



COURSE DESCRIPTION

1. Information about the programme

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

2. Information about the course

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|-------------------------|---|--------------|----------|------------------------|------------|-------------------|----------|
| 2.1 Course name | Advanced Topics in Bank Risk Management | | | | | | |
| 2.2 Course coordinator | Alin Andrieș (Prof. dr.), Sorin Anton (Prof. dr.), Cezar Chirilă (Dr.) | | | | | | |
| 2.3 Seminar coordinator | Alin Andrieș (Prof. dr.), Sorin Anton (Prof. dr.), Cezar Chirilă (Dr.) | | | | | | |
| 2.4 Year of study | 2 | 2.5 Semester | 2 | 2.6 Type of assessment | EVP | 2.7 Course status | C |

* C – Compulsory / E - Elective

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

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| 3.1 Number of hours per week | 4 | of which: 3.2 lecture | 2 | 3.3 seminar/lab | 2 | |
| 3.4 Number of hours in the curriculum | 56 | of which: 3.5 lecture | 28 | 3.6 seminar/lab | 28 | |
| Time distribution | | | | | | hrs |
| Study of the textbook, coursebook, bibliography and lecture notes | | | | | | 25 |
| Additional research in the library, online and on the field | | | | | | 15 |
| Preparation of seminars/labs, homework, projects, portfolios and essays | | | | | | 40 |
| Tutorials | | | | | | 8 |
| Assessment | | | | | | 6 |
| Other activities..... | | | | | | - |
| 3.7 Total number of self-study hours | | | | | | 94 |
| 3.8 Total number of hours per semester | | | | | | 150 |
| 3.9 Number of credits | | | | | | 6 |

4. Prerequisites (if applicable)

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| 4.1 Curriculum-based | Fundamentals of Risk Management |
| 4.2 Competence-based | <p>Students should have a basic understanding of the role, activities, and sources of risk for banks. Good knowledge of mathematical and statistical concepts for assessing risks and some basic programming skills are also required.</p> <p>It is expected that students will demonstrate a general interest in the area of credit risk management and will seek to develop more practical skills in an international setup. References and lecture notes will offer background to the topics and will be explored on a self-study basis and class discussion.</p> <p>In addition, the business case provided by the industry partner will allow for the application of the academic knowledge and skills developed in class to real world risk setting. This will demand analytical thinking, problem solving, as well as the ability to critically assess current company practices.</p> |



**5. Conditions** (if applicable)

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| 5.1 For lectures | <ul style="list-style-type: none">Attendance is compulsory at minimum 70% of the lectures. In case of absence, the instructor should be informed in advance.Operation of cell phones and other handheld electronic devices for sending and reading text messages and e-mails, recording or other disruptive activities for fellow students and instructor is not allowed. Devices should be turned off or set to the vibrate mode before the start of the lecture. |
| 5.2 For seminars / labs | <ul style="list-style-type: none">Attendance is compulsory at minimum 70% of the seminars. In case of absence, the instructor should be informed in advance.Operation of cell phones and other handheld electronic devices for sending and reading text messages and e-mails, recording or other disruptive activities for fellow students and instructor is not allowed. Devices should be turned off or set to the vibrate mode before the start of the seminar. |

6. Specific competencies

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

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

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| 7.1. Main objective | <p>The aim of this intensive programme is to introduce participants into the practice of credit risk management, with an emphasis on credit scoring and scorecard development.</p> <p>Alexandru Ioan Cuza University of Iasi in cooperation with Banca Comercială Română will offer the intensive programme using the following model for the organization of the course:</p> <ul style="list-style-type: none">Phase 1 (offsite): Preparatory reading and preparation for questionsPhase 2 (onsite): Presence phase during the course (March 19 – April 1, 2017) <p>The onsite course will start with an introduction given by local and guest academic lecturers to the required theoretical background in credit risk management and also to programming (R or SAS), a tool for the scorecard development process.</p> <p>This will be followed by an input into a business case supplied by the representative of the local industry partner - Banca Comercială Română S.A. The aim of the case study is to build and calibrate a scorecard for individuals.</p> |
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| 7.2. Specific objectives | <p>On completion of the course, students will be able to:</p> <ul style="list-style-type: none"> ▪ Demonstrate an in-depth understanding of the main types of risks faced by financial institutions and banks and of the risk models used for their management; ▪ Apply academic knowledge in a practical finance and risk management context; ▪ Analyse situations and scenarios from case studies relating to realistic risk-focus business problems and strategic and tactical asset allocation at local level; ▪ Apply academic knowledge in a practical bank risk management context; ▪ Identify relevant theoretical course coursework and translate it into solutions for concrete bank risk management issues; ▪ Demonstrate an in-depth understanding of the institutional details of a company in the field of banking; ▪ Prepare a set of solutions to a bank risk management case study; ▪ Build a scorecard and use it for credit decision. ▪ Summarise case findings in a team report, present and defend these in a clear and effective way; ▪ Assess critically both theirs' and other teams' case reports during the presentation and solutions phase; ▪ Work in an international team environment and develop the ability to formulate and defend their point of view in a constructive manner; ▪ Use intercultural creativity to achieve an agreed outcome; ▪ Understand how culture affects the work in international teams; ▪ Select appropriate communication tools for international teams. |
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8. Content

