# COURSE DESCRIPTION CARD - SYLLABUS

Course name

Safety management systems

## Course

Field of study

Aviation and cosmonautics

Year/Semester

2/4

Area of study (specialization)

-

Profile of study

general academic

Level of study

First-cycle studies

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

2

## Lecturers

Responsible for the course/lecturer:

dr inż. Piotr Smoczyński

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Wydział Inżynierii Lądowej i Transportu

ul. Piotrowo 3 60-965 Poznań

Responsible for the course/lecturer:

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## Prerequisites

The student has a basic knowledge of aviation law, organization in civil aviation, as well as quality management systems, knows the basics of mathematics, with particular emphasis on probability. The student is able to analyze complex processes: identify and describe their component parts. The student is able to work in a group, assuming different roles in it, is able to define priorities important in solving the tasks set before him, shows independence in solving problems, acquiring and improving the acquired knowledge and skills.

## Course objective

Transfer of knowledge and skills allowing for independent design of elements of safety management

systems that meet the requirements of aviation organizations at the international, European and national level.

## Course-related learning outcomes

Knowledge

1. Student has a structured, theoretically founded general knowledge covering key issues in the field of flight safety and risk assessment

2.Student has extended knowledge necessary to understand the profile subjects and specialist knowledge about the construction, operation, air traffic management, safety systems, economic, social and environmental impact in the field of aviation and space

3. student has basic knowledge necessary to understand social, economic, legal and other non-technical conditions of engineering activity.

4.Student has ordered, theoretically founded specialist knowledge in the field of on-board equipment: as well as on-board and terrestrial electronic communication systems, remote sensing systems, observation systems, satellite navigation systems

Skills

1. Student is able to apply basic technical standards concerning unification and safety as well as recycling

2. Student can use the language of mathematics (differential and integral calculus) to describe simple engineering problems

Social competences

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

2.Student 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: Written exam in the test form

Classes: test

## Programme content

History of security management. Overview of the main stages in the development of safety engineering. The actual role of SMS in civil aviation (division of responsibilities between EU and national offices, discussion of the main legal acts, requirements for safety management systems implemented in airlines, examples of requirements implementation, the manner of CAO supervision over entities, typical

irregularities identified during inspections). Scientific discussion on the problems of safety management systems.

## Teaching methods

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

The exercise method (subject exercises, practice exercises) - in the form of auditorium exercises (application of acquired knowledge in practice - may take various forms: solving cognitive tasks or training psychomotor skills; transforming a conscious activity into a habit through repetition)

## Bibliography

Basic

1. Załącznik 19 do Konwencji o międzynarodowym lotnictwie cywilnym

2. Kadziński A., Studium wybranych aspektów niezawodności systemów oraz obiektów pojazdów szynowych, Wydawnictwo Politechniki Poznańskiej, Poznań 2013 rozdział 8

Additional

1. Załącznik 19 do Konwencji o międzynarodowym lotnictwie cywilnym

2. Kadziński A., Studium wybranych aspektów niezawodności systemów oraz obiektów pojazdów szynowych, Wydawnictwo Politechniki Poznańskiej, Poznań 2013 ? rozdział 8

## Breakdown of average student's workload

| | Hours | ECTS |
|---|---|---|
| Total workload | 50 | 2,0 |
| Classes requiring direct contact with the teacher | 45 | 2,0 |
| Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1] | 5 | 0,0 |

[1] delete or add other activities as appropriate