



Subject card

Subject name and code	Capital market models, PG_00049994						
Field of study	Economic Analytics						
Date of commencement of studies	October 2022		Academic year of realisation of subject		2023/2024		
Education level	second-cycle studies		Subject group		Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Part-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 Kochański				
	Teachers		dr Błażej Kochański				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	8.0	16.0	0.0	0.0	0.0	24
	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	24		6.0		45.0	75
Subject objectives	Gaining knowledge concerning capital market models and the ability to use them to solve professional issues.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_U08] has the ability to implement analytical methods to independently propose solutions to economic problems and verify their effectiveness		Student applies the models of capital markets learned during the classes in order to analyse the capital markets in Poland and abroad, accompanied by the examination of their effectiveness.		[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools		
	[K7_W12] has a broad knowledge of the evolution of structures, institutions and socio-economic relations		Student describes the changes that take place on the capital markets and in their environment.		[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects		
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	Basic financial knowledge, especially concerning financial markets.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	project	60.0%	40.0%
	computational tests	60.0%	50.0%
	theory test	60.0%	10.0%
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	Adresy na platformie eNauczanie: Modele rynku kapitałowego 2023/2024 - Moodle ID: 31453 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=31453	
Example issues/ example questions/ tasks being completed	1. Compute betas for selected assets. 2. Construct a minimum variance portfolio. 3. Assuming the random walk model, calculate the probability that the share price will rise in the next month		
Work placement	Not applicable		