| 8.1 | Lectures | Teaching methods | Observations (hours & readings) |
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| 1. | Credit risk management (Cezar Chirilă) | Interactive lecture | 4hrs: (1) Ch. 4&5, pp.79-143 / Materials handed out in class |
| 2. | Development of rating models in SAS (Cezar Chirilă) | Interactive lecture | 4hrs: Materials handed out in class |
| 3. | Presentation of the case study by BCR representative (Cezar Chirilă) | Interactive lecture | 4hrs: Case to be provided onsite by BCR |
| 4. | Introduction to credit scoring, scoring at different customer stages, score types (Sorin Anton) | Interactive lecture | 4hrs: (3) Ch. 2, pp. 93-114 / Materials handed out in class |
| 5. | Scorecard development process (Alin Andrieș) | Interactive lecture | 4hrs: (2) Ch. 20-26, pp. 419-526 / Materials handed out in class |
| 6. | Scorecard calibration, validation and management issues (Alin Andrieș) | Interactive lecture | 4hrs: (2) Ch. 20-26, pp. 419-526 / Materials handed out in class |
| 7. | Scorecard implementation (Alin Andrieș) | Interactive lecture | 4hrs: (2) Ch. 20-26, pp. 419-526 / Materials handed out in class |



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

For the offsite preparation, the following book is mandatory:

(1) Apostolik, R., Donohue, C., Went, P., *Foundations of banking crisis: an overview of banking, banking risks, and risk-based banking regulation*, John Wiley & Sons, New Jersey, 2009.

The following references offer a comprehensive description of various concepts underlying credit scoring and/or provide support to the regulatory framework on credit risk:

(2) Anderson, R., *The Credit Scoring Toolkit. Theory and Practice for Retail Credit Risk Management and Decision Automation*, Oxford University Press, New York, 2007.

(3) Van Gestel, T., Baesens, B., *Credit Risk Management. Basic Concepts: Financial Risk Components, Rating Analysis, Models, Economic and Regulatory Capital*, Oxford University Press, New York, 2009.

(4) *Regulamentul nr. 5/2013 privind cerințele prudențiale pentru instituțiile de credit, Banca Națională a României*, <http://www.bnr.ro/apage.aspx?pid=404&actId=326618>

(5) *Regulamentul nr. 575/2013 al Parlamentului European și al Consiliului din 26 iunie 2013 privind cerințele prudențiale pentru instituțiile de credit și societățile de investiții și de modificare a Regulamentului (UE) nr. 648/2012*, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:176:0001:0337:RO:PDF>

Additional readings on bank risk management

(6) Karas, M., *10 practical steps to build a credit scoring model*, Intelligent Risk - April, 2015, pp. 26-32.

(7) Bessis, J., *Risk Management in Banking*, 3rd edn. Wiley finance series, 2009.

(8) van Greuning, H., Brajovic Bratanovic, S., *Analyzing Banking Risk: A Framework for Assessing Corporate Governance and Risk Management*. World Bank Publications, 2009.

(9) Saunders, A., Cornett, M., *Financial Institutions Management: A Risk Management Approach*, 8th edn, McGraw Hill, 2014.

(10) Saunders, A., Allen, A., *Credit risk management in and out of the financial crisis: new approaches to value at risk and other paradigms*, 3rd edn. Wiley finance series, 2010.

