

Subject card

Subject name and code	AI in Excel from data analysis to automation, PG_00202528						
Field of study	Economics, International Economic Relations, International Business, Logistics and Mobility						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		English		
Semester of study	3		ECTS credits		5.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Marcin Brycz				
	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		95.0	125
Subject objectives	Developing the ability to use AI for data analysis, automation and decision support in the Excel environment.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[EKONMU2_W06] knows in advanced stage statistical and econometric methods and tools for description and macro- and microeconomic modelling of economic structures and public institutions and processes occurring in them	The student uses Excel and AI tools to support the description, analysis and interpretation of data relating to economic, logistic and mobility processes, using selected statistical and analytical methods.	[SW2] presentation/project/paper/report
	[MSG3_U02] can assess economic and social phenomena occurring in an open economy, interpret necessary statistical data and economic indicators, as well as forecast economic phenomena and processes, using standard methods and tools applied in economic sciences	The student has the ability to observe, understand and analyze economic and social phenomena and processes using data, analytical tools and appropriate methods supported by AI and the Excel environment.	[SU2] presentation/project/paper/report
	[IBMU2_U08] can manage teamwork, cooperate and work in a team, in particular an international one, taking a leading role in it	The student has the ability to observe, understand and analyze economic and social phenomena and processes using data, analytical tools and appropriate methods supported by AI and the Excel environment.	[SU2] presentation/project/paper/report
	[IBMU2_W06] has in-depth knowledge of the world economy, economic ties and the regularities governing them, principles of global market functioning and international economic and financial relations as well as the process of their evolution; understands the causes, regularities and consequences of occurring changes;	The student uses Excel and AI tools to support the description, analysis and interpretation of data relating to economic, logistic and mobility processes, using selected statistical and analytical methods.	[SW2] presentation/project/paper/report
	[MSGMU2_W06] knows and understands the various dilemmas related to globalisation and the formation of contemporary international economic relations	The student uses Excel and AI tools to support the description, analysis and interpretation of data relating to economic, logistic and mobility processes, using selected statistical and analytical methods.	[SW2] presentation/project/paper/report
	[MSGMU2_K04] is ready to think and act in an entrepreneurial manner; adapts to new situations and conditions; undertakes challenges of creative thinking; acquires resilience to failures; assesses risks and threats and finds ways of counteracting their effects	The student demonstrates a readiness for entrepreneurial action by initiating and developing analytical solutions using AI and Excel, assessing their effectiveness and adapting to changing requirements.	[SK1] oral statement/conversation/discussion
	[EKONMU2_U08] can independently analyse economic and social phenomena and processes, and can perform a theoretically deepened assessment of such phenomena, using appropriately selected research method	The student has the ability to observe, understand and analyze economic and social phenomena and processes using data, analytical tools and appropriate methods supported by AI and the Excel environment.	[SU2] presentation/project/paper/report
	[LMMU2_U08] can independently analyse logistics and mobility processes and systems, and can perform a theoretically deepened assessment of such processes and systems, using appropriately selected research method	The student has the ability to observe, understand and analyze economic and social phenomena and processes using data, analytical tools and appropriate methods supported by AI and the Excel environment.	[SU2] presentation/project/paper/report
	[IBL3_K02] is ready to critically assess own knowledge in the field of international business, economics and finance and complementary disciplines	The student demonstrates a readiness for entrepreneurial action by initiating and developing analytical solutions using AI and Excel, assessing their effectiveness and adapting to changing requirements.	[SK1] oral statement/conversation/discussion
	[LMMU2_K04] is ready to think and act in an entrepreneurial manner; adapts to new situations and conditions; undertakes challenges of creative thinking; acquires resilience to failures; can assess risks and threats and find ways of counteracting their effects	The student demonstrates a readiness for entrepreneurial action by initiating and developing analytical solutions using AI and Excel, assessing their effectiveness and adapting to changing requirements.	[SK1] oral statement/conversation/discussion

