COURSE DESCRIPTION CARD - SYLLABUS

Course name

Methods of air events analysis

Course

Field of study

Aerospace Engineering

Year/Semester

2/3

Area of study (specialization)

–

Profile of study

practical

Level of study

Second-cycle studies

Course offered in

polish

Form of study

full-time

Requirements

elective

Number of hours

Lecture

15

Laboratory classes

0

Other (e.g. online)

0

Tutorials

15

Projects/seminars

0

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

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Wydział Inzynierii Lądowej i Transportu

ul. Piotrowo 3 60-965 Poznań

Responsible for the course/lecturer:

Prerequisites

A student starting this course should have knowledge of aviation law and organizations, have a well-established knowledge of mathematics, physics and aerodynamics, and know the theoretical basis of issues related to aviation safety, be able to obtain information from literature and the Internet.

Course objective

Acquainting with various methods of aviation incident analysis, division and classification of aviation incidents, and the principles of operation of organizations investigating aviation incidents.

Course-related learning outcomes

Knowledge

1. has basic knowledge of aircraft movement in the air and air traffic services [K2A_W09]

2. has a structured, theoretically founded general knowledge covering key issues in the field of flight safety and risk assessment [K2A_W15]

3. has basic knowledge of law, in particular civil aviation law, copyright and industrial property law and its influence on the development of technology, can use patent information resources [K2A_W18]

Skills

1. is able to name and describe the security policy and objectives, knows the requirements in the field of security management [K2A_U11]

2. he can identify the differences between the National Program for Civil Aviation Safety and the National Safety Plan [K2A_U12]

3. is able to identify the sources of threats in various areas of aircraft operation, formulate the related threats, assess the risk of threats using appropriate methods and propose ways to ensure safety [K2A_U14]

Social competences

1. 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 [K2A_K03]

2. Is ready to critically evaluate the knowledge and content received, recognize the importance of knowledge in solving cognitive and practical problems, and consult experts in case of difficulties in solving the problem on its own [K2A_K02]

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 an activity assessment and an exam. The skills acquired during the exercises are verified on the basis of a final test.

Programme content

1. Air transport safety

2. Classification of aviation occurrences categories

3. Quantitative methods of event analysis

4. Qualitative methods of event analysis

5. Risk assessment methods in various modes of transport

6. Events in air traffic

7. Causal models in incident analysis

Teaching methods

Informative (conventional) lecture (transfer of information in a systematic way) - can be (propedeutical) or monographic (specialist)

Exercise method (subject exercises) - in the form of auditorium exercises (the application of acquired knowledge in practice - can take a different nature: solving cognitive tasks or training psychomotor skills; transforming conscious activity into a habit by repetition)

Bibliography

Basic

1. Ilościowe metody analizy incydentów w ruchu lotniczym. Skorupski J., Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2018

2. Analiza i badania elementów systemów transportowych różnych gałęzi transportu, Zboiński, Krzysztof. Red., Politechnika Warszawska. Oficyna Wydawnicza, 2014.

3. Odpowiedzialność za szkodę na ziemi wyrządzoną ruchem statku powietrznego, Anna Konert, Wolters Kluwer Polska. LEX a Wolters Kluwer business, 2014.

Additional

1. Podręcznik klasyfikacji kategorii zdarzeń lotniczych (tzw. „Occurrence Category") wg systematyki ICAO ADREP oraz ECCAIRS 5 dla organizacji lotniczych, zgodny z wymogami Rozporządzenia Parlamentu Europejskiego i Rady (UE) nr 376/2014

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	25	1,0
Student's own work (literature studies, preparation for tutorials, preparation for exam) [1]	25	1,0

[1] delete or add other activities as appropriate