



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Contemporary aviation issues [S1Lot2-ORL>KRL]

### Course

Field of study

Aviation

Year/Semester

4/7

Area of study (specialization)

Air Traffic Organisation

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

elective

### Number of hours

Lecture

15

Laboratory classes

30

Other

0

Tutorials

0

Projects/seminars

0

### Number of credit points

4,00

### Coordinators

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### Lecturers

### Prerequisites

Basic Knowledge in the Areas of Safety, Ecology, Material Science, and Unmanned Aerial Vehicles

### Course objective

Introducing Students to the Current Areas of Aviation with the Highest Development Dynamics

### Course-related learning outcomes

Knowledge:

has an ordered, theoretically founded general knowledge of technology and various means of air transport

has a structured and theoretically founded general knowledge in the field of key technical issues and detailed knowledge in the field of selected issues related to air transport

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

has basic knowledge of Aviation Law, organizations operating in civil aviation and knows the basic principles of functioning of the State Aviation

### Skills:

can obtain information from various sources, including literature and databases, both in Polish and in English, integrate them properly, interpret and critically evaluate them, draw conclusions and exhaustively justify their opinions

can see legal aspects in the process of formulating and solving tasks in air transport, in particular, use the aspects of European and national aviation law regulations

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 specific task

### Social competences:

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

correctly identifies and resolves dilemmas related to the profession of an aerospace engineer

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

LECTURE: Assessment of knowledge and skills in a written or oral exam based on the explanation of selected issues  
LABORATORY: Preparation of reports on the implementation of individual laboratory exercises. Optional assessment of students' knowledge prior to the implementation of the classes.

## Programme content

1. The Latest Materials Used in Aviation for Load-Bearing Structures, Fuselage, and Engine Components. Specialized Issues in the Manufacturing of Materials for the Aviation Sector.
2. Changes in the Division and Management of Airspace Related to the Introduction of Autonomous Aircraft.
3. Polish and Global Aviation Industry in the Field of Military Applications.
4. Applications of UAVs in Various Industrial Sectors.
5. Implementation of New Solutions in Airports in the Fields of Safety and "Green Airport" Technologies.
6. Trends in Aircraft Engine Certification and Protection of Aviation Personnel.

## Course topics

1. Modern Materials in Aviation
2. Projects on Changes in Airspace Management
3. Directions in the Development of Military Aviation
4. Application Areas of Unmanned Aerial Vehicles
5. Development of Airports
6. Methods for Reducing the Environmental Impact of Aviation

## Teaching methods

Informative (conventional) lecture (providing information in a structured manner) - may be of a course (introductory) or monographic (specialist) character  
Laboratory (experiment) method (students independently conduct experiments)

## Bibliography

### Basic:

Transport lotniczy. Zagrożenia ekologiczne oraz sposoby ich ograniczania - Paweł Głowacki, Stefan Szczeciński

Perspektywy rozwoju lotnictwa wojskowego i wykorzystania kosmosu - Jerzy Gotowała

### Additional:

Bezzałogowe statki powietrzne. Nowa era w prawie lotniczym. Rozwój regulacji prawnych dotyczących bezpieczeństwa lotnictwa bezzałogowego - Piotr Kasprzyk

## Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,00
Classes requiring direct contact with the teacher	45	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	55	2,00