COURSE DESCRIPTION CARD

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

1. Course title:

FIXED INCOME & CREDIT DERIVATIVES

2. Course code:
Number of ECTS credits: 4
Course completion mode: **E**
Course commenced / **Year 2019/2020**

3. Major: Finance and Accounting / **ARIMA**

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

5. Name of course instructor:

Lecture: dr TADEUSZ CZERNIK
Classes…
Lab classes …
Examiner: dr TADEUSZ CZERNIK

6. Department of course instructor: Department of Applied Mathematics

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	-	
Total hours	30	
examination (hours)	3	

8. Course timeframe - no. of semesters: 1
Course commencement / Year 1
Course commencement / Semester 1

9. Level of tertiary education: Master (2)

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

11. Course prerequisites
Compulsory: EQUITY & FOREIGN EXCHANGE DERIVATIVES
FUNDAMENTALS OF MATHEMATICS & STATISTICS
Recommended:

12. Course objectives:

Acquainted with the construction and analysis of interest rate derivatives and credit derivatives.

13. Teaching and learning methods:

A. Direct student-instructor contact:

No.	Teaching methods	Description	Number of hours	
			Full-time study	Part-time study
1.	Solving exercises and tests	Solving exercises	15	
2.	Active lecture	Active lecture	15	
3.				
4.				
Total			AS: 30	AN:

B. Self-study:

No.	Learning methods	Description	Number of hours	
			Full-time study	Part-time study
1.	Solving exercises	Self-solving problems	60	
2.	Analysis of the lecture notes	Independent literature studies	10	
3.				
4.				
Total			BS: 70	BN:

Total AS+BS = 100
Examination (E) = 3
Total AS+BS+E= 103

Total AN+BN = …….
Examination (E) =…….
Total AN+BN+E = …….

14. Key words: derivatives, random processes

15. Course content:

1. The most important interest rate derivatives
2. The most important credit derivatives
3. Valuation models
4. Estimation of parameters of valuation models.

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
Knowledge			
FiR2_W01# FiR2_W02#	1. Student has in-depth knowledge of methods and tools for measuring interest rate and credit risk derivatives 2. Student is able to apply mathematical methods for the valuation of credit derivatives and for the interest rate	colloquium,	student working files
Skills			
FiR2_U01# FiR2_U04#	1. Student has the ability to use theoretical knowledge to describe and analyze derivatives extended to formulate their own opinions. 2. Student has language skills and vocabulary to measure derivatives at B2 + level	colloquium,	student working files
Social competences			
FiR2_K01# FiR2_K02#	1. Is able to indicate strengths and weaknesses of derivative valuation models. 2. Can correctly formulate questions regarding	colloquium,	student

	derivative valuation.		working files

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 notes	Computational tasks	70%
2.	Activity during classes	Computational tasks	30%
3.			

* 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:

- Keith Cuthbertson and Dirk Nitzsche: Financial Engineering: Derivatives and Risk Management.
- Wilmott P., Paul Wilmott on quantitative finance, vol. I/II, Wiley, 2000.

Suggested readings:

- Martellini L., Priaulet P., Priaulet S., Fixed-income securities Wiley 2003.

19. Language of instruction: English

20. Course instructors' recommendations: