



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

System management of the organization's environment

### Course

Field of study

Year/Semester

Safety Engineering

2/3

Area of study (specialization)

Profile of study

Ergonomics and work safety

general academic

Level of study

Course offered in

Second-cycle studies

Polish

Form of study

Requirements

part-time

compulsory

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

10

0

0

Tutorials

Projects/seminars

10

0

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

Responsible for the course/lecturer:

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### Prerequisites

Basic knowledge of enterprise management, work safety issues and aspects of the impact of processes implemented in an enterprise on the natural environment.

### Course objective

Acquiring knowledge and skills related to the implementation of management functions in the enterprise and the impact of social, environmental and economic challenges on implemented processes and decisions made.



### Course-related learning outcomes

#### Knowledge

- knows and describes issues in the field of risk analysis, threats and their effects in the work environment, taking into account the nature of implemented processes (P7S\_WG\_05),
- knows the issues arising from the systematic management of the organization's environment in relation to product and process design (P7S\_WG\_07),

#### Skills

- can obtain information from literature, databases and other sources; interpret and critically evaluate them (P7S\_UW\_01),
- identifies and formulates the need to include system and non-technical aspects in engineering tasks, including those related to the environment of the organization (P7S\_UW\_03),
- can use research and analytical methods to formulate and solve engineering problems, and applies adequate information and communication methods and tools (P7S\_UW\_04),
- can prepare the necessary resources to work in an industrial environment and knows the safety rules associated with this work and can justify the need for their use (P7S\_UW\_05),
- can make a critical analysis of how processes and technical solutions work in the enterprise and evaluate them (P7S\_UW\_06),
- can present ergonomic and occupational safety problems using properly selected means (P7S\_UK\_01)
- can identify changes in requirements, standards and regulations as well as technical progress and on their basis define the need to acquire new knowledge (P7S\_UU\_01),

#### Social competences

- understands that knowledge and skills in managing the environment of an organization requires recognizing cause-and-effect relationships, a team-based approach to problem solving, and assuming responsibility for the implementation of tasks arising from the project of which you are an active participant (P7S\_KK\_01, P7S\_KR\_02).

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

#### Formative assessment:

- tutorials: assessment of the current progress of the exercise tasks,
- lectures: answers to questions about the content of previous lectures,

#### Summative rating:

- tutorials: exercises given to the teacher and the results obtained,
- lectures: The exam consists of 20-30 (test) questions, scored on a two-point scale of 0, 1. Passing threshold: 50% of points. Examinative issues, on the basis of which test questions are built, are



developed on the basis of the content provided to students during lectures, and additional materials indicated by the teacher.

### Programme content

#### Lecture:

Contextual conditions of the functioning of enterprises, management megatrends and their impact on the system management of the organizational environment (IT and Sustainable Development). Environmental and health and safety aspects in contemporary concepts of organization management (lean, green, sustainable). Methods and tools for identifying losses and threats from the perspective of health and safety, natural resources used and environmental impact. Norms and standards in system management of the organization's environment.

#### Tutorials:

Methods and tools used in lean and green manufacturing (VSM, 5S, visual management, BBS), identification of significant environmental aspects and selection of supervision measures

### Teaching methods

Lecture: multimedia presentation, illustrated with examples on the board.

Tutorials: multimedia presentation illustrated with examples given on a blackboard and performance of tasks given by the teacher - practical exercises.

### Bibliography

#### Basic

1. Matuszak-Flejszman A., Pochyluk R. (2010), Istota kontekstu organizacji w systemowym podejściu do zarządzania. *Studia Oeconomica Posnaniensia*, 4(10).
2. Saniuk A., Jasiulewicz-Kaczmarek M., Samolejova A., Saniuk S., Lenort R. (2015), Environmental avourable foundries through maintenance activities. *Metalurgia*, 54/4, 725-728.
3. Jasiulewicz-Kaczmarek M., Drożyner P. (2013), The Role of Maintenance in Re-educing the Negative Impact of a Business on the Environment, In: Erechthoukova M. G., et al. (eds.), *Sustainability Appraisal: Quantitative Methods and Mathe-matical Techniques for Environmental Performance Evaluation, EcoProduction* (pp. 142-166), Springer-Verlag Berlin Heidelberg.
4. Bryke M., Starzyńska B. (2015), Koncepcja Human Lean Green jako instrument zapewnienia zrównoważonego rozwoju organizacji ukierunkowany na wzrost jej efektywności. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, 337.

#### Additional

1. Laszlo Ch. (2008), *Firma zrównoważonego rozwoju. Jak wypracować trwałą wartość z uwzględnieniem efektów społecznych i ekologicznych*, Wydawnictwo Studio EMKA, Warszawa.
2. Kafel P. (2017), *Integracja systemów zarządzania. Trendy, zastosowania, kierunki doskonalenia*, Wydawnictwo UEK Krakow, Krakow.
3. PN-EN ISO 14001:2015, *Systemy zarządzania środowiskowego. Specyfikacja i wytyczne stosowania*.



4. PN-N ISO 14004:2016, Systemy zarządzania środowiskowego. Ogólne wytyczne dotyczące zasad, systemów i technik wspomagających.

#### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	20	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	30	1,0

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