

Subject card

Subject name and code	Introduction to Data Science, PG_00118014						
Field of study	Economics						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2024/2025		
Education level	Master's studies	Subject group			Obligatory subject group in the field of study Specialty subject group		
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					
Conducting unit	Department of International Economics and Economic Development -> Faculty of Economics -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Jakub Kwiatkowski				
	Teachers		dr Jakub Kwiatkowski				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	0.0	0.0	0.0	15
	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	15		2.0		15.0	32
Subject objectives	The subject allows students to learn the basics of data science using the RStudio package. During the semester, the most important packages and tools used by business intelligence analysts are presented. As a result, students will gain practical knowledge combining previously acquired knowledge and analytical skills with actual economic analyzes carried out in business.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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	is able to independently analyze economic and social phenomena and processes ability to theoretically in-depth assessment of these phenomena, with appropriate application selected research method and the RStudio package	[SU2] presentation/project/paper/report
	[EKONMU2_K01] recognises the importance of knowledge in the field of economics in the process of identifying and solving economic problems and of consulting experts when having difficulties in solving them independently	recognizes the importance of economics and data science knowledge in the identification process and solving economic problems and seeking expert opinions in cases difficulties in solving them on your own	[SK2] presentation/project/paper/report
	[EKONMU2_K02] is aware of the level of his/her knowledge in the field of economics; understands the need to extend and update this knowledge throughout his/her life	is aware of the level of his/her knowledge in the area of economics and data science, understands the need to deepen and update this knowledge throughout life	[SK2] presentation/project/paper/report
	[EKONMU2_U01] can creatively interpret and explain economic and social phenomena and relations between them, using acquired knowledge of economics, finance and management sciences	can creatively interpret and explain economic and social phenomena and relationships between these phenomena, using their knowledge in the field of economics, finance and management sciences using the RStudio package	[SU2] presentation/project/paper/report
	[EKONMU2_U03] can analyse causes and course of economic and social processes and phenomena, formulate his/her own opinions on the subject, construct research hypotheses, and select and apply methods of their verification	can analyze causes and course using the RStudio package economic and social processes and phenomena, formulate their own opinions on this subject, pose research hypotheses and select and use methods of their verification	[SU2] presentation/project/paper/report
	[EKONMU2_U04] can forecast and model complex economic and social processes using quantitative and qualitative methods and tools developed by economic sciences (including statistics and econometrics)	is able to forecast and model complex economic and social processes using RStudio packages	[SU2] presentation/project/paper/report
	[EKONMU2_U15] can independently expand and improve acquired knowledge and skills in economics; is open to new ideas and techniques; tends to learn using any accessible method and to interact with other participants of the learning process	is able to independently supplement and improve acquired knowledge in the field of data science and economic skills, is open to new ideas and techniques, has a tendency to learn by any method and a tendency to interact with other participants of the learning process	[SU2] presentation/project/paper/report
[EKONMU2_W06] knows statistical and econometric methods and tools for description and macro- and microeconomic modelling of economic structures and public institutions and processes occurring in them	knows statistical and econometric methods and tools for macro description and modeling microeconomic economic structures and public institutions and processes in taking place using the RStudio package	[SW2] presentation/project/paper/report	
Subject contents	1. What is data science? 2. Installation and operation of RStudio. Built-in data structures, reading and writing data 4. Basics of statistical libraries. 5. Basics of econometric modeling in RStudio. Data cleaning and preparation 7. Data visualization 8. Testing econometric models in RStudio.		
Prerequisites and co-requisites	None		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Project	51.0%	100.0%

Recommended reading	Basic literature	Required literature: Neusser (2016) Time series econometrics. Springer Ham Additional reading: Kwiatkowski (2021) The impact of the technology gap on the trade intensity of OECD countries. University of Gdańsk Publishing House
	Supplementary literature	None
	eResources addresses	Adresy na platformie eNauczenie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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