جامعة أم القرى
UMM AL-QURA UNIVERSITY

Databases Administration and Security (SEC2203)

Dr. Hatim Alsuwat

Introduction Lecture

Course Information

https://hatimalsuwat.github.io/Databases%20Administration%20and%20Security.html

Hatim Alsuwat, Ph.D.

HOME
RESEARCH
LAB
TEACHING
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CONTACT

(SEC2203T) DATABASES ADMINISTRATION & SECURITY

HOMEPAGE AND SYLLABUS

Disclaimer

This is the best information available as of today, **August 31, 2025** at **7:30 p.m. KSA time**. Changes will appear in this web page as the course progresses.

Meeting time and place

- **Section 1:** Abdyia -Male Students, Monday 10:00 a.m. - 11:50 a.m. Room: 12-1.014
- **Section 2:** Abdyia -Male Students, Monday 1:00 p.m. - 2:50 p.m. Room: 12-1.014
- **Section 3:** Abdyia -Male Students, Monday 8:00 a.m. - 9:50 a.m. Room: 12-1.014

Instructor: Dr. Hatim Alsuwat

Course Homepage: https://hatimalsuwat.github.io/Databases%20Administration%20and%20Security.html
Office: 1148
Office hours: TBD
Phone: NA
Email: hssuwat@uqu.edu.sa

- Communication:
  - Announcements on webpage/ emails/ blackboard
  - Questions? Email me.
  - Staff email: hssuwat@uqu.edu.sa
- Course technology:
  - Website
  - UQU Blackboard
  - Regular homework
  - Help us make it awesome!

Course Information

- Course Website

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- Discussion:
  - Please ask any question during the lecture (don't be shy)
  - There is no such thing as a stupid question.
  - Answer others' questions - if you know the answer ;-)
  - Learn from others' questions and answers

Course Information

- **Meeting time and place:**
  - **Office:** Department of Computer Science (office #1148)

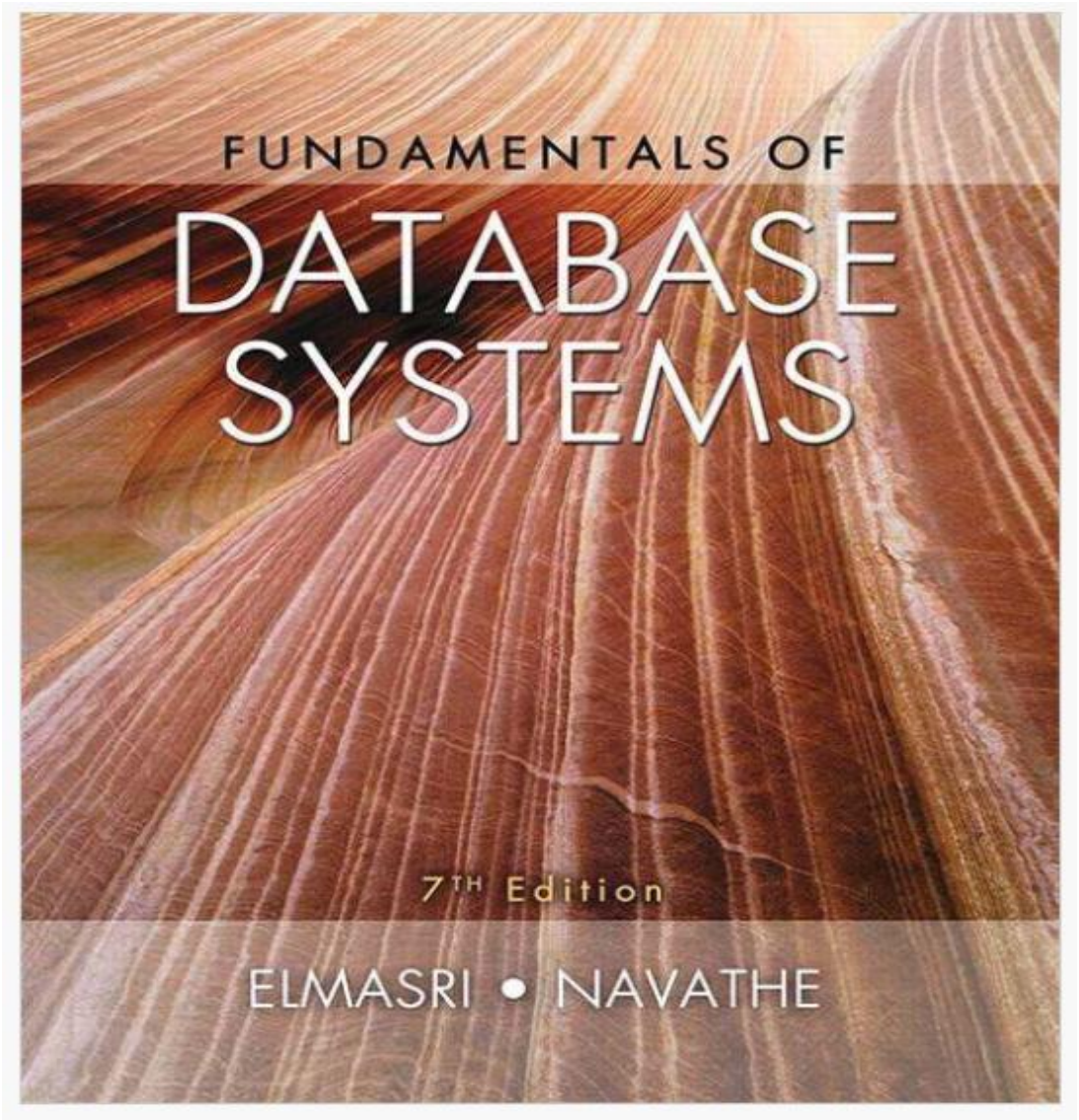
  - **Office hours:** Please email me if you have any question. If necessary, I will arrange a phone call or a virtual meeting
  - **Email:** Hssuwat@uqu.edu.sa

Learning Resources

- **Required Textbooks:**

  Fundamentals of Database Systems, 7th edition Published by Pearson (July 14, 2021) © 2016, Ramez Elmasri, Shamkant B. Navathe

Textbook


FUNDAMENTALS OF
DATABASE
SYSTEMS
7TH Edition
ELMASRI • NAVATHE

Course Description

- This course introduces the fundamental concepts necessary for designing, using, and implementing database systems and database applications.
- It includes relational (structured) databases, SQL, and non-structured databases such as NoSQL.
- Then, the course continues with database security, which includes a discussion of SQL commands for discretionary access control (DAC), as well as mandatory security levels and models for including MAC in relational databases
- Also, this course discuss threats such as SQL injection attacks, as well as other techniques and methods related to data security and privacy.

Course Content

#	Topic	Contact Hours
1	Introduction to Databases and Users	2
2	Database System Concepts & Architecture	2
3	ER Data Modeling	4
4	Relational Model & Constraints	4
5	SQL (DDL/DML, Queries & Transactions)	4
6	Security Threats & Vulnerabilities (Inference, Aggregation, SQL Injection, Corruption, Unauthorized Access)	4
7	Access Control Models & Flow Control (DAC, MAC, RBAC, Clark-Wilson; Flow Control)	4
8	Cryptography & Privacy (Hashing, Encryption, Privacy Issues & Preservation)	3
9	Object-based & Distributed; NoSQL & Big Data	3

Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Project	W 15	20
2	Lab assessments	Weekly	20
6	Mid-term Exam	W 8	20
8	Final Exam	W 18	40

Total score that can be achieved: 100

Course Information: Feedback

- Please give feedback positive or negative as early as you can via email.