



Subject card

Subject name and code	Production Engineering, PG_00040526						
Field of study	Engineering Management						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2023/2024		
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	3	Language of instruction			Polish		
Semester of study	5	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. 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	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	8.0		60.0		100
Subject objectives	The aim of the course is to understand the essence of production planning and control at every level of operational activity and to acquire the skills to ensure the efficient running of production processes.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_U11] can plan and control production and production quality, including the identification and formulation of specifications for simple engineering tasks	Uses basic methods of production planning and control.			[SU4] Assessment of ability to use methods and tools		
	[K6_W12] has a basic knowledge of production management and occupational safety and ergonomics management, as well as information technologies necessary for engineering management	Describes the activities carried out in the planning and control process.			[SW3] Assessment of knowledge contained in written work and projects		
	[K6_W10] has the knowledge of the life cycle of the production system and the product	Identifies elements of the production system. Decomposes the production system.			[SW3] Assessment of knowledge contained in written work and projects		
Subject contents	Production system and production process. Decomposition of the production system. Activities in production planning and control. Demand forecasting. Planning of production capacity. Sales and operations planning S&OP). Master plan scheduling. Pull and push concepts. Production planning and control according to MRP/ERP/APS/MES systems. Balancing production in JiT systems (OPF), heijunka. Kanban system, supermarket. Production planning and control according to the Theory of Constraints, DBR method.						
Prerequisites and co-requisites	production management						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	colloquium	60.0%	25.0%
	exam	60.0%	50.0%
	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	Goldratt, M. Cox, J.(2008). Cel. Doskonałość w produkcji, Mint Books Pająk, E (2021). Zarządzanie produkcją, Warszawa: Wydawnictwo Naukowe PWN.. Pająk, E., Klimkiewicz, M., Kosieradzka, A. (2014). Zarządzanie produkcją i usługami, Warszawa: Wydawnictwo Naukowe PWE. The Productivity Press Development Team.(2010). Kanban na hali produkcyjnej, Prod.Publishing, Balle, F., Balle, M.(2013). Kopalnia złota, Wrocław: Lean Enterprise Institute.	
	eResources addresses	Podstawowe https://leanactionplan.pl/kanban/13.09.2023 - Production control in accordance with the kanban system. Adresy na platformie eNauczanie: Inżynieria produkcji Nst 2023/2024 - Moodle ID: 30534 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=30534	
Example issues/ example questions/ tasks being completed	Characteristics of the method of drum-buffer-rope. Production control according the kanban system.		
Work placement	Not applicable		