

Subject card

Subject name and code	Business Analytics - Crisis Management, PG_00156090						
Field of study	Management						
Date of commencement of studies	October 2024		Academic year of realisation of subject				
Education level	undergraduate studies		Subject group				
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		7.0		
Learning profile	academic		Assessment form				
Conducting unit	Zakład Zrównoważonego Rozwoju i Nauk o Jakości -> Katedra Strategicznego Rozwoju -> Faculty of Management						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Jędrzej Siciński				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	30.0	15.0	0.0	0.0	75
	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	75		14.0		86.0	175
Subject objectives	-Introduction to the problem of shortening economic cycles, which increase risk and the necessity for risk management. The lecture content corresponds with a tool-based approach or case studies, reflecting the structured layout of the program's content. -Guiding students step-by-step through the process of data preparation and parameter estimation for an early warning model for bankruptcy (SWO). -The lecture content covers the assumptions of statistical modeling, principles of data set cleaning, and the selection of variables for models. During practical sessions, students make successive attempts at estimating discriminant functions with the aim of creating their own models, which will be implemented in a spreadsheet tool in the following classes alongside models used in practice. -Working with students to build a tool in Excel, which includes around 10 EWM models, intended for practical use in assessing bankruptcy risk. This spreadsheet can later be used to analyze any entity based on balance sheet data and, for example, may serve as an analytical tool for the empirical part of a thesis. -At the end of the teaching cycle, a summary on the project-based approach to the restructuring process is provided						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[ZARZL3_W10] The student can identify and understand the mechanism of functional areas in an enterprise, their interrelationships and their role in achieving enterprise goals.	The student possesses knowledge of crisis management tools and is able to optimally link the usefulness of such instruments with various functional areas of the enterprise.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[ZARZL3_W01] The student has advanced knowledge in the social sciences, with particular emphasis on the discipline of management and quality sciences, and understands their interrelationships with other social sciences.	The student fully understands the necessity of integrating knowledge from various social science disciplines and is familiar with advanced techniques and methods related to mitigating the effects of risk, as outlined in the discipline of management and quality sciences	[SW2] presentation/project/paper/report
	[ZARZL3_U06] The student is able to forecast and simulate selected economic and social phenomena in relation to macro (economy), as well as micro (enterprise) scale using methods and tools applied in management and quality sciences.	The student possesses comprehensive skills in working with financial data to support crisis management—from data acquisition, through entry and cleaning, to drawing conclusions from selected early warning models and other anti-crisis tools.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[ZARZL3_W02] The student knows the relationships between the disciplines of the social sciences that are crucial to understanding the nature of economic processes.	The student understands the interconnections between various social science disciplines, enabling them to objectively utilize crisis management analytical tools.	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report

Subject contents	Lecture: 1. Life Cycles in the Economy (Economic, sectoral, organizational, product) 2. Risk in Business Operations (Typology, dynamics, countermeasures) 3. Organizational Decline vs. Morphogenesis (Decline phases and possible exit scenarios) 4. Bankruptcy vs. Corporate Restructuring (Legal foundations) 5. Bankruptcy and Restructuring Processes in Poland (Statistics, structure, case studies) 6. Economic Analysis of Bankruptcy and Restructuring Law (Selected issues) 7. Modeling - Assumptions for Building Early Warning Models (Discriminant analysis) 8. Project-Based Approach to Implementing the Restructuring Process in an Organization
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Exercises:

1.

Risk Response Matrix

(Case study)

2.

Monte Carlo Analysis in Risk Management

(Case study)

3.

Case Study

(Could the bankruptcy have been prevented? Analysis of causes)

4.

Sources of Information on Bankruptcies and Restructuring Processes in the Economy

5.

Review of Financial Statements for Preliminary Assessment of Financial Viability

6.

Data Preparation for Model Construction

Computer Laboratories:

1.

STATISTICA: Estimation of Discriminant Function Parameters - Building Your Own Early Warning

Model for an Organization (Computer Laboratory)

2.

Excel: Constructing Conditional Formulas

3.

Excel: Preparing an Analytical Balance Sheet

	4. Excel: Profit and Loss Statement and Control Formulas 5. Excel: Constructing an Analytical Table - Z7INE PAN Models 6. Excel: Graphical Data Presentation (Templates) 7.Excel: Implementation of ZBP and ZHCP Models 8.Excel: Implementation of ZH, ZOJ, ZA Models 9.Excel: Implementation of Own Models (Developed During STATISTICA Sessions) 10.Excel: Using the Tool for Analyzing Selected Entities (Practical Application of the Analytical Template on Current Financial Statements of Selected Companies) - INTERPRETATIONS		
Prerequisites and co-requisites	n/a		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
Recommended reading	Basic literature	1. Antonowicz A., Antonowicz P., Kaczmarek P., Siciński J., Kryzys i erozja kondycji finansowej barometr upadłości czy sygnał do restrukturyzacji? Finanse, statystyka i studia przypadków, Wyd. CMS, Sopot 2021. 2. Antonowicz P. (red.), Zarządzanie rozwojem przedsiębiorstwa. Interaktywny podręcznik z zakresu zarządzania. Repozytorium case study dla studentów, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2020. 3. Antonowicz P.: Bankructwa i upadłości przedsiębiorstw. Teoria - studia regionalne - praktyka gospodarcza", Wyd. UG, Gdańsk 2015. 4. Antonowicz P.: Metody oceny i prognoza kondycji ekonomicznofinansowej przedsiębiorstw, Wyd. ODDK, Gdańsk 2007. 5. Antonowicz A., Antonowicz P.: Matematyka finansowa w praktyce. Wybrane zagadnienia z zakresu finansów przedsiębiorstw, Wyd. ODDK, Gdańsk 2009. 6. Siciński J., Wybrane systemy wczesnego ostrzegania w predykcji upadłości europejskich linii lotniczych w latach 2009-2017, Zarządzanie i Finanse, Tom 16/2018, s. 263-277 7. Siciński, J., System wczesnego ostrzegania przedsiębiorstw przed ryzykiem upadłości na przykładzie branży, Wydawnictwo CMS, Sopot 2021	

	Supplementary literature	Prusak B.: Nowoczesne metody prognozowania zagrożenia finansowego przedsiębiorstw, Wyd. Difin, Warszawa 2005. Slatter S., Lovett D.: Restrukturyzacja firmy. Zarządzanie przedsiębiorstwem w sytuacjach kryzysowych, Wyd. WIG-Press, Warszawa 2001. Jackson M., Staunton M.: Zaawansowane modele finansowe z wykorzystaniem Excela i VBA. Zaawansowane obliczenia dla finansistów i menedżerów, Wyd. Helion, Gliwice 2004. Middleton M.R.: Microsoft Excel w analizie danych, Wyd. RM, Warszawa 2004. Langer M.: Po prostu Excel 2002/XP PL, Wyd. Helion, Gliwice 2002. Wędzki D., Analiza wskaźnikowa sprawozdania finansowego według polskiego prawa bilansowego, Nieoczywiste, Warszawa 2022.
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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