

30178 - Human factors

Syllabus Information

Academic Year: 2021/22

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

1.1. Aims of the course

- To know the main human factors of aviation.
- To recognize the different physiological processes that occur during the flight.
- To learn the main principles about aviation psychology.

Specialization in Defence: These approaches and objectives are in line with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/>), in such a way that the acquisition of the course learning outcomes provides training and competence to contribute to their achievement to some degree.

- Objective 3: Good health and well-being

1.2. Context and importance of this course in the degree

The subject is part of the Aviation module of the Industrial Organization Engineering Degree. This course is of great importance for the officers which are part of the Aviation of the Army.

The course allows the future officers of the Army to become familiar with the necessary knowledge they need to perform their duties as helicopter pilots. Thereby, it contributes to the development of their physical and mental health.

1.3. Recommendations to take this course

It is a subject of the fundamental specialty of aviation.

The students must have passed most of the degree, so they should be able to successfully complete it.

2. Learning goals

2.1. Competences

- Ability to plan, budget, organise, manage and monitor tasks, people and resources.
- Ability to solve problems and take decisions with initiative, creativity and critical reasoning.
- Ability to communicate knowledge and skills in Spanish.
- Ability to work in a multidisciplinary group and in a multilingual setting.
- Ability to continue learning and develop self-learning strategies.
- Familiarity with the human factors involved in aviation, the general instructions related to the main objectives of the Cockpit Resource Management (CRM), human (individual and group) performance and limitations.

2.2. Learning goals

- Familiarity with the human factors involved in aviation, the general instructions related to the main objectives of the Cockpit Resource Management (CRM), human (individual and group) performance and limitations.
- Recognition and interpretation of the different physiological processes that occur during the flight.

-Development of optimal strategies for the management of human behavior in aviation.

2.3. Importance of learning goals

The learning goals are part of the skills that students should acquire as part of their training in their fundamental specialty.

3. Assessment (1st and 2nd call)

3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

- Two exams throughout the semester: 40%.
- Works throughout the semester (individual and in groups): 60%.
(A minimum of 5 is required in both parts to pass the course).

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

If this teaching could not be done in person for health reasons, it would be done telematically.

So, the methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as:

- Lectures.
- Practical activities.
- Academic works (individual and in groups).
- Assimilation works during classes.
- Autonomous study.

4.2. Learning tasks

The course includes the following learning tasks:

- Presentation of the contents in classes and resolution, by the student, of theoretical and practical problems.
- Academic works (individual and in groups).

4.3. Syllabus

The course will address the following topics:

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

4.4. Course planning and calendar

Calendar of sessions and exam dates:

It will be announced by the teacher, both in class and through the Moodle platform.

4.5. Bibliography and recommended resources

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=30178>