COURSE DESCRIPTION CARD - SYLLABUS

Course name
Operation of integrated management systems [S2IBiJ1-JiEwBP>EZSZ]

Course

Field of study
Safety and Quality Engineering

Year/Semester
1/2

Area of study (specialization)
Quality and Ergonomics in Work Safety

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
full-time

Requirements
elective

Number of hours

Lecture
0

Laboratory classes
0

Other
0

Tutorials
15

Projects/seminars
15

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

The student has knowledge of the basic concepts of quality management, environmental management and occupational health and safety management, as well as the basics of organization and management. The student is able to verify and assess the phenomena occurring during the implementation of processes carried out in organizations and to interpret and describe observations and observations. The student is aware of the importance of work safety, its impact on the environment and the quality of processes, products and systems.

Course objective

Presentation of practical skills in the operation of quality, environmental and work safety management systems in a production or service organization.

Course-related learning outcomes

Knowledge:
1. Student has a established knowledge of the requirements of the following standards: ISO 9001: 2015, ISO 14001: 2015 and ISO 45001: 2015. He knows how to interpret these requirements and what are the principles of operation of management systems [K2_W08].

Skills:
1. Student can properly select methods and design procedures during the operation of selected elements of the quality, occupational safety and environmental management system [K2_U05].
2. Student can interpret the requirements of the following standards: ISO 9001:2015, ISO 14001:2015 and ISO 45001:2015 and indicate examples of effective maintenance and operation of integrated management systems [K2_U06].
3. Student can work in a group and design a standard of conduct related to the selected area of operation and maintenance of an integrated quality, environmental and occupational health and safety management system [K2_U13].

Social competences:
1. Student is critical for the solutions he has developed, he is aware that the proper and effective operation of integrated systems requires expert knowledge, he is willing to seek this knowledge and willingly uses good practices developed by experts [K2_K01].
2. Student is prepared to make ethical decisions related to the operation of integrated management systems [K2_K05].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Tutorials:
Formative assessment: Assessment of the current progress in the implementation of tasks, for each task the student receives a certain number of points. Each task must be completed with a minimum of 51%.
Summative assessment: the assessment is the sum of the points obtained for all exercises. Passing threshold 51%. Grading scale:
91 - 100 points - Very Good
82 - 90 points - Good plus
72 - 81 points - Good
62 - 71 points - Good enough
52-61 points - Fair
00 - 51 points - Insufficient
Project:
Formative assessment: assessment of the current progress of the project stages. For each stage of the project, the Student receives a certain number of points. Each stage must be passed at a minimum of 51%.
Summative assessment: the assessment is the sum of the points obtained for all stages of the project. Passing threshold 51%. Grading scale:
91 - 100 points - Very Good
82 - 90 points - Good plus
72 - 81 points - Good
62 - 71 points - Good enough
52-61 points - Fair
00 - 51 points - Insufficient

Programme content

The course program includes practical aspects of maintaining, operating, and supervising quality management, safety, and environmental systems based on the standards ISO 9001:2015, ISO 45001:2018, and ISO 14001:2015.

Course topics

Tutorials: Management Review and Data Analysis as a Basis for Operating Quality, Environmental, and Safety Management Systems: Common elements of data analysis in the three systems. The role of improvement actions.
Documented Information in Quality Management Systems: Documented information in environmental management systems. Documented information in occupational health and safety management systems. Differences in maintaining and preserving documented information. Documentation management in integrated management systems.

Standardization of Activities in an Integrated Management System as a Condition for Effective System Operation: Management review and data analysis as a basis for operating quality, environmental, and safety management systems. Common elements of data analysis in the three systems. The role of improvement actions.

Projects: Planning and Preparing for the Management Review of an Integrated Quality, Environmental, and Occupational Health and Safety Management System: Input data for the review. Data sources. Reporting and reporting in integrated management systems.

Teaching methods

Tutorials: lecture with explanation and explanation, case study, brainstorming
Project: case study, brainstorming, project method.

Bibliography

Basic:
1.Gołaś H., Mazur A. (2010), Wdrażanie systemów zarządzania jakością, Wydawnictwo Politechniki Poznańskiej, Poznań.
2. Gołaś H., Mazur A., Misztal A. (2016), Model doskonalenia przedsiębiorstwa przez zarządzanie ryzykiem zgodnie z ISO 9001:2015, Problemy Jakości 10, 9-14.
3. Górny A. (2017), Zarządzanie bezpieczeństwem i higieną pracy w doskonaleniu warunków produkcji - implikacyjne aspekty wymagań normy ISO 45001, Problemy Jakości, 5, 2-8
4. Jasiulewicz-Kaczmarek M., Misztal A. (2014), Projektowanie i integracja systemów zarządzania projakościowego, Wydawnictwo Politechniki Poznańskiej, Poznań. 4
5. Kowal E., Kucińska-Landwójtowicz A., Misiołek A. (2013), Zarządzanie środowiskowe, Polskie Wydawnictwo Ekonomiczne, Warszawa.
6. PN-ISO 45001:2018-06, Systemy zarządzania bezpieczeństwem i higieną pracy. Wymagania i wytyczne stosowania, PKN, Warszawa.
7. PN-EN ISO 14001:2015-09/Ap1:2018-11, Systemy zarządzania środowiskowego. Wymagania i wytyczne stosowania, PKN, Warszawa.
8. PN-EN ISO 9001:2015-10/Ap1:2017-08, Systemy zarządzania jakością. Wymagania, PKN, Warszawa.

Additional:
1. Golas H., Mazur A., Gruszka J. (2015), Improving an organization functioning in risk conditions in accordance with ISO 9001: 2015, In: Advances in Computer Science Research (p. 257 - 261), Springer, Cham.
2. Misztal A. (2015), Kryteria brzegowe implementacji systemów zarządzania jakością w przedsiębiorstwach branży motoryzacyjnej, Wydawnictwo Politechniki Poznańskiej, Poznań.
3. Mazur M., Quality management, Publishing House of Poznań University of Technology, 2022.

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
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)	20	1,00