



## COURSE DESCRIPTION

### 1. Information about the programme

1.1 Institution of higher education	<b>Alexandru Ioan Cuza University of Iasi</b>
1.2 Faculty	<b>Faculty of Economics and Business Administration</b>
1.3 Department	<b>Department of Finance, Money and Public Administration</b>
1.4 Field of study	<b>Finance</b>
1.5 Level	<b>Master</b>
1.6 Study programme/ Qualification	<b>Finance and Risk Management</b>

### 2. Information about the course

2.1 Course name	<b>Market Risk Management</b>						
2.2 Course coordinator	<b>Prof. Bogdan Căpraru</b>						
2.3 Seminar coordinator	<b>Prof. Bogdan Căpraru</b>						
2.4 Year of study	<b>2</b>	2.5 Semester	<b>3</b>	2.6 Type of assessment	<b>E</b>	2.7 Course status	<b>E</b>

\* C – Compulsory / E – Elective

### 3. Total estimated time (hours allotted to teaching activities per semester)

3.1 Number of hours per week	<b>3</b>	of which: 3.2 lecture	<b>2</b>	3.3 seminar/lab	<b>1</b>
3.4 Number of hours in the curriculum	<b>42</b>	of which: 3.5 lecture	<b>28</b>	3.6 seminar/lab	<b>14</b>
Time distribution					hrs
Study of the textbook, coursebook, bibliography and lecture notes					<b>25</b>
Additional research in the library, online and on the field					<b>11</b>
Preparation of seminars/labs, homework, projects, portfolios and essays					<b>37</b>
Tutorials					<b>8</b>
Assessment					<b>2</b>
Other activities.....					
3.7 Total number of self-study hours					<b>83</b>
3.8 Total number of hours per semester					<b>125</b>
3.9 Number of credits					<b>5</b>

### 4. Prerequisites (if applicable)

4.1 Curriculum-based	
4.2 Competence-based	

### 5. Conditions (if applicable)

5.1 For lectures	<b>General conduct and behavior</b> Students are expected to conduct themselves with consideration and respect for the needs of their fellow students and teaching staff. Conduct which unduly disrupts or interferes with a class, such as ringing or talking on mobile phones, is not acceptable and students may be asked to leave the class.
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	<b>Attendance</b> Your regular and punctual attendance at lectures and seminars is expected in this course.
5.2 For seminars / labs	<b>General conduct and behavior</b> Students are expected to conduct themselves with consideration and respect for the needs of their fellow students and teaching staff. Conduct which unduly disrupts or interferes with a class, such as ringing or talking on mobile phones, is not acceptable and students may be asked to leave the class. <b>Attendance</b> Attendance is compulsory at minimum 80% of the seminars. In case of absence, the instructor should be informed in advance.

## 6. Specific competencies

Professional competencies	<b>C1. Analysis of the theoretical and practical aspects of financial markets, models, instruments that are used in the management of risks.</b> <b>C2. Adequate use of mathematical and statistical concepts, methods and techniques in assessing risks and performing independent research in finance.</b> <b>C3. Evaluation of the main risk factors for organizations and financial systems.</b> C4. Implementing effective financial management and reporting within the business environment to ensure value creation. <b>C5. Ensuring effective and appropriate governance and management of risk within an organization, in the context of an overall ethical framework.</b>
Transversal competencies	<b>CT1. Application of the professional ethical norms and values in decision-making and undertaking of complex professional tasks, independently or within a team.</b> <b>CT2. Human resources planning within a group or organization, in the context of awareness of own responsibility for professional outcomes.</b> CT3. Assuming the need for continuous development to create prerequisites for career progression and adapt own professional and managerial competencies to the economic dynamics.

## 7. Course objectives (provided by the specific competencies grid)

7.1. Main objective	This course will discuss the best practices in developing an effective market risk management infrastructure to manage market risk within the bank. Methods, instruments and activities used to identify, measure, control and monitor market risk will be discussed with special attention paid to implementation issues for large and small banks in both developed and emerging markets. The objective is to help build a world class market risk management capability which not only minimizes risk but also maximizes profit and optimizes capital allocation decisions for the bank.
7.2. Specific objectives	By the end of this course, it is expected that students will: <ul style="list-style-type: none"><li>Understand the latest developments in banking regulations that are the main driving force behind changes in our approaches to risk measurement</li><li>Outline the foundations of market risk analysis and the basic models for assessing market risk</li><li>Describe the market risk measurement techniques that are used daily in the front and middle offices of banks; particular emphasis is placed on the appraisal of the covariance matrices that are used to measure the market risk of portfolios</li><li>Be able to build various Value-at-Risk (VaR) models for market risk for international portfolios of equities, FX, interest rate products, commodities, derivatives etc.</li></ul>



