

Instructor: Dr. Seyed Mahdi Ghamkhari

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Office Hours: Thursdays: 11:00 a.m. to 12:00 p.m. <https://miamioh.zoom.us/j/6611985445>

Course Description:

Overview of database management, database system architecture, and database modeling principles. Logical database design. The relational database model, relational integrity constraints, and relational algebra. Relational commercial database management systems and languages. Interactive database processing, view processing, and database application programming. Database integrity. Relational database design by normalization. File structures for database systems.

Prerequisite:

CSE 274 or concurrent registration.

Learning Objectives:

1. Students will use a fundamental conceptual modeling technique to capture database requirements in a graphical representation.
2. Students will learn relational database terminology and concepts and derive an implementation schema from their conceptual design.
3. Students will apply relational normalization theory to evaluate good design practices.
4. Students will learn query processing techniques by writing queries using a standard language and studying the impact of physical storage options such as indexing.

Textbook:

C.M. Ricardo and S.D. Urban, *Databases Illuminated*, 3rd edition, Jones & Bartlett Learning, 2017.

Grading:

100-points scale

Course components:

- Assignments (25%)
- Quizzes 10%
- Projects (25%)
- Midterm exam (20%)
- Final exam (20%)

Late policy late submissions will not be accepted.

Collaboration Policy:

Tests: No access to any material nor discussion with anyone is allowed. Access to electronics beyond the testing platform (e.g., mobile devices) is not permitted.

Assignments: stealing, giving, or receiving any code, drawings, diagrams, text, or designs from any other person is not allowed for independent work. Having access to another student's work electronically or giving access is not allowed.

Academic dishonesty: CSE and Miami University guidelines will be followed.

Communication Policy:

Canvas used for class announcements. Students are accountable for any content sent to the class via announcements.

Class Attendance:

Exercises and materials used during class sessions will be posted on Canvas.

Note:

Resources and Support for Students

As an instructor, I have a [duty to report](#). This means I am required to promptly report to the Deputy Title IX Coordinator (titleix@miamioh.edu) any information a student shares with me regarding harassment, discrimination, sexual misconduct and interpersonal violence, or retaliation. **A report does not initiate an investigation. It engages a discussion of your resources, supportive measures, and options available.** If students want to speak with someone confidentially, the following resources are available on and off campus:

- [Student Health Services](#), (513) 529-3000
- [Student Counseling Services](#), (513) 529-4634
- Women Helping Women (WHW) Sexual and Interpersonal Violence Support Specialists are available to support all students and can be contacted by emailing mu@womenhelpingwomen.org. As well as calling/texting 513-846-8402 between 9AM-5PM. The 24-hour hotline is 513-381-5610. WHW supports ALL survivors of dating/domestic violence, sexual assault, and stalking, regardless of gender identity or sexual orientation.

Speaking with a confidential resource person does not preclude students from making a formal report to the University if and when they are ready.

<https://miamioh.edu/diversity-inclusion/programs-resources/report-incident/index.html>

For more information, please visit <https://miamioh.edu/campus-safety/sexual-assault/> and <https://www.miamioh.edu/diversity-inclusion/oeeo/index.html>.

Academic Integrity Policy

Students are required to comply with the [CSE department expectations for Academic Integrity](#).

In the CSE department, the default penalty for a first-time violation of the Academic Integrity policy is: a score of zero for the assignment/exam/quiz and a reduction in the student's final grade of a full letter grade (for example, a C- would become a D-).

Miami University Learning Community

Miami University is committed to fostering a supportive learning environment for all students irrespective of individual differences in gender, race, national origin, religion, handicapping condition, sexual preference, or age. Students should expect, and help create a supportive learning environment free from all forms of prejudice. Disparaging comments, sexist or racist humor, or questioning the academic commitment of students based upon these individual differences undermines our learning community. If such behaviors occur in class, please seek the assistance of your instructor or department chair.

Students with Disabilities

If you have a documented disability and need special accommodations in this course, you must contact the Office of Disability Resources, 19 Campus Avenue Building. Once you submit the required documentation, they can determine what accommodations, if any, you will be given by your instructor. You will also receive paperwork with which to notify your instructor. For more information, refer to Chapter 3 (Part 4: Health and Safety) of the *Student Handbook*.

Grading scale for your final grade		
If grade is at least...	but less than...	Final grade
92	100	A
90	92	A-
88	90	B+
82	88	B
80	82	B-
78	80	C+
72	78	C
70	72	C-
68	70	D+
62	68	D
60	62	D-
0	60	F

Final grades will be rounded to the nearest whole number.
For example, 81.5 or 81.6 would be rounded to 82, but 81.4 would be rounded to 81.

Important Dates:

January 23	First day of class
February 9	Last day to drop course with no grade
March 20-26	Spring Break
April 3	Last day to withdraw from course (course grade will be "W")
May 5	Last day of classes
May 8-12	Final exams

Software Tools:

A. Dia

Windows: <https://wiki.gnome.org/Apps/Dia/Download>

Mac: <https://macappstore.org/dia/>

B. RelaX

<https://dbis-uibk.github.io/relax/>

Web browser-based relational algebra interpreter

C. MySQL Workbench

<https://dev.mysql.com/downloads/workbench/>

D. MySQL Server 8.0

<https://dev.mysql.com/downloads/mysql/>

E. ObjectDB

<https://www.objectdb.com/>

F. Other software to be determined

Disclaimer:

The subject matter and dates for the course may evolve a little and should be considered tentative. Updates will be announced.