



Финансовые решения в ситуации риска / Financial decisions in a risk environment

Syllabus of the course

Specialty	38.03.02 Management
Specialization	Business management and digital innovations
Level of higher education	Bachelor
Form of training	Full-time
Year of enrolment	2022
Authored by:	
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Total number of hours	72	Form of final attestation: Test: semester 5
incl:		
contact work	32	
self-study	40	
practical training	0	
control hours	0	

Hours distribution:

Semester:	5
Type of classes	Hours
Contact hours	18
Practical training	14
Laboratory work	
Total contact hours	32
Self-study	40
Control hours	0
Total academic hours	72
Total credits	2

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1. LEARNING OBJECTIVES

Objective:	To form a holistic understanding of the principles of decision-making in the field of economics and finance in indeterministic conditions and to master the methods of rational choice in situations of uncertainty and risk.
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2. COURSE PLACE IN THE PROGRAMME STRUCTURE

The discipline B1.V.DV Financial decisions in a risk environment belongs to the elective disciplines of Block 1.

3. EXPECTED LEARNING OUTCOMES

Code and name of graduate competence	Code and name of the competence achievement indicator	Expected learning outcomes
UC-2 – Capable of identifying the range of tasks within a given objective and choosing the best way to achieve them, considering the applicable legal provisions, available resources and constraints	UC-2.2 – Selects the best ways to solve problems based on the applicable legal provisions, available resources and constraints	<p>Know: features of the decision-making problem in situations of uncertainty and risk, approaches to its modeling and selection of the optimal solution; approaches to building modern risk management systems for organizations.</p> <p>Be able to: formalize the initial data for the problem of decision-making in a situation of uncertainty and risk; quantitatively evaluate and compare decision options in situations of uncertainty and risk using the principles of dominance and risk criteria (metrics).</p> <p>Possess: methods of qualitative and quantitative risk analysis and assessment of the probabilistic distribution of the results of economic decisions; skills in choosing optimal economic decisions in situations of uncertainty and risk.</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.	The concept of uncertainty. Reasons for uncertainty. The role of science in eliminating uncertainty. Subjective assessment of possible outcomes. An assessment approach to defining the concept of "risk". Subjective and objective in understanding risk. Risk structure: causes, event, consequences, factors. A measure of risk. Information approach to defining the concept of "risk".	2			4
Topic 2. The	Risk theory as a decision-making tool. Deterministic and indeterministic models. Decision making problem.	2	1		6

problem of decision making under conditions of uncertainty and risk.	Model elements. Decision maker. The concept of environment. Managed and environment settings. Implementation function. Alternatives (strategies). State of the environment. Evaluation structure and objective function. Types of uncertainty. Undefined parameters. The problem of assessing the result in models with uncertain parameters. Distinction between conditions of uncertainty and risk from the point of view of decision making.				
Topic 3. Evaluation of decisions under conditions of uncertainty.	Approaches to decision making under conditions of uncertainty. Matrix games. Statement of the problem in terms of games with nature. The principle of successive reduction of uncertainty. Principles of dominance. Absolute dominance and dominance by state. The idea of applying selection criteria. Wald criterion. "Maximax" criterion. Laplace criterion. Savage criterion. Hurwitz criterion. Generalized Hurwitz criterion. Comparison of selection criteria.	4	4		6
Topic 4. Evaluating decisions under risk conditions.	Features of decision-making under risk conditions. Modeling a risk situation using a random variable: discrete and continuous distributions. Dominance by probability. Traditional criteria for comparing risky alternatives. Limit value criterion. Criterion of the most probable value. Expected value criterion. Variability criteria. Generalized criterion. Continuous distributions of a random variable. Constructing a histogram. Limit, most likely, and expected value tests for a continuous distribution. Value-at-Risk (VaR) criterion. Expected Shortfall (ES) criterion. Tail-Value-at-Risk (TVaR) criterion. Comparison of selection criteria under risk conditions. Assessing the value of information under risk conditions.	6	6		12
Topic 5. Implementation of a risk-based approach in socio-economic systems.	The concept of a risk management system (RMS). Evolution of approaches to risk management. Goals, objectives and logic for building a risk management system. Organizational risk management schemes according to domestic and international standards in the field of risk management. Concept of risk assessment. Identification, measurement and assessment of risks. Methods for measuring risks, their features and scope. Criteria for the significance of risks. Mapping the risk situation. Concept and classification of methods of influencing risk. Risk regulation and financing. Expanding the range of alternatives through the application of risk treatment techniques. Changes in the risk situation as a result of the application of risk treatment methods. Segregation of risks. Diversification of risks. Pooling risks. Principles for effective risk pooling.	2	2		8
Topic 6. Psychological aspects of decision-making under risk conditions.	Features of economic behavior under risk conditions and problems of its study. Types of human attitude towards risk. Theoretical approaches to describing the behavior of economic entities under risk conditions. Expected utility theory. A general approach to decision making using a utility function. Prospect theory.	2	1		4
Control hours:					0
Total hours:		18	14	0	40

