



## Subject card

Subject name and code	, PG_00049941						
Field of study	Economic Analytics						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2022/2023		
Education level	second-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	2	Language of instruction			Polish		
Semester of study	3	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Błażej Kocharński				
	Teachers		dr Błażej Kocharński				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	30.0	0.0	0.0	0.0	45
	E-learning hours included: 0.0						
Modele rynku kapitałowego 2022/2023 - Moodle ID: 24348 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=24348">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=24348</a>							
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		4.0		26.0	75
Subject objectives	Acquiring knowledge about capital market models and the ability to use this information in solving professional problems.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_W12] has a broad knowledge of the evolution of structures, institutions and socio-economic relations		The student describes the changes taking place on the capital markets and in the economic environment.		[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects		
	[K7_U08] has the ability to implement analytical methods to independently propose solutions to economic problems and verify their effectiveness		The student utilizes the capital market models to describe the capital market in Poland and elsewhere and assesses the effectiveness of these models.		[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools		
Subject contents	Return calculation.  Descriptive statistics and random variables in capital market modeling.  Mean-variance analysis.  CAPM model.  Multifactor models - Arbitrage Pricing Theory.  Option pricing.  Log-optimal strategy.						

Prerequisites and co-requisites	Knowledge of finance, especially financial markets.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	theory test	60.0%	10.0%
	computational tests	60.0%	50.0%
	project	60.0%	40.0%
Recommended reading	Basic literature	David G. Luenberger (1998), Investment Science, Oxford.	
	Supplementary literature	D. Ruppert, S. Matteson (2015), Statistics and Data Analysis for Financial Engineering, Springer.  O. Linton (2019), Financial Econometrics: Models and Methods, Cambridge University Press.	
	eResources addresses	Podstawowe <a href="https://library.ku.ac.ke/wp-content/downloads/2011/08/Bookboon/Finance/portfolio-theory-financial-analyses.pdf">https://library.ku.ac.ke/wp-content/downloads/2011/08/Bookboon/Finance/portfolio-theory-financial-analyses.pdf</a> - Uzupełniająca <a href="https://campus.datacamp.com/courses/introduction-to-portfolio-analysis-in-r">https://campus.datacamp.com/courses/introduction-to-portfolio-analysis-in-r</a> - <a href="http://www.columbia.edu/~mh2078/FoundationsFE/MeanVariance-CAPM.pdf">http://www.columbia.edu/~mh2078/FoundationsFE/MeanVariance-CAPM.pdf</a> -	
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> <li>1. Compute betas for selected assets.</li> <li>2. Construct a minimum variance portfolio.</li> <li>3. Assuming the random walk model, calculate the probability that the share price will rise in the next month</li> </ol>		
Work placement	Not applicable		