GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	ENTERPRISE RISK MANAGEMENT, PG_00071131		
Field of study	Economic Analytics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
Education level	first-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	3	Language of instruction	Polish
Semester of study	5	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department of Finance -> Faculty of Management and Economics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Błażej Prusak	
	Teachers		

Lesson types

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

eNauczanie source address: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=47320

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	3.0	52.0	100

Subject objectives

preparing students to identify and quantify risks occurring within a company and to select appropriate hedging instruments, based on knowledge of risk analysis methods, information sources, and financial tools.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U04] develops logical solutions to complex or unstructured problems, even under conditions of uncertainty.	is able to solve complex and unstructured problems related to enterprise risk management, also under conditions of uncertainty, by selecting appropriate methods for risk identification, analysis, and assessment.	[SU4] Assessment of ability to use methods and tools
[K6_K02] is prepared to make competent and ethical decisions to create and maintain economic, social, and environmental values, demonstrating entrepreneurial actions.	is ready to make informed and responsible decisions in risk management, taking into account their impact on economic performance as well as social and environmental aspects, while initiating actions to mitigate risk.	[SK2] Assessment of progress of work [SK5] Assessment of ability to solve problems that arise in practice
[K6_W03] is familiar with reliable sources of information and employs advanced knowledge to explain the fundamental dilemmas of the contemporary economy	has knowledge and understanding of the types and classifications of risks, methods of their identification, as well as methods of hedging against different types of risks.	[SW1] Assessment of factual knowledge

Subject contents

Course content – lecture

1. Concept of risk, classification and identification of risks.
2. isk management process.
3. Calculation of risk measures (standard deviation, semistandard deviation, coefficient of variation, semioefficient of variation, VAR, CVAR).
4. Quantification of risk by means of: risk map, Risk Score method, stress tests.
5. Sensitivity analysis, scenario analysis and Monte Carlo simulation in risk assessment.
6. The concept and application of the ROM (return on mitigation) metric.
7. Application of currency risk hedging transactions (forwards, futures, options, swaps, zero-cost corridors).
8. Toxic option products.
9. Application of interest rate hedging transactions (FRA, options, caps, floors, swaps, collars).
10. Hedging against default risk. Concept and settlement of CDS transactions.
11. Types and characteristics of weather risks.
12. Application of weather risk hedging transactions (forwards, options, swaps, catastrophe bonds).

Course content – exercises

1. Concept of risk, classification and identification of risks.
2. isk management process.
3. Calculation of risk measures (standard deviation, semistandard deviation, coefficient of variation, semioefficient of variation, VAR, CVAR).
4. Quantification of risk by means of: risk map, Risk Score method, stress tests.
5. Sensitivity analysis, scenario analysis and Monte Carlo simulation in risk assessment.
6. The concept and application of the ROM (return on mitigation) metric.
7. Application of currency risk hedging transactions (forwards, futures, options, swaps, zero-cost corridors).
8. Toxic option products.
9. Application of interest rate hedging transactions (FRA, options, caps, floors, swaps, collars).
10. Hedging against default risk. Concept and settlement of CDS transactions.
11. Types and characteristics of weather risks.
12. Application of weather risk hedging transactions (forwards, options, swaps, catastrophe bonds).

Prerequisites and co-requisites

Financial management.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Colloquium 1 and 2	60.0%	90.0%
Activity in classes	0.0%	10.0%

Recommended reading

Basic literature

1. Benett, D.(2000). Ryzyko walutowe. Kraków: Dom Wydawniczy ABC.
2. Jajuga, K. (red.). (2007 oraz 2019 wydanie II) Zarządzanie ryzykiem. Warszawa: PWN.
3. Kaczmarek, T.T. (2005). Ryzyko i zarządzanie ryzykiem. Warszawa: Difin.
4. Kalinowski, M. (2009). Zarządzanie ryzykiem stopy procentowej w przedsiębiorstwie. Warszawa: CeDeWu.
5. Kalinowski, M. (2007). Zarządzanie ryzykiem walutowym w przedsiębiorstwie. Warszawa: CeDeWu.
6. Karkowski, P. (2009). Toksyczne opcje. Od zaufania do bankructwa. Warszawa: GreenCapital.pl
7. Maliszewski, J. (2013). Zarządzanie ryzykiem kursu walutowego w przedsiębiorstwie. Warszawa: Wydawnictwo Linia.
8. Preś, J. (2007). Zarządzanie ryzykiem pogodowym. Warszawa: Cedewu.
9. Tarczyński, W., Mojsiewicz, M. (2001). Zarządzanie ryzykiem. Warszawa: PWE.
10. Thompson, C., Hopkin, P. (2024). Podstawy zarządzania ryzykiem. Jak wdrażać efektywne systemy zarządzania ryzkiem w przedsiębiorstwie, Wydanie VI. Gliwice: Helion
11. Woźniak, J., Wereda, W. (red.). (2018). Mapa ryzyka w zarządzaniu organizacją. Warszawa: CeDeWu.

Supplementary literature

1. Best, P. (2000). Wartość narażona na ryzyko. Kraków: Dom Wydawniczy ABC.
2. Hubbard, D.W. (2020). The Failure of Risk Management. Why Iss Broken and How to Fix It, Wiley, Second Edition, New Yersey, s. 73-75, 142-150.

eResources addresses

Example issues/ example questions/ tasks being completed

- List and characterise methods of internal hedging against exchange rate risk.
- List and characterise external instruments for hedging against currency and interest rate risk.
- Prepare a risk map on the basis of specific company data.

Practical activites within the subject

Not applicable

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