GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Comprehensive quality management, PG_00064720						
Field of study	Management and Production Engineering						
Date of commencement of studies	February 2025		Academic year of realisation of subject	2024/2025			
Education level	second-cycle studies		Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study			
Mode of study	Full-time studies		Mode of delivery	at the university			
Year of study	1		Language of instruction	Polish			
Semester of study	1		ECTS credits	4.0			
Learning profile	general academic profile		Assessment form	exam			
Conducting unit	Katedra Inżynierii Zarządzania i Jakości -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Piotr Grudowski				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	15.0	0.0	0.0	0.0	45
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours	Self-study	SUM	
	Number of study hours	45		12.0	43.0	100	
Subject objectives	Presentation and an indication of the practical circumstances of the principles, methods and tools of a totalquality management.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W03] demonstrates structured and theoretically based knowledge covering key issues in the field of Management and Production Engineering enabling the design and synthesis of stationary and non-stationary systems, devices and technological processes with continuous and discrete operation	The student has in-depth knowledge of the methodology of designing, controlling and improving system solutions regarding the quality of products or services and its relationships with the achievements of mechanical engineering and science of management and quality.	[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge
[K7_U01] uses known analytical, simulation and experimental methods as well as mathematical models to analyze and evaluate stationary and non-stationary technological and production systems/processes with continuous and discrete operation	The student notices and determines the impact of the systemic complex of technical, social, environmental and legal factors determining the results of individual processes and the entire organization. The student uses the methods and techniques enabling the improvement of the organization.	[SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment
[K7_U11] communicates and justifies opinions on specialized topics in a manner understandable to diverse audiences, including the use of modern techniques, including information technology	The student is able to obtain from the literature, databases and other sources, also in the foreign languages, information on comprehensive quality management of products or services, is able to integrate and interpret information, draw conclusions and formulate and justify professional opinions in this area.	[SU2] Assessment of ability to analyse information [SU5] Assessment of ability to present the results of task
[K7_K01] is aware of the importance and understanding of non-technical aspects and effects of engineering/production activities, including its impact on the environment and the related responsibility for decisions made, demonstrating knowledge of actions aimed at reducing risk and anticipating the social and environmental effects of engineering/production activities	The student consciously selects and applies rules, system models, methods and tools representing engineering and managerial activities in order to reduce the risk of implemented projects.	[SK1] Assessment of group work skills [SK4] Assessment of communication skills, including language correctness [SK5] Assessment of ability to solve problems that arise in practice

Subject contents

LECTURES Quality infrastructure. Principles of TQM in a product lifecycle. Models of Excellence as the basis for self assessment of an organization. The essence and the role of the process orientation in quality management Processdesign, control and improvement methodology in quality management systems. Audit-planning andconducting. Improvement cycle in ISO 9001 model elements. ISO 9004 standard. Tools for designing,assessment and improvement of quality. Economic aspects of quality. Integration of formalized managementsystems.

TUTORIALS Applications of elements of process design, control and improvement methodology. Self assessment of an organization basing on ISO 9004. Self-assessment based on models of excellence. Designing and interpreting of SPC charts. Process capability analysis. Applications of quality costs calculation in management systems.

Prerequisites and co-requisites

Competencess aquired from the subject of Ist level studies - "Quality management".

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Written exam	60.0%	70.0%
Active participation in tutorials	70.0%	30.0%

Recommended reading	Basic literature	Grudowski P., Wiśniewska M.: Kultura jakości, doskonałości ibezpieczeństwa w organizacji. Warszawa: CeDeWu, 2019. ISBN9978-83-8102-276-7Grudowski P. Projektowanie, nadzorowanie i doskonalenie systemujakości według normy PN-EN ISO 9001:2009 w oparciu o podejścieprocesowe, ODDK, Gdańsk 2010.Grudowski P. Jakość, środowisko, BHP w systemach zarządzania. Bydgoszcz: Wydawnictwo OPO-AJG.2004 Hamrol A., Mantura W. Zarządzanie jakością. Teoria i praktyka. PWN, Warszawa 2005 (also earlier editions - 2002, 2004).Muhlemann A. P., Oakland J. S., Lockyer K. G.: Zarządzanie. Produkcja i usługi, Wydawnictwo Naukowe PWN, Warszawa 1997.
	Supplementary literature	Grudowski P., Przybylski W., Siemiątkowski M., Inżynieria jakości wtechnologii maszyn, Wydawnictwo PG, 2006Urbaniak M., Zarządzanie jakością. Teoria i praktyka. Difin 2004.
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Principles of TQM. Models of excellence and their criteria. Elements of quality infrastructure. Process approach in quality management. Quality management methods and tools.	
Work placement	Not applicable	

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