



COURSE DESCRIPTION CARD - SYLLABUS

Course name

System management of the organization's environment

Course

Field of study

Safety Engineering

Area of study (specialization)

Ergonomics and work safety

Level of study

Second-cycle studies

Form of study

full-time

Year/Semester

2/3

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

Number of hours

Lecture

15

Laboratory classes

Other (e.g. online)

Tutorials

15

Projects/seminars

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

Ph.D., Eng., Anna Stasiuk-Piekarska,

Mail to:anna.stasiuk-piekarska@put.poznan.pl

Phone:+48 61 665 33 79

Faculty of Engineering Management

ul. J. Rychlewskiego 2 60-965 Poznań

Responsible for the course/lecturer:

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

1. The student 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],
2. The student knows the issues arising from the systematic management of the organization's environment in relation to product and process design [P7S_WG_07],

Skills

1. The student can obtain information from literature, databases and other sources; interpret and critically evaluate them [P7S_UW_01],
2. The student 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],
3. The student can use research and analytical methods to formulate and solve engineering problems, and applies adequate information and communication methods and tools [P7S_UW_04],
4. The student 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],
5. The student can make a critical analysis of how processes and technical solutions work in the enterprise and evaluate them [P7S_UW_06],
6. The student can present ergonomic and occupational safety problems using properly selected means [P7S_UK_01]
7. The student 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

1. The student 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:

- lecture: a short test to verify knowledge and evaluation for activity,



- tutorials: based on assessments of current progress in the implementation of tasks,

Rating summary:

- lecture: on the basis of an examination consisting of 20-30 questions. Passing threshold: 50% of points. Examination issues are developed on the basis of the content provided to students during lectures and additional materials indicated by the teacher will be provided during the last class;
- tutorials: based on the arithmetic mean of the assessments made by the teacher and given the task.

Programme content

Lecture:

Contextual conditions for the functioning of enterprises, identification of the elements of the organization's environment and their impact on its activities; management megatrends and their impact on the systemic management of the organization's environment (IT and Sustainable Development). Environmental and occupational health and safety in the modern concepts of management organization (lean, green, sustainable). Methods and tools for identifying losses and risks from the perspective of safety, used natural resources and environmental impact. Norms and standards in the system management of the organization's environment.

Tutorials:

Methods and tools used in lean and green manufacturing, identification of significant environmental aspects and selection of supervision measures; planning activities aimed at supporting the organization in relations with the external and internal environment.

Teaching methods

1. Lecture- information lecture with elements of dialogue, illustrated with multimedia presentations
2. Tutorials - exercises conducted using the case study method and problem methods

Bibliography

Basic

1. Matuszak-Flejszman A., Pochyluk R. (2010), Istota kontekstu organizacji w systemowym podejściu do zarządzania. *Studia Oeconomica Posnaniensia*, 4(10).
2. Stasiuk-Piekarska A., Włodarczyk A., " Innovation in The Pursuit of Sustainable Manufacturing" Proceedings of the 36th International Business Information Management Association (IBIMA), ISBN: 978-0-9998551-5-7, 4-5 November 2020, Granada, Spain., s. 7363-7370.
3. Jasiulewicz-Kaczmarek M., Drożyner P. (2013), The Role of Maintenance in Reducing the Negative Impact of a Business on the Environment, In: Erechchoukova M. G., et al. (eds.), *Sustainability Appraisal: Quantitative Methods and Mathematical 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.
5. Stasiuk-Piekarska A.K., Human factor in Industry 4.0 - perception of competences of graduates and employees, Smart and Sustainable Supply Chain and Logistics – Trends, Challenges, Methods and Best Practices Volume 1, Paulina Golinska-Dawson Kune-Muh Tsai Monika Kosacka-Olejniak Editors, wyd. Springer, Swizerlands 2020, ISSN 2193-4614 ISSN 2193-4622 (electronic) ISBN 978-3-030-61946-6 ISBN 978-3-030-61947-3 (eBook) <https://doi.org/10.1007/978-3-030-61947-3>, s. 257-265.

Breakdown of average student's workload

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

¹ delete or add other activities as appropriate