GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	PRODUCTION ENGINEERING, PG_00061402		
Field of study	Engineering Management		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026
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	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	4	ECTS credits	5.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department Of Management Engineering And Quality -> Faculty Of Management And Economics -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Jolanta Łopatowska	
	Teachers		

Lesson types and methods of instruction

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

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	32	7.0	86.0	125

Subject objectives

Understanding the essence of production planning and control system at every level of operational activity and acquiring the ability to design solutions that ensure the efficient course of production process.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U05] designs innovative solutions for complex management processes, using appropriate methods and techniques	Designs solutions for production planning and control using modern analytical and design methodologies	[SU4] Assessment of ability to use methods and tools
[K6_W03] identifies reliable sources of information relevant to the analyzed issues	identifies key factors affecting the effective functioning of production systems	[SW1] Assessment of factual knowledge

Subject contents

Production system and production process
Activities in production planning and control
Forecasting in demand planning
Capacity planning
Sales and operations planning S&OP
Master production schedule MPS. Sequence of tasks
Push and pull strategies.
Planning and control in MRPII/ERP, APS, MES systems
Balancing production (OPF) in JiT systems, heijunka. Kanban system, supermarket
Production control according to the Theory of Constraints, DBR method.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Exam	60.0%	50.0%
Reports	60.0%	25.0%
Test	60.0%	25.0%

Recommended reading

Basic literature

Brzeziński, M. (2002). Organizacja i sterowanie produkcją, Warszawa: Placet.
Waters, D. (2021). Zarządzanie operacyjne. Towary i usługi, Warszawa: Wydawnictwo Naukowe PWN.
Bozarth C., Handfield R..(2021). Wprowadzenie do zarządzania operacjami I łańcuchem dostaw. Helion

	Supplementary literature	Balle, F., Balle, M. (2023). Kopalnia złota, Wrocław Goldratt, M. Cox, J. (2023). Cel. Doskonałość w produkcji, Mint Books Pająk, E (2021). Zarządzanie produkcją, Warszawa: Wydawnictwo Naukowe PWN.. The Productivity Press Development Team.(2010). Kanban na hali produkcyjnej, Prod.Publishing,
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Sales and operations planning S&OP Characteristics of the drum-buffer-rope method	
Work placement	Not applicable	

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