

APPROVED:
Vice-rector for study and methodical work
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«23» июль 2022.

***Управление рисками в финансовых учреждениях / Risk
management in financial institutions***

Syllabus of the course

Specialty	38.04.02 Management
Specialization	Risk management and controlling
Level of higher education	Master's Degree
Form of training	Full-time
Year of enrolment	2022

Authored by:

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Total number of hours	180	Form of final attestation: Exam: semester 2
incl:		
contact work	48	
self-study	96	
practical training	0	
control hours	36	

Hours distribution:

Semester:	2
Type of classes	Hours
Contact hours	20
Practical training	28
Laboratory work	
Total contact hours	48
Self-study	96
Control hours	36
Total academic hours	180
Total credits	5

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1. LEARNING OBJECTIVES

Objective:	To introduce students to the basics of modern risk management in financial institutions
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2. COURSE PLACE IN THE PROGRAMME STRUCTURE

Discipline B1.V Risk management in financial institutions refers to the part formed by the participants of the educational relations of Block 1.

3. EXPECTED LEARNING OUTCOMES

Code and name of graduate competence	Code and name of the competence achievement indicator	Expected learning outcomes
PC-2 – Is able to develop, implement and operate an integrated risk management system	PC-2.1 - Identifies risks in the corporation's activities; provides a quantitative and qualitative assessment of the risks of the corporation's activities; calculates indicators of quantitative analysis of financial risks	<p>To know: the theory of risk management and modern analytical methods for conducting applied research; the theory of risks and risk management in the activities of the corporation</p> <p>To be able to: apply modern analytical methods for conducting applied research and business process management, prepare analytical materials based on the results of their application; calculate indicators of quantitative analysis of financial risks</p> <p>To possess: methods for conducting applied research and business process management; calculation tools for quantitative analysis of financial risks</p>
UC-1 – Is able to carry out a critical analysis of problematic situations based on a systematic approach, to develop a strategy of actions	UC-1.3 – Determines and evaluates the practical consequences of possible solutions to the problem, develops and offers various strategic solutions to the problem, assessing their advantages and disadvantages	<p>To know: the theory of a systematic approach, methods of developing a strategy of action</p> <p>To be able to: identify and evaluate the practical consequences of possible solutions to problems</p> <p>To possess: tools for developing various strategic solutions to problems</p>

4. COURSE STRUCTURE AND CONTENT

Code and name of the topics	Course content	Academic hours			
		Contact work			Self-study
		Lectures	Practices	Workshops	
Topic 1. Uncertainty and risk.	Features of decision-making in conditions of uncertainty of future results. Risk determination based on uncertain future results. Business risks in the real sector of the economy. The main problems of risk management in real business.	2			6
Topic 2. Risk factors.	The main types of risk factors. External risk factors. Internal risk factors.	2	1		6
Topic 3. Risk decision strategies and basic risk management methods.	Features of the modern economy and their impact on business development strategies. The main strategies of business development and risk management. The main methods of risk management.	2	1		6
Topic 4. Risk measurement and risk decision-making criteria.	Formalization of the conditions of the risk situation. Risk measurement. Indirect methods of risk accounting. Criteria for assessing risk decisions.	2	2		8
Topic 5. Sensitivity analysis of long-term investment projects.	Sensitivity analysis as a method of assessing the sustainability of an investment project. Analytical approach to sensitivity analysis. Discrete sensitivity analysis. The Monte Carlo method.	2	2		6
Topic 6. Measuring the risk of long-term investment projects.	The main risk measures of a long-term investment project. Risk assessment of a long-term investment project based on an event tree. Risk assessment by the method of future development scenarios. Using a decision tree in risk assessment. investment projects	2	2		8
Topic 7. Operational risk management of a long-term investment project.	The main features of the risk management organization. Risk management based on early termination of the project. Operational risk management based on increased advertising costs. Risk management through diversification	2	2		6
Topic 8. Risk management of long-term investment projects using real options.	Real options: definitions, types and characteristics. Using simple real options for risk management. Combined real options. Built-in real option for business development. The impact of real options on the valuation of investments and the value of risky capital assets.		2		6
Topic 9. Risk management using mixed-type strategies based on real options.	Using combinations of real options to manage the risks of investment projects. Some possibilities of forming mixed-type solutions for risk management.		2		6
Topic 10. Risk management in terms of leasing use.	Some features of leasing contracts. Justification of leasing conditions. Risk management using real options embedded in the leasing contract.	2	2		6

