МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ ЕКОНОМІЧНИЙ УНІВЕРСИТЕТ
ІМЕНІ СЕМЕНА КУЗНЕЦЯ

ЗАТВЕРДЖЕНО
на засіданні кафедри
менеджменту, логістики та інновацій
Протокол № 2 від 31.08.2023 р.

ПОГОДЖЕНО
Проректор з навчально-методичної роботи

Каріна НЕМАШКАЛО

УПРАВЛІННЯ РИЗИКАМИ В ЛОГІСТИЦІ

робоча програма навчальної дисципліни (РПНД)

Галузь знань	**07 "Управління та адміністрування"**
Спеціальність	**073 "Менеджмент"**
Освітній рівень	**перший (бакалаврський)**
Освітня програма	**"Логістика"**

Статус дисципліни	**вибіркова**
Мова викладання, навчання та оцінювання	**англійська**

Розробник:
к.е.н., викладач Підписано КЕП Лідія МАЖНИК

Завідувачка кафедри
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інновацій Олена ЯСТРЕМСЬКА

Гарант програми Тетяна КОЛОДІЗЄВА

Харків
2023

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS

APPROVE
at the meeting of the department
management, logistics and innovation
Protocol № 2 of 31.08.2023

APPROVE
Vice-rector for educational and methodical work

Karina NEMASHKALO

MANAGEMENT RISKS IN LOGISTICS

Program of the course

Field of knowledge	**07 "Management and administration"**
Specialty	**073 "Management"**
Study cycle	**first (bachelor)**
Study programme	**Logistics**
Course status	**Selective**
Language	**English**

Developer:
PhD of Economics — Digitally signed — Lidiia MAZHNYK

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Kharkiv
2023

INTRODUCTION

Management risks in logistics is a new direction in the theory of enterprise management.

Course "Management risks in logistics" belongs to selective educational components of the educational program "Logistics". The working program of the educational discipline was developed in accordance with the requirements of the industry standard of higher education on the basis of the educational and professional bachelor's training program.

The purpose of the course is to teach students the necessary theoretical foundations, methodological approaches and practical skills in the analysis, assessment and modeling of risks and their management during decision-making in logistics systems.

The task is to master risk management skills to ensure effective management of the logistics system.

The subject of the course is logistics risks, risk assessment, risk management.

The object of the educational discipline is logistic risks, risk assessment, risk management. The subject of the academic discipline is logistical risks that arise in the process of entrepreneurial activity between subjects, the peculiarities of interaction in the process of risk assessment and management.

The results of training and competence formed by the course are defined in the table. 1.

Table 1

Learning outcomes and competences formed by the course

Learning outcomes	**Competences that must be mastered by a student of higher education**
LO 5	SC 8
LO 11	SC 18
LO 16	SC 11
LO 18	SC 17
LO 19	SC 18
LO 22	SC 20

where, SC 8. Ability to plan the activities of the organization and manage time.

SC 11. Ability to create and organize effective communications in the management process.

SC 17 The ability to carry out organizational, technological, technical and information support of the basic functions of logistics. The ability to manage the logistics activities of enterprises in the areas of production, stocks, warehousing, procurement, sales, transportation and cargo processing.

SC 18. Ability to develop a logistics service system, logistics service strategy. Ability to organize logistics service for consumers and manage orders in the logistics service system. Ability to form a logistics service system and service quality system.

SC 20. The ability to effectively analyze and integrate the logistics concept into international activity, to analyze the conceptual foundations and define the main categories of international logistics, to apply the optimization factor in the delivery of goods in international communication.

The ability to choose the optimal mode of transport in international communication, to make effective decisions in the process of international logistics activity .

LO 5. Describe the content of the functional areas of the organization.

LO 11. Demonstrate skills in situation analysis and communication in various areas of the organization.

LO 16. Demonstrate the skills of independent work, flexible thinking, openness to new knowledge, be critical and self-critical.

LO 18. Use the principles and methods of logistics in the general management system of the enterprise to reduce costs and optimize logistics flows and processes of organizations.

LO 19. To apply a logistic approach to the management of organizations' resources and to ensure an increase in their competitiveness. Demonstrate skills in optimizing the organizational and technological aspects of the main functions of logistics using communication and information support.

LO 22. The ability to apply the optimization factor in the delivery of goods in international communication, to choose the optimal mode of transport in international communication. Analyze international agreements, analyze risks in international logistics.

COURSE CONTENT

Content Module 1. The essence of logistics risks

Topic 1. Economic essence of risk in logistics

1.1. Definition of the term "risk".

The essence of risks in logistics. The concept of "risk". Definition of the concept of "risk" by different authors.

1.2. Classification of risks.

Classification of risks according to different characteristics. Operational risk. Market risk. Business risk. Credit risk. Acceptable risk. Critical risk. Catastrophic risk. Entrepreneurial risk.

1.3. Risk, reliability and insurance in logistics systems.

Peculiarities of risks in the logistics system. The essence of risk and its reliability and insurance in logistics systems.

Topic 2. Risk assessment methods

2.1. Risk measurement.

The essence of the definition of "risk measure". List and sequence of the measurement process. Peculiarities of risk measurement in relation to business entities.

2.2. Assessment of the probability of adverse events.

Assessment of the probability of adverse events. Methods of assessing the probability of the occurrence of adverse events: the method of building event trees, the method of "events – consequences", the method of hazard indices. Dow index.

2.3. Damage assessment.

Damage assessment. Direct damages. Indirect battles. Property damage. Loss of profit. Loss of working days. Expenses for the investigation of the incident. Lost benefit. Fines and claims due to non-delivery of products. Legal costs. Medical

expenses. Payments of personnel compensation. Retraining of personnel. Loss of image.

Content Module 2. Risk management and their insurance

Topic 3. Risk management

3.1. General scheme of the risk management process.

General scheme of risk management. Risk management process. Statistical methods of risk assessment. Expert methods of risk assessment.

3.2. Organization of risk management at the enterprise.

Organization of risk management at the enterprise. The main organizational aspects of creating a structure with risk. Provisions on risk management. Guide to risk management.

3.3. Risk management methods and their selection.

Risk management methods. Risk avoidance or rejection. Acceptance of risks. Loss prevention. Reduction of damages. Insurance. Self insurance. Transfer of risks (different from insurance). Selection of risk management methods for various risk factors.

Topic 4. Risk insurance

4.1. Basic concepts, types and methods of insurance.

The essence of insurance. Basic concepts of insurance. Insurance risks. Types of insurance. Methods of insurance. Proportional insurance. Non-proportional insurance.

4.2. Land and water transport insurance.

Land and water transport insurance. Casco insurance. Automobile transport insurance. Accident insurance for vehicle drivers and passengers. Insurance of railway rolling stock. Marine insurance of ships, groups of shipowner losses.

4.3. Air transport insurance.

Air transport insurance. Terms of aviation insurance. Specifics of aviation insurance. Air transport insurance policy.

4.4. Cargo insurance.

Cargo insurance. Cargo insurance contract. Freight insurance.

4.5. Liability insurance of the carrier.

Liability insurance of the carrier. Liability insurance contract of