**8. Content**

8.1	Lectures	Teaching methods	Observations
1.	Introduction to Market Risk Management	Lecturing and class participation	2 hrs: AS(1)
2.	The Characteristics of Markets and Market Risk & Capital Requirements	Lecturing and class participation	2 hrs: AS(2), A(IV.1.1-2)
3.	VaR: Definition and Measurement	Lecturing and class participation	2 hrs: AS(3.1), A(IV.1.4-8)
4.	VaR Models	Lecturing and class participation	2 hrs: AS (3.2-3), A(IV.1.9)
5.	Advanced VaR models	Lecturing and class participation	2 hrs: A (IV.4), AS (3)
6.	Advanced VaR models	Lecturing and class participation	2 hrs: A (IV.5), AS (3)
7.	Applied market risk: Equities and foreign exchange	Lecturing and class participation	2 hrs: AS (4.3)
8.	Applied market risk: Equities and foreign exchange	Lecturing and class participation	2 hrs: AS (4.3)
9.	Applied market risk: Fixed income products	Lecturing and class participation	2 hrs: AS (4.2)
10.	Applied market risk: Fixed income products	Lecturing and class participation	2 hrs: AS (4.2)
11.	Applied market risk: Equity and interest rate derivatives	Lecturing and class participation	2 hrs: AS (4.4)
12.	Applied market risk: Equity and interest rate derivatives	Lecturing and class participation	2 hrs: AS (4.4)
13.	Applied market risk: Fund management, banking & non-financial firms	Lecturing and class participation	2 hrs: AS (7,8)
14.	Applied market risk: Fund management, banking & non-financial firms	Lecturing and class participation	2 hrs: AS (7,8)

**Bibliography****Main readings:**

- Alexander, C. (2009), Market Risk Analysis, Volume IV: Value at Risk Models, Wiley. (A)
- Alexander, C., Sheedy, E. (2015), The Professional Risk Manager's Handbook: A Comprehensive Guide to Current Theory and Best Practices, Volume III: Book 3 – Market Risk, Asset Liability Management and Funds Transfer Pricing, [www.prmia.org](http://www.prmia.org). (AS)

**Additional readings:**

- Dowd, K. (2005), Measuring Market Risk, 2nd Edition, Wiley Finance. (D)

Other readings such as cases, simulations, journal papers, press articles will be provided periodically throughout the course via FEAA eLearning platform, e-mail or handed-in in class.





8.2	Seminars / Labs	Teaching methods	Observations (hours & readings)
1.	The characteristics of markets and market risk & capital requirements	Small group discussion, Simulation, Random calling	2 hrs: AS(1), A(IV.1.1-2)
2.	VaR models	Small group discussion, Simulation, Random calling	2 hrs: AS (3.1), A(IV.1.9)
3.	VaR models	Small group discussion, Presentations	2 hrs: AS (3.1), A (IV.1.9)
4.	Advanced VaR models	Small group discussion, Presentations	2 hrs: A (IV.4, IV.5), AS (3.2-3)
5.	Applied market risk: Equities and foreign exchange	Small group discussion, Presentations	2 hrs: AS (4.3-4)
6.	Applied market risk: Fixed income products	Small group discussion, Presentations	2 hrs: AS (4.2)
7.	Applied market risk: Fund management, banking & non-financial firms	Small group discussion, Presentations	2 hrs: AS (7,8)

**Bibliography****Main readings:**

- Alexander, C. (2009), Market Risk Analysis, Volume IV: Value at Risk Models, Wiley. (A)
- Alexander, C., Sheedy, E. (2015), The Professional Risk Manager's Handbook: A Comprehensive Guide to Current Theory and Best Practices, Volume III: Book 3 – Market Risk, Asset Liability Management and Funds Transfer Pricing, [www.prmia.org](http://www.prmia.org). (AS)

**Additional readings:**

- Dowd, K. (2005), Measuring Market Risk, 2nd Edition, Wiley Finance. (D)
- PRMIA Case studies (<http://www.prmia.org/risk-resources/case-studies>)

Other readings such as cases, simulations, journal papers, press articles will be provided periodically throughout the course via FEAA eLearning platform, e-mail or handed-in in class.

**9. Corroboration of the course content with the expectations of community representatives, professional associations and representative employers from the programme's related field**

This course provides students with the core knowledge, skills, and abilities that are generally accepted and applied by finance and investments professionals throughout the world. Topics are selected in accordance to the requirements of Chartered Financial Analyst (CFA) and Professional Risk Manager (PRM) world-leading certifications for finance and risk management, to offer the adequate preparation for CFA and PRM exams. The course content is correlated to that of similar courses taught at renowned universities and is continuously updated based on the feedback of students and alumni. Moreover, this is a student-centered course that follows the best practices of learning and teaching in undergraduate education through the adoption of a variety of active-learning instructional methods.



**10. Assessment**

Type of activity	10.1 Assessment criteria	10.2 Assessment methods	10.3 Weight in final grade (%)
10.4 Lectures	Coverage: topics covered in the lectures from week 1 to week 14. Format: Multiple choice questions + Calculation questions+ Open questions. Criteria: Clarity of explanation and Accuracy of answers	<b>Final exam</b> (multiple-choice, true-false and open questions)	60%
10.5 Seminars/ Labs	Active attitude during class, giving comments to fellow students etc.	<b>Active Participation</b>	10%
	Presentation and Accuracy of solutions	<b>Case study and Individual assignments</b>	30%
10.6 Minimum performance standard			
▪ A minimum passing grade of 5, computed as $P = 0,40 \cdot A + 0,60 \cdot E$ , where P – final grade, A – Active participation and individual Assignments, E – final exam grade.			

Date  
14.09.2020

Course Coordinator  
Prof. Bogdan CĂPRARU

Seminar Coordinator  
Prof. Bogdan CĂPRARU

Date of approval  
23.09.2020

Head of Department  
Prof. Ovidiu STOICA