Topic 11. Fundamentals of the theory of market options.	A market option as a form of a conditional fixed-term contract. A model of the equilibrium price of an option based on the value of an equivalent portfolio.		2		6
Topic 12. Using equivalent portfolios to assess risky investments and manage risks in the real sector of the economy.	Assessment of risky capital assets by the example of justification of the marginal cost of a plot of land for development. Risk management through conditional and unconditional fixed-term contracts for the sale of products. Comparative analysis of the use of a real option and an unconditional fixed-term contract for the sale of products for risk management.		2		8
Topic 13. Multi-period binomial models for assessing risky investments and business value in the real sector of the economy.	A multi-period binomial model of the equilibrium price of a market option. Adaptation of binomial model calculations to real business conditions. Experimental calculations based on a multi-period binomial model. Modification of the model in question.		2		6
Topic 14. Continuous models of justification of multi-period investments and business valuation.	Estimation of the value of a market option under conditions of continuous change in the price of the underlying asset (Black—Scholes formula). Using the Black—Scholes formula to estimate the value of real options for business expansion. Estimation of the current value of multi—period risky investments based on the Black-Scholes formula. Comparative analysis of calculations based on multi-period models.	2	2		6
Topic 15. Comprehensive justification of investment projects and features of risk decision assessment.	Justification of investment projects and features of risk decision assessment.	2	4		6
Control hours:					36
Total hours:		20	28	0	96

5. TEACHING AND LEARNING TOOLS OF THE COURSE

5.1 Recommended literature

Bibliographic description of the publication (author, title, type, place and year of publication, number of pages)	Digital resources
Vyatkin, V. N. Risk management : textbook / V. N. Vyatkin, V. A. Gamza, F. V. Mayevsky. — 2nd ed., reprint. and add. — Moscow : Yurayt Publishing House, 2022. — 365 p. — (Higher education). — ISBN 978-5-9916-3502-8.	https://urait.ru/viewer/risk-menedzhment-489098
Vorontsovsky, A.V. Risk management: textbook and workshop for universities / A.V. Vorontsovsky. — 2nd ed. — Moscow : Yurayt Publishing House, 2022. — 485 p. — (Higher education). — ISBN	https://urait.ru/viewer/upravlenie-riskami-489580

978-5-534-12206-0.	
Pimenov, N. A. Financial risk management in the system of economic security : textbook and workshop for universities / N. A. Pimenov. — 2nd ed., reprint. and add. — Moscow : Yurayt Publishing House, 2022. — 326 p. — (Higher education). — ISBN 978-5-534-04539-0.	https://urait.ru/viewer/upravl ... omicheskoy-bezopasnosti-489025
Sazykin, B. V. Operational risk management in a commercial bank / B. V. Sazykin. — 2nd ed., reprint. and add. - Moscow: Yurayt Publishing House, 2022. - 224 p. - (Professional practice). — ISBN 978-5-534-12030-1.	https://urait.ru/viewer/upravl ... m-v-kommercheskom-banke-494313

5.2 List of software (including national production)

- 7-Zip
- Microsoft Office Professional
- Microsoft Windows Professional

5.3 List of reference systems and modern professional databases

№	Name of reference systems and professional databases
1.	Digital library Grebennikon.ru – www.grebennikon.ru
2.	Science Digital Library eLIBRARY – www.elibrary.ru
3.	Science Digital Library КиберЛеника – www.cyberleninka.ru
4.	Database ПОЛПРЕД Справочники – www.polpred.com
5.	Database OECD Books, Papers & Statistics on the platform OECD iLibrary www.oecd-ilibrary.org
6.	Legal reference system КонсультантПлюс (installed resource UNECON or www.consultant.ru)
7.	Legal reference system «ГАРАНТ» (installed resource UNECON or www.garant.ru)
8.	Information and referral system «Кодекс» (installed resource UNECON or www.kodeks.ru)
9.	Digital library system BOOK.ru - www.book.ru
10.	Digital library system ЭБС ЮРАЙТ – www.urait.ru
11.	Digital library system ЗНАНИУМ (ZNANIUM) – www.znanium.com
12.	Digital library UNECON – opac.unecon.ru

6. TECHNICAL FACILITIES

There are special rooms for lectures, seminars, coursework, group and individual consultations, current and interim assessments, as well as rooms for self-study.

