POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Quality management - principles and standards [S2IBiJ1-BiZK>ZJ]

Course

Field of study	Year/Semester
Safety and Quality Engineering	1/2
Area of study (specialization)	Profile of study
Safety and Crisis Management	general academic
Level of study	Course offered in
second-cycle	Polish
Form of study	Requirements
full-time	compulsory

Number of hours

Lecture	Laboratory classes	Other
15	0	0
Tutorials	Projects/seminars	
15	15	

Number of credit points

4,00

Coordinators	Lecturers
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Prerequisites

A student starting this course should have basic knowledge of the basics of quality engineering and quality management as well as the ability to verify and evaluate phenomena occurring during the implementation of processes in enterprises. He should also have the ability to obtain information from the indicated sources and be ready to cooperate within the team.

Course objective

Providing students with basic knowledge of the principles and requirements of quality management standards in various industries. Developing the ability of students to apply quality management methods and tools in processes, projects, products and systems.

Course-related learning outcomes

Knowledge:
1. A student knows in depth-degree principles and rules of management supporting the implementation of the requirements of quality management systems in various industries [K2_W06].
2. A student has structured and theoretically based knowledge of the principles of quality management

[K2_W08].
3. A student knows in depth the economic, legal, ethical, social and psychological aspects included in the industry standards of quality management [K2_W10].

Skills:
1. A student is able to develop and properly apply the principles, methods and tools for solving complex problems characteristic of quality management [K2_U03].
2. A student is able to design selected elements of quality management standards in a team using properly selected means, methods and techniques [K2_U05].
3. A student is able to identify changes in requirements and standards and use them properly in solving problems in the area of quality management [K2_U06].

Social competences:
1. The student is ready to perform tasks related to quality management in the organization in an ethical manner, to persuade others to observe the principles of professional ethics and to develop professional values in this area [K2_K05].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture:
Formative assessment: answers to questions about the content of previous lectures
Summative assessment:
Passing is carried out in the form of a written test, each of the test questions is scored on a two-point scale of 0, 1. Passing point: 51% of points.
Exercises:
Formative assessment: assessment of the current progress in the implementation of tasks, for each task the student receives a partial mark.
Summative assessment: arithmetic mean of partial grades obtained for individual tasks. Passing threshold: 51% of points.
Design:
Formative assessment: assessment of the current progress in the implementation of tasks, for each task the student receives a partial mark.
Summative assessment: arithmetic mean of partial grades obtained for individual tasks. Passing threshold: 51% of points.

Programme content

The program covers issues related to quality management in the enterprise.
The lecture program covers the following topics:

Course topics

Systemic quality management,
Concepts, standards and principles supporting quality activities in various industries.
The exercise program covers the following topics:
use of 7 old and 7 new tools, application of these tools in in-depth G8D analysis.
The project program covers the following issues:
Designing an employee suggestion system and verifying its effectiveness.

Teaching methods

Lecture: multimedia presentation illustrated with examples given on the board.
The lecture is conducted using distance learning techniques in a synchronous mode. Acceptable platforms: eMeeting, Zoom, Microsoft Teams.
Exercises: a multimedia presentation illustrated with examples given on the blackboard and carrying out the tasks given by the teacher - practical exercises.
Project: multimedia presentation illustrated with examples given on the board and execution of project tasks.

Bibliography

Basic:
1. Stadnicka D., Wybrane metody i narzędzia doskonalenia proesów w praktyce, Oficyna Wydawnicza Politechniki Rzeszowskiej, Rzeszów 2017
2. Hamrol A.: Zarządzanie i inżynieria jakości. Warszawa PWN, Warszawa 2017.
3. Pacana, A., & Siwiec, D. (2018). Analiza rozwiązania problemu wyrobów niezgodnych z wykorzystaniem metodyki 8D. Zeszyty Naukowe. Organizacja i Zarządzanie/Politechnika Śląska.
4. Gołaś H., Mazur A. (2012), Zarządzanie jakością, Wydawnictwo Politechniki Poznańskiej, Poznań
5. Jasiulewicz-Kaczmarek M., Misztal A. (2014), Projektowanie iintegracja systemów zarządzania jakością, Wydawnictwo Politechniki Poznańskiej, Poznań.
6. Mazur A. (2022) Quality management, Wydawnictwo Politechniki Poznańskiej, Poznań.

Additional:
1. Antosz K., Augustyn A., Jasiulewicz-Kaczmarek M., Application of VSM for improving the medical processes - case study, APMS 2021 IFIP AICT Springer
2. Myszkowski, P., & Knop, K. (2019). Zastosowanie narzędzi koncepcji WCM typu S-Tag oraz Quick Kaizen do identyfikacji i rozwiązania problemu związanego z bezpieczeństwem pracy. Archiwum Wiedzy Inżynierskiej, 4, 15-18.
3. Łosyk, H., Szmołda, M., & Topczak, M. Koncepcja systemu sugestii opartego na kaizen. Aktualne trendy i badania w inżynierii, 16.
4. Mazur A. (2023), Siedem starych i siedem nowych narzędzi zarządzania jakością, Wydawnictwo Politechniki Poznańskiej, Poznań.

Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,00
Classes requiring direct contact with the teacher	45	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	55	2,00