



Database System (Online)

CSCI 3700/6070

Instructor Info

- Kelvin Gao
- Office Hrs: Upon Request
- Zoom Virtual Meeting Room
- www.kell.vin
- zgao1@aum.edu

Course Info

- Prereq: CSCI 3000 (Structured Programming II)
- Flexible
- Check Blackboard Announcement
- Zoom Virtual Meeting Room

Lab Info

- Flexible
- Flexible
- Github

TA Info

- TBD
- Office Hrs: TBD
- TBD

Overview

This course is an introduction to the design of databases and the use of database management systems for applications. We will cover the relational model and SQL - the standard language for creating, querying, and modifying relational databases. A variety of other issues important to database designers and users will be covered, including indexes, views, transactions, and integrity constraints. Non-SQL database systems and their advantages and disadvantages at certain situations will be discussed.

Material Required Text

Murach's MySQL (3rd Edition) by Joel Murach, Published March 2019, ISBN 978-1-943872-36-7

Recommended Texts

Fundamentals of Database Systems (7th Edition) by Ramez Elmasri and Shamkant B. Navathe, ISBN-10: 0133970779, ISBN-13: 978-0133970777

Grading Scheme

30%	Class Project
30%	Programming Assignment
40%	Weekly Quiz

Grades will follow the standard scale: A = 89.5-100; B = 79.5-89.4; C = 69.5-79.4; D = 60-69.4; F <60. Curving is at the discretion of the professor.

Late Submission Policy and Make-up Policy

Except in the cases outlined above for excused absences, programming assignments must be submitted before the specified deadline in order to receive full credit.

- 0 to 24 hours late: 10% of points will be deducted from the original score.
- 24 to 48 hours late: 20% of points will be deducted from the original score.
- Others: No acceptance.

Note: No late submissions will be accepted after the final exam.

Make-up exams or assignments will only be allowed for students who have a substantiated excuse approved by the instructor *before the due date*. Leaving a phone message or sending an e-mail without confirmation is not acceptable.

Learning Objectives

Students will be able to conduct transactions by using basic/intermediate/advanced SQL language. In addition, students will also learn other cutting-edge DB technology nowadays.

FAQs

? What programming languages are expected to use?

! Mainly SQL. Non-SQL databases may refer to some other languages like Pig Latin. Class projects may require understanding some web design language like php, html and javascript.

? Any programming work in this course?

! Yes, we do have several class projects that require programming works.

? How are exams organized?

! If it allows, the exams will include a text part and a practical part. Details will be given in the class.

Diversity and Inclusivity Statement

I consider this classroom to be a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability - and other visible and non-visible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class.

Accommodations for Students with Disabilities

Students who need accommodations are asked to arrange a meeting during office hours to discuss your accommodations. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. If you have not registered for accommodation services through the Center for Disability Services (CDS), but need accommodations, make an appointment with CDS, 147 Taylor Center, or call 334-244-3631 or e-mail CDS at cds@aum.edu.

Free Academic Support

All students have the opportunity to receive free academic support at AUM. Visit the Learning Center (LC) in the WASC on second floor Library or the Instructional Support Lab (ISL) in 203 Goodwyn Hall. The LC/ISL offers writing consulting as well as tutoring in almost every class through graduate school. The LC may be reached at 244-3470 (call or walk-in for a session), and the ISL may be reached at 244-3265. ISL tutoring is first-come-first served. Current operating hours can be found at www.aum.edu/learningcenter

Blackboard support: Students may seek technology assistance from the ITS Help Desk located in the computer lab on the first floor of the Taylor Center. You may also call 334-244-3500 or email helpdesk@aum.edu.

COVID-19 FAQ

Please feel free to share the FAQ resource page with them and encourage them to share specific questions or needs via our Warhawk Help portal. While our spring semester will not end in the manner we had hoped, we appreciate all that you are doing as faculty and staff to keep students on track toward their educational goals and provide the necessary support services. FAQ: <http://www.aum.edu/coronavirus-update-student-faq>

Academic Integrity

The University Code of Academic Integrity is central to the ideals of this course. Students are expected to be independently familiar with the Code and to recognize that their work in the course is to be their own original work that truthfully represents the time and effort applied. Violations of the Code are most serious and will be handled in a manner that fully represents the extent of the Code and that befits the seriousness of its violation.

Class Schedule

MODULE 1: An Introduction to MySQL

Week 1	Introduction & MySQL Workbench	June 8: introduction.pptx, syllabus, ch1ch2.pptx
Week 2	Database Query	June 15: ch3ch4.pptx, Programming Assignment 1
Week 3	Schema Operations	June 22: ch5.pptx
Week 4	Aggregate Functions and Subqueries	June 29: ch6ch7.pptx

Due: Programming Assignment 1

MODULE 2: Database Design

Week 5	Database Design	July 6: ch8ch10ch11.pptx, Class Project, Programming Assignment 2
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MODULE 3: SQL Programming

Week 6	Stored Procedure and Functions	July 13: ch9ch13ch15.pptx
Week 7	Work with C++ and Python	July 20: ch14.pptx

MODULE 4: Others

Week 8	Others	July 27: ch16ch17.pptx
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Due: Programming Assignment 2, Class Project Report