The premises are equipped with equipment and teaching aids.

The rooms for students' independent work are equipped with computers with Internet connection and access to the university's electronic learning environment.

Name of classroom	Classroom location
Classroom 1043 Training classroom (for lecture- and seminar-type classes, coursework, group and individual consultations, current control and intermediate attestation), equipped with a multimedia system. Specialised furniture and equipment: Educational furniture for 42 seats (21 desks), teacher's workplace, chalk board 1 pc. (3 sections), chair 1 pc., table 2 pcs., iso chair 2 pcs. Portable multimedia kit: Laptop HP 250 G6 1WY58EA, Multimedia projector LG PF1500G. Sets of display equipment and visual aids: multimedia applications for lecture courses and practical sessions, interactive teaching and visual aids.	191023, St. Petersburg, Griboedova canal, 30-32, lit. A, B, P
Classroom 1064 Training classroom (for lecture- and seminar-type classes, coursework, group and individual consultations, current control and intermediate attestation), equipped with a multimedia system. Special furniture and equipment: Educational furniture for 42 seats, a teacher's workplace, a whiteboard - 1 pc, a table - 1 pc, a chair - 1 pc, an interactive projector Epson-EB-455Wi - 1 pc, a computer Intel i3-2100 2.4 Ghz/4Gb/500Gb/Acer V193 19" - 1 pc. Sets of display equipment and visual aids: multimedia applications for lecture courses and practical sessions, interactive teaching and visual aids.	191023, St. Petersburg, Griboedova canal, 30-32, lit. A, B, P
Classroom 2007 Training classroom (for lecture- and seminar-type classes, coursework, group and individual consultations, current control and intermediate attestation), equipped with a multimedia system. Specialized furniture and equipment: Training furniture for 126 seats, teacher's workplace, m/m table - 1 pc, desk - 6 pcs, chair - 1 pc, chalk board (3 sectional) - 2 pcs, Chair - 3 pcs., Computer Intel i3-2100 2.4 Ghz/4Gb/500Gb/Acer V193 19" - 1 pc, Multimedia projector Type 2 Panasonic PT-VX610E - 1 pc, ScreenMedia Champion 244x183cm (SCM-4304) - 1 pc. Sets of display equipment and visual aids: multimedia applications for lecture courses and practical sessions, interactive teaching and visual aids.	191023, St. Petersburg, Griboedova canal, 30-32, lit. A, B, P
Classroom 2009 Training classroom (for lecture- and seminar-type classes, coursework, group and individual consultations, current control and intermediate attestation), equipped with a multimedia system. Special furniture and equipment: Educational furniture for 122 seats (study table 61 pcs., chairs 122 pcs.), the teacher's workplace, desk m/m, drawer 1 pc, chalk board 1 pc (3 sections), chair 1 pc, drawer 1 pc, chair 1 pc, Chair 2 pcs., Intel i3-2100 2.4 Ghz /4Gb/500Gb/Acer V193 19" - 1 pc, Sound projector Yamaha YSP-3000 - 1 pc, Projector stand with camera decks - 1 pc, Projection screen draper - 1 pc, Multimedia projector Type 2 Panasonic PT-VX610E - 1 pc, Screen Media D1 ceiling bracket - 1 pc. Sets of display equipment and visual aids: multimedia applications for lecture courses and practical sessions, interactive teaching and visual aids.	191023, St. Petersburg, Griboedova canal, 30-32, lit. A, B, P

7. METHODOLOGICAL GUIDELINES FOR STUDENTS

The following documents should be made available to the trainee before the start of the course:

- training and methodological documentation;
- local normative acts regulating the main issues of the organisation and implementation of educational activities, including those regulating the procedure for current monitoring and interim assessment of students;
- the schedule of consultations of the teaching staff.

The level and depth of mastering the discipline is determined by the active and systematic work of students in lectures, seminars, independent work, including in terms of identifying the most significant and relevant problems for further study. A special condition for qualitative mastering of the discipline is an effective

organisation of work, which allows distributing the academic workload evenly in accordance with the schedule of the educational process.

