

## COURSE DESCRIPTION CARD

NOTE: If the course includes lectures and classes, the Course Description Card applies to both types of instruction.

<b>1. Course title:</b> in Polish / in English <b>MEASUREMENT OF CREDIT RISK</b> <b>Pomiar ryzyka kredytowego</b>	<b>2. Course code:</b> Number of ECTS credits: <b>4</b> Course completion mode: <b>E</b> Course commenced / <b>Year 2019/2020</b>
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**3. Major: Finance and Accounting/ARIMA**

**4. Department of major coordinator: Banking and Financial Markets**

**5. Name of course instructor:**  
 Lecture: dr inż. TOMASZ BRONISŁAW ZIELIŃSKI  
 Classes...  
 Lab classes ...  
 Examiner: dr inż. TOMASZ BRONISŁAW ZIELIŃSKI

**6. Department of course instructor:**

**7. Number of contact hours with students:**

Type of instruction	Full-time study	Part-time study
lectures	30	
classes		
foreign language classes		
lab classes		
seminars		
e-learning		
other		
<b>Total hours</b>	30	
examination (hours)	3	

**8. Course timeframe - no. of semesters: 1**

Course commencement / **Year 1**

Course commencement / **Semester 2**

**9. Level of tertiary education: ...**  
**second cycle studies**

**10. Course status**  
 **Compulsory for the major X**  
 Compulsory for the specialization ...  
 Elective ...

**11. Course prerequisites**  
 Compulsory: **ANY**  
 Recommended: **ANY**

**12. Course objectives:**  
 Characteristics of credit risk as a general variation of credit risk. Description and measurement of risk. Modeling of range of losses and general main parameters of operations..

**13. Teaching and learning methods:**

**A. Direct student-instructor contact:**

No.	Teaching methods	Description	Number of hours	
			Full-time study	Part-time study
1.	Interactive lecture	Providing of theoretical and empirical issues with a multimedia presentation and exercising with excel simulation	30	0
Total			AS: 30	AN: 0

**B. Self-study:**

No.	Learning methods	Description	Number of hours	
			Full-time study	Part-time study
1.	Analysis of source materials		25	0
3.	Independent work using a computer		25	0
4.	Analysis of lecture notes		20	0
Total			BS: 70	BN: 0

Total AS+BS = **100**

Examination (E) = **3**

Total AS+BS+E= **103**

Total AN+BN = 0

Examination (E) = 0

Total AN+BN+E = 0

**14. assets, bank, financial institutions, financial markets, credit risk**

**15. Course content:**

1. Characteristics of the shape of the distribution of credit risk losses
2. Characteristics of expected loss and unexpected loss due to credit risk
3. Review of basic loss parameters: EAD, LGD, PD
4. PD estimation methods (implied probability based on market and bank credit rates)
5. LGD estimation for a single credit exposure
6. EAD for credit lines
7. Simulation of loss distribution for independent and correlated LGD and PD changes
8. Determination of VaR for loss distribution
9. Elements of stress testing loss distribution

**16. Course learning outcomes as related to the learning outcomes of the major and methods for assessing student attainment**

Intended learning outcomes of the major / Symbols	Intended learning outcomes of the course	Methods for assessing student learning outcomes	Documentation
<u>Knowledge</u>			
FiR2_W01#	Has in-depth knowledge of the types and features of major financial credit assets. Has knowledge of the identification and description of formal credit risk of financial assets.	Final project.	Student working papers
FiR2_W02#	Has in-depth knowledge of methods for the financial assessment of credit assets.		

<u>Skills</u>			
FiR2_U01	Has deepened ability to identify and describe the main features of the distribution of credit risk losses	written exam, work of students from MS Excel	exam forms, student work files
FiR2_U02 #	Can independently present their views on various areas of credit risk	activity during classes	lecturer's notes
FiR2_U04 #	Has language skills at B2 + level allowing free communication in the area of subject issues	active participation in classes, passing and written exam in English	lecture materials as well as passing and exam forms
FiR2_U05 #	Is able to implement a group actions on a given topic.	Assessment of tasks carried out in class	MS Excel files
<u>Social competences</u>			
FiR2_K04 #	Finds practical application and justification for credit risk models	activity during classes	lecturer's notes

### 17. Method for determining the final course grade:

No.	Methods for awarding credits and course completion requirements	Description	Percentage of the final course grade*
1.	Written exam without the possibility of using textbooks	Student exam forms	80%
2.	Activity during classes	Lecturer's notes	20%

\* If students are required to obtain both a class grade and an exam grade, the class grade constitutes at least 30% of the final course grade.

### 18. Reading list

#### Mandatory readings:

1. F. Fabozzi, F. Modigliani, F. Jones: Foundations of Financial Markets and Institutions. Pearson, International Edition, 2010.
2. Fabozzi F., Rynki obligacji. Analiza i strategie. WIG-Press W-wa 2000.
3. Hull J. C.: Zarządzanie ryzykiem instytucji finansowych. Wyd. PWN, Warszawa, 2011.
4. Crouhy M., Galai D., Mark R.: The Essentials of Risk Management. Wyd. McGraw - Hill, International, 2006.
5. Resti.A, Sironi A.: Risk Management and Shareholders' Value in Banking. Wyd. JOHN WILEY & SONS, England, 2007.

#### Suggested readings:

### 19. Language of instruction: **English**

### 20. Course instructors' recommendations: **Computer laboratory**