



Subject card

Subject name and code	Production Engineering, PG_00068496						
Field of study	Engineering Management						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
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		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						
	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		5.0		88.0	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_K01] is ready to fulfill professional roles responsibly, taking legal, ethical, and cultural aspects into account in decision-making processes.		is able to make informed decisions in production processes, taking into account organizational, social, and regulatory conditions		[SK5] Assessment of ability to solve problems that arise in practice		
	[K6_U02] communicates effectively with others by preparing presentations that use terminology specific to the field of engineering management, and by evaluating diverse opinions during discussions and debates.		is able to clearly present issues related to production processes using precise technical terminology and engage in constructive exchange of views with professionals from various engineering fields		[SU5] Assessment of ability to present the results of task		
	[K6_W03] knows reliable sources of information and utilizes advanced knowledge to explain contemporary management issues.		understands how to use reliable data and up-to-date technical and organizational knowledge to analyze and interpret challenges in modern production systems		[SW3] Assessment of knowledge contained in written work and projects		
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%
	Test	60.0%	25.0%
	Reports	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 werbel-buffer-rope method		
Work placement	Not applicable		

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