



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Human - performance and limitations 1

Course

Field of study

Aviation

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

1/2

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

Number of hours

Lecture

15

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

Number of credit points

1

Lecturers

Responsible for the course/lecturer:

dr n. med. Karol Szymański

Wydział Inżynierii Środowiska i Energetyki

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Responsible for the course/lecturer:

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Prerequisites

A student starting this subject should have a basic knowledge of general and aviation psychology, the nature and functioning of human cognitive, emotional and motivational processes. He should also have the ability to apply the scientific method in solving problems and be ready to cooperate within a team.

Course objective

To acquaint the student with the emotional and motivational processes of man functioning in normal, difficult and extreme situations. Basic human cognitive processes - perception and attention and their importance in the process of information management in the human - technical object system. The dynamics of small social groups and its application in the process of constructing effective task teams in aviation. Crew / team resource management (CRM).



Course-related learning outcomes

Knowledge

1. has basic knowledge of the vocabulary used in English to describe mathematical operations and the data presented in the diagram / graph. Has knowledge of formulating a text in English explaining / describing a selected specialist issue, has basic knowledge of the vocabulary used in English to describe the technological support of air communication, flight control systems, safety procedures at the airport related to the presence of animals, aircraft control surfaces, maneuvers performed by plane
2. has a basic knowledge of the mechanisms and laws governing human behavior and psyche

Skills

1. is able to organize, cooperate and work in a group, assuming various roles in it, and is able to properly define priorities for the implementation of a task set by himself or others

Social competences

1. understands that in technology, knowledge and skills very quickly become obsolete

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture:

- assessment of knowledge and skills demonstrated on the written test - 1.5 hour

Programme content

Lecture:

Human factors in aviation. Becoming a competent pilot. Flight safety concepts. Threat and error management (TEM) model and SHELL model. Safety culture and safety management. Basics of flight physiology.

PART-66

MODULE 9A. HUMAN FACTORS

9.1 General

The need to consider the human factor; Events that can be attributed to human factors / human errors; Murphy's laws. [2]

9.2 Human possibilities and limitations

Vision; Hearing; Processing information; Attention and perception; Memory; Claustrophobia and physical access. [2]

9.3 Social psychology



Individual and group responsibility; Motivation and demotivation; Pressure from colleagues; "Cultural" issues; Teamwork; Management, supervision and guidance. [1]

9.4 Factors Affecting Achievements

Health condition; Stress related to work and personal life; Time pressure and deadlines; Workload: excessive and insufficient; Sleep and fatigue, shift work; Alcohol, medicines and drug abuse. [2]

9.5 Physical environment

Noise and smoke; Lighting; Climate and temperature; Movement and vibration; Working environment. [1]

9.6 Tasks

Physical work; Repetitive tasks; Examination by visual inspection; Complex systems. [1]

9.7 Communication

Within and between teams; Work registration; Update, validity period; Dissemination of information. [2]

9.8 Human error

Error models and theories; Types of error in maintenance tasks; The effects of errors (e.g. accidents); Avoiding and managing errors. [2]

9.9 Risk in the workplace

Risk recognition and avoidance; Emergency procedures. [2]

Teaching methods

1. Lecture: multimedia presentation, illustrated with examples given on the board.

Bibliography

Basic

1. Szajnar S.: „Czynnik ludzki w obsłudze urządzeń technicznych”, Skrypt WAT, Warszawa 2010.
2. Janowska Z.: „Zarządzanie zasobami ludzkimi”, Polskie Wydawnictwo Ekonomiczne, 2010
3. Scott W. E., Cummings L. L.: “Zachowanie człowieka w organizacji”, Państwowe Wydawnictwo Naukowe, 1983
4. www.faa.gov
5. www.easa.europa.eu

Additional



Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,0
Classes requiring direct contact with the teacher	15	0,5
Student's own work (literature studies, preparation for written tests) ¹	10	0,5

¹ delete or add other activities as appropriate