GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Comprehensive quality management (TQM), PG_00059491		
Field of study	Management and Production Engineering		
Date of commencement of studies	February 2024	Academic year of realisation of subject	2023/2024
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	blended-learning
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	Faculty of Management and Economics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Piotr Grudowski	
	Teachers	dr hab. inż. Piotr Grudowski mgr Anna Wendt	

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: 26.0						

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	10.0	45.0	100

Subject objectives	Presentation and an indication of the practical circumstances of the principles, methods and tools of a total quality management.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U01] can obtain information from literature, databases and others sources, also in English or another foreign language recognized as the language of international communication in a given engineering discipline; is able to integrate the obtained information, interpret it, as well as draw conclusions and formulate and justify opinions.	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.	[SU1] Assessment of task fulfilment [SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools
[K7_U06] can - when formulating and solving engineering tasks - see their systemic aspects and social conditions, environmental, economic, legal and others	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.	[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools
[K7_W01] knows and understands to a greater extent selected issues in the field of management and quality sciences and mechanical engineering, their location in the field of social sciences and engineering and technical sciences, as well as relationships with related disciplines, and sees the possibility of applying the knowledge in practice	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
[K7_K02] is aware of the importance and understanding of non-technical aspects and effects of engineering activities, including its impact on the environment, and the related responsibility for decisions made demonstrates knowledge of actions to reduce risk and anticipate the social impact of engineering and manufacturing 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 Process design, control and improvement methodology in quality management systems. Audit-planning and conducting. Improvement cycle in ISO 9001 model elements. Tools for designing, assessment and improvement of quality. Economic aspects of quality. Integration of formalized management systems TUTORIALS Applications of elements of process design, control and improvement methodology. QMS audit preparation according to process approach. Self assessment of an organization basing on ISO 9004. 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 of production"

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 i bezpieczeństwa w organizacji. Warszawa: CeDeWu, 2019.244 s. ISBN 9978-83-8102-276-7 Grudowski P. Projektowanie, nadzorowanie i doskonalenie systemu jakości według normy PN-EN ISO 9001:2009 w oparciu o podejście procesowe, ODDK, Gdańsk 2010 Grudowski P. Jakość, środowisko i bhp w systemach zarządzania. Bydgoszcz: Wydawnictwo OPO-AJG, 2004 Hamrol A. Mantura W. Zarządzanie jakością. Teoria i praktyka. PWN, Warszawa 2005 (również wydania wcześniejsze 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 w technologii maszyn, Wydawnictwo PG, 2006 Urbaniak M., Zarządzanie jakością. Teoria i praktyka. Difin 2004.

	eResources addresses	Adresy na platformie eNauczanie: Kompleksowe Zarządzanie Jakością WIMiO 23/24 STAC. - Moodle ID: 33754 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33754
Example issues/ example questions/ tasks being completed	Principles of TQM. Models of excellence and their criteria. Elements of a Quality Infrastructure. Process approach in the QM.	
Work placement	Not applicable	