IT 2060C Database Management I Syllabus

Instructor

Name:
Email:
Office Hours:
Office Hour Locations:

Contents

Course Description

This is an introductory course to the technology used for database development. Topics include the key database concepts, writing queries to retrieve, insert, update, and delete data from databases, and additional database features. Enterprise database management system will be used. Hands-on active learning required.

Credit Hours, Course Format, and Pre-reqs

3 credit hours; in person

There are no prerequisites for this course, but *this course is a prerequisite* for the IT3060C Database Management II or the IT4015C Applied Business Intelligence course. You must receive a C- or better in this course to be accepted in the Database Management II or the Applied Business Intelligence course.

Course Learning Outcomes

Upon completion of this course, the student will be able to:

1. Describe the characteristics of databases and the features of database management systems.
2. Identify the various data types available and best practices for their usage
3. Code queries that retrieve data from one or more tables
4. Code queries using advanced features such as built-in functions, aggregate operations, and other methodologies
5. Code insert, update and delete queries

Course Materials

There is **no textbook** for this course. The following are important resources:

- https://docs.microsoft.com/en-us/sql/sql-server/what-s-new-in-sql-server-ver15?view=sqlallproducts-allversions
- https://www.linkedin.com/learning/topics/sql?u=2133849
- https://www.w3schools.com/sql/default.asp
- https://beginner-sql-tutorial.com/sql.htm

Required Technology

Instructions will be provided in class, but the following technology will be used in this course:

- SQL Server 2017 Developer
- SQL Server Management Studio

Course Activities and Grading

Communication and Feedback Policy

Email is the best way to communicate with me. Please use your UC email account to email me with questions, to arrange an office hour appointment, or to inform me if you will miss a class. You can expect a response within 24 hours during the week and 48 hours on the weekend.

Attendance/Participation Expectations

You, of course, are expected to attend and participate in all class sessions. With the longer semester term, it is possible you may experience illness, family troubles, or other issues that affect class attendance. Please email me if you are unable to attend a class with a valid excuse. Failure to attend class does not relieve you of your responsibility to turn in homework assignments on time nor for the material covered during class.

Do not make appointments during class time; this includes visits with counselors, office hours or assignments for other classes, interviews, and so on. These are not considered excused absences.

Attendance is worth 10% of your overall grade. Any unexcused absence will reduce your attendance grade by 8 points and missing more than 4 classes will forfeit all of your attendance grade. Walking out during class time without the instructor's consent and a valid excuse will be considered missing class.

Late or Missing Assignment Policy

Keep in mind that assignments are located in Canvas and have a due date; after the due date, the assignment is no longer visible and a zero is posted for the non-submitted work.

Late Work: I do not accept late assignments. You should check Canvas frequently to ensure you do not miss a due date. Assignments are open at least two weeks before the assignment is due providing plenty of time for you to complete the work.

You cannot pass this class without submitting your homework assignments. In order to receive an A in this course, you must do "A" work. Do not ask in the final weeks of the semester how to get an A in the course; do quality work starting in week 1.

Grading Scale

93.00% and above = A
90.00%-92.99% = A-
87.00%-89.99% = B+
83.00%-86.99% = B
80.00%-82.99% = B-
77.00%-79.99% = C+
73.00%-76.99% = C
70.00%-72.99% = C-
67.00%-69.99% = D+
63.00%-66.99% = D
60.00%-62.99% = D-
less than 60.00% = F

The grades are weighted as follows:
- Quizzes: 30%
- Labs: 30%
- In-Class Group Labs: 10%
- Final Project: 20%
- Attendance: 10%

Course Schedule

There are 9 modules for this course. Below is the basic outline of each module. Most modules have a lab and a quiz to complete. There is also a final project.

In general, we will allocate Tuesdays for covering most of the material and Thursdays will be to complete remaining lecture material and doing Group Labs.

