



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Air transport safety II

Course

Field of study

Aerospace Engineering

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/5

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

Number of hours

Lecture

60

Laboratory classes

0

Other (e.g. online)

0

Tutorials

30

Projects/seminars

30

Number of credit points

7

Lecturers

Responsible for the course/lecturer:

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Responsible for the course/lecturer:

Wydział Inżynierii Lądowej i Transportu

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Prerequisites

Knowledge and skills acquired during the implementation of the subject Air Transport Safety I.

Course objective

Expanding knowledge in the field of aviation safety. Training of skills related to aviation safety management. Development of SMS Safety Management Systems in institutions and aviation companies. Ability to perform an in-depth analysis of an air incident

Course-related learning outcomes

Knowledge

1. Has extended knowledge necessary to understand the profile subjects as well as specialist knowledge



of construction, operation, air traffic management, safety systems, the impact on the economy, society and the environment in the field of aviation and space science - [K2A_W01]

2. He can develop a safety management system for an airline company and a security audit for an airport. Has extensive knowledge of the documents required to ensure security in aviation facilities - [K2A_W07]

3. Has detailed knowledge related to selected issues in the field of human capabilities and limitations in aviation and aerospace - [K2A_W16]

4. Has detailed knowledge related to selected issues in the field of ground handling of aircraft and propulsion systems, taking into account logistics aspects - [K2A_W19]

5. Has ordered, theoretically founded general knowledge covering key issues in the field of flight safety and risk assessment - [K2A_W22]

Skills

1. Is able to communicate using various techniques in the professional environment and other environments, using the formal notation of construction, technical drawing, concepts and definitions of the scope of the field of study - [K2A_U02]

2. Has the ability to self-educate with the use of modern didactic tools, such as remote lectures, websites and databases, didactic programs, electronic books - [K2A_U03]

3. Can obtain information from literature, the Internet, databases and other sources. Can integrate the obtained information, interpret and draw conclusions from it, and create and justify opinions - [K2A_U04]

4. Can develop a safety instruction for an on-board device, machine or technical flying object in specific environmental conditions [K2A_U12]

5. Can use basic technical standards regarding unification and safety and recycling [K2A_U13]

Social competences

1. Understands the need for lifelong learning; can inspire and organize the learning process of other people - [K2A_K01]

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

3. Can interact and work in a group, taking different roles in it - [K2A_K04]

4. Is aware of the social role of a technical university graduate, and especially understands the need to formulate and convey to the society, in particular through the mass media, information and opinions on the achievements of technology and other aspects of engineering activities; makes efforts to provide such information and opinions in a commonly understandable manner - [K2A_K08]



Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

LECTURE: Assessment of knowledge and skills on the written or oral test based on the explanation of selected issues

TUTORIALS: Assessment of knowledge and skills on the written test on the basis of solved tasks

PROJECT: Assessment of the document prepared by the student (safety management system, safety audit plan, aviation incident analysis, risk assessment of threats in the selected system)

Programme content

LECTURE

Responsibility of a country for safety management

National Civil Aviation Safety Program (KPBwLC), Safety Policy, State Goals and Resources, State Safety Risk Management, State Safety, State Safety Promotion

Safety Management System (SMS) in general aviation - international operations - airplanes

Collection, analysis, protection, sharing and exchange of data and security information Security data collection and processing systems, Data analysis and security information, Data protection and security information, Sharing and exchange of security information

Critical elements (CE) of the National Safety Oversight System (SSO)"

Basic Aviation Legislation, Special Operating Regulations, State System and Functions, Qualified Professionals, Specialist Guidelines, Tools and Provision of Safety Critical Information, Licensing, Certification, Authorization and Approval Obligations, Oversight Obligation, Safety Problem Resolution

Structure of the Safety Management System (SMS):

Security policy and objectives, Security risk management, Security assurance, Safety promotion

Principles for the protection of security data, security information and related sources

EXERCISES:

Classes provide an example of solving the task on the blackboard (from the scope presented in the lecture) along with the analysis of subsequent stages. The way students solve the task on the blackboard is reviewed by the tutor

PROJECT: Preparation of a document by the student to choose from among the examples presented by the lecturer, e.g. safety management system, safety audit plan, aviation incident analysis, risk assessment in the selected system.

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 the acquired knowledge in practice - may take various forms: solving cognitive tasks or training psychomotor skills; transforming a conscious activity into a habit through repetition)

Project method (individual or team implementation of a large, multi-stage cognitive or practical task, the effect of which is the creation of a work)

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
3. Rozporządzenie Parlamentu Europejskiego i Rady (WE) nr 216/2008 w sprawie wspólnych zasad w zakresie lotnictwa cywilnego i utworzenia Europejskiej Agencji Bezpieczeństwa Lotniczego (z późniejszymi zmianami)
4. Safety Management Manual (SMM), ICAO, wyd. 3, 2012

Additional

1. Sumeer Charkuj, Piotr Kozłowski, Michał Nędza: Podstawy transportu lotniczego, Konsorcjum Akademickie Kraków–Rzeszów–Zamość 2012
2. Podręczniki szkoleniowe EASA ATPL Series

Breakdown of average student's workload

	Hours	ECTS
Total workload	175	7,0
Classes requiring direct contact with the teacher	130	5,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	45	2,0

¹ delete or add other activities as appropriate