

Database Management

Course schedule: 14:20-17:20 Wednesday classroom: 管一 101

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Course Outline

This course is designed to provide individuals with a complete introduction to database concepts and the relational database model. Topics include QBE, SQL, normalization, design methodology, DBMS functions, database administration, and other database management approaches, such as client/server databases, object-oriented databases, data warehouses, and XML. At the completion of this course, students should be able to understand a user's database requirements and translate those requirements into a valid database design.

Week	Topics	Chapter Readings	Exams/ Project Due Dates
1	Course outline	Class note	
2	Introduction to Database Management Managerial Perspective on DBMS	Chapter 1 & 2	
3-5	The Relational Model 1: Introduction, Single Entity, one-to-many relationship, many-to-many relationship, QBE Lab 1: Access practice 1	Chapter 3-6	
6-7	The Relational Model 2: Data modeling, basic structure Quiz1 (chapters 1-6) Lab 2: Access practice 2	Chapter 7	
8	The Relational Model 3: Relational Algebra	Chapter 9	
9	The Relational Model 2: SQL	Chapter 10	
10	Mid term		
11	Database Design 1: Normalization	Chapter 8	
12-13	Database Architecture and Implementation: Design Methodology (OO), Data structure and Storage, Processing Architecture	Chapter 11-14	

14-15	Organizational Memory Technologies: Intelligence technologies, Web, Java, and XML Quiz 2 (chapters 8, 11-14)	Chapters 15-18	
16	Team project presentation		Oral presentation
17	Managing Organization Memory: Database Administration, Data Integrity	Chapter 19-21	
18	Final Exam		

Grading Schema

Homework (4x2.5% each)	10%
Classroom participation	5%
Quiz	15%
Mid term	30%
Team project (team)	10%
Final Exam	30%

Textbook

Watson, Richard T., Data Management: Database and Organizations, 5th ed., Wiley, ISBN: 0-471-71536-0 (web site: www.wiley.com/college/watson)

Homework Assignments

There are four homework assignments. Please select **ONLY ONE** from each group.

Group 1:

- Case questions 1-4 in Chapter 2 (p.54)
- Exercise 8 in Chapter 4 (p.106)

Group 2:

- Exercise 12 in Chapter 7 (p.197)
- Exercise 20 in Chapter 10 (p.287)

Group 3:

- Exercise 17 in Chapter 11 (p.358)
- Exercise 3 in Chapter 14 (p.429)

Group 4:

- Exercise 13 in Chapter 16 (p.487)
- Exercise 9 in Chapter 19 (p.561)