27025 - Database Systems I

Syllabus Information

Academic Year: 2019/20
Subject: 27025 - Database Systems I
Faculty / School: 100 -

Degree: 453 - Degree in Mathematics

ECTS: 6.0
Year: 4
Semester: Second semester
Subject Type: Optional
Module: ---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as theory sessions, problem-solving sessions and autonomous work and study.

4.2.Learning tasks

This course is organized as follows:

- **Theory sessions**.
- **Problem-solving sessions**. Acquisition of skills in the use of computer tools. Exposition of the solutions to the proposed activities and problems. Development of skills in the use of computer tools. Resolution of cases drawn from the real world. Analysis and specification of the solutions to the proposed practical cases.
- **Autonomous work and study.**
- **Assessment tasks**. A final exam will take place as well as two midterm exams.

4.3.Syllabus

This course will address the following topics:

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

4.4.Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the Faculty of Sciences website and Moodle.

4.5.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.
2. Date, C. J., & Darwen, H. (1997). A Guide To Sql Standard (4th ed). Reading: Addison-Wesley.
3. Elmasri, R., & Navathe, S. B. (2007). Fundamentos de sistemas de bases de datos. Madrid [etc.] : Pearson Addison Wesley, D.L. 2007.

http://biblos.unizar.es/br/br_citas.php?codigo=27025&year=2019