

## 。 GDAŃSK UNIVERSITY OF TECHNOLOGY

## Subject card

Subject name and code	Information Systems in Manufacturing, PG_00066752								
Field of study	Mechanical Engineering								
Date of commencement of studies	February 2024		Academic year of realisation of subject			2024/2025			
Education level	second-cycle studies		Subject group						
Mode of study	Full-time studies		Mode of delivery			e-learning			
Year of study	2		Language of instruction			English			
Semester of study	3		ECTS credits			2.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Zakład Ekoinżynierii i Silników Spalinowych -> Institute of Energy -> Faculty of Mechanical Engineering and Ship Technology						gineering and		
Name and surname	Subject supervisor		dr hab. inż. Jacek Kropiwnicki						
of lecturer (lecturers)	Teachers		dr hab. inż. Jacek Kropiwnicki						
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
of instruction	Number of study hours	30.0	0.0	0.0	0.0		0.0	30	
	E-learning hours inclu	-learning hours included: 30.0							
Learning activity and number of study hours	Learning activity	Participation in classes includ plan	n didactic ed in study	Participation in consultation hours		Self-study		SUM	
	Number of study hours	30		0.0		0.0		30	
Subject objectives	The course will provide the students with advanced knowledge in production manufacturing systems, which every company implements today, and they will understand modern block chain technology.								
Learning outcomes	Course outcome		Subject outcome			Method of verification			
	[K7_W11] possesses knowledge useful in understanding ex-tec conditioning connect performing the profes engineer and taking i consideration in engi practice; possesses established knowled range of intellectual p management and or manufacturing proce including the manage cycle of a product	7_W11] possesses organized iowledge useful in iderstanding ex-technical inditioning connected with arforming the profession of an gineer and taking it into insideration in engineering factice; possesses well- stablished knowledge within the inge of intellectual property, anagement and organization of anufacturing processes, cluding the management and life- vcle of a product				[SW1] Assessment of factual knowledge			
	[K7_K82] is equipped to participate actively in lectures, seminars and laboratory classes conducted in foreign language		Student jest przygotowany do aktywnego uczestnictwa w wykładach w języku obcym z zakresu systemów produkcyjnych i nowoczesnych technologii blockchain.			[SK2] Assessment of progress of work			
	[K7_U02] is able to communicate in English in professional matters within the area of technical science and, particularly, of construction and operation of machines		The student is able to communicate in English while discussing production manufacturing systems, and modern block chain technology.			[SU1] Assessment of task fulfilment			

Subject contents	Information Systems: Production systems, Technological processes, Software framework; Business Information Systems: Business functions and processes, Basic Concepts of the Information System, The position of the information system in the decision-making process, Organizational aspects of information systems, Basic architectures and types of business information systems, Types of information systems, ERP, CRM, Using electronic business technologies - business information systems on the Internet, Knowledge management; ERP (Enterprise Resource Planning) Systems: Theoretical teaching, Introduction to enterprise-level systems, System integration, ERP system architecture, ERP system implementation strategies, Software and vendor selection, Post-implementation work, Organizational changes and process reengineering, Supply chain management, Customer relationship managemen; Advanced Manufacturing and Block Chain technology: Introduction to Blockchain Technology, Cryptographic Foundations, Blockchain Platforms and Ecosystems, Smart Contracts and Decentralized Applications, Blockchain Development Tools and Frameworks, Consensus Mechanisms and Protocols and Security, Use Cases and industry applications.						
Prerequisites and co-requisites							
Assessment methods	Subject passing criteria	Passing threshold	Percentage of the final grade				
and criteria	Test	55.0%	100.0%				
Recommended reading	Basic literature	Production and Operations Management Systems By Sushil Gupta, Martin Starr, ISBN 9781466507333, https://www.amazon.com/ Production-Operations-Management-Systems-Sushil/dp/1466507330					
	Supplementary literature	Production and Operations Management Systems By Sushil Gupta, Martin Starr, ISBN 9781466507333, https://www.amazon.com/ Production-Operations-Management-Systems-Sushil/dp/1466507330					
	eResources addresses	Adresy na platformie eNauczanie: Information Systems in Manufacturing; group 1; 09.15-10.45; Mechanical Engineering, W, sem. 03, letni 24/25 (PG_00066752) - Moodle ID: 44072 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=44072					
Example issues/ example questions/ tasks being completed	What is Master Production Schedul	ing plan?					
	? systems?						
	Name the steps that are involved in the Blockchain project implementation.						
	What is the fork? What are some of the types of forking?						
Work placement	Not applicable						

Document generated electronically. Does not require a seal or signature.