# COURSE DESCRIPTION CARD - SYLLABUS

Course name
Integration of quality, safety and environmental management systems [N2IBiJ1-JiEwBP>ISZ]

## 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
part-time

Requirements
elective

## Number of hours

Lecture
0

Laboratory classes
0

Other
0

Tutorials
10

Projects/seminars
10

## Number of credit points

2,00

## Coordinators

dr inż. Anna Mazur prof. PP
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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

Get the practical skills to integrate quality, environmental and occupational health and safety management systems in enterprises.

## 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. Knows how to interpret these requirements and what are the boundary conditions for the integration of management systems [K2_W08].

Skills:
1. Student can properly select methods and design selected elements of an integrated quality, occupational safety and environmental management system [K2_U05].
2. Student can interpret the requirements of the standards: ISO 9001: 2015, ISO 14001: 2015 and ISO 45001: 2015 and indicate common areas for three systems that can be a way to integrate at different levels of organization management [K2_U06].
3. Student can work in a group and design a standard of conduct related to the selected area of the integrated quality, environmental and occupational health and safety management system [K2_U13].

Social competences:
1. Student is critical for the solutions he has developed, is aware that proper and effective integration of systems requires expert knowledge, 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 integration of 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 integrating, maintaining, 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: Integration of management systems: opportunities and barriers. Integration conected with policy and objectives. Documented information in quality management systems. Similarities and differences in ISO 9001:2015; ISO 14001:2015, ISO 45001:2018. HIgh level structure as a starting point for system integration. Documented information in environmental management systems. Documented information in occupational health and safety management systems. The difference in maintaining and maintaining documented information. Document management in integrated management systems.
Projects: A risk-based thinking as one of the pillars of quality, environment and safety management systems. Impact of a risk-based approach on an organization's business processes. Risk management in

quality, environment and work safety 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. Jasiulewicz-Kaczmarek M., Misztal A. (2014), Projektowanie i integracja systemów zarządzania projakościowego, Wydawnictwo Politechniki Poznańskiej, Poznań. 4
4. PN-ISO 45001:2018-06, Systemy zarządzania bezpieczeństwem i higieną pracy. Wymagania i wytyczne stosowania, PKN, Warszawa.
5. PN-EN ISO 14001:2015-09/Ap1:2018-11, Systemy zarządzania środowiskowego. Wymagania i wytyczne stosowania, PKN, Warszawa. 4
6. PN-EN ISO 9001:2015-10/Ap1:2017-08, Systemy zarządzania jakością. Wymagania, PKN, Warszawa.

Additional:
1. Ejdys J., Kobylińska U., Lulewicz-Sas A., Zintegrowane systemy zarządzania jakością, środowiskiem i bezpieczeństwem pracy : teoria i praktyka, Wydawnictwo Politechniki Białostockiej, Białystok, 2006.
2. Gołaś H., Mazur A. (2010), Wdrażanie systemów zarządzania jakością, Wydawnictwo Politechniki Poznańskiej, Poznań. 2. 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.
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 | 20 | 0,50 |
| Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation) | 30 | 1,50 |