

## 30254 - Legacy System

### Syllabus Information

**Academic year:** 2024/25

**Subject:** 30254 - Legacy System

**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:** First semester

**Subject type:**

**Module:**

### 1. General information

The objective of the subject is to become familiar with the problem of inevitable obsolescence in computer systems. It will be discussed how the technological gap affects the different components of an information system (hardware, software, data, business processes), the different strategies to face this gap, and will also talk about the existing IT tools to solve these problems. All this will be illustrated with real cases. These approaches and goals are aligned with the following Sustainable Development Goals (SDGs):

- Goal 8: Decent work and economic growth. Targets 8.2 and 8.3.
- Goal 12: Ensure Sustainable Consumption and Production Patterns. Target 12.5.

### 2. Learning results

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

- Be able to understand the importance of the evolution of technology and its impact on computer systems.
- Be capable of drawing up action plans for the integration of two or more independent IT systems.
- Be able to select the best strategies to upgrade, migrate and maintain IT systems throughout the life of an organization.
- Know how to manage software evolution by applying reengineering techniques.
- Be able to propose different solutions to digitally preserve data and complete systems.

### 3. Syllabus

- Part I: Introduction to legacy systems
  - Motivation: some real cases
  - Evolution of information technology Open and closed systems
- Part II: Software maintenance and integration
  - Reverse engineering
  - Reengineering
  - Encapsulation
  - Migration strategies
- Part III: Digital preservation of computer systems

- Digitization
- Emulation

For more details, consult the [website of the subject](#) (EINA).

#### 4. Academic activities

The program offered to the student to help them achieve the expected results includes the following activities

- The syllabus will be developed in the classes taught in the classroom.
- In the problem classes, problems of application of the concepts and techniques presented in the program will be solved.
- The practical sessions will take place in a computer laboratory. In these sessions the student should do practical work related to the subject.

#### 5. Assessment system

(ZA=School of Engineering and Architecture of the Rio Ebro Campus; TE=University Polytechnic School of the Campus of Teruel)

The student must demonstrate that they have achieved the expected learning results through the following assessment activities:

- Practical work in the laboratory (ZA 40%, TE 50%): Group work will be carried out, following up on the students' learning progress during the four-month period, . Students who meet the established deadlines, obtaining at least a 5, will be exempted from taking a practical exam in the laboratory.
- Written test (ZA 40%, TE 30%). In this test, questions and/or problems related to the program taught in the subject will be posed.
- Preparation of a report on theoretical/practical issues related to the contents taught in the subject (ZA/TE 20%). A written document with the work done must be submitted and a public presentation must be made. The quality of the contents and the answers to the questions posed at the end of the presentation will be evaluated

The final grade will be obtained by means of the weighted average of the previous sections. Each test must be passed by separately; otherwise the final grade will be the maximum between the grades that do not exceed the pass mark.

#### 6. Sustainable Development Goals

- 8 - Decent Work and Economic Growth
- 12 - Responsible Production and Consumption