

# **Database Management Systems**

## **- Fall, 2022 -**

### **Goal**

The goal of the course is to develop an understanding of basic concepts and principles of database management systems.

### **Instructor**

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### **Office hour**

14:00~15:00, Tuesday or by appointment

### **References**

Fundamentals of Database Systems, 7th edition, R. Elmasri and S.B. Navathe, Pearson, 2016.  
Database Systems: Design, Implementation and Management, 12th edition, C. Coronel and S. Morris, Cengage Learning, 2016.  
Data Mining: Concepts and Techniques, 3rd edition, J. Han, M. Kamber and J. Pei, Morgan Kaufmann, 2011.  
Database System Concepts, 6th edition, A. Silberschatz, H. Korth and S. Sudarshan, McGraw Hill Company, 2016.

### **Topics included**

Overview  
Relational data model  
Query language and processing, SQL  
Entity-relationship model and schema design  
Functional dependencies and normalization  
Transaction processing  
Concurrency control  
Database recovery  
Big data  
Emerging database technologies and applications

### **Grading**

Quizzes	30%
Mid-term (Nov. 2)	20%
Final (Dec. 21)	20%
Class participation and performance	15%
Term project (Dec. 27, Proposal: Nov. 30)	15%