Module 1 Intro to Relational Databases and SQL

Overview: This module will help you become familiar with the concepts and terms that apply to database management systems. You will learn what a relational database is and some of the basic SQL statements and features provided by SQL Server.

Module 2 How to Use Management Studio (2 weeks)

Overview: This module introduces the Management Studio, the primary tools for working with a database server.

Module 3 Retrieving Data From a Single Table

Overview: This module covers how to code SELECT statements that retrieve data from a single table.

Module 4 Retrieving Data From Two or More Tables (2 weeks)

Overview: This module covers how to create result sets that contain data from two or more tables.

Module 5 How to Code Summary Queries

Overview: This module covers how to code queries that summarize data.

Module 6 How Code Subqueries (2 weeks)

Overview: This module demonstrates how to code subqueries- a SELECT statement that is coded within another SQL statement.

Module 7 How to INSERT, UPDATE, and DELETE Data

Overview: This module covers how to code the INSERT, UPDATE, and DELETE statements to modify the data in a table.

Module 8 How to Work With Data Types

Overview: For the first seven modules, we've been using SQL statements to work with the three most common types of data: strings, numbers, and dates. Now, in Module 8, we take

a more in-depth look at other data types that are available with SQL Server and some basic skills for working with them.

Module 9 How to Work with Functions (2 weeks)

Overview: SQL Server has many built-in functions. This module contains string, numeric, date, conversion, and some other advanced functions in SQL Server.

Final Project

IT 2060C Signature Assignment: SoIT Clinic

UC Policies

Attendance: Students at the University of Cincinnati are expected to attend classes in order to meet the learning objectives for the course. Students are expected to follow the class attendance policy as outlined by the instructor. Students participating in official University sponsored activities, where the student is representing the University, will meet with instructor related to absences due to university-sponsored activities. When such absences occur, students need to provide documentation of the event(s), and work with the professor to develop a written plan for completion of missed assignments or other course requirements with as much advance notice as possible.

Communication: All university business must be conducted using a university assigned email account. The use of a personal, or non-university assigned email account to conduct university business is strictly prohibited. [See full policy here](#).

Class Cancellation Policy: In the rare case that a class must be cancelled, faculty will post an announcement on the LMS that will be emailed to students. Faculty will attempt to communicate class cancelations with as much advance notice as possible. Students should be sure that their LMS email is current and valid to ensure emails are received. If the University closes due to inclement weather or other emergency situations, there will be an announcement posted on Canvas (LMS) and if possible on the local news channels (TV and radio). Communications related to University closures will also be sent to the student's cell phone number on record through the automatic University emergency text messaging system. Students should notify the University if they change their cell phone number to ensure they will receive these important emergency communications.

Academic Integrity: The University of Cincinnati is committed to academic integrity. A formal articulation of this commitment is articulated in the Student Code of Conduct. Any violation of these rules, including plagiarism or cheating will be handled on a case-by-case basis. At the least, you should anticipate a zero on an assignment, at the fullest extent, your

violation will reported to the university and the incident will be documented on your permanent record.

Artificial Intelligence: Generative AI can be a huge productivity tool for experienced coders as it can generate "draft code" that can than be modified/enhanced to meet the needs of the specific task.   However, the objective of this course is to teach students the basic syntax and capabilities of SQL, so it would be self-defeating to use AI tools to generate the code you need to produce for labs and quizzes. Therefore, unless the instructor makes an explicit exception (e.g., for a specific learning objective), the use of AI tools in this course is not allowed. If you fail to follow our course and assignment AI guidelines, you may receive a reduced grade, fail an assignment, and/or be eligible for disciplinary action according to UC's Academic Misconduct Process.

Accessibility and Special Needs: The University of Cincinnati is committed to providing all students with equal access to learning opportunities. Accessibility Resources is the official campus office that works to arrange for reasonable accommodations for students with an identified physical, psychological or cognitive disability (learning, ADD/ADHD, psychological, visual, hearing, physical, cognitive, medical condition, etc.) Students are encouraged to contact the Accessibility Resources Office to arrange for a confidential meeting to discuss services and accommodations. Contact should be initiated as soon as possible to allow adequate time for accommodations to be arranged.

