



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Occupational risk in aviation enterprises

### Course

Field of study

Aviation

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/6

Profile of study

general academic

Course offered in

Polish

Requirements

elective

### Number of hours

Lecture

15

Laboratory classes

4

Other (e.g. online)

0

Tutorials

0

Projects/seminars

15

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

dr inż. Anna Kobaszyńska-Twardowska

anna.kobaszynska-twardowska@put.poznan.pl

Wydział Inżynierii Lądowej i Transportu

ul. Piotrowo 3, 60-965 Poznań

Responsible for the course/lecturer:

dr hab. inż. Adrian Gill

adrian.gill@put.poznan.pl

Wydział Inżynierii Lądowej i Transportu

ul. Piotrowo 3, 60-965 Poznań

### Prerequisites

The student understands the risk management process. The student has knowledge of the ways recognizing sources of threats and formulating threats. The student has a general knowledge of risk and methods of risk assessment of threats and security systems. The student is able to recognize the sources/factors of threats using forward and backward methods. He has the skill formulation of threats. The student is fluent in using a suite of computer office programs. The student understands and accepts the need to introduce social and transport systems and industrial relevant restrictions that may lead to improved safety

### Course objective

Getting to know the objectives, elements and structure of the internal security system of the state. Knowledge procedures and acquiring practical skills in the application of threat risk management



in the areas of analysis that overlap with workplaces and accident sites.

### Course-related learning outcomes

#### Knowledge

1. has the ability to self-study with the use of modern teaching tools, such as remote lectures, websites and databases, teaching programs, e-books
2. has a basic knowledge of the mechanisms and laws governing human behavior and psyche

#### Skills

1. is able to obtain information from various sources, including literature and databases, both in Polish and in English, integrate them properly, interpret them and make a critical evaluation, draw conclusions and exhaustively justify the opinions they formulate
2. is able to obtain information from various sources, including literature and databases, both in Polish and in English, integrate them properly, interpret them and make a critical evaluation, draw conclusions and exhaustively justify the opinions they formulate
3. can assess - at least in a basic scope - various aspects of the risk associated with a logistics undertaking in air transport
4. can analyze the strategies of enterprises and interpret their activities, and can use in practice the basic tools of strategic analysis

#### Social competences

1. is aware of the importance of knowledge in solving engineering problems and knows examples and understands the causes of faulty engineering projects that have led to serious financial and social losses, or to a serious loss of health and even life
2. correctly identifies and resolves dilemmas related to the profession of an aerospace engineer

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Evaluation of knowledge and skills from the lecture on the basis of an explanation

selected issues. The grade for the project is determined by combining the activity grades in subsequent project classes, evaluation of the presentation of the final versions of the projects implemented as a team and their level substantive and editorial provided in the paper version.

### Programme content

Basic concepts - security, types of security, state security (national): internal security and external security. Internal security: public security, general security, constitutional order. System internal security in the Republic of Poland. Public authorities. Types and forms of threats internal security of the state. Institutional dimension of internal security. Legal basis, types and characteristics of institutions and services responsible for security internal states. (2) Legal conditions and objectives of managing the risk of hazards at workplaces. Concept methods of managing the risk of hazards at workstations



(occupational risk management). Basic concepts in the field of risk management at workplaces. Positions employees functioning in the structures of civil and military aviation enterprises, their nomenclature and characteristics. Identification of characteristic sources of threats for areas analytics being airlines. Sources of hazards recognized during operation of aircraft in the course of securing flight operations. Safety rules used when servicing aircraft. Exemplary currently valid "Evaluation cards occupational risk" for positions in airline companies. Algorithm implementation of the general idea of the classic concept of threat risk management methods - in processes, procedures and models of the risk management method for the areas of analysis corresponding to the workplaces. Basic components (processes, procedures and models) of the method risk management of hazards at workstations - selection of the workstation as the area of analysis and presentation of his model; identification of the security system functioning within the position and the adoption of its model; implementation of the process of identifying hazards generated at the position work; selection or development of risk models and risk measures for hazards identified on workstation, supporting software; determining the values of decision variables indicating areas of risk acceptability and risk assessment of hazards identified on workplace; dealing with the risk of hazards identified at the workplace and assessment the effectiveness of these proceedings; communicating about the risk of hazards identified in the position work

### Teaching methods

Lecture: using multimedia presentations and films.

Project: electronic presentations in the phases of formulating tasks to be performed and presenting final results; solving some of the problems on the board by the teacher and/or students.

### Bibliography

Basic

1. Konstytucja Rzeczypospolitej Polskiej z dnia 2 kwietnia 1997 r.
2. Biała Księga Bezpieczeństwa Narodowego RP z 2013 r.
3. Strategia Bezpieczeństwa Narodowego z 2014 r.
4. Ściborek Z, Wiśniewski B., Kuc R.B., Dawidczyk A., Bezpieczeństwo wewnętrzne. Podręcznik akademicki, Toruń, 2017.
5. Bryła R., Bezpieczeństwo i higiena pracy. Wyd. ELAMED, Katowice, 2011.
6. Chrużik K., Ocena ryzyka zawodowego. Wyd. Politechniki Śląskiej, Katowice, 2013.
7. Dahlke G., Zarządzanie bezpieczeństwem pracy i higieną pracy. Modele systemowego zarządzania bezpieczeństwem i higieną pracy. Wyd. Politechniki Poznańskiej, Poznań, 2013.
8. Kadziński A., Gościński M., Analiza porównawcza oprogramowania wspomagającego oceny ryzyka



zagrożeń na stanowiskach pracy. Logistyka, nr 2/2010, CD 2, s. 657-665.

9. Lewicki L., Sadłowska-Wrzesińska J. (red.), Istotne aspekty BHP. Wyd. Wyższej Szkoły Logistyki, Poznań, 2014.

10. PN-N-18002:2011, Systemy zarządzania bezpieczeństwem i higieną pracy. Ogólne wytyczne do oceny ryzyka zawodowego. Polski Komitet Normalizacyjny, Warszawa, 2011.

11. Siemiątkowski P.Ł. (red.), Ocena ryzyka zawodowego 2013. Listy kontrolne, wzory, dokumenty. Wyd. Wiedza i Praktyka, Warszawa, 2011

#### Additional

1. Bryła R., Bezpieczne stanowisko pracy. Ocena ryzyka, instrukcje stanowiskowe, listy kontrolne. Wyd. ELAMED, Katowice, 2007.

2. Kołodziejczyk E., Skarżyński A., Oceny ryzyka zawodowego w zakładzie pracy. Wyd. FORUM Sp. z o.o., Poznań, 2009.

3. PN-N-18001:2004, Systemy zarządzania bezpieczeństwem i higieną pracy. Wymagania. Polski Komitet Normalizacyjny, Warszawa, 2004.

4. PN-N-18004:2001, Systemy zarządzania bezpieczeństwem i higieną pracy. Wytyczne. Polski Komitet Normalizacyjny, Warszawa, 2011

5. Podejmij ryzyko. Ocena ryzyka zawodowego – 70 kart oceny ryzyka zawodowego. Wyd. Unimedia Sp. z o.o., Warszawa, 2011.

6. Rączkowski B., BHP w praktyce. Wyd. ODDK Sp. z o.o., Gdańsk, 2014.

7. Jancelewicz B. (red.), Bezpieczeństwo i niezawodność w lotnictwie. Wyd. Adam Marszałek, Toruń, 2009

#### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	35	1,5
Student's own work (literature studies, preparation for classes, preparation for tests,) <sup>1</sup>	15	0,5

<sup>1</sup> delete or add other activities as appropriate