

## 30256 - Web Systems and Technology

### Syllabus Information

**Academic year:** 2023/24

**Subject:** 30256 - Web Systems and Technology

**Faculty / School:** 110 - Escuela de Ingeniería y Arquitectura  
326 - Escuela Universitaria Politécnica de Teruel

**Degree:** 439 - Bachelor's Degree in Informatics Engineering  
443 - Bachelor's Degree in Informatics Engineering

**ECTS:** 6.0

**Year:** 4

**Semester:** Second semester

**Subject type:**

**Module:**

### 1. General information

Web Systems and Technologies is a compulsory subject in the specialties of Information Systems and Information Technologies, and an optional subject in the specialty of Software Engineering, which is implemented as a subject of 6 ECTS credits in the second semester of the fourth year of the Degree in Computer Engineering with a practical and applied profile.

The temporal location of the subject, in the last semester of the Degree, allows to focus the subject in a very practical and applied way, and to reflect on the characteristics of the systems and technologies that the student has used or knows.

In addition, it addresses topics that will help you in your immediate professional future.

The approaches and objectives of the course are aligned with some of the Sustainable Development Goals (SDGs): Goal 8 (Target 8.4) and Goal 9 (Target 9.1).

### 2. Learning results

In order to pass this subject, the students shall demonstrate they has acquired the following results:

- If you follow the "**Software Engineering**" pathway:
  1. Know the importance of the Web in organizations, its advantages and risks, as well as the associated technology.
  2. Be able to design and implement a medium to large web system.
- If you follow the "**Information Technology**" pathway:
  1. Knowledge of an emerging programming paradigm. The student should be able to design various solutions to a given problem.
  2. Know the importance of the Web in organizations, its advantages and risks, as well as the associated technology.
  3. Be able to design and implement a medium to large web system.
  4. Be able to search for documentation on different standards and technologies, analyze it and present it effectively to peers.
- If you follow the "**Information Systems**" pathway:
  1. Know the importance of the Web in organizations, its advantages and risks, as well as the associated technology.
  2. Be able to design and implement a medium to large web system.

### 3. Syllabus

#### Syllabus

Classroom face-to-face learning activities, organized in lecture and problem classes, will focus on the study of the following topics:

- Introduction. Web systems and technologies.

- Distributed systems.
- Web Technologies.
- Web Services.
- Cloud computing.

### **Practice sessions**

- The program of practical sessions and problems will cover the concepts covered in the theoretical classes.

## **4. Academic activities**

The learning process designed for this subject is based on the following:

- Presentation by the teacher of the main contents of the subject.
- Personal study of the subject by the students.
- The resolution of theoretical-practical assumptions for specific cases, in practical problem sessions.
- The development of specific practices by the students, guided by the teacher, which expand the theoretical knowledge and lead to the development of a Web application as a real application case of application of the subject.

The student's dedication to achieve the learning results in this subject is estimated in 150 hours, distributed as follows:

- 60 hours of teaching activities (30 hours of theory sessions and 30 hours of problem and practical sessions)
- 45 hours of team work.
- 40 hours of work and effective individual study.
- 5 hours dedicated to different evaluation tests.

The detailed calendar of activities will be established on the basis of the calendar approved by the University for the corresponding academic year . Dates for exams and assignments will be announced well in advance during classes and on the course page (Moodle).

## **5. Assessment system**

The student must demonstrate achievement of the intended learning results through the following assessment activity:

- **Project:** A group project in which students must conceive, design, and implement an application Web that contemplates a series of technologies that are part of the syllabus of the subject.

The teacher will evaluate the work developed by each student on the basis of deliverables provided by the group, and on the defense that each student makes of his/her contribution. The grade for this project will be 100% of the final grade.

The evaluation will be the same for the June and July sessions.