CS 4347 Database Systems

Fall 22 Course Syllabus

Course Description

This course emphasizes the concepts and structures necessary for the design and implementation of database management systems. Topics include data models, data normalization, data description languages, query facilities, file organization, index organization, security, data integrity, and reliability.

Course Information

Course Title: Database Systems
Course Number: CS/SE 4347.504
Term: Fall 22
Meeting At: Tuesday and Thursday 5:30-6:45PM in HH 2.502
Credit Hours: 3

Instructor's Contact Information

Name: Dr. Michael Christiansen
NetID: mgc013000
Email: michael.christiansen@utdallas.edu
Office: ECSS 4.201
Office Hours: Tuesday and Thursday 2:30-3:30PM and any time I am available via MS Teams.

Teaching Assistant Contact Information

Name: Maxwell Weinzierl
Office Hours: 12:00 - 1:00 PM on Tuesdays, 10:00 - 11:00 AM on Wednesdays
Office: ECSN 2.114
Email Address: maw150130@utdallas.edu

Name: Amin Birashk
Office Hours: Mondays 10 to 11 AM, Wednesdays 4:30 to 5:30 PM
Office: ECSS 2.103B
Email Address: axb200025@utdallas.edu

Academic Calendar

- Classes Start: 8/22
- Last Day of Class: 12/8
- Midterm Exam: Oct 8-12 in the UTD Testing Center. Study guide will be provided.
- Final Exam: Dec 13-16 in the UTD Testing Center. Study guide will be provided.

See the official UTD calendar for university holidays and closings here.

Notice: The testing center requires that students reserve a seat on the exam dates through the UTD Testing Center site here. There will be no opportunity to take exams outside of the assigned dates. Reserve seats for both the Midterm and Final Exams ASAP.

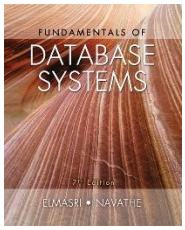
Course Prerequisites

1. CS/CE/SE 3345 Data Structures

Course Learning Objectives

1. Understand Data Modeling.
2. Understand the Relational Model and theory.
3. Understand normalization of relations.
4. **Gain a fundamental understanding of SQL programming.**
5. Understand and protect against SQL attacks
6. Understand data organization methods, indexing, and query processing.
7. Understand database integrity and concurrency.

Required Textbook



Fundamentals of Database Systems Sixth Edition.

Ramez Elmasri & Shamkant B. Navathe.

ISBN-13: 978-0133970777

Other reading materials as provided in the “Supplemental Materials” folder of the eLearning site.

Grading Policy

The grade will be determined as follows:

- The final course grade will be calculated against the following factors:

Programming Projects	25 %
Homework Assignments	10 %
SQL Assignments	10%
Class Attendance	5%
Midterm Exam	10 %
Final Exam	40 %

- **No bonus work, make-up work, dropped scores, or other means of raising your grade will be provided.**
- **To earn a course grade 65 or better, students will be required to correctly produce on the final exam the four basic SQL statements. Also 1-N and N-M joins between two tables.**

Undergraduate Grade Ranges and GPA Points

	Score	Letter Grade	GPA
A+	X ≥ 97	A+ (1)	4.00
A Excellent	93 ≥ X < 97	A	4.00
A-	90 ≥ X < 93	A-	3.67
B+	87 ≥ X < 90	B+	3.33
B Good	83 ≥ X < 87	B	3.00
B-	80 ≥ X < 83	B-	2.67
C+	77 ≥ X < 80	C+	2.33
C Fair	73 ≥ X < 77	C	2.00
C-	70 ≥ X < 73	C-	1.67
D+	67 ≥ X < 70	D+	1.33
D Poor	63 ≥ X < 67	D	1.00
D-	60 ≥ X < 63	D-	0.67
F Failure	< 60	F	0.00

Attendance Policy

University and department policy is students attend live, face to face lectures and to record attendance when possible. My policy is to record attendance for live lectures only. This is accomplished by circulating an attendance sheet for each class meeting. It is the responsibility of each student to ensure that their attendance is recorded during the lecture only.

Cheating the process (e.g. having a friend sign-in for you) will be reported to the university.

It is understood that some lectures may be missed for valid reasons e.g. sickness. But the course policy stands, attendance is only counted for signed roll sheets. To offset this inequity, each student receives an additional point to their final course grade. This extra point will more than offset the penalty of missing a few days throughout the semester.

Classroom Policy

Students are encouraged to attend the live lectures in accordance with university policy.

Students will be required to interact with their assigned project teams regardless of their schedule, locality, or status as an asynchronous student.

The materials in this syllabus are subject to change at the professor's discretion.