COURSE DESCRIPTION CARD - SYLLABUS

Course name

contemporary aviation issues

Course

Field of study

Aerospace Engineering

Year/Semester

2/3

Area of study (specialization)

-

Profile of study

general academic

Level of study

Second-cycle studies

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture

15

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

15

Number of credit points

3

Lecturers

Responsible for the course/lecturer:

prof. dr hab. inż. Jerzy Merkisz\

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Wydział Inżynierii Lądowej i Transportu

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Responsible for the course/lecturer:

Prerequisites

Knowledge:

Basic knowledge in the field of aviation.

Skills:

Can think analytically and associate cause-and-effect relationships in the field of aircraft.

Social competence:

Can work in a group and understands the basics of security.

Course objective

Understanding the requirements and challenges in aviation of the 21st century

Course-related learning outcomes

Knowledge

1. has extended knowledge necessary to understand the profile subjects and specialist knowledge about the construction, methods of construction, production, operation, air traffic management, safety systems, impact on the economy, society and the environment in the field of aviation and cosmonautics for selected specialties: Civil Aviation, UAV

2. has detailed knowledge related to selected issues in the field of manned and unmanned aerial vehicles, in the field of on-board equipment, control systems, communication and registration systems, life support systems, automation of individual systems

3. has detailed knowledge related to selected issues in the field of manned and unmanned spacecraft construction, in the field of on-board equipment, control systems, communication and recording systems, life support systems, satellite navigation systems, teletection, image recognition, automation of individual systems

4. has an orderly, theoretically founded general knowledge covering key issues in the field of the impact of aviation on the natural environment, emission of toxic compounds from aircraft propulsion, acoustic emission of flying objects

5. has an extended knowledge of metal, non-metal and composite materials used in machine construction, in particular about their structure, properties, methods of production, heat and thermo-chemical treatment and the influence of plastic processing on their strength

6. has detailed knowledge related to selected issues in the field of human capabilities and limitations in aviation and aerospace

Skills

1. has the ability to self-educate with the use of modern teaching tools, such as remote lectures, websites and databases, teaching programs, e-books.

2. can analyze objects and technical solutions, can search in catalogs and on manufacturers' websites, ready components of machines and devices, including means and transport and storage devices, assess their suitability for use in their own technical and organizational projects.

Social competences

1. Understands the need for lifelong learning; can inspire and organize the learning process of other people.

2.is aware of the importance and understands the non-technical aspects and effects of engineering activities, including its impact on the environment, and the related responsibility for decisions made

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: assessment of knowledge and skills on a written or oral exam based on the explanation of selected issues

Project: evaluation of performed tasks

Programme content

1. flying ships and rockets,

2. classification, competitiveness, security,

3. regulations, tests and certificates,

4. reducing exhaust emissions and noise,

5. increasing airspace capacity,

6. elimination of the human factor

Teaching methods

Informative (conventional) lecture (providing information in a structured way) - may be of a course (introductory) or monographic (specialist) character

Project method

Bibliography

Basic

1. Pilecki S., Lotnictwo i kosmonautyka, WKŁ, Warszawa 1984.

2. Szczeciński S., Ilustrowany leksykon lotniczy. Technika lotnicza, WKŁ, Warszawa 1988.

Additional

Breakdown of average student's workload

	Hours	ECTS
Total workload	85	3,0
Classes requiring direct contact with the teacher	35	1,0
Student's own work (literature studies, preparation for tests, project preparation) [1]	50	2,0

[1] delete or add other activities as appropriate