30224 - Information Systems

Syllabus Information

Academic Year: 2019/20

Subject: 30224 - Information Systems

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

326 - Escuela Universitaria Politécnica de Teruel

Degree: 443 - Bachelor's Degree in Informatics Engineering

439 - Bachelor's Degree in Informatics Engineering

ECTS: 6.0

Year: 3

Semester: 439 - First semester

439 - First semester

439 - First semester

439 - First semester

439 - First semester

439 - First semester

439 - First semester

439 - First semester

439 - First semester

439 - First semester

443 - First semester

443 - First semester

443 - First semester

443 - First semester

Subject Type: Compulsory

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 learning process is based on:

1. Lectures related to the topics included in the program of the course (30 hours) and the resolution of problems and tutorials in class (7.5 hours).
2. Tasks in the laboratory to develop different systems (24 hours spread over 12 sessions of 2 hours).
3. The creation of a paper about a topic related to the program of the course by the students. Moreover, students must also do a presentation of their paper in class.
4. Self-study.
5. Personal attention to the students along the course in-office hours of the teachers in order to review and discuss materials and topics presented in both theoretical and practical sessions.
6. Exams and reports that the students should do during the course.

Keep in mind that the subject has both theoretical and practical orientation. Therefore, the learning process requires developing tasks in the laboratory in a collaborative way and also self-studying in an individual way

4.2.Learning tasks

The course includes the following learning tasks:

? Lecture sessions in the classroom: In these sessions, different concepts, technologies, tools and methodologies related to the topics of the subject are presented. Moreover, students and teachers will discuss technical, ethical, and moral aspects related to the different concepts.

? Problem sessions in the classroom: In these sessions, tutorials about different technologies and examples of information systems in production are presented. Besides, during the last sessions of the course, students make presentations of their papers.

? Laboratory sessions: In these sessions students develop a total of 6 practical works in groups.

4.3.Syllabus

The course will address the following topics://
- Introduction to Information Systems
  - Differences between data and information
  - Data types: structured, semi-structured and unstructured
  - Types of information systems
  - Information systems in organizations
  - The life cycle of information systems
- Information systems and the Internet:
  - The Web: evolution and related technologies
  - Information Search on the Web
  - E-commerce: Digital Marketing and Online Reputation
  - The Semantic Web
  - Ethical and social aspects
- The organization of data and information or management systems and integration of information.
  - Distributed Databases
  - OLTP vs OLAP
  - Ethical and Social aspects
- Knowledge-Based Systems / Business Intelligence
  - Knowledge representation
  - Data Mining
- Legacy information systems
  - Strategies to migrate legacy systems and their data
- Introduction to Spanish legal issues related to Information Systems:
  - Standards to develop and manage Information Systems
  - Methodologies to manage risks
  - Introduction to LOPD, LSSI and LPI
  - Ethical and Social aspects

4.4.Course planning and calendar

Schedule

The schedule of the sessions of this subject will be defined by the Escuela de Ingeniería y Arquitectura (EINA).

Student Work

The subject has 6 ECTS credits: 2.8 credits for activities in the classroom and the lab and 3.2 credits for work of students.

Therefore, the estimated dedication of each student to achieve the goals of the learning is 150 hours (60 contact hours and 90 non-contact hours) distributed approximately as follows:

- 65 hours for classroom activities (classroom sessions, laboratory sessions, presentation of papers, and evaluation).
- 45 hours for the development of the exercises, problems and tasks presented in different sessions.
- 40 hours for effective self-study.

4.5.Bibliography and recommended resources

EINA:

http://psfunizar7.unizar.es/br13/egAsignaturas.php?codigo=30224&Identificador=14675

EUPT:

http://psfunizar7.unizar.es/br13/egAsignaturas.php?codigo=30224&Identificador=13596