



Subject card

Subject name and code	MODELING OF SUSTAINABLE DEVELOPMENT, PG_00058527						
Field of study	Economics						
Date of commencement of studies	October 2023	Academic year of realisation of subject			2025/2026		
Education level	first-cycle studies	Subject group			Optional subject group 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	3	Language of instruction			Polish		
Semester of study	5	ECTS credits			4.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Katedra Statystyki i Ekonometrii -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Marta Kuc-Czarnecka				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	30.0	0.0	0.0	45
	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	45		5.0		50.0	100
Subject objectives	Describes the possibilities of using quantitative methods in terms of their selection and obtaining reliable data						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U06] acquires new knowledge by planning lifelong learning strategies		acquires new knowledge necessary to conduct a quantitative analysis of the implementation of the concept of sustainable development		[SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information		
	[K6_W03] identifies reliable sources of information relevant to the analyzed issues		identifies reliable sources of information required for modeling sustainable development		[SW3] Assessment of knowledge contained in written work and projects		
Subject contents	Sustainable development as an example of a multidimensional phenomenon. Selection of indicators of sustainable development. Composite indicator of sustainable development - stimulation and normalization of variables. Composite indicator of sustainable development - aggregation and weighting of variables. Sensitivity analysis of the composite indicator of sustainable development. Linear ordering of the countries according to the degree of achievement of the SDGs. Grouping countries according to the degree of achievement of the SDGs - taxonomic analyzes. The spatial taxonomic measure of sustainable development. Upward convergence in monitoring the achievement of the SDGs. Soft modelling of sustainable development.						
Prerequisites and co-requisites	basic statistical and econometric skills						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Group project		60.0%		100.0%		
Recommended reading	Basic literature		Perło, D. (2014). Modelowanie zrównoważonego rozwoju. Białystok: Wydawnictwo Uniwersyteckie Trans Humana. Panek, T. Zwierzchowski, J. (2013). Statystyczne metody wielowymiarowej analizy porównawczej. Teoria i zastosowania, Warszawa: Oficyna Wydawnicza SGH. Młodak, A. (2006). Statystyczna analiza wielowymiarowa w statystyce regionalnej, Warszawa: Difin.				
	Supplementary literature		OECD (2008). Handbook on Constructing Composite Indicators. Methodology and User Guide. Paris: OECD Publications.				
	eResources addresses		Adresy na platformie eNauczanie:				

Example issues/ example questions/ tasks being completed	Construct a composite indicator for the 7 th sustainable development goal. Prepare a linear ordering and group the European Union countries in terms of achieving this goal. Assess the convergence trends in the implementation of the seventh SDG.
Work placement	Not applicable