GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Modern Concepts of Production Management, PG_00068461		
Field of study	Engineering Management		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2027/2028
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	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	6	ECTS credits	7.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department Of Management Engineering And Quality -> Faculty Of Management And Economics -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor		
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	8.0	32.0	0.0	0.0	0.0	40

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	40	6.0	129.0	175

Subject objectives

Formulates and implements creative production management concepts using modern advanced methods

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U05] designs innovative solutions for complex management processes by utilizing appropriate methods and techniques.	is able to develop improvements in production process management by selecting approaches and tools suited to the nature of the problem and the operational context of the enterprise	[SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools
[K6_W07] knows and understands advanced methods for analyzing the management process in technical, legal, economic, financial, and social contexts.	is familiar with approaches used in modern production management and understands how to consider various organizational and external factors when evaluating the effectiveness of operational solutions	[SW3] Assessment of knowledge contained in written work and projects
[K6_K03] is prepared to critically assess the knowledge they possess, which is necessary for solving cognitive and practical problems, and to supplement any gaps with opinions from external experts.	is able to reflect on their approach to production management challenges, identify areas requiring deeper insight, and seek expert input when the complexity of the issue demands it.	[SK3] Assessment of ability to organize work [SK5] Assessment of ability to solve problems that arise in practice

<table>
<tr><td>Subject contents</td><td>Lean manufacturing
Basic concepts related to Lean Manufacturing
Problem solving
5S - engaging in the perception and elimination of waste
Gemba Walk - identifying problems in processes
Standardization of work
Milk run - organization of supplying stations with materials
Poka-yoke - right the first time
SMED - shortening changeover times
Kamishibai - layered standards auditing
One point lesson - communication of changes in processes
Quick Response manufacturing
VUCA world
Quick Response Manufacturing pillars
White and gray times
Construction of MCT maps
Creating cells based on FTMS
Quick Response Office Center
Quick Response Cell</td></tr>
<tr><td>Prerequisites
and co-requisites</td><td></td></tr>
<tr><td>Assessment methods
and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Lecture test</td><td>60.0%</td><td>40.0%</td></tr>
<tr><td>Project</td><td>60.0%</td><td>60.0%</td></tr>
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</td></tr>
<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>Czerska J, Podstawowe narzędzia Lean Manufacturing, LeanQ Team, 2014
Czerska J, Doskonalenie strumienia wartości, wyd 2, LeanQ Team, 2014
Czerska J (red.) Poradnik Młodego Lean Lidera, Lean Education, 2019
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</td></tr>
<tr><td>Supplementary literature</td><td>Pająk E., Zarządzanie produkcją, Wyd PWN Warszawa 2021
Rajan Suri Przewodnik po MCT, Wyd 4Results, QRM Institute Polska</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr>
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<tr><td>Example issues/
example questions/
tasks being completed</td><td>Discuss the construction of the MCT map
Discuss the 4 pillars of QRM
Build a QRoc based on selected FTMS
Use the Lean Management tool in relation to the given problem in the form of a case study</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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