COURSE DESCRIPTION CARD - SYLLABUS

Course name

Quality Management

Course

Field of study	Year/Semester
Safety Engineering	1/1
Area of study (specialization)	Profile of study
Ergonomics and work safety	general academic
Level of study	Course offered in
Second-cycle studies	Polish
Form of study	Requirements
part-time	compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
10	10	
Tutorials	Projects/seminars	

Number of credit points

3

Lecturers

Responsible for the course/lecturer:

Ph.D., D.Sc., Eng. Agnieszka Misztal, University Professor

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Responsible for the course/lecturer:

Ph.D., D.Sc., Eng. Małgorzata Jasiulewicz-Kaczmarek, University Professor

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Prerequisites

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EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

Student should have a basic knowledge of quality engineering, is able to interpret concept of quality, knows how to apply basic quality methods and technigues, has ability to work in a group.

Course objective

Providing students with knowledge about precursors of quality management, system and process approach, modern principles of quality management and conditions related to them; teaching how to solve quality management problems and creating pro-quality attitudes.

Course-related learning outcomes

Knowledge

- knows issues in field of designing quality management system processes [P7S_WG_07],

- knows issues of management functions in area of quality [P7S_WG_08],

- knows basic pro-quality principles used in solving simple engineering tasks in area of ergonomics and work safety using information technologies, information protection and computer support [P7S_WK_03],

Skills

- is able to properly select sources and information derived from them in relation to quality-oriented principles, and on the basis of this makes an assessment, critical analysis and synthesis, as well as is able to formulate conclusions and comprehensively justify the opinion [PS7_UW_01],

- is able to apply various pro-quality techniques to communicate in a professional environment and in other environments [PS7_UW_0]),

- can see the analogy of pro-quality systems and formulate engineering and non-technical as well as socio-technical, organizational and economic aspects in engineering tasks [PS7_UW_03],

- is able to use research, analytical, simulation and experimental methods to formulate and solve engineering tasks using pro-quality methods and tools [PS7_UW_04],

- is able to plan and carry out measurements and computer simulations of the quality system, interpret the results obtained and draw conclusions [PS7_UO_01],

Social competences

- is aware of perception cause-and-effect relationships in achieving set pro-quality goals and ranking the significance of alternative or competitive tasks [PS7_KK_01],

- is aware of recognition of importance of pro-quality knowledge in solving problems in the field of security engineering and continuous improvement [PS7_KK_02],

- is aware of the responsibility for own work and readiness to comply with the rules of teamwork and taking responsibility for jointly implemented tasks [PS7_KR_02].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

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Formative assessment:
- lecture: current assessment in class, partial points for participating in discussion,
- tutorials: tasks solved during classes, presentation of solutions.

Summative rating:
- lectures: oral form (the end of the semester) from material processed during the lectures, 4-5 open questions, positive assessment 51%; partial points increase final grade,
- tutorials: average of grades obtained from individual exercises.

Programme content

Precursors of quality. Introduction to system quality management (beginnings of system standardization, evolution of quality approach, current family of ISO 9001, accompanying and industry standards. Modern principles of pro-quality management and its basic elements. Pro-quality culture of an organization and its formation. Advanced methods of multi-criteria decision making (AHP, ISM). Supervision of measuring systems (MSA).

Teaching methods

Didactic methods - lecture with multimedia presentation, discussion, case study,
Tutorials based on a case study.

Bibliography

Basic

1. Jasiulewicz-Kaczmarek M., Misztal A. (2014), Projektowanie i integracja systemów zarządzania jakością, Wydawnictwo Politechniki Poznańskiej, Poznań.
2. Hamrol A. (2008), Zarządzanie jakością z przykładami, PWN, Warszawa.
3. Gołaś H., Mazur A. (2012), Zarządzanie jakością, Wydawnictwo Politechniki Poznańskiej, Poznań.
4. Szczepańska K. (2018), Zasady zarządzania jakością, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa.
5. Dobrowolska A. (2017), Podejście procesowe w organizacjach zarządzanych przez jakość, Wydawnictwo Poltext, Warszawa.

Additional

1. Gruszka J., Misztal A. (2017), Zarządzanie jakością w motoryzacji wg standardu IATF 16949:2016 w ujęciu procesowym, Problemy Jakości 11, 4-10.
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., Drożyner P. (2010), Excellence models in maintenance , [w:] Fertsch M. (red.), Innovative and intelligent manufacturing systems, (s. 335-352), Wydawnictwo Politechniki Poznańskiej, Poznań.

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Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	25	1,0
Student's own work (literature studies, preparation for laboratory classes, preparation for tests/exam) [1]	50	2,0

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[1] delete or add other activities as appropriate