a different section of the class, will result in a zero grade for the entire assignment or test. Repeated incidents can have more severe penalties.
- That does not mean you must solve all your problems in silent isolation! Students are welcome to collaborate to share information. Questions such as "how did you do that?" or "where did you find that?" are encouraged. However, the core work of each lab must be your own.
- I also encourage students to find information on-line! Please cite your sources if you find non-trivial code. If you cite your sources, you will always get full earned credit for the problem.
- Citing typically means including a URL in comments such as:
// Code from <https://www.tutorialsteacher.com/csharp/csharp-tutorials>
- No citations are needed for the textbook. No citations are needed for trivial/common code such as how an if statement is formatted or use of basic language features. If you have any doubt, either cite or ask me if a citation is needed.
- All academic policies of SPSCC apply, including the prohibition against plagiarism. Consult your student handbook for more details.

Support Services:

- Several support services are available for students in the following: Library, Writing, Math Centers, Computer Labs, Disability Support Services, Tutoring. Please let me know if you need help in any of these.
- **Additional SPSCC college-wide policies and resources can be found under the College Resources & Help link in Canvas.**