GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	PRODUCTION MANAGEMENT, PG_00061448		
Field of study	Engineering Management		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2024/2025
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	Part-time studies (on-line)	Mode of delivery	blended-learning
Year of study	2	Language of instruction	Polish
Semester of study	3	ECTS credits	5.0
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. Elwira Brodnicka	
	Teachers	dr inż. Elwira Brodnicka	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	16.0	0.0	0.0	16.0	0.0	32

E-learning hours included: 24.0

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	32	7.0	86.0	125

Subject objectives

Analyzes production processes, conducting their multidimensional critical assessment in preparation for the implementation of innovative improvement activities

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W03] identifies reliable sources of information relevant to the analyzed issues	correctly interprets all components of the production process, preparing a set of reliable information needed for its analysis, improvement and design as well as making responsible operational decisions	[SW1] Assessment of factual knowledge
[K6_U05] designs innovative solutions for complex management processes, using appropriate methods and techniques	designs innovative solutions for production processes, taking into account technological, economic and environmental factors as well as customer needs	[SU1] Assessment of task fulfilment

Subject contents	Introduction Basic concepts related to production management Organization of information and material flow in production processes with elements of logistics management in production Production management concepts and current trends in production management Product design and technology Input from the R&D department: product design and bill of materials Input data from the technology department: technological operations, product labor consumption, list of machines Map of the manufacturing process. Cycle time of an employee, machine, product Designing generation capacity taking into account seasonal demand Customer tact calculation Calculation of the number of employees, taking into account holidays and absenteeism Production efficiency management Fundamentals of maintenance management. Total Productive Maintenance Analysis of effectiveness and efficiency losses (OEE, Pareto losses) Production flexibility management. Techniques for increasing production flexibility Flexibility calculation (EPE) for job and process Rules for determining the minimum production lot (MOQ and EOQ) Flow design Workforce Analysis and Load Balancing (Yamazumi) Principles of designing a production cell Employee competency management Competency matrices, methods of assessing the complexity of competencies, planning an employee's development path Classification of work at the workstation Classification of work and levels of competence Verification of the employee's knowledge and skills Standardization of work Types of work standards and principles of building standards On-the-job training. Methods of instruction and principles of conducting instruction Indicators (KPI) in production management Where do they come from and why are they important. How to obtain data for calculating indicators Visual performance management Designing the agenda of visual meetings Rules for monitoring losses at workstations Environmental aspects in production
Prerequisites and co-requisites	
Assessment methods and criteria	

Subject passing criteria	Passing threshold	Percentage of the final grade
Exam	60.0%	20.0%
Project	60.0%	50.0%
Quizzes and tasks	70.0%	30.0%

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 Czerska J., Pozwól płynąć swojemu produktowi, Placet, 2011
	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 OL_NST 2024/2025 EB - Moodle ID: 40286 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=40286
Example issues/ example questions/ tasks being completed	Designing the product according to the customer's requirements, designing the manufacturing process, managing the results of the production process; designing a production control system, taking into account inventory in the production process	
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.