



Subject card

Subject name and code	PRODUCTION ENGINEERING, PG_00061336						
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	Full-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						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Jolanta Łopatowska				
	Teachers		dr inż. Jolanta Łopatowska				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	30.0	0.0	0.0	0.0	60
	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	60		7.0		58.0	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_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		
	[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		
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 methods.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Reports		60.0%		25.0%		
	Test		60.0%		25.0%		
	Exam		60.0%		50.0%		

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: Inżynieria produkcji stac. 2024/2025 - Moodle ID: 42874 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=42874
Example issues/ example questions/ tasks being completed	Building sales and operations plan S&OP. Drum-buffer-rope method.	
Work placement	Not applicable	

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