

# Databases

Useful Information

Computer Science Engineering

2018-2019

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# Assessment Method

- **Assessment Method:** Course grade has three components:
  - ▶ **C:** Midterm exam: ER, MR, AR.
  - ▶ **A:** Other activities: Lab exercises, etc.
  - ▶ **F:** Final exam in January / July.
- **Detailed assessment:** Final course grade is **the maximum of the following three expressions:**
  - ▶  $C * 0,15 + A * 0,15 + F * 0,7$
  - ▶  $C * 0,1 + F * 0,9$
  - ▶  $A * 0,1 + F * 0,9$
- **Re-sit exam:** The same rule will be applied.
  - ▶ Items **C** and **A** correspond to the **activities done during the course (september-december)**.
- Midterm exam and other activities are **optional**.
- **Requirements for passing the subject:**
  - ▶ Final exam (january or july) marked with at least 5 out of 10, **and**
  - ▶ Final course grade of at least 5 out of 10.

**Read the Learning Guide (ficha docente) on the Web.**

## Bibliography

- R. Elmasri, S.B. Navathe. **Fundamentals of Database Systems** (6th ed). Addison-Wesley, 2010. (in Spanish: **Fundamentos de Sistemas de Bases de Datos** (5a ed). Addison-Wesley, 2007).
- A. Silberschatz , H. F. Korth, S. Sudarshan. **Database Systems Concepts** (5th ed) McGraw-Hill, 2006. (in Spanish: **Fundamentos de Bases de Datos** (5a ed) McGraw-Hill, 2006).
- H. Garcia Molina, J. D. Ullman, J. Widom. **Database Systems: The Complete Book** (2nd ed). Prentice Hall, 2009.
- R. Ramakrishnan, J. Gehrke. **Database Management Systems** (3rd ed). McGraw-Hill, 2007. (In Spanish: **Sistemas de Gestión de Bases de Datos** (3a ed) McGraw-Hill, 2007).
- J. Gallibaud. **Oracle 11g - SQL, PL/SQL y SQL\*Plus**. Ediciones ENI, 2010.
- O. Heurtel. **Oracle 11g - Administracion**. Ediciones ENI, 2010.

# Attention to the Student

- **Classroom sessions:**

- ▶ **Start right on time** and last 50 minutes (2-hour classes are two sessions of 50-minute class with a 10-minute break).
- ▶ **Cell phone is not allowed in class.**

- **Laboratory Sessions.**

- **Office hours:** Office room 446.

Mondays:	12:00-13:00 and 14:00-16:00
Tuesdays:	12:00-13:00 and 14:00-15:00
Fridays:	11:00-12:00

- Before coming to the office room, send a message (jcorreas@ucm.es) to make an appointment.

# Syllabus

1. Introduction to Databases.
2. Conceptual Design: The Entity-Relationship Model.
3. Logical Design: The Relational Database Model. Relational Algebra.
4. SQL: Structured Query Language.
5. Introduction to PL/SQL. Triggers.
6. Introduction to Transactions and Concurrency Control.
7. Advanced Concepts.