

## 63290 - Design of Learning Activities for Industrial and Building Processes

### Syllabus Information

**Academic year:** 2023/24

**Subject:** 63290 - Design of Learning Activities for Industrial and Building Processes

**Faculty / School:** 107 - Facultad de Educación

**Degree:** 584 - Master's Degree in Teaching Compulsory Secondary Education

601 - University Master's Degree in Teaching, specializing in Industrial and Construction Processes

**ECTS:** 8.0

**Year:** 1

**Semester:** Second semester

**Subject type:** Optional

**Module:**

### 1. General information

The subject Design of Learning Activities of Industrial Processes and Construction is mandatory for the specialty of Industrial Processes and Construction, with 8 ECTS. It is taken in the second semester of the Master's program.

Its objective is that students acquire prior knowledge, skills and attitudes necessary for the design of learning activities of the subjects of the specialty and to develop the necessary environments and resources for the work of the students of these stages. In addition, this subject allows the integration of information and communication technologies in formal learning situations and in professional practice.

These approaches and objectives are aligned with the following SDG of the United Nations Agenda 2030, so that the acquisition of the learning results of the subject provides training and competence to contribute in some extent to its achievement: Goal 4: Quality Education

### 2. Learning results

- 1.Explain the specific characteristics and difficulties of learning the corresponding subjects, establishing their relationship with the characteristics of the content to be taught and with the teaching processes followed.
- 2.Describe and critically comment on a wide repertoire of activities and resources for learning the corresponding subjects, related to different types of objectives, methodologies and learning styles.
- 3.Describe the main assessment tools, procedures, and comment critically on their suitability for different types of educational objectives.
- 4.Design teaching proposals on the corresponding subjects, following the principles and criteria previously established in the theoretical framework of the corresponding specific didactics.

All these learning results aim to bring the Master's student, future teacher of Secondary/Professional Training, closer to the development of activities to be implemented in the field of teaching in schools. This will allow them to design, plan and develop teaching-learning activities that facilitate the acquisition of the competences and contents of the subjects of the Industrial Processes areas, as well as to design and develop learning environments that facilitate equal opportunities and that stimulate the effort of the student to learn by themselves and cooperatively. In addition, organizational aspects and the management of activities are discussed in depth.

### 3. Syllabus

The contents of the subject will be the following:

- 1.Design and development of different types of classroom activities: initial, motivational, discovery, orientation, analysis, and evaluation
- 2.Design and development of activities for creative learning.
- 3.Active and collaborative methodologies: gamification, game-based learning, project-based learning, case method, etc.
- 4.Use of educational resources.
- 5.Application of different web tools for application in educational environments.
- 6.Design and elaboration of presentations.

### 4. Academic activities

The course has 8 ECTS, which is equivalent to 200 hours of student dedication, distributed as follows:

- Master classes: 30 h
- Practical classes: 30 h
- Directed work: 40 h
- Individual study: 97 h
- Assessment test: 3 h

Theoretical fundamentals will be explained in the master classes. In the practical classes, cases/works related to the theory covered will be studied, developed and presented. These classes include the development of group and /or individual work, as well as the development of oral presentations in which the work or cases carried out are presented and later debated . In addition, lectures will be given by professionals related to the teaching of the subject, as well as visits to entities related to the subject.

## 5. Assessment system

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

- Individual and/or small group completion of case studies/assignments related to the different modules of the subject, following the indications and criteria set by the teacher in each of the assignments, in which the students demonstrate their competence. All these papers will form an overall subject work.
- Oral presentation of case studies/workshops.

### Assessment criteria

The assignments/case studies are intended to achieve continuous formative and additive assessment and that the workload is uniform each week. The following aspects of each paper (written part) will be evaluated:

- Presentation and structuring.
- Application and adequacy to the contents of the subject.
- Clarity and quality of documentation, organization, etc.
- Originality of the work.
- Inclusion and application of the theoretical knowledge achieved in the first term and those that are applicable in each work/practical case.
- Results achieved.
- Bibliographic references.

Each group of students must make an oral presentation of the final work. For the oral presentation, the following will be valued: clarity of the presentation, the ability to motivate the rest of the classmates for the debate, the active participation in the debate and the ability to defend and argue their own ideas and methodologies.

### Levels of demand (Grading criteria and requirements to pass the subject)

Global work of the subject (in which each of the works/cases carried out throughout the subject are grouped): 80 %, Oral presentation of papers: 20 %.

In order to pass the subject it will be necessary to obtain a 5 out of 10 in each of the sections.

Students who do not opt for continuous assessment or who do not pass the subject by this procedure will have the right to sit the overall test, whose contents will be those of the subject.

### Standards for evaluation

Finally, it must be taken into account that the Regulations of the Norms of Coexistence of the University of Zaragoza will be applicable to the irregularities committed in the evaluation tests by means of academic fraud, as well as the application of article 30 of the Regulations of the Norms of Evaluation of Learning in relation to irregular practices other than academic fraud.

### Global test and second call

In compliance with articles 9.1 and 9.3 of the Regulation of Learning Assessment Standards of the University of Zaragoza, there is an overall assessment test, which will be a written test whose value will be 100% , to which all students will be entitled and which will be held on the date established in the official examination calendar.

### Fifth and sixth calls

For the fifth and sixth calls, there will be a global written test, whose value will be 100% of the grade.