

Subject card

Subject name and code	Digital Transformation , PG_00187200						
Field of study	International Business						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
Education level	Bachelor'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	2		Language of instruction		English		
Semester of study	4		ECTS credits		4.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Division of Electronic Economy -> Department of Maritime Transport and Seaborne Trade -> Faculty of Economics -> Rector						
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	0.0	30.0	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		0.0		70.0	100
Subject objectives	The aim of the course is to develop students' ability to use artificial intelligence and other digital technologies to analyse information and solve problems related to international business. The course also enables students to critically evaluate the opportunities, limitations and implications of AI applications in business activities.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[IBL3_U10] is able to plan and implement own lifelong learning in the field of international business.	The student is able to independently develop and continuously update competencies related to the use of artificial intelligence and other digital technologies in enterprises operating in international markets.	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report
	[IBL3_K01] is ready to recognise the importance of knowledge in solving problems in international business and to seek expert opinions when specialised expertise is required.	Student demonstrates readiness to critically evaluate outputs generated by artificial intelligence tools and to seek expert knowledge when addressing problems related to business activities in the international environment.	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report
	[IBL3_W03] knows and understands at an advanced level selected research methods and tools, including information technologies and techniques for data collection and analysis used in the study of economic and business phenomena.	The student knows and understands the capabilities, limitations, and applications of contemporary artificial intelligence tools used for obtaining, analyzing, and interpreting information in business activities.	[SW2] presentation/project/paper/report
	[IBL3_U03] is able to select appropriate sources of information and analyse and synthesise data in order to solve international business problems under conditions of uncertainty.	The student is able to select information sources and use artificial intelligence tools to analyze and synthesize data in order to solve international business problems.	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report
Subject contents	1. History of Artificial Intelligence: from Early Neural Networks to Deep Learning, Transformer Architectures, and Modern Reasoning Models Analysis of key stages in the development of artificial intelligence and comparison of selected AI models. 2. Modern AI Tools: Models, Providers, APIs, Coding Assistants and AI Agents Overview and comparison of contemporary AI tools and analysis of their practical applications. 3. Digital Organisations Analysis of how AI is used by businesses, public administration and other institutions, including case studies of successful and unsuccessful implementations. 4. Productivity, Creativity and Cognitive Processes Evaluation of the impact of AI on productivity, creativity, problem-solving and decision-making processes. 5. AI in Education Analysis of the impact of artificial intelligence on learning, higher education and the development of future skills. 6. Economy and Labour Markets Analysis of the impact of AI on employment, social and economic inequalities, and applications of artificial intelligence in the financial sector. 7. AI Safety and the Future of Artificial Intelligence Analysis of AI-related risks, challenges of model interpretability, the concept of superintelligence, and major open questions concerning the future development of AI. As part of the classes, students complete an individual task using one or more artificial intelligence tools related to the field of International Business. The outcome is a short evaluation report (maximum two pages) assessing the quality of the results, time savings, limitations, and situations in which AI proved useful or ineffective. In addition, students working in pairs prepare and present an academic paper or a case study related to the topics discussed during the course.		
Prerequisites and co-requisites	Entry requirements Basic knowledge of information technologies and the ability to use digital tools.		

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Presentation	51.0%	30.0%
	Project and evaluation report	51.0%	70.0%
Recommended reading	Basic literature	1. Egodawe, M., Sedera, D., & Bui, V. (2022). A systematic review of digital transformation literature (2013-2021) and the development of an overarching apriori model to guide future research. <i>arXiv</i> . https://app.scholarai.io/paper?paper_id=SS_ID:c84aad5e2ae83d27854ffe5cade17e35c0938463 2. Belliger, A., & Krieger, D. J. (2021). <i>Essays zur digitalen Transformation</i> . Berlin: transcript Verlag. https://app.scholarai.io/paper?paper_id=SS_ID:24fec8133954bd77717a8feef14d356b3dcc83a8 3. Bohnsack, R., Hanelt, A., Marz, D., & Marante, C. (2018). Same, same, but different!? A systematic review of the literature on digital transformation. <i>Academy of Management Proceedings</i> . https://app.scholarai.io/paper?paper_id=SS_ID:dc81970e71794a6e25b2c5c46527e63ba5f12d85	
	Supplementary literature	1. Henriette, E., Feki, M., & Boughzala, I. (2016). Digital transformation challenges. <i>Proceedings of the 49th Hawaii International Conference on System Sciences (HICSS)</i> . https://app.scholarai.io/paper?paper_id=SS_ID:4f51a6d4480b321e69a67be6e292927a44172a84 2. Ji, X., & Li, W. (2022). Digital transformation: A review and research framework. <i>Frontiers of Business, Economics and Management</i> , 5(3), 1898. https://app.scholarai.io/paper?paper_id=SS_ID:afbcff6c45e8d5cbea5d960e48b4b64100eaf294 3. Nielsen, J. A., Elmholdt, K., & Noesgaard, M. S. (2023). Leading digital transformation: A narrative perspective. <i>Public Administration Review</i> . https://app.scholarai.io/paper?paper_id=SS_ID:bb5c1231dea2119a21ab7e0a3b68ca8d5d49b448	
	eResources addresses		
	Example issues/ example questions/ tasks being completed		
Work placement	Not applicable		

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