

Subject card

Subject name and code	Business Applications of Artificial Intelligence , PG_00199304						
Field of study	Economics						
Date of commencement of studies	October 2026		Academic year of realisation of subject			2026/2027	
Education level	Master's 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	1		Language of instruction			Polish	
Semester of study	2		ECTS credits			2.0	
Learning profile	academic		Assessment form			credit	
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Jacek Winiarski, prof. UG				
	Teachers						
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						
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		5.0		15.0	50
Subject objectives	The course aims to familiarise students with the practical applications of artificial intelligence in the business environment. Students will gain knowledge of key AI technologies, their impact on economic processes, and the ability to critically assess the opportunities and limitations of AI implementation in organisations. The programme combines an economic perspective with a technological one, preparing graduates to operate in a labour market increasingly shaped by automation and intelligent decision-making systems.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[EKONMU2_W10] knows the terms and principles of protection of industrial property and copyright, and understands the necessity of management of intellectual property resources	The student knows the concepts and principles of industrial property protection and copyright law in the context of artificial intelligence systems — understands the legal challenges arising from the development and deployment of AI models, including issues of copyright ownership over AI-generated content, protection of training data, and the management of intellectual property assets in organisations using intelligent decision-making systems.	[SW4] test/exam - oral or written
	[EKONMU2_W11] knows the detailed principles of establishing and developing forms of individual entrepreneurship, using the knowledge of economics, finance and management sciences	The student knows the principles of creating and developing individual entrepreneurship in the context of the digital economy, understands how artificial intelligence tools are transforming the conditions for running a business, and is able to use knowledge from the fields of economics, finance and management to assess the profitability and risk of AI implementations in small and medium-sized enterprises.	[SW4] test/exam - oral or written
Subject contents	• Introduction to AI in Business - Types of AI, language models, and the current tool ecosystem • AI in Data Analysis and Forecasting - Predictive analytics, machine learning, and Business Intelligence • AI in Marketing and Customer Service - Personalization, chatbots, CRM, and recommendation systems • AI in Operations and Supply Chain Management - Automation, logistics, and inventory optimization • AI in Finance and Risk Management - Credit scoring, fraud detection, and robo-advisors • AI Ethics, Regulation, and Implementation Strategy - EU AI Act, algorithmic accountability, and digital transformation Doubts that arise during the implementation of the subject content or problems of interpretation will be resolved during consultations.		
Prerequisites and co-requisites	No prerequisites required.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Examination	51.0%	100.0%
Recommended reading	Basic literature	Przegalińska, A., & Jemielniak, D. (2023). <i>AI w strategii: Rewolucja sztucznej inteligencji w zarządzaniu</i>. MT Biznes. Agrawal, A., Gans, J., & Goldfarb, A. (2022). <i>Prediction machines, updated and expanded: The simple economics of artificial intelligence</i>. Harvard Business Review Press. Iansiti, M., & Lakhani, K. R. (2020). <i>Competing in the age of AI: Strategy and leadership when algorithms and networks run the world</i>. Harvard Business Review Press.	
	Supplementary literature	Acemoglu, D., & Restrepo, P. (2019). Automation and new tasks: How technology displaces and reinstates labor. <i>Journal of Economic Perspectives</i>, 33(2), 330. https://doi.org/10.1257/jep.33.2.3 Brynjolfsson, E., Rock, D., & Syverson, C. (2021). The productivity J-curve: How intangibles complement general purpose technologies. <i>American Economic Journal: Macroeconomics</i>, 13(1), 333372. https://doi.org/10.1257/mac.20180386 Athey, S., & Imbens, G. W. (2019). Machine learning methods that economists should know about. <i>Annual Review of Economics</i>, 11, 685725. https://doi.org/10.1146/annurev-economics-080217-053433	
	eResources addresses		

Example issues/ example questions/ tasks being completed	In what ways does artificial intelligence transform the sources of competitive advantage for firms, and what are the implications for traditional business models? Discuss the benefits and risks of applying AI in a chosen functional area of a firm (marketing, finance, operations, or customer service), illustrating your answer with examples from business practice. What ethical and regulatory challenges are associated with implementing AI systems in business, and how should organisations respond to them?
Work placement	Not applicable

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