COURSE DESCRIPTION CARD - SYLLABUS

Course name
Environment management [N2IBiJ1>ZS]

Course

Field of study
Safety and Quality Engineering

Year/Semester
2/3

Area of study (specialization)
Safety and Crisis Management

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
part-time

Requirements
compulsory

Number of hours

Lecture
10

Laboratory classes
0

Other
0

Tutorials
10

Projects/seminars
10

Number of credit points

4,00

Coordinators

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Lecturers

Prerequisites

Basic knowledge of enterprise management, work safety issues and aspects of the impact of processes implemented in an enterprise on the 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 has structured and theoretically based knowledge of environmental management, systemic approach to management, system integration and auditing of management systems in organizations [K2_W08].
2. The student knows in depth the fundamental dilemmas of modern civilization, including legal, political, economic, ethical and moral changes related to safety engineering, quality, ergonomics and occupational safety and crisis management, as well as their impact on environmental management

[K2_W11].

Skills:
1. The student is able to design selected elements of environmental systems in organizations using properly selected means, methods and techniques [K2_U05].
2. The student is able to identify and recognize hazards in the work environment, assess their impact on the individual, organization and its stakeholders, and indicate methods of conduct aimed at minimizing the effects of hazards, taking into account pro-ecological solutions based on knowledge in the field of environmental management [K2_U10].
3. Can independently plan and implement his own development and motivate and direct others, can take care of development throughout his life, taking into account the goals of sustainable development [K2_U14].

Social competences:
1. The student is ready to initiate activities related to improving safety, taking into account pro-ecological solutions, taking into account the goals of sustainable development [K2_K03].
2. The student is prepared to reliably perform professional roles resulting from current economic and social needs, taking into account the principles of safety and ecology, taking into account the goals of sustainable development [K2_K06].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture:
Lectures: a short test verifying knowledge (quick test) and an assessment for activity (also in the area of realized problem tasks),
Lecture classes: on the basis of an exam with 20-30 questions. The student receives credit after obtaining at least 51% of the required points. The detailed procedure is described in the Study Regulations. Exam 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;
Classes:
Exercises: on the basis of the arithmetic average of the grades for the tasks completed and handed over to the teacher.
Project:
Development of the project based on the given project plan; partial grade after the 2nd point of the project and for its presentation.

Programme content

The topics of the classes include environmental management in organizations, with particular emphasis on the requirements of the ISO 14001:2015 standard.

Course topics

Lectures:
Contextual determinants of the functioning of enterprises, identification of 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. Environmental and health and safety aspects in modern concepts of organization management (lean, green, sustainable). Norms and standards in the systemic management of the organization's environment. A risk-based approach in environmental management.
Classes:
Identification of significant environmental aspects and selection of supervision measures; planning activities aimed at supporting the organization in its relations with the external and internal environment. Expanding knowledge on the practical implementation of the ISO 14001:2015 standard.
Project:
Development of elements necessary to implement the ISO 14001:2015 standard in the indicated company.

Teaching methods

1. Problem lecture with elements of a conversation lecture, illustrated with multimedia presentations. The lecture is conducted using distance learning techniques in a synchronous mode. Acceptable platforms: eMeeting, Zoom, Microsoft Teams.
2. Classes - exercises carried out using the case study method and problem methods.
3. Project - a project method with elements of mindmapping.

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: Erechtchoukova 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.
5. Standard ISO14001:2015.

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 systemow 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-Olejnik 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.
6. educational materials of the Stowarzyszenie Polski Ruch Czystszej Produkcji (www.cp.org.pl).

Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	70	3,00