Universidad Zaragoza

Academic Year: 2025/26

39841 - Information systems

Teaching Plan Information

Academic year: 2025/26
Subject: 39841 - Information systems
Faculty / School: 326 - Escuela Universitaria Politécnica de Teruel
Degree: 634 - Joint Programme in Computer Engineering - Business Administration
ECTS: 6.0
Year: 4
Semester: First semester
Subject type: Compulsory
Module:

1. General information

The objective of this subject is that the student acquires a solid base for the understanding of the basic vocabulary used by professionals who design, develop, use and maintain Information Systems in companies and/or organizations. In addition, it is intended that the students become familiar with the methodologies, technologies and basic techniques currently used for the construction of Information Systems.

2. Learning results

- To know the importance of information management in organizations, the main types of information systems and some relevant real cases.
- Know the business and organizational environment well enough to know how to select the most appropriate technology for your needs.
- To understand the impact of computerization on the target organization, at all levels (technological, organizational, ethical, etc.).
- To know the possible alternatives for data and information management.
- To know the different software architectures that can be deployed in a network for the construction of a distributed information system, as well as the importance of the Web for organizations.
- To know the current techniques that allow the creation of decision support systems.
- Knowledge of migration strategies and general preservation of information systems.

3. Syllabus

- Introduction to information systems

- Differences between data and information
- Definition and types of information systems
- Information systems life cycle

- Networked information systems

- The Web: evolution and technologies
- Searching for information on the Web
- Ethical and social aspects

- The organization of data and information

- Information management and integration systems
- Distributed databases
- OLAP vs OLTP environments
- Data mining and business intelligence
- Ethical and social aspects

- Legacy information systems

- System and data migration strategies

- Introduction to the Spanish legislative framework

- Risk management and IT audit methodologies

- Introduction to the protection of personal data and intellectual property

- Ethical and social aspects

4. Academic activities

- Participative lectures (24 hours). Different concepts related to will be introduced and students will be asked to participate and discuss the technical, ethical and moral aspects involved.
- Problem sessions and directed work (12 hours): We will work on different technologies and examples of information systems in production. In addition, during the last sessions of the course, students will make the presentations of the work they have done.
- Laboratory practice sessions (24 hours): Group practices will be carried out in which different components of an information system will be developed.
- Study and personal work: 85 hours.
- Assessment tests. 5 hours.

5. Assessment system

The subject will be evaluated in the continuous assessment mode by means of the following activities:

- Written test (40%) Questions and/or problems related to the topics of the syllabus.

- Practical test (60%): The knowledge test in practical exam will consist of the delivery of all materials produced as a result of the practical classes and exercises of the subject. Teachers may ask questions or appropriate tests to ensure the originality and quality of the materials submitted.

In order to pass the subject, it is essential to obtain a grade in the written test higher than or equal to 5 points out of 10.

6. Sustainable Development Goals

4 - Quality Education
9 - Industry, Innovation and Infrastructure
17 - Partnerships for the Goals