

GDAŃSK UNIVERSITY

Subject card

Subject name and code	Comprehensive quality management, PG_00064720							
Field of study	Management and Production Engineering							
Date of commencement of studies	February 2026		Academic year of realisation of subject		2025/2026			
Education level	second-cycle studies		Subject group			Obligatory subject group in the field of study Subject group related to scientific		
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	Department of Management Engineering and Quality -> Faculty of Management and Economics -> Wydziały Politechniki Gdańskiej							
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	Projec	t	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 totalquality manager	indication of the nent.	e practical circi	umstances of t	ne princi	ples, m	ethods and t	ools of a

Learning outcomes	Course outcome	Subject outcome	Method of verification			
	[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.	[SK5] Assessment of ability to solve problems that arise in practice [SK4] Assessment of communication skills, including language correctness [SK1] Assessment of group work skills			
	[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.	[SU5] Assessment of ability to present the results of task [SU2] Assessment of ability to analyse information			
	[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.	[SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools			
	[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.	[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects			
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 methodol assessment of an organization basing on ISO 9004. Self-assessment based on models of ex Designing and interpreting of SPC charts. Process capability analysis. Applications of quality calculation in management systems.						
Prerequisites and co-requisites	Competencess aquired from the subject of 1st level studies - "Quality management".					
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade			
	Active participation in tutorials	70.0%	30.0%			
	Written exam	60.0%	70.0%			

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				
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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