

Subject card

Subject name and code	Scoring Models Design, PG_00157355						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2025/2026		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study 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	4		ECTS credits		2.0		
Learning profile	academic		Assessment form		exam		
Conducting unit	Department of Statistics -> Faculty of Management -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Ewa Wycinka				
	Teachers		dr hab. Ewa Wycinka				
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		15.0		20.0	50
Subject objectives	To learn about the nature and applicability of scoring models for risk assessment. To learn the principles of model construction and evaluation.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[liEMU2_K01] The student understands the need for continuous completion and deepening of acquired knowledge. The student inspires and organizes others' learning processes.	The student is able to conduct his/her own research and present the results to the group. Can share knowledge and learn from more experienced colleagues and lecturers.	[SK2] presentation/project/paper/report
	[liEMU2_W04] The student has an in-depth knowledge of advanced mathematical, statistical, econometric and IT methods that enable the acquisition, processing and analysis of data reflecting the functioning and growth of the national economy and its components, as well as the phenomena and processes occurring in their environment.	The student understands the essence of scoring models and knows the areas of their application. He or she has knowledge of methods of scoring models construction. He knows statistical tools used in the construction of scoring models.	[SW2] presentation/project/paper/report
	[liEMU2_U07] The student is able to build advanced formal models of complex economic phenomena and processes, estimate them, carry out their verification and apply them to modeling, forecasting and optimization of resources of economic institutions of varying degrees of complexity, their structure and the course of processes in them.	The student is able to build scoring models for various economic institutions and is able to verify and optimise these models.	[SU2] presentation/project/paper/report
Subject contents	1. Introduction to scoring2.Data preparation - data quality assessment, selection of predictors, discretisation of variables3.Construction of a logistic regression model4. Evaluation of the logistic regression model5.Construction of a scoring table6.Scoring model evaluation7.Comparing scoring models8.Optimal division of units of a community into homogeneous risk groups (cut-off point management)9.Comparison of two data sets (population stability)10.Consideration of data from rejected applications (analysis of rejected applications)		
Prerequisites and co-requisites	Knowledge of basic mathematical statistics and econometrics.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	group project	51.0%	100.0%
Recommended reading	Basic literature	Przanowski K., Credit-scoring w erze Big-Data: techniki modelowania z wykorzystaniem generatora losowych danych portfela Consumer Finance, Szkoła Główna Handlowa - Oficyna Wydawnicza (2014) Przanowski K., Credit Scoring studia przypadków Szkoła Główna Handlowa - Oficyna Wydawnicza (2015) Matuszyk A., Credit Scoring, CeDeWu 2008 Siddiqi N., Credit Risk Scorecards: Developing and Implementing Intelligent Credit Scoring, Wiley 2006 Wycinka E., Uniwersalność zastosowań modeli skoringowych, Statsoft 2013	
	Supplementary literature	Gruszczyński M., Scoring logitowy w praktyce bankowej a zagadnienie koincydencji, Bank i Kredyt, maj 1999 Janc A., Kraska M., Credit-Scoring. Nowoczesna metoda oceny kredytowej, Biblioteka Menadżera, Warszawa 2001 Jackowska B., Wycinka E. (2011), Zastosowanie scoringu do oceny ryzyka ubezpieczeniowego; Studia ubezpieczeniowe: Zarządzanie ryzykiem i finansami, Zeszyty Naukowe 182, Wyd. Uniwersytetu Ekonomicznego w Poznaniu, Poznań, strony 225-235 Anderson R, The credit scoring toolkit, Oxford University Press 2007	

	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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