When preparing for classes, students have the opportunity to attend consultations with the staff of UNECON according to the timetable set out in the schedule of consultations.

The students' in- and out-of-classroom work should aim to form:

- the fundamentals of the learner's world view and scientific understanding;
- basic knowledge relevant to the training area and the declared professional field, forming the target and professional basis for training;
- professional competences oriented towards the needs of the labour market;
- an individual trajectory by mastering a unique set of professional competences that complement the learner's competence model, through a focus on specific professional specialised areas of knowledge defined by labour market representatives;
- meta-skills for learners, such as teamwork and leadership, data analysis, digital skills, project design and implementation, intercultural interaction.

8. SPECIFICATIONS FOR TEACHING DISABLED PERSONS

Students with disabilities, if necessary, are taught on the basis of an adapted work programme using special teaching methods and didactic materials that take into account the particularities of their psychophysical development, individual capacities and health status.

In order for disabled persons and persons with disabilities to master the curriculum, the University shall ensure that:

- for the visually impaired and visually impaired: availability of information on the timetable in accessible places and adapted forms for learners who are blind or visually impaired; presence of an assistant to assist the learner as needed; production of alternative formats of teaching materials (large print or audio files);
- for the hearing-impaired and hearing-impaired: adequate sound reproduction of information;
- for persons with disabilities and persons with mobility impairments: the possibility of unimpeded access for students to classrooms, restrooms and other areas of the department, as well as their stay in these areas.

Learners with disabilities and persons with disabilities are provided with printed and/or electronic educational resources in forms adapted to their disabilities. The education of students with disabilities may be organised with other students or in separate groups or organisations.

ASSESSMENT RESOURCES

1.1 Control tasks and assignments for interim attestation

1. According to available information, the risk-free rate is 5%, the expected return on shares is 7%. Calculate at what yield of the market portfolio the beta coefficient of the shares will be 0.4 (in the context of the CAPM model).
2. Show how the efficient markets hypothesis finds its practical application in financial risk management.
3. How does conditional probability differ from unconditional probability?
4. What risks allow you to measure volatility indicators?
5. What is a financial risk metric?
6. What explains the relationship between different groups of financial risks?
7. What are the main properties of financial risks?
8. Show how the option pricing theory is used in the company's structural credit risk assessment model.
9. What significant events in the financial markets can be classified as a "black swan"?
10. What is the point of default in the context of the KMV model?

1.2 Topics for written task

Is not provided by the work programme of the discipline.

1.3 Interim checkpoints

Number	Type	Method of conduct	Topic number
1	Case	written	1-8
2	Project analytic work	written	9-15
3	Monitoring	written	1-15

1.4 Other assessment objects

Is not provided by the work programme of the discipline.

1.5 Self-study

Name of self-study	Topic number
Writing an essay	1-12
Exam preparation	1-15

1.6 Grading scale

Scales of assessment and procedures for assessing learning outcomes of the discipline are regulated by the Regulations on the current control of progress and interim attestation of students in higher education programmes and the Regulations on the scoring and rating system.

A grading and rating system is used to assess the learning outcomes of the discipline:

The final control of the discipline is an examination (or a differentiated test), the final grade being formed in accordance with the scale given in the table below:

Points	Grade
≤ 54	failed
55-69	satisfactory
70-84	good
≥ 85	excellent

Grading scale

2 (points to 54)	Demonstrates a lack of understanding of the problem. Many of the requirements of the assignment are not met. An initial perception of the material is demonstrated. The work is incomplete and/or plagiarized.
3 (points 55-69)	Demonstrates a partial understanding of the problem. Most of the requirements of the task have been met. Mastery of the elements of the assigned material. The material is mostly clear and coherent.
4 (points 70-84)	Demonstrates considerable understanding of the issue by the discipline. All requirements of the assignment are fulfilled. The content of the completed tasks is disclosed and examined from different perspectives.
5 (points 85-100)	Demonstrates full understanding of the problem. All requirements of the assignment are fulfilled. Demonstrates proficiency in the discipline. The completed assignments are holistic, complete, structured, present different points of view and demonstrate creativity.