



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

General flight safety [S2AiR2-SliB>BL]

### Course

Field of study

Automatic Control and Robotics

Year/Semester

1/1

Area of study (specialization)

Intelligent and Unmanned Systems

Profile of study

general academic

Level of study

second-cycle

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

### Number of hours

Lecture

30

Laboratory classes

0

Other (e.g. online)

0

Tutorials

15

Projects/seminars

0

### Number of credit points

3,00

### Coordinators

mgr inż. Julia Brotier

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### Lecturers

### Prerequisites

A student starting this course should have basic knowledge of general flight safety. He should also have the ability to apply the scientific method in solving problems and be ready to cooperate within a team.

### Course objective

1. Familiarizing the student with aviation safety, procedures and regulations of civil aviation. 2. Developing students' problem-solving skills. 3. Developing teamwork skills in students during the final briefing in the laboratory.

### Course-related learning outcomes

Knowledge:

1. has structured and in-depth knowledge in selected areas of automation and robotics; [K2\_W10]
2. has the knowledge necessary to understand the economic, legal and social aspects of engineering activities and the possibilities of applying them in practice; [K2\_W14]

Skills:

1. can critically use literature information, databases and other sources in Polish and foreign languages;

[K2\_U1]

2. has self-education skills in order to improve and update professional competences; [K2\_U6]

Social competences:

1. is aware of the importance and understands non-technical aspects and consequences of engineering activities, including its impact on the environment and the related responsibility for decisions made; is ready to develop professional achievements; [K2\_K2]

2. is aware of the need for a professional approach to technical issues, thorough familiarization with the documentation and environmental conditions in which the devices and their components may operate; [K2\_K4]

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The knowledge acquired during the lecture is verified by a written assessment. The assessment consists of 10 open questions, scored differently. Passing threshold: 50% of points. Assessment issues on the basis of which questions are developed are made available to students during the semester.

The skills acquired during laboratory classes are verified on the basis of reports prepared and a final colloquium consisting of 3 tasks scored differently depending on their degree of difficulty. Passing threshold: 50% of points.

### Programme content

1. Terminology and regulations of flight organization.
2. Classification of flights and statutory rules for their execution.
3. Rules for performing certain tasks specific to military aviation.
3. Flight logistics.
4. Flight organization and its stages. Organization of test flights.
5. The role of individual officials and flight organization services in organizing flights.
6. Documentation of flight organization.
7. Functioning of the flight safety service in military aviation.
8. Goal of safety management.
9. Basic concepts: risk, threat, reliability, safety.
10. Man-technology-environment system, losses in the system and their causes, human errors.
11. Structures of systems and the basis of their modeling and analysis - risk and security.
12. Safety system in military and civil aviation, international and national organization, organization and management of safety in the construction and operation of aircraft.
13. Certification of production, service and use.
14. Security systems in air traffic and airports. Licensing of aviation personnel, knowledge, skills and proficiency checks.
15. State aviation supervision.

The laboratory program covers the following issues: flight mechanics, flight rules, technological support for air communications, flight control systems, airport safety procedures related to the presence of animals, aircraft control surfaces, maneuvers performed by the aircraft.

### Course topics

none

### Teaching methods

1. Lecture: multimedia presentation, illustrated with examples given on the board.
2. Laboratory exercises: laboratories will aim to solve engineering problems in the implementation of the generally understood "safe aviation".

### Bibliography

Basic:

1. Lecture materials progressively provided by the instructor in electronic form.
2. Klich E.: „Bezpieczeństwo lotów”, Instytut Technologii i Eksploatacji - PiB, Radom, 2011
3. „Poradnik - Podstawy Zarządzania Ryzykiem w Lotnictwie”, Dowództwo Sił Powietrznych, Warszawa

2010

Additional:

1. „Instrukcja Bezpieczeństwa Lotów Lotnictwa SZ RP”, Poznań 2014

### Breakdown of average student's workload

	Hours	ECTS
Total workload	90	3,00
Classes requiring direct contact with the teacher	60	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00