(11) Sironi, A., Resti, A., *Risk management and shareholders' value in banking: from risk measurement models to capital allocation policies*. John Wiley & Sons, 2007.

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 credit process and credit risk management | Small group discussion, Brainstorming, Random calling | 2hrs: (1) Chapters 4&5, pp.79-143. |
| 2. | Development of rating models in SAS | Small group discussion | 2hrs: Lab materials handed out in class |
| 3. | Case study on credit scorecard development | Small group discussion, Case Study | 18hrs: Case to be provided onsite by BCR |
| 4. | Presentation and discussion of case report by international teams | Small group discussion, Students small group presentations | 6hrs |

Bibliography**Main readings:**

(1) Apostolik, R., Donohue, C., Went, P., *Foundations of banking crisis: an overview of banking, banking risks, and risk-based banking regulation*, John Wiley & Sons, New Jersey, 2009.

* Case on credit scorecard development provided by Banca Comercială Română

** SAS Tutorials available at <http://support.sas.com/training/tutorial/>





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 is designed as an intensive programme offered in two weeks (19 March – 1 April 2017) within the International Project **INTQUANT** (Creating an International Semester for Master Programmes in Quantitative Finance), Funding Scheme: Erasmus+ Strategic Partnerships (Key Action 2), involving four partner universities - University of Applied Sciences bfi Vienna (UAS), University of Bologna (UNIBO), University of Economics in Katowice (UEK) and Alexandru Ioan Cuza University of Iași (UAIC).

The course will be organized by the Faculty of Economics and Business Administration of UAIC Iași in cooperation with Banca Comercială Română S.A. and will be taught as a combination of case study, lectures and tutorials offered by the local professors and distinguished guest experts. Successful accomplishment will provide participants with 6 ECTS that can be acknowledged within the Master programme of each partner University.

The course provides students with the core knowledge, skills, and abilities that are generally accepted and applied by risk management professionals throughout the world. Topics are selected in accordance to the requirements of Professional Risk Manager (PRM) world-leading certification for risk management, to offer the adequate preparation for PRM exams.

Moreover, this is a student-centered course that follows the best practices of learning and teaching in graduate education through the adoption of a variety of active-learning instructional methods.

10. Assessment

| Type of activity | 10.1 Assessment criteria (based on the course learning objectives) | 10.2 Assessment methods | 10.3 Weight in final grade (%) |
|---|---|---|--------------------------------|
| 10.4 Lectures | <ul style="list-style-type: none"> ▪ Clarity of description of the credit risk taxonomy, the credit products and the credit process ▪ Clarity of explanation of the usage by banks of various tools to reduce the overall risk of their portfolio ▪ Accuracy of application of a credit analysis | <p>Written test (multiple-choice questions)</p> | <p>30%</p> |
| | <ul style="list-style-type: none"> ▪ Accuracy of application and calibration of a credit scoring model ▪ Depth of analysis of a business case on credit scorecard development ▪ Originality of analysis of a business case on credit scorecard development | <p>Case Report (group work)</p> | <p>30%</p> |
| 10.5 Seminar/ Labs | <ul style="list-style-type: none"> ▪ Quality of work in a team of international students ▪ Clarity of speech and ideas ▪ Quality of argument, introduction and conclusion in the presentation of the group report | <p>Oral presentation of the case report (for 15 minutes in front of peers and instructors)</p> | <p>40%</p> |
| 10.6 Minimum performance standard | | | |
| <ul style="list-style-type: none"> ▪ Demonstration of the ability to identify, analyse and interpret relevant information on credit products, credit process, types of credit risk and tools for credit risk management, to apply and calibrate a credit scoring model, and to develop a credit scorecard, taking the responsibility for tasks specific to the role in an international team. ▪ Correct answers provided to at least half of questions in the written examination. ▪ A minimum passing grade of 5, computed as $F = 0.30 \cdot T + 0.30 \cdot R + 0.40 \cdot P$, where F – final grade, T – written test grade, R – group report grade, P – presentation grade. | | | |





Date
14.09.2023

Course Coordinator
Prof. dr. Alin Andrieș

Seminar Coordinator
Prof. dr. Alin Andrieș

Prof. dr. Sorin Anton

Prof. dr. Sorin Anton

Dr. Cezar Chirilă

Dr. Cezar Chirilă

Date of approval
26.09.2023

Head of Department
Prof. dr. Ovidiu STOICA

