GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Production Management, PG_00040564						
Field of study	Engineering Management						
Date of commencement of studies	October 2021		Academic year of realisation of subject	2022/2023			
Education level	first-cycle studies		Subject group	Obligatory subject group in the field of study 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	2		Language of instruction	Polish			
Semester of study	3		ECTS credits	4.0			
Learning profile	general academic profile		Assessment form	exam			
Conducting unit	Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Joanna Czerska				
	Teachers		dr inż. Joanna Czerska				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	15.0	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		7.0	48.0		100
Subject objectives	The goal of the course is obtain by the students knowledge about contemporary operation systems of production and services. It gives the students skills in creation operation strategy and design operation systems.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_K02] identifies problems related to undertaking various tasks, including engineering in the changing conditions of the organisation's functioning; takes into account the ethical aspect related to the implementation of the organisation's tasks	The student working in team projects is able to make decisions taking into account the needs of the members of this team in the face of the set goals and challenges that the team faces.	[SK1] Assessment of group work skills
[K6_W02] has a basic knowledge of the different types of departments in the organisation, with particular emphasis on structures of an engineering nature	Student defines and explains contemporary operation systems of production and services. Creates operation strategy. Apples fundamental methods and tools of design operation systems..	[SW1] Assessment of factual knowledge
[K6_W12] has a basic knowledge of production management and occupational safety and ergonomics management, as well as information technologies necessary for engineering management	Knows the Goals and Measures of Operations. Productivity. Operation Processes. Process Layout Planning. Process Reegineering and Improvement. Process Management.	[SW1] Assessment of factual knowledge
[K6_W08] has a basic knowledge of the changes taking place in the organisation and its environment, taking into account environmental problems	Knows the current trends in production management. Can make decisions based on operational indicators. Knows the requirements for the management of waste and hazardous substances	[SW3] Assessment of knowledge contained in written work and projects
[K6_U11] can plan and control production and production quality, including the identification and formulation of specifications for simple engineering tasks	The student is able to choose the method of controlling the flow of customer orders to the specificity of these orders. The student understands how the lack of quality affects the losses on production efficiency and is able to assess this impact	[SU5] Assessment of ability to present the results of task

Subject contents

1. Basic concepts related to production management
2. Production management concepts
3. Current trends in the management of production processes
4. Ways of organizing production processes (design to order, make to order, make to stock, assembly to order, assembly to order)
5. Operational indicators (KPIs) in production management.
6. Production efficiency management (performance indicators at various levels of management, decisions made based on these indicators)
7. Basics of maintenance management. Total Productive Maintenance
8. Basics of maintenance management. Predictive support.
9. Basics of maintenance management. Preventive maintenance.
10. Basics of maintenance management. Autonomous operation.
11. Managing production flexibility. Introduction
12. Managing production flexibility. Influence of production flexibility on the level of inventories
13. Managing production flexibility. Influence of production flexibility on order fulfillment time.
14. Managing production flexibility. Shortening changeover times using the SMED method
15. Employee competency management. Competency matrices
16. Employee competency management. Methods of assessing the complexity of competences
17. Employee competency management. Planning the employee development path
18. Employee competency management. Classification of work at the workplace
19. Employee competency management. Job classification and levels of competences
20. Managing employee competencies. Verification of employee knowledge and skills
21. Standardization of work. Types of work standards.
22. Standardization of work. Principles of building labor standards
23. On-the-job training. Instructional methods
24. On-the-job training. Principles of conducting the instruction
25. Waste management and chemicals management

The classes include a simulation game in a 5-hour block and a 4-hour factory tour

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Test Exam	60.0%	30.0%
Project	60.0%	50.0%
Additional activities	70.0%	20.0%

Recommended reading	Basic literature	Goldratt E., Cox J.: Cel 1. Doskonałość w produkcji., Mint Books, 2008 Liker J.K.: Droga Toyoty. 14 zasad zarządzania wiodącej firmy produkcyjnej świata, MT Biznes, 2016
	Supplementary literature	Parmenrer D. Kluczowe wskaźniki efektywności (KPI). Tworzenie, wdrażania i stosowanie. Wyd 3, One press, 2016
	eResources addresses	Adresy na platformie eNauczanie: ZARZĄDZANIE PRODUKCJĄ 2022/2023 - Moodle ID: 20790 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=20790
Example issues/ example questions/ tasks being completed	Designing a product according to customer requirements, designing the manufacturing process, managing the results of the production process; designing the production control system taking into account the stocks in the production process.	
Work placement	Not applicable	