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
Bogoyavlensky, Sergey Borisovich Risk assessment: textbook / S.B. Bogoyavlensky, I.V. Stonozhenko; Ministry of Science and Higher Education education Ros. Federation, St. Petersburg. state econ. University, Dept. banks, financial markets and insurance St. Petersburg: Publishing house of St. Petersburg State Economic University, 2021	http://opac.unecon.ru/elibrary ... D1%81%D0%BA%D0%BE%D0%B2_21.pdf
Vorontsovsky A.V. Risk management: textbook and workshop. — 2nd ed. — Electron. Dan. - Moscow: Yurayt Publishing House, 2019. - 485 p.	https://www.urait.ru/viewer/upravlenie-riskami-447050
Shapkin, A. S. Risk theory and modeling of risk situations: a textbook for bachelors / A. S. Shapkin, V. A. Shapkin. — 7th ed. — Moscow: Publishing and trading corporation “Dashkov and Co.”, 2019. — 880 p.	https://znanium.com/read?id=358275
Bogoyavlensky S.B. Typical problems of decision making under conditions of uncertainty and risk: textbook / S.B. Bogoyavlensky, I.V. Stonozhenko. – St. Petersburg: Publishing house of St. Petersburg State Economic University, 2016. – 79 p.	http://opac.unecon.ru/elibrary ... BD%D1%8F%D1%82%D0%B8%D1%8F.pdf
Bogoyavlensky S.B. Theoretical and practical aspects of decision making under conditions of uncertainty and risk: textbook. – St. Petersburg: Publishing house of St. Petersburg State Economic University, 2014. – 118 p.	http://opac.unecon.ru/elibrary/elib/465922979.pdf

5.2 List of software (including national production)

- 7-Zip
- LibreOffice
- ОС АЛТ образование 10

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 КиберЛенинка – 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
3-4-5 Classroom (for conducting lecture-type classes and seminar-type classes, course design (completing coursework), group and individual consultations, ongoing monitoring and intermediate certification), equipped with a multimedia complex. Specialized furniture and equipment: Educational furniture on 40 seats, teacher's workplace, 1 pc. lectern, 1 pc. 3-section chalk board, 1 pc. chair, 1 pc. hanger stand. Portable multimedia kit: HP 250 G6 1WY58EA laptop, LG PF1500G multimedia projector. Sets of demonstration equipment and educational visual aids: multimedia applications for lecture courses and practical exercises, interactive educational visual aids.	191023, St. Petersburg, Griboedova canal, 30-32, lit. A, B, P
3-4-7 Classroom (for conducting lecture-type classes and seminar-type classes, course design (completing coursework), group and individual consultations, ongoing monitoring and intermediate certification), equipped with a multimedia complex. Specialized furniture and equipment: Educational furniture on 25 seats, teacher's workplace - 2 pcs., marker board - 1 pc., hanger rack - 3 pcs., blinds - 2 pcs. Portable multimedia kit: HP 250 G6 1WY58EA laptop, LG PF1500G multimedia projector. Sets of demonstration equipment and educational visual aids: multimedia applications for lecture courses and practical exercises, interactive educational 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 organized with other students or in separate groups or organisations.

ASSESSMENT RESOURCES

1.1 Control tasks and assignments for interim attestation

Is not provided by the work programme of the discipline.

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	Problems solving	By means of technical tools and information systems	1-4
2	Test	By means of technical tools and information systems	4
3	Monitoring	By means of technical tools and information systems	1-6

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
Preparation for lectures and practical classes	1-6

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
<55	Not passed
>=55	Passed

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 plagiarised.
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.