



## Subject card

Subject name and code	, PG_00054587						
Field of study	Engineering Management						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2024/2025		
Education level	first-cycle studies	Subject group			Optional subject group 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	3	Language of instruction			Polish		
Semester of study	6	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Management Engineering and Quality -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Grzegorz Zieliński					
	Teachers	dr inż. Grzegorz Zieliński					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	0.0	30
	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	30	4.0		41.0	75	
Subject objectives	The aim of the subject is to familiarize students with the concept of Quick Response Manufacturing and its impact on the reduction of orders in enterprises						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_U08] analyses engineering and managerial solutions in decision-making processes, taking into account pro-quality and pro-environmental aspects, as well as safety of work processes	The student analyzes engineering solutions in the field of making decisions focused on optimizing production processes			[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject		
	[K6_W13] has a basic knowledge of the design, modelling and optimisation of technical processes and systems	The student has basic knowledge in the field of modeling and optimizing processes focused on shortening lead time			[SW3] Assessment of knowledge contained in written work and projects		
Subject contents	The world of VucaPillars Quick Response ManufacturingWhite and gray timesConstruction of MCT mapsCreating cells based on FTMSQuick Response Office CenterQuick Response Cell						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	project	60.0%			100.0%		

Recommended reading	Basic literature	Rajan Suri Zyskaj na Czasie, Wyd MT Biznes 2017 Knosala R., Inżynieria Produkcji, Kompendium Wiedzy, Wyd. PWE Warszawa 2017 Szatkowski K., Nowoczesne zarządzanie produkcją, Wyd. PWN Warszawa 2014
	Supplementary literature	Pająk E., Zarządzanie produkcją, Wyd PWN Warszawa 2021 Rajan Suri Przewodnik po MCT, Wyd 4 Results, QRM Institute Polska
	eResources addresses	Adresy na platformie eNauczanie: Quick Response Manufacturing lato 2025 - ZI Dzienne - Moodle ID: 43296 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=43296">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=43296</a>
Example issues/ example questions/ tasks being completed	Discuss the construction of the MCT map Discuss 4 QRM pillars Build a QROC on the basis of selected FTMS	
Work placement	Not applicable	

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