



Subject card

Subject name and code	, PG_00056524						
Field of study	Engineering Management						
Date of commencement of studies	October 2021	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	Part-time studies	Mode of delivery			at the university		
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	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	8.0	0.0	16.0	0.0	0.0	24
	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	24	0.0		0.0	24	
Subject objectives	<p>The aim of the Lean Manufacturing course is to develop students' skills in using Lean Manufacturing tools to eliminate key challenges in production processes.</p> <p>The aim of the theoretical material (lectures) is to familiarize students with the problems that arise in production processes and the way in which the presented tools help in solving them. The aim of the exercises is to support students in the development of skills and the use of tools for various processes and situations.</p>						
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 is able to design solutions using the indicated Lean Manufacturing methods and tools			[SU4] Assessment of ability to use methods and tools		
	[K6_W13] has a basic knowledge of the design, modelling and optimisation of technical processes and systems	The student has basic knowledge of the use of Lean Manufacturing tools to eliminate key challenges in production processes.			[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation		
Subject contents	<p>Basic concepts related to Lean Manufacturing 5S - involvement in the elimination of waste Visual performance management One piece flow / Continuous flow Standardization of work Milk run - organization of supplying stations with materials Poka-yoke - good the first time Kamishibai - tiered standards auditing Suggestion system SMED</p>						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Final exam	60.0%	50.0%
	Presence	75.0%	15.0%
	Mini projects	60.0%	20.0%
	Quizzes on e-nauczanie	85.0%	15.0%
Recommended reading	Basic literature	Narzędzia Lean Manufacturing, Joanna Czerska Pozwól płynąć swojemu produktowi, Joanna Czerska	
	Supplementary literature	Doskonalenie strumienia wartości. Joanna Czerska	
	eResources addresses	Adresy na platformie eNauczanie: LEAN MANUFACTURING 24/25 NSTC - Moodle ID: 40222 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=40222	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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