

Subject card

Subject name and code	Business Applications of Artificial Intelligence , PG_00204653						
Field of study	International Economic Relations						
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		
	[MSGMU2_W08] knows and understands the terms and principles of intellectual (industrial) property protection and copyright law; understands the necessity of intellectual property management		Knows and understands the concepts and principles of intellectual property protection in the context of artificial intelligence systems and tools, including issues of copyright in AI-generated content, patenting of AI-based solutions, and the ethical and legal use of data, and understands the necessity of managing intellectual property assets in organisations implementing AI technologies.		[SW4] test/exam - oral or written		
	[MSGMU2_W12] has knowledge and understanding of the principles of establishing and development of business entities, including forms of individual entrepreneurship		Knows and understands the opportunities and limitations of applying artificial intelligence in business entities, including its role in supporting individual entrepreneurship and building competitive advantage.		[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 Any doubts regarding the issues discussed can be clarified during the consultations.		
Prerequisites and co-requisites	No prerequisites required.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Written exam	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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