



Subject card

Subject name and code	Information Systems in Manufacturing, PG_00066752						
Field of study	Information Systems in Manufacturing						
Date of commencement of studies	February 2025		Academic year of realisation of subject		2025/2026		
Education level	second-cycle studies		Subject group				
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		English		
Semester of study	2		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Division of Ecoengineering and Combustion Engines -> Institute of Energy -> Faculty of Mechanical Engineering and Ship Technology -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Jacek Kropiwnicki				
	Teachers		dr hab. inż. Jacek Kropiwnicki				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
	eNauczanie source addresses: Moodle ID: 2799 Information Systems in Manufacturing, W, MiBM, sem. 02, zimowy 25/26 (PG_00066752) https://enauczanie.pg.edu.pl/2025/course/view.php?id=2799						
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	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_U14] integrates information obtained from literature and other properly selected sources, including those in a foreign language, creatively interpreting and critically evaluating them, and drawing conclusions		integrates information obtained from literature and other carefully selected sources in the field of information systems in manufacturing		[SU1] Ocena realizacji zadania		
	[K7_W12] identifies and interprets the main developmental trends and significant new achievements in the field of engineering and technical sciences and disciplines relevant to the course of study		identifies and interprets the main development trends and the most important new achievements in the field of information systems in manufacturing		[SW1] Ocena wiedzy faktograficznej		
	[K7_U82] is able to proficiently obtain and process information related to field of study and academic environment in foreign language at B2+ level of the Common European Framework of Reference for Languages (CEFR)		has the ability to efficiently acquire and process information in a foreign language in the field of information systems in manufacturing		[SU2] Ocena umiejętności analizy informacji		
	[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] Ocena postępów pracy		

Subject contents	Course content – lecture 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 management; 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 and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	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		
Example issues/ example questions/ tasks being completed	What is Master Production Scheduling plan? Differences between ERP and MRP systems? Name the steps that are involved in the Blockchain project implementation. What is the fork? What are some of the types of forking?		
Practical activities within the subject	Not applicable		

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