	Course outcome	Subject outcome	Method of verification
	[EKONL3_W06] has an advanced knowledge of selected methods and tools, including statistical and econometric techniques, for describing economic agents and structures as well as social institutions and the processes taking place in them	The student uses Excel and AI tools to support the description, analysis and interpretation of data relating to economic, logistic and mobility processes, using selected statistical and analytical methods.	[SW2] presentation/project/paper/report
	[IBMU2_K04] is ready to inspire and organise projects for the benefit of the environment and the international business community, in accordance with the idea of sustainable development	The student demonstrates a readiness for entrepreneurial action by initiating and developing analytical solutions using AI and Excel, assessing their effectiveness and adapting to changing requirements.	[SK1] oral statement/conversation/discussion
	[EKONMU2_K04] is ready to think and act in an entrepreneurial manner; adapts to new situations and conditions; undertakes challenges of creative thinking; acquires resilience to failures; can assess risks and threats and find ways of counteracting their effects	The student demonstrates a readiness for entrepreneurial action by initiating and developing analytical solutions using AI and Excel, assessing their effectiveness and adapting to changing requirements.	[SK1] oral statement/conversation/discussion
	[MSG3_K02] critically assesses the level of his/her knowledge in the field of economics; is willing to deepen and update this knowledge throughout his/her life	The student demonstrates a readiness for entrepreneurial action by initiating and developing analytical solutions using AI and Excel, assessing their effectiveness and adapting to changing requirements.	[SK1] oral statement/conversation/discussion
	[IBL3_W06] knows and understands the relations and regularities between international business stakeholders i.a. business entities, public institutions, organisations; functioning in the national, international and intercultural realms	The student uses Excel and AI tools to support the description, analysis and interpretation of data relating to economic, logistic and mobility processes, using selected statistical and analytical methods.	[SW2] presentation/project/paper/report
	[IBL3_U02] can formulate and solve complex and nonstandard issues in international business by employing quantitative and qualitative research methods and tools, as well as advanced communication and information techniques applicable in the field of international business, economics and finance	The student has the ability to observe, understand and analyze economic and social phenomena and processes using data, analytical tools and appropriate methods supported by AI and the Excel environment.	[SU2] presentation/project/paper/report
	[EKONL3_K04] is willing to think and act in an entrepreneurial manner; adapts to new situations and conditions, takes on the challenges of creative thinking, is resilient in the face of failure, is able to identify risks and assess the risks of failure	The student demonstrates a readiness for entrepreneurial action by initiating and developing analytical solutions using AI and Excel, assessing their effectiveness and adapting to changing requirements.	[SK1] oral statement/conversation/discussion
	[EKONL3_U08] has the ability to observe, understand and analyse economic and social phenomena and processes using appropriate scientific methods	The student has the ability to observe, understand and analyze economic and social phenomena and processes using data, analytical tools and appropriate methods supported by AI and the Excel environment.	[SU2] presentation/project/paper/report
	[LMMU2_W06] has an in-depth knowledge of statistical and econometric methods and tools for description and macro- and microeconomic modelling of logistics and mobility processes and systems	The student uses Excel and AI tools to support the description, analysis and interpretation of data relating to economic, logistic and mobility processes, using selected statistical and analytical methods.	[SW2] presentation/project/paper/report
	[MSG3_W06] knows and understands the relations between economic entities and public institutions functioning in the national, international and intercultural realms	The student uses Excel and AI tools to support the description, analysis and interpretation of data relating to economic, logistic and mobility processes, using selected statistical and analytical methods.	[SW2] presentation/project/paper/report

	<table><tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr><tr><td>[MSGMU2_U08] can communicate in an international and culturally diverse environment, using advanced terminology of international economic relations; supports his/ her position, doubts and suggestions with argumentation based on selected theories, opinions of various authors and/or statistical data</td><td>The student has the ability to observe, understand and analyze economic and social phenomena and processes using data, analytical tools and appropriate methods supported by AI and the Excel environment.</td><td>[SU2] presentation/project/paper/ report</td></tr></table>	Course outcome	Subject outcome	Method of verification	[MSGMU2_U08] can communicate in an international and culturally diverse environment, using advanced terminology of international economic relations; supports his/ her position, doubts and suggestions with argumentation based on selected theories, opinions of various authors and/or statistical data	The student has the ability to observe, understand and analyze economic and social phenomena and processes using data, analytical tools and appropriate methods supported by AI and the Excel environment.	[SU2] presentation/project/paper/ report					
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Subject contents	1. Foundations: Excel + AI workflow 2. AI for Excel Formulas 3. Debugging & Formula Audit 4. Data Cleaning with AI 5. AI-Assisted Data Analysis											
Prerequisites and co-requisites	none											
Assessment methods and criteria	<table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Active in disoussion</td><td>0.0%</td><td>30.0%</td></tr><tr><td>Project</td><td>50.0%</td><td>70.0%</td></tr></table>	Subject passing criteria	Passing threshold	Percentage of the final grade	Active in disoussion	0.0%	30.0%	Project	50.0%	70.0%		
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Recommended reading	<table><tr><td>Basic literature</td><td>Angelica Lo Duca, Learning Generative AI Tools for Excel, 2026, O'Reilly</td></tr><tr><td>Supplementary literature</td><td>-</td></tr><tr><td>eResources addresses</td><td></td></tr></table>	Basic literature	Angelica Lo Duca, Learning Generative AI Tools for Excel, 2026, O'Reilly	Supplementary literature	-	eResources addresses						
Basic literature	Angelica Lo Duca, Learning Generative AI Tools for Excel, 2026, O'Reilly											
Supplementary literature	-											
eResources addresses												
Example issues/ example questions/ tasks being completed	Draft an Excel spreadsheet that compares real estate investments to stock market investments over the next 10 years. Explain how artificial intelligence accelerated the process.											
Work placement	Not applicable											

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