GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00056525		
Field of study	KONCEPCJE ZARZĄDZANIA PRODUKCJĄ II: QUICK RESPONSE MANUFACTURING		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2025/2026
Education level	first-cycle studies	Subject group	Optional subject group Subject group related to scientific research in the field of study
Mode of study	Part-time studies (on-line)	Mode of delivery	blended-learning
Year of study	4	Language of instruction	Polish
Semester of study	7	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 -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Grzegorz Zieliński	
	Teachers	dr inż. Grzegorz Zieliński	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	8.0	0.0	8.0	0.0	0.0	16

E-learning hours included: 12.0

eNauczanie source addresses:

Moodle ID: 46394 Koncepcje zarządzania produkcją QRM (online) ZIMA 2025 / 2026
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=46394

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	16	0.0	0.0	16

Subject objectives

The aim of the course is to prepare students for conscious and responsible engineering and managerial decision-making in highly customized production activities by acquiring knowledge and skills in the field of design, modeling and optimization of technical processes and systems, taking into account the principles of the Quick Response Manufacturing strategy supporting decision-making and production processes, taking into account pro-quality and pro-environmental aspects.

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	is able to consciously and responsibly analyze and evaluate engineering and managerial solutions in decision-making processes, taking into account pro-quality and pro-environmental aspects.	[SU4] Ocena umiejętności korzystania z metod i narzędzi
[K6_W13] has a basic knowledge of the design, modelling and optimisation of technical processes and systems	possesses fundamental knowledge of the design, modeling, and optimization of processes and technical systems in highly customized manufacturing operations, taking into account quality-oriented, environmentally sustainable, and occupational safety aspects	[SW3] Ocena wiedzy zawartej w opracowaniu tekstowym i projektowym

Subject contents

Course content – lecture
The World of VUCA and BANI
4 Pillars of QRM
The Power of Time and MCT Mapping
QRM Organizational Structure and Cells - Q-ROC and Q-Cell
Work Organization Based on FTMS
Basic Queueing Theory in Production Customization
Course content – laboratory
Project implementation using MCT mapping of a selected organization producing highly customized products

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="3">Basic knowledge of production management</td></tr>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Written report</td><td>60.0%</td><td>40.0%</td></tr>
<tr><td>Problem-based questions (oral exam)</td><td>60.0%</td><td>40.0%</td></tr>
<tr><td>Project report presentation</td><td>60.0%</td><td>20.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">Suri R., Zyskaj na czasie, Wyd. 4Results Warszawa 2022</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Waters D., Zarządzanie operacyjne, Wyd PWN 2012</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">Discuss the structure of an MCT map.
Using an example, define the organizational structure of a selected FTMS.
Discuss the pillars of QRM.</td></tr>
<tr><td>Practical activites within the subject</td><td colspan="3">Not applicable</td></tr>
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