Universidad Zaragoza

Academic Year/course: 2023/24

25879 - Ergonomics

Syllabus Information

Academic year: 2023/24
Subject: 25879 - Ergonomics
Faculty / School: 110 - Escuela de Ingeniería y Arquitectura
Degree: 558 - Bachelor's Degree in Industrial Design and Product Development Engineering
ECTS: 6.0
Year: 3
Semester: First semester
Subject type: Compulsory
Module:

1. General information

This subject focuses on the student knowing the fundamental principles of ergonomics and being able to apply them to the design of new products and the redesign of existing products.

Ergonomics, understood as the discipline that seeks to ensure that users and technology work in complete harmony, designing and maintaining products, workstations, tasks, equipment, etc. in accordance with their characteristics, needs and limitations, is a basic and fundamental subject for any designer.

These approaches and objectives are aligned with the Sustainable Development Goals (SDGs) of the 2030 Agenda of United Nations (https://www.un.org/sustainabledevelopment/es/), specifically, the learning activities planned in this subject will contribute to the achievement of target 16.7 of Goal 16.

2. Learning results

1. Know how to use an anthropometric chart.
2. Propose and analyze different options and select the most appropriate posture to perform a task.
3. Design a product taking into account population differences.
4. To know how environmental variables affect users performing tasks.

3. Syllabus

1.- Anthropometry.
2.- Biomechanics.
3.- Design for the task.
4.- Environmental ergonomics.
5.- Design for all.

4. Academic activities

Lectures. Weekly two-hour sessions: 30h.

Problem solving and case studies: 15h.

Personalized teacher-student mentoring. The work teams will carry out a weekly session of one hour of tutoring and follow-up of the practical work: 15h.

Carrying out practical application or research work: 60h.

Effective personal study: 25h.

Assessment tests. 5h.

5. Assessment system

The assessment will consist of a global test consisting of two parts:

- **Multiple-choice test.** This exam will account for 25% of the student's grade.
- **Practical work(s).** Based on one or several practical works carried out in group, which must be handed in and presented on the day of the test. In the case of those students who cannot participate in the learning activities on a regular basis, such work(s) should be performed on an individual basis. The quality of the documentation and its defense will be evaluated, and will account for 75% of the student's grade. For this assessment, peer review systems may be proposed.

In order to pass the subject, at least a 5 in each of the parts is required. During the theory sessions,, quizzes may be proposed that may represent up to one additional point in the theoretical part, as long as it is higher than 4.0.