



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Aviation risk management [S1Lot2-BTL>ZRZwL]

Course

Field of study

Aviation

Year/Semester

2/3

Area of study (specialization)

Air Transport Safety

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

0

Other

0

Tutorials

30

Projects/seminars

15

Number of credit points

5,00

Coordinators

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Lecturers

Prerequisites

Knowledge: The student understands the concept of a system and is able to identify social systems, systems in industry and transport. The student has basic knowledge of probability theory, has knowledge of the reliability of technical objects. The student is able to calculate probabilities of elementary and complex events. The student is proficient in using a package of office computer programs. The student understands and accepts the need to introduce appropriate restrictions to social, industrial and transport systems, which most often lead to improving the safety of these systems. The student is able to manage the time available to perform the tasks indicated for implementation.

Course objective

Learning the methods and acquiring practical skills in managing the risk of threats identified in selected areas of analyses related to transport, and in particular in aviation.

Course-related learning outcomes

Knowledge:

1. the student has knowledge of aviation safety and management. The student knows the concept of the human factor and the methods of assessing human reliability

Skills:

1. can, when formulating and solving tasks related to civil aviation, apply appropriately selected methods, including analytical, simulation or experimental methods
2. can assess - at least in a basic scope - various aspects of the risk associated with a logistics undertaking in air transport

Social competences:

1. can think and act in an entrepreneurial way, incl. finding commercial applications for the created system, taking into account not only the business benefits, but also the social benefits of the conducted activity

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: based on written test.

Exercises: based on written test.

Project: based on evaluation of prepared exercise reports.

Programme content

Need for safety analyses.

Risk management as an element of SMS in aviation.

Sources of threats, threats,

Threat risk,

Risk models,

Threat risk valuation/estimation -

Risk procedures

Exercises in applying risk management procedures in the areas of analyses related to transport, and in particular in aviation.

Course topics

Need for safety analyses. The concept of a safety management system (SMS).

Risk management as an element of an SMS in aviation. Levels of risk management in aviation and types of risk. Sources of threats, threats, adverse events, risk of threats, identification of sources of threats and threats, characteristics of threats, activation of threats, levels of possibilities and levels of effects of threat activation. Risk models, generalized risk model, risk models in known risk assessment methods, risk estimation. Evaluation/assessment of risk risk - risk categories. Risk procedures - generally about safety system models.

Risk monitoring and risk communication. Exercises in applying procedures of risk management methods in areas of analyses related to transport, and in particular in aviation.

Teaching methods

Informative (conventional) lecture (transmission of information in a systematic way) - may have a course (propaedeutic) or monographic (specialist) character

Exercise method (subject-specific exercises, exercises) - in the form of auditorium exercises (application of acquired knowledge in practice - may take on a different character: solving cognitive tasks or training psychomotor skills; transforming conscious activity into habit through repetition)

Project using knowledge from lectures and exercises to perform a risk management procedure for a selected area of analysis

Bibliography

Basic:

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Additional:

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Breakdown of average student's workload

	Hours	ECTS
Total workload	125	5,00
Classes requiring direct contact with the teacher	62	2,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	63	2,50