COURSE DESCRIPTION CARD - SYLLABUS

Course name
Standardization in safety

Course

Field of study
Safety Engineering
Area of study (specialization)

Level of study
First-cycle studies
Form of study
part-time

Year/Semester
1/2
Profile of study
general academic
Course offered in
English
Requirements
compulsory

Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials
8

Projects/seminars
10

Number of credit points

2

Lecturers

Responsible for the course/lecturer:
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Faculty of Engineering Management

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Responsible for the course/lecturer:

Prerequisites

The student knows and understands the basic concepts of the organization's activities, especially management sciences (at the high school level). The student is able to interpret the phenomena occurring in the business and work environment and their impact on the functioning of the organization.

Uses the known methods of researching phenomena and relations, and applies logical thinking to associate and evaluate them.

Course objective

Acquainting with the construction of ISO standards and the HLS concept. Presentation of the subject of the use of standards, as well as the way of their interpretation. Initial preparation of it for the use of standards in professional life and decisions regarding the activities of the organization. The acquired knowledge, skills and competences will allow the student to initially recognize problems in the field of adapting the work of the organization and its effects (products) to market requirements.

Course-related learning outcomes

Knowledge

1. The student knows the issues of technical safety, safety systems, occupational health and safety as well as threats and their effects in depth. [K1_W02]

2. The student has advanced knowledge of the life cycle of products, devices, facilities, systems and technical systems. [K1_W06]

3. The student has advanced knowledge of quality engineering in relation to products and processes. [K1_W07]

Skills

1. The student is able to properly select the sources and information derived from them, making the assessment, critical analysis and synthesis of this information.[K1_U01]

2. The student is able to see system and non-technical aspects in engineering tasks, as well as socio-technical, organizational and economic aspects.[K1_U03]

3. The student is able to make a critical analysis of the way of functioning and evaluate, in connection with Safety Engineering, the existing technical solutions, in particular machines, devices, objects, systems, processes and services. [K1_U06]

4. The student is able to identify changes in requirements, standards, regulations and technical progress and the reality of the labor market, and on their basis define the need for supplementing knowledge. [K1_U12]

Social competences

1. The student is aware of the importance of knowledge in solving problems in the field of safety engineering and continuous improvement.[K1_K02]

2. The student is aware of the understanding of non-technical aspects and effects of engineering activities, including its impact on the environment and the related responsibility for the decisions made. [K1_K03]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assessment:

- classes: evaluation of the exercises and tasks to be performed independently (60% of the final mark), evaluation of the written test (40% of the final mark);

- project: preparation of a project on a given topic (evaluation for each stage) and its presentation.

Passing on the first and second attempt min. 50% of all points.

Programme content

Classes:

Tasks related to the construction of ISO standards, including the identification of standard requirements; identification of the High Level Structure concept; breakdown of standards

Project: analysis of selected standards and their interpretation

Teaching methods

Classes: subject exercises in connection with the analysis of case studies and elements of the problem lecture.

Projects: design method with case study analysis.

Bibliography

Basic

1. Bugdol M., Jedynak P., Współczesne systemy zarządzania. Jakość, bezpieczeństwo, ryzyko, Wyd.HELION, Gliwice 2012.

2. Urbaniak M., Zarządzanie jakością. Teoria i praktyka, Wyd. Difin, Warszawa 2004.

3. Tomaszewski Z. (2002), Bezpieczeństwo wyrobów oraz ich zgodność ze standardami Unii Europejskiej, Wydawnictwo Politechniki Poznańskiej, Poznań.

4. Standards given in classes.

Additional

1. Stasiuk-Piekarska A., Innowacyjne wykorzystanie założeń metody FMEA dla potrzeb zarządzania ryzykiem organizacyjnym w systemach produkcyjnych [w:] Problemy Jakości 6/2017, Wyd. Sigma-NOT, DOI: 10.15199/48.2017.6.4 , s. 26-31.

2. Starzyńska B., Hamrol A., Grabowska M., Poradnik menadżera jakości. Kompendium wiedzy o narzędziach jakości, COMPRINT-Wydawnictwo Politechniki Poznańskiej, Poznań 2010.

3. Hamrol A., Mantura W., Zarządzanie jakością teoria i praktyka, Wydawnictwo Naukowe PWN, Warszawa 2005.

4. Mrugalska B., Prussak W., Projektowanie systemów bezpieczeństwa, Wyd. Politechniki Poznańskiej, Poznań 2011.

Breakdown of average student's workload

	Hours	ECTS
Total workload	55	2,0
Classes requiring direct contact with the teacher	18	1,0
Student's own work (literature studies, preparation for tutorials, preparation for tests, project preparation) [1]	37	1,0

[1] delete or add other activities as appropriate