GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	LEAN MANAGEMENT, PG_00070266		
Field of study	LEAN MANAGEMENT		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026
Education level	second-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	2	Language of instruction	Polish
Semester of study	4	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Management Engineering and Quality -> Faculty of Management and Economics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Ewa Marjańska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	8.0	16.0	0.0	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	3.0	48.0	75

Subject objectives

The aim of the course is to prepare students to identify waste and to analyze and improve organizational processes using Lean Management principles, based on knowledge of creative and entrepreneurial action, as well as to develop attitudes of responsibility and reflexivity in making improvement-oriented decisions in the context of contemporary organizational functioning.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U04] Prepares and delivers convincing presentations of the results of specialized analyses, providing in-depth interpretations during debates and meetings with diverse audiences.	The student is able to develop an analysis of waste and a proposal for process improvements in accordance with Lean Management principles, and present the results in a convincing presentation, using visualization methods and argumentation in discussion with diverse audiences.	[SU1] Ocena realizacji zadania
[K7_W05] Possesses in-depth knowledge of the principles of integrating economic, legal, and ethical contexts in analyses and applying them in entrepreneurial activities while respecting copyright protection rules	The student knows and understands the principles of identifying waste and evaluating organizational processes in Lean Management, in the context of the economic, legal, and ethical conditions of entrepreneurial activity.	[SW1] Ocena wiedzy faktograficznej

Subject contents	Course content – lecture **1. The essence and assumptions of Lean Management** 2. **Value in Lean what is value-added and how is it defined by the customer?** 3. **Types of waste in Lean: MUDA, MURA, MURI three perspectives on inefficiency** 4. **A brief history of Lean Thinking and the Toyota Production System** 5. **Lean as a strategy for competitive advantage: global competition, customer demands, and the limits of traditional methods** 6. **The role of Taiichi Ohno and the development of the Toyota Production System (TPS)** 7. **Total Quality Management (TQM) and its relationship to Lean** 8. **Demings 14 principles in the context of Lean** 9. **Toyota Way 2001 and values as the foundation of Lean culture** 10. **Traditional culture vs Lean culture key differences** 11. **Kaizen and the 10 principles of continuous improvement** 12. **The five principles of Lean Thinking (Value, Value Stream, Flow, Pull, Perfection)** 13. **The Toyota Production System Jidoka and Just-in-Time** 14. **The role of leadership and employee engagement in Lean** 15. **Key Lean tools: an introduction to practical application** Course content – exercises 1. I**dentifying waste (MUDA) in a selected process** 2. **Value Stream Mapping / Makigami analysis of process flow** 3. **5x Why root cause analysis** 4. **Classification of activities: VA / NVA / NNVA** 5. **Simulation: one-piece flow vs batch production** 6. **Work standardization creating a basic standard** 7. **Kaizen workshop proposing small improvements** 8. **Team dysfunctions (Lencioni) diagnosis and discussion** 9. **Gemba Walk observing a process and identifying problems**

10. **Designing a Daily Management board**

11. **Improvement Kata leaderemployee coaching simulation**

12. **Defining values and behaviors in an organization**

13. **Case study: from waste to improvement**

14. **Designing a simple pull system (Kanban)**

15. **Problem map and prioritization of improvement action**

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Presentation	60.0%	30.0%
Test	60.0%	35.0%
Case study	60.0%	35.0%

Recommended reading

Basic literature	**Liker, J. K. (2017).** ***Droga Toyoty. 14 zasad zarządzania wiodącej firmy produkcyjnej*****. MT Biznes.** **Czerska, J. (2009).** ***Doskonalenie strumienia wartości*****. Difin.** **Womack, J. P., & Jones, D. T. (2008).** ***Lean thinking: Szczupłe myślenie o eliminowaniu strat i tworzeniu wartości w przedsiębiorstwie*****. ProdPress.com.**
Supplementary literature	**Ohno, T. (1988).** ***Toyota production system: Beyond large-scale production*****. Productivity Press.** **George, M. L. (2003).** ***Lean Six Sigma for service: How to use Lean speed and Six Sigma quality to improve services and transactions*** **. McGraw-Hill.**
eResources addresses	

Example issues/ example questions/ tasks being completed	1. **Explain the philosophy of Lean Management.** Include the difference between a process-oriented approach and the traditional approach to management. 2. **What is Value Added in Lean and how is it defined by the customer?** Provide an example of a VA (Value-Added), NVA (Non-Value-Added), and NNVA (Necessary but Non-Value-Added) activity in any process. 3. **Discuss the concepts of MUDA, MURA, and MURI.** Explain how they differ from one another and why all three hinder the achievement of operational excellence. 4. **Present the principles of Kaizen and the role of employee engagement in continuous improvement.** Give an example of a small improvement that could be implemented in an organization. 5. **Choose one Lean tool** (e.g., 5S, Kanban, Standardized Work, or Gemba Walk) **and explain what it is used for, what benefits it brings, and what challenges may arise during its implementation.**
Practical activites within the subject	Not applicable

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