Counseling Services: As a UC college student, there may be times when personal stressors interfere with your academic performance and/or negatively impact your daily life. If you or someone you know is experiencing challenges such as strained relationships, increased anxiety, feeling down, difficulty concentrating, lack of motivation, etc., you are not alone; there are people here that can help.

- **To schedule**: please contact Counseling and Psychological Services (CAPS) at **513-556-0648** to schedule a virtual or in-person appointment with our CAPS CECH embedded counselor, Madeleine Muller, located in the CECH Student Services Center in Suite 360 of the Teachers-Dyer Complex.
- Have questions before committing to an appointment? Check out Let's Talk, a 15-20-minute conversation to ask questions about counseling and get to know our CECH counselor.
- **After-hours crisis line: 513-556-0648**
- **Self-Help:** to access Therapy Assistance Online (TAO), a **free** self-help resource for students.

Diversity, Equity, and Inclusion: The University of Cincinnati embraces diversity, equity, and inclusion as core values that empower individuals to transform their lives and achieve their highest potential. The University of Cincinnati recognizes a very broad and

inclusive concept of diversity that includes commonly recognized considerations such as race, ethnicity, gender, age, disability status, socioeconomic status, gender identity and expression, sexual identity, sexual orientation, religion, and regional or national origin. Going forward, we emphasize that UC's concept of diversity will retain the capacity to grow with our understanding. Inclusion authentically brings traditionally excluded individuals and/or groups into processes, activities, and decision/policy making. We are committed to creating and fostering a positive learning and working environment based on open communication, mutual respect, and inclusion.

Religious Accommodation: Ohio law and the University's Student Religious Accommodations for Courses Policy 1.3.7 permits a student, upon request, to be absent for reasons of faith or religious or spiritual belief system or participate in organized activities conducted under the auspices of a religious denomination, church, or other religious or spiritual organization and/or to receive alternative accommodations with regard to examinations and other course requirements due to an absence permitted for the above-described reasons. Not later than fourteen days after the first day of instruction in the course, a student should provide the instructor with written notice of the specific dates for which the student requests alternative accommodations. For additional information about this policy, please contact the Executive Director of the Office of Equal Opportunity and Access at (513) 556-5503 or oeohelp@UCMAIL.UC.EDU

Valuing Student Identity:

The College of Education, Criminal Justice, Human Services, & Information Technology recognizes that gender identity is fluid and respects those that may not identify with the gender binary. Please feel free to share your lived pronouns with the instructors and staff members you may work with, in order to avoid misgendering in the learning space. To learn more about pronoun use, please check out mypronouns.org.

We also understand that names may have some personal, cultural, or familial importance to everyone. If your name is being pronounced incorrectly in class, please make sure to find time to correct me through email or after class.

Title IX: Title IX is a federal civil rights law that prohibits discrimination on the basis of a person's actual or perceived sex, gender, gender identity, gender expression, or sexual orientation. Title IX also address instances of sexual violence, dating or domestic violence, and stalking. If a student discloses a Title IX issue to a faculty member, the faculty member is required to forward that information to the Title IX Office. The Title IX office will follow up with the student and discuss how the University can take steps to address the impact on the student and the community. They will also inform the student of their rights and direct them to available resources. The priority is to make sure students are safe and successful here at the University of Cincinnati. Students are not required to talk to anyone in the Title IX Office. Students may also directly report any instance of sex or gender-based

discrimination, harassment or violence to the Title IX office at 513-556-3349. Students who wish to know more about their rights and resources on campus, they can consult the [Title IX website](#) or contact the Title IX office directly at 513-556-3349.

NOTE: The instructor reserves the right to update this syllabus as class needs arise. Be assured that they will communicate to you any changes to the schedule, syllabus or policies quickly and efficiently.