

## 30178 - Human factors

### Syllabus Information

**Academic year:** 2024/25

**Subject:** 30178 - Human factors

**Faculty / School:** 179 - Centro Universitario de la Defensa - Zaragoza

**Degree:** 563 - Bachelor's Degree in Industrial Organisational Engineering

**ECTS:** 6.0

**Year:** 4

**Semester:** First semester

**Subject type:** Optional

**Module:**

### 1. General information

The goals of the subject are:

- Know the human factors in aviation.
- Recognize the different physiological processes that occur in flight.
- Learn the principles of aviation psychology.

### 2. Learning results

RA-1. Knows the biopsychosocial human factors involved in aviation, the general instructions concerning the principles and objectives of CRM (Crew Resource Management), individual and group human performance and its limitations.

RA-2. Recognizes and interprets the different physiological processes that occur in flight.

RA-3. Develops optimal and adaptive coping strategies for the management of human behaviour (individual and group) in functional and dysfunctional situations in aviation.

### 3. Syllabus

The program of the subject is divided into the following thematic blocks:

1. Human factors in aviation: basic safety and performance concepts.
2. Fundamentals of flight physiology.
3. Principles of aviation psychology.

### 4. Academic activities

- Theoretical development of the subject by the teacher in the expository sessions, who will look for the maximum participation of the student
- Teaching-learning activities such as case studies, debates and role-playing in which the practical application of the contents will be sought, in order to check the achievement of the objectives.
- Production of two individual and group works and oral presentation of the same.
- Assimilation work in class on the contents of the subject
- Personal study of the subject by the students.
- Evaluation and tutoring activities.

### 5. Assessment system

FIRST CALL

Continuous evaluation throughout the four-month period:

- Two written tests during the term on theoretical, practical or theoretical-practical aspects (40% of the final grade)
- Two individual and/or group practical assignments to be carried out throughout the term (50% of the final grade).
- A research paper and critical analysis of information on human factors in aviation (10% of the final grade).

### Overall test

Development of several open questions, practical exercises and oral presentation. Students who do not pass the subject by continuous evaluation or who would like to improve their grade, will have the right to take the overall test set in the academic calendar , prevailing, in any case, the best of the grades obtained. This global test will be equivalent to the continuous assessment tests described above and will have a 100% weight in the final grade.

### SECOND CALL

Students who do not pass the subject in the first call may sit for a second comprehensive exam with a similar structure to the previous one.

### ASSESSMENT CRITERIA

In order to pass the subject, the student must obtain a final grade of 5 or higher. The evaluation criteria will be based on a rubric of correction of the answers, assessing the adequate content, correct argumentation and critical judgment , as well as the formal, logical and editorial correctness of the texts.

Learning tools	Weighting	RA-1	RA-2	RA-3
Written test 1	20%	X		X
Practice 1 and oral presentation	25%	X		X
Written test 2	20%	X	X	X
Practice 2 and oral presentation	25%	X	X	X
Practical information search	10%	X	X	X

## 6. Sustainable Development Goals

3 - Good Health & Well-Being