## POZNAN UNIVERSITY OF TECHNOLOGY



## EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

## **COURSE DESCRIPTION CARD - SYLLABUS**

Course name

Financial transact safety

Field of study Year/Semester

Safety engineering 3/6

Area of study (specialization) Profile of study

Level of study general academic

Course offered in

First-cycle studies Polish

Form of study Requirements

part-time elective

Number of hours

Lecture Laboratory classes Other (e.g. online)

10 0 0

Tutorials Projects/seminars

10 10

**Number of credit points** 

4

Lecturers

Course

Responsible for the course/lecturer: Responsible for the course/lecturer:

dr hab. Joanna Sadłowska-Wrzesińska mgr inż. Wiktoria Czernecka

Institute of Safety Engineering email: w\_czernecka@wp.p

Risk and Quality Management Department

email: joanna.sadlowska-wrzesinska@put.poznan.pl

**Prerequisites** 

The student has knowledge of occupational hazard factors; knows how to identify and assess hazards in the work environment, as well as to assess the risks. The student is aware of the costs arising from the wrong level of health and safety.

## **Course objective**

Acquiring knowledge about safety management in order to reduce losses and familiarizing the student with the main groups of costs of occupational safety; in addition - recognition of the effectiveness of the incentive effect of the system of differentiated premiums for social accident insurance. At the practical level - acquiring skills of economic analyzes of occupational health and safety, including identification as well as recording and monitoring costs for the purposes of planning corrective actions.

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## **Course-related learning outcomes**

#### Knowledge

- Student knows issues in the field of work safety, security systems, threats and their consequences in the context of incurred losses P6S\_WG\_02
- The student knows the issues in the field of threats and their effects: economic, moral and image in relation to the costs of occupational safety P6S\_WG\_03
- The student knows the issues of ergonomics, human ecology, environmental protection and occupational health and safety and understands their interrelationship in the processes of ensuring psychophysical well-being of employees in connection with the economics of enterprises P6S\_WG\_05.

#### Skills

- Student is able to present, using properly selected means, the problem associated with the need for systematic monitoring and reduction of losses in occupational safety P6S\_UK\_01
- Student is able to identify changes in requirements, standards, regulations, technical progress and the reality of the labor market, and based on them determine the needs of preventive actions, taking into account the economic capabilities of the company P6S\_UU\_01

I propose to add the following effect:

- Student is able to plan and conduct tests (including measurements and simulations) of work safety costs and design appropriate corrective actions to minimize losses P6S UO 01

#### Social competences

- The student is aware of the recognition of the importance of knowledge in the field of safety management and shaping the appropriate security policy in solving problems in the field of safety engineering in the work environment P6S KK 02
- The student is aware of the responsibility for their own work and readiness to comply with the principles of teamwork and taking responsibility for jointly implemented tasks in the work to improve the level of security and reduce losses in this regard P6S\_KR\_02

#### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

#### Formative assessment:

- knowledge is verified by short tests after the third and fifth didactic unit new concepts and definitions
- + problem tasks; in the process of project preparation assessment of individual stages of project development, the purpose of which is to prepare a plan to reduce losses in the safety of work of the selected enterprise;
- social skills and competences are verified by issuing partial grades resulting from: working in teams (taking responsibility for decisions made); rewarding activity; presentations of exercises prepared by students.

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## Summative rating:

knowledge is verified by a written test on the basic concepts and problems of researching occupational accidents and diseases; passing threshold - 50% + 1;

exercises - average of partial grades;

project - average of partial grades + grade for the editing level of the project.

### **Programme content**

1. Work costs. Loss as an undesirable element of labor costs. 2. Identification of risk factors. Costs related to inappropriate working environment conditions. 3. Accidents at work, occupational diseases, disasters. Cost distribution. 4. Expenses of the loss-making enterprise. Moral, image and cultural issues. Costs of preventive measures. 5. Reducing losses in work safety. Reduction of internal and external losses. Activities towards building a safety culture.

## **Teaching methods**

#### lecture

- informative lecture, conversational lecture.

#### exercises

- displaying methods (film, show), panel discussion, case study, brainstorming.

#### **Bibliography**

#### **Basic**

- 1. Sadłowska-Wrzesińska J., Lewicki L, (red.) Podstawy bezpieczeństwa i zdrowia w pracy, Wyd. WSL, Poznań 2018.
- 2. Romanowska-Słomka, Wypadki i choroby zawodowe. Analiza i koszty, Tarbonus, 2018.
- 3. Pietrzak L., Badanie wypadków przy pracy. Modele i metody, CIOP, Warszawa, 2004.
- 4. Polskie Normy i rozporządzenia, w tym PN-ISO 45001:2018.

## Additional

- 1.Smoliński, D., Solecki, L., Ekonomiczne przesłanki ograniczania ryzyka zawodowego, Bezpieczeństwo Pracy: nauka i praktyka, Warszawa 2015, nr 6,25-27
- 2.Czernecka W.& Górny, A. (2018, March). Ergonomic risk measurement in prioritizing corrective action AT workstations. in Occupational Safety and Hygiene VI: Proceedings of the 6th International Symposium on Occupation Safety and Hygiene (SHO 2018), March 26-27, 2018, Guimarães, Portugal (p. 419). CRC Press. .





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# Breakdown of average student's workload

	Hours	ECTS
Total workload	80	4,0
Classes requiring direct contact with the teacher	30	1,5
Student's own work (literature studies, preparation for laboratory	50	2,5
classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>		

4

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