



Subject card

Subject name and code	SCORING MODELS, PG_00060921						
Field of study	Economic Analytics						
Date of commencement of studies	October 2023	Academic year of realisation of subject			2024/2025		
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 (on-line)	Mode of delivery			at the university		
Year of study	2	Language of instruction			Polish		
Semester of study	4	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Statistics and Econometrics -> 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	0.0	16.0	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	4.0		47.0	75	
Subject objectives	Assesses the credibility of the bank's client, reducing the risk by using scoring models						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_W06] identifies reliable sources of information relevant to the analyzed issues	identify reliable sources of information for the purposes of assessing the customer's creditworthiness by banks and reducing the bank's risk			[SW1] Assessment of factual knowledge		
	[K7_U04] prepares and presents convincing, professional presentations of analysis results, with their in-depth interpretation	presents a professional presentation of the results of scoring analyses, making an in-depth interpretation of the proposed ratings			[SU5] Assessment of ability to present the results of task		
Subject contents	<ul style="list-style-type: none">• Terms: credit scoring, scoring card, creditworthiness, creditworthiness, risk assessment.• Typology of bank scoring models.• Data used in credit models. Credit information agencies.• Selection of variables, binning, missing data.• Good/bad customer, failure to repay (default), loss rate.• Construction of scoring models: statistical tools and machine learning methods.• Reject inference methods.• The use of logistic regression in credit risk assessment.• The use of classification trees.• Assessment of the quality of scoring models: error table, ROC curve, Gini coefficient, KS, lift.• Calibration of scoring models.• Use of scores. Establishing cut-off points. Risk-based pricing.• The process of building and implementing a scoring model, validation and monitoring.• Evolution of banking scoring models - the latest trends.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	Problems/project	60.0%			50.0%		
	Exam	60.0%			50.0%		

Recommended reading	Basic literature	<ul style="list-style-type: none"> Naeem Siddiqi Intelligent credit scoring: building and implementing better credit risk scorecards John Wiley & Sons, 2017. Raymond A. Anderson Credit intelligence & modelling: many paths through the forest Rayan Risk Analytics, Inc., 2019
	Supplementary literature	<ul style="list-style-type: none"> Lyn Thomas, Jonathan Crook, David Edelman Credit scoring and its applications Society for Industrial and Applied Mathematics, 2017 Mariola Kapla: O historii kredytowej i scoringu BIK ScoringExpert, 2019
	eResources addresses	Adresy na platformie eNauczenie: Modele scoringowe 2025 (online) - Moodle ID: 43117 https://enauczenie.pg.edu.pl/moodle/course/view.php?id=43117
Example issues/ example questions/ tasks being completed	<ul style="list-style-type: none"> Evaluate the discriminatory power of the model based on the data presented. Build a logistic regression model using the indicated variables. Determine the cut-off point for a scoring card with the given properties. Assess the predictive power of individual features and their importance in the model. 	
Work placement	Not applicable	

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