



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Quality Engineering 2

Course

Field of study

Safety Engineering

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/6

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

Number of hours

Lecture

15

Tutorials

30

Laboratory classes

Projects/seminars

30

Other (e.g. online)

Number of credit points

4

Lecturers

Responsible for the course/lecturer:

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Faculty of Engineering Management

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Responsible for the course/lecturer:

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Prerequisites

Knowledge and skills related to engineering aspects of the quality of products, processes and systems. Knowledge of quality management tools that can be used in various aspects related to security issues.

Course objective

Providing students with knowledge and skills related to engineering aspects of pro-quality systems. Acquainting students with the essence of normalization and standardization, indicating links with selected pro-quality systems in relation to systems and products. To familiarize students with selected methods of quality engineering.

Course-related learning outcomes

Knowledge

The student knows issues related to normalization and standardization in the area of process, product and system quality engineering. He knows the assumptions and requirements of selected pro-quality systems, including ISO 9001: 2015 [P6S_WG_07].

Skills

The student is able to use appropriate methods and techniques to design selected elements of the quality management system according to the requirements of ISO 9001: 2015 [P6S_UW_07].

The student is able to plan and carry out experiments related to the application of selected methods of quality management, is able to interpret the results and draw conclusions [P6S_UO_01].

Social competences

Student dostrzega zależności przyczynowo-skutkowe, potrafi określać priorytety dążąc do postawionych celów w realizowanych zadaniach i projektach [P6S_KK_01].

Student ma świadomość znaczenia wiedzy z obszaru inżynierii jakości w rozwiązywaniu problemów związanych z inżynierią bezpieczeństwa, jest świadomy konieczności ciągłego doskonalenia [P6S_KK_02].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Tutorials:

Formative assessment: ongoing assessment of the tasks performed. For each task the student receives points, completing the task - at least 50% of points

Summative assessment: the sum of points obtained from individual tasks is converted into a grade

Design:

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%

Lecture:

Formative assessment: answers to questions about the content of previous lectures,

Summative assessment: Test of the knowledge provided during the lectures, scored on a two-point scale 0, 1. Passing point: 50% of points.

Programme content

Lecture: Normalization and standardization in quality engineering. Principles of quality management. Pro-quality systems related to the functioning of the organization. Quality management system acc. To ISO 9001: 2015 - selected elements.

Tutorials: Quality management methods used in quality engineering of processes, products and systems. Application of quality function expansion to solving problems related to safety engineering. FMEA method process - application in the areas of safety engineering. Quality plan - a method of designing, monitoring, supervising and improving processes.

Project: Selected elements of the quality management system according to ISO 9001: 2015. Practical application of the principles of quality management. The context of the organization. Analysis of the company's surroundings and design of the quality policy. Determining the scope of the quality management system. Business process map. Process documentation templates. Basics of the risk-based approach.

Teaching methods

Lecture: information lecture, problem lecture, work with a book, lecture.

Tutorials: problem lecture, lecture with explanation and explanation, case study, brainstorming

Project: case study, brainstorming, project method

Bibliography

Basic

Jasiulewicz-Kaczmarek M., Misztal A., Projektowanie i integracja systemów zarządzania jakościowego, Wydawnictwo PP, Poznań 2014.

Mazur A., Gołaś H., Zasady, metody i techniki wykorzystywane w zarządzaniu jakością, Wydawnictwo Politechniki Poznańskiej, ISBN 978-83-7143-908-7, Poznań 2010, s. 113.

Mazur A., Małecka J., Kompleksowe wykorzystanie metod i narzędzi jakości w FMEA procesie, Problemy Jakości 07/2019, s. 14-19.

Prussak W., Jasiulewicz-Kaczmarek M., Wydawnictwo Politechniki Poznańskiej, Poznań 2010 .



Zymonik Z., Hamrol A., Grudowski P., Zarządzanie jakością i bezpieczeństwem Polskie Wydawnictwo Ekonomiczne, 2013.

PN-EN ISO 9001:2015 System zarządzania jakością. Wymagania. PKN, Warszawa, 2016.

PN-EN ISO 9000:2015. System zarządzania jakością. Podstawy i terminologia. PKN, Warszawa, 2016.

Additional

Gołaś H., Mazur A., Piasek P., Czajkowski P., Zastosowanie standaryzacji w procesie kontroli jakości wyrobów, Problemy Jakości 2/2017, s. 10-14.

Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,0
Classes requiring direct contact with the teacher	75	3,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	25	1,0

¹ delete or add other activities as appropriate