GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00054586		
Field of study	Engineering Management		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2023/2024
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	Katedra Inżynierii Zarządzania i Jakości -> Faculty of Management and Economics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Ewa Marjańska	
	Teachers	dr inż. Ewa Marjańska	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	30.0	0.0	0.0	45

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	45	4.0	26.0	75

Subject objectives

The aim of the Lean Manufacturing course is to develop students' ability to use toolsLean Manufacturing to eliminate key challenges in production processes.The aim of the theoretical material (lectures) is to familiarize students with the problems that arise inproduction processes and how the presented tools help in solving themThe aim of the exercises is to support students in developing skills and using various toolsprocesses and situations.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W13] has a basic knowledge of the design, modelling and optimisation of technical processes and systems	The student has basic knowledge of scope of application of tools Lean Manufacturing to be eliminated key process challenges production.	[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects
[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 is able to design solutions using indicated methods and tools Lean Manufacturing.	[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

Subject contents

1. Basic concepts related to Lean Manufacturing2.Problem solving3. 5S - involvement in noticing and eliminating waste4. Gemba Walk - identifying problems in processes5. Standardization of work6. Milk run - organization of supplying materials to stations7. Poka-yoke - right the first time8. SMED - shortening changeover times9. Kamishibai - layered auditing of standards10. One point lesson - communication of changes in processes

<table>
<tr><td>Prerequisites and co-requisites</td><td>The student should complete the subject of Production Management;</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>mini projects</td><td>60.0%</td><td>60.0%</td></tr>
<tr><td>exam</td><td>60.0%</td><td>20.0%</td></tr>
<tr><td>passing an e-learning course</td><td>75.0%</td><td>10.0%</td></tr>
<tr><td>activity and punctuality</td><td>70.0%</td><td>10.0%</td></tr>
</table>
</td></tr>
<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>1. "The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer" Jeffrey Liker.
2. "Lean Thinking: Banish Waste and Create Wealth in Your Corporation" James P. Womack, Daniel T. Jones.
3. "Lean Production Simplified: A Plain-Language Guide to the World's Most Powerful Production System" Pascal Dennis.</td></tr>
<tr><td>Supplementary literature</td><td>Seria książek Shopfloor wydawnictwa Productivity Press</td></tr>
<tr><td>eResources addresses</td><td>Podstawowe
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=35037 - E-nauczanie course
Adresy na platformie eNauczanie:</td></tr>
</table>
</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Use the 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>
</table>