

**Información del Plan Docente**

<b>Academic Year</b>	2017/18
<b>Faculty / School</b>	100 - Facultad de Ciencias
<b>Degree</b>	453 - Degree in Mathematics
<b>ECTS</b>	6.0
<b>Year</b>	4
<b>Semester</b>	Second semester
<b>Subject Type</b>	Optional
<b>Module</b>	---

**1.General information****1.1.Introduction****1.2.Recommendations to take this course****1.3.Context and importance of this course in the degree****1.4.Activities and key dates****2.Learning goals****2.1.Learning goals****2.2.Importance of learning goals****3.Aims of the course and competences****3.1.Aims of the course****3.2.Competences****4.Assessment (1st and 2nd call)****4.1.Assessment tasks (description of tasks, marking system and assessment criteria)****5.Methodology, learning tasks, syllabus and resources****5.1.Methodological overview**

Theoretical classes.

Problem solving sessions.

Acquisition of skills in the use of computer tools.

Exposition of the solutions to the proposed activities and problems.

### 5.2.Learning tasks

Development of skills in the use of computer tools.

Problem solving with the support of computer tools.

Resolution of cases drawn from the real world.

Analysis and specification of the solutions to the proposed practical cases.

### 5.3.Syllabus

1. Overview of database technology.
2. Table-based data models.
3. The relational model.
4. SQL: query language for relational databases.
5. Technological design in databases: methodology.
6. The conceptual schema: entity-relationship model. Perspective, formal model of knowledge representation and data model.
7. Textual specification of entity-relationship schemes.
8. An extended entity-relationship model.
9. Rules for the transformation of an entity-relationship schema into a relational schema.

### 5.4.Course planning and calendar

In addition to the final test, up to two partial tests will be done during the course.

### 5.5.Bibliography and recommended resources

1. Connolly, T. M., & Begg, C. E. (2005). Sistemas de bases de datos : un enfoque práctico para diseño, implementación y gestión. Madrid [etc.] : Pearson Educación, D.L. 2005.

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Date, C. J., & Darwen, H. (1997). A Guide To Sql Standard (4th ed). Reading: Addison-Wesley.

2. Elmasri, R., & Navathe, S. B. (2007). Fundamentos de sistemas de bases de datos. Madrid [etc.] : Pearson Addison Wesley, D.L. 2007.