## 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

**Economics of safety** 

**Course** 

Field of study Year/Semester

Safety Engineering 1/2

Area of study (specialization) Profile of study

Integrated Management of Safety in Organization general academic

Level of study Course offered in

Second-cycle studies Polish

Form of study Requirements

full-time elective

**Number of hours** 

Lecture Laboratory classes Other (e.g. online)

8 0 0

Tutorials Projects/seminars

10 10

**Number of credit points** 

4

**Lecturers** 

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

Rafał Mierzwiak, Ph.D., Eng.

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phon: 691504270

#### **Prerequisites**

The student has basic knowledge of economics and taking actions to improve health and safety at work.

## **Course objective**

The aim of the course is to acquire knowledge, skills and competences in the field of concepts, issues, correctness and methods of solving occupational safety and health problems in the context of their economic implications.

## **Course-related learning outcomes**

Knowledge

- knows the basic concepts of economics in the context of the requirements of work safety and ergonomics,
- is familiar with the issues of costs and insurance systems, occurring in the area of ergonomics and safety at work and the related legal regulations,

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- knows and understands the basic methodological instruments for modelling and decision making in the context of OHS,

#### Skills

- is able to describe and analyse economic and social phenomena taking place, especially in connection with work safety,
- is able to apply modern methods of data analysis in the context of economic problems occurring during the process of shaping work safety,
- is able to make a critical analysis of how the organization operates and assess, taking into account economic aspects, the existing technical solutions, in particular machines, devices, objects, systems and processes,
- is able to plan and manage business ventures undertaken in the area of work safety,

#### Social competences

- is aware of the understanding of non-technical aspects and effects of the engineering activity, including its impact on the environment and the related responsibility for the decisions taken,
- is aware of the importance of cost accounting for effective work safety,
- is aware of the importance of ethical problems in the economization of park security activities,
- is aware of the responsibility for their own work and willingness to comply with the applicable rules of teamwork and take responsibility for jointly performed tasks.

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

Learning outcomes presented above are verified as follows:

Moodle quiz,

Evaluation of mini-projects,

Evaluation of tasks in the tutorials.

## **Programme content**

Economic doctrines and their importance for state and business policy-making in the field of occupational health and safety. Occupational safety as part of the management process - introduction to the issue. Economic instruments to ensure job safety in microeconomic and macro-economic terms. Types of benefits and costs of work safety - analysis of selected cost-benefit models. The methods for assessing the benefits and costs of ensuring safety at work, including methods forassessing the economic impact of accidents at work. Economic determinants of decisions taken in the field of occupational safety by the organization stakeholders - elements of strategic analysis

## **Teaching methods**

Group projects and e-learning with the Moodle paltform and tasks in the tutorials.

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### **Bibliography**

#### Basic

- 1. Rzepecki J. (1999), Ekonomiczne aspekty ochrony pracy, w: Koradecka D. ( red.), Bezpieczeństwo pracy i ergonomia, CIOP, Warszawa.
- 2.Rzepecki J., (2002), BHP w Przedsiębiorstwie. Model analizy korzyści i kosztów ochrony pracy, Bezpieczeństwo pracy, 10 (6-18).
- 3. Rzepecki J. (2006), Podstawy prowadzenia analizy kosztów i korzyści bhp, Wydawnictwo CIOP, Warszawa.

#### Additional

- 1. Duraj J. (2000), Podstawy ekonomiki przedsiębiorstwa, PWE, Warszawa.
- 2. Mossink, J. C. M. (2002). Understanding and performing economic assessments at the company level. Protection Workers Health, Series No 2, WHO, Geneva.
- 3. Materiały do zajęć umieszane na plaformie Moodle.

# Breakdown of average student's workload

	Hours	ECTS
Total workload	60	4,0
Classes requiring direct contact with the teacher	28	2,0
Student's own work (literature studies, preparation for project	32	2,0
activities, project execution, analysis of materials published on		
Moodle, consultations) <sup>1</sup>		

3

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