



Subject card

Subject name and code	PRODUCTION MANAGEMENT, PG_00061448						
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 (on-line)	Mode of delivery			at the university		
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	Department of Management Engineering and Quality -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Joanna Czerska					
	Teachers						
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: 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	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	<p>Introduction</p> <p>Basic concepts related to production management</p> <p>Organization of information and material flow in production processes with elements of logistics management in production</p> <p>Production management concepts and current trends in production management</p> <p>Fundamentals of maintenance management. Total Productive Maintenance</p> <p>Product design and technology</p> <p>Input from the R&amp;D department: product design and bill of materials</p> <p>Input data from the technology department: technological operations, product labor consumption, list of machines</p> <p>Map of the manufacturing process. Cycle time of an employee, machine, product</p> <p>Designing generation capacity taking into account seasonal demand</p> <p>Customer tact calculation</p> <p>Calculation of the number of employees, taking into account holidays and absenteeism</p> <p>Production efficiency management</p> <p>Analysis of effectiveness and efficiency losses (OEE, Pareto losses)</p> <p>Production flexibility management. Techniques for increasing production flexibility</p> <p>Flexibility calculation (EPE) for job and process</p> <p>Rules for determining the minimum production lot (MOQ and EOQ)</p> <p>Flow design</p> <p>Workforce Analysis and Load Balancing (Yamazumi)</p> <p>Principles of designing a production cell</p> <p>Employee competency management</p> <p>Competency matrices, methods of assessing the complexity of competencies, planning an employee's development path</p> <p>Classification of work at the workstation</p> <p>Classification of work and levels of competence</p> <p>Verification of the employee's knowledge and skills</p> <p>Standardization of work</p> <p>Types of work standards and principles of building standards</p> <p>On-the-job training. Methods of instruction and principles of conducting instruction</p> <p>Indicators (KPI) in production management</p> <p>Where do they come from and why are they important. How to obtain data for calculating indicators</p> <p>Visual performance management</p> <p>Designing the agenda of visual meetings</p> <p>Rules for monitoring losses at workstations</p> <p>Environmental aspects in production</p>														
Prerequisites and co-requisites															
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="456 1034 794 1061">Subject passing criteria</th> <th data-bbox="801 1034 1139 1061">Passing threshold</th> <th data-bbox="1145 1034 1482 1061">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="456 1070 794 1097">Exam</td> <td data-bbox="801 1070 1139 1097">60.0%</td> <td data-bbox="1145 1070 1482 1097">30.0%</td> </tr> <tr> <td data-bbox="456 1106 794 1133">Quizzes and tasks</td> <td data-bbox="801 1106 1139 1133">70.0%</td> <td data-bbox="1145 1106 1482 1133">20.0%</td> </tr> <tr> <td data-bbox="456 1142 794 1169">Project</td> <td data-bbox="801 1142 1139 1169">60.0%</td> <td data-bbox="1145 1142 1482 1169">50.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Exam	60.0%	30.0%	Quizzes and tasks	70.0%	20.0%	Project	60.0%	50.0%
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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														

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