



Subject card

Subject name and code	PRODUCTION QUALITY MANAGEMENT, PG_00070643						
Field of study	Engineering Management						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
Education level	first-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	2		Language of instruction		Polish		
Semester of study	4		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 -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Grzegorz Zieliński				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	45.0	0.0	0.0	0.0	60
	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	60		3.0		37.0	100
Subject objectives	Preparing students to analyze, design, and improve solutions in the area of quality management of production processes, based on knowledge of quality management methods and tools, taking into account technical, economic, and environmental conditions, as well as shaping attitudes of responsibility for decisions made in the context of the functioning of manufacturing organizations.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_K02] is prepared to make competent and ethical decisions to create and maintain economic, social, and environmental values, demonstrating entrepreneurial actions.		is ready to make responsible decisions related to production quality, taking into account their economic and environmental consequences as well as their significance for customers and the organization.		[SK3] Assessment of ability to organize work [SK5] Assessment of ability to solve problems that arise in practice		
	[K6_W04] possesses advanced knowledge of the principles of creative and entrepreneurial activity, enabling the identification and implementation of innovative ideas while ensuring compliance with copyright protection requirements.		knows and understands the principles of quality management in production processes and the role of quality data in assessing process effectiveness and stability.		[SW3] Assessment of knowledge contained in written work and projects		
	[K6_U05] designs innovative solutions for complex management processes by utilizing appropriate methods and techniques.		is able to design innovative solutions in the field of quality management of production processes by applying appropriate methods and techniques for process analysis and improvement, taking into account economic and environmental criteria.		[SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools		

Subject contents	Course content – lecture 1. Quality definitions 2. Development of quality management 3. Quality of products and services 4. Quality determinants and their level of importance 5. CSI and ESI index; QFD method and quality house 6. Tools of the classic seven of quality 7. New quality seven tools 8. Normalization on the example of ISO 9000 9. ISO 14000 Environmental Management System; ISO 18000; HACCP and ISO 22000 10. Quality management concepts by E. Deming, J. Juran, Ph. Crosby 11. Models of Excellence 12. Quality costs Course content – exercises 1. Identification of features of products and services 2. Examples of quality determinants in products and services 3. Calculation of the level of customer and employee satisfaction using the CSI and ESI indexes 4. Quality cottage construction 5. Use of cause and effect tools 6. The use of the tools of the classic seven of quality 7. The use of tools of the new quality seven 8. Group problem solving methods 9. Creating a quality policy 10. Quality documents in standardization 11. environmental policy 12. Statistical methods in quality 13. Control cards 14. Calculation of the Cp and Cpk indices 15. Deming's quality theses; Juran and Crosby 16. Excellence Model Criteria 17. Calculation of quality costs		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria Written knowledge and comprehension test with open-ended and problem-based questions. Written project report Presentation of the report with discussion of the solutions	Passing threshold 60.0% 60.0% 60.0%	Percentage of the final grade 50.0% 35.0% 15.0%
Recommended reading	Basic literature Supplementary literature eResources addresses	1. Dahlgaard J., Kristensen K., Kanji G., Podstawy zarządzania jakością, Wyd. PWN, Warszawa 2002 2. Urbaniak M., Zarządzanie jakością. Teoria i praktyka, Wyd. Difin, Warszawa 2005 3. Lock D., Podręcznik zarządzania jakością, Wyd. PWN, Warszawa 2002 1. Hamrol A., Zarządzanie jakością z przykładami, Wyd PWN, Warszawa 2005	
Example issues/ example questions/ tasks being completed	• Discuss the construction of the "Quality House" • Discuss the construction of the type X control card • Discuss the construction of an R-type control card • Calculate the Cp and Cpk index • Discuss the concept of Kaizen		
Practical activities within the subject	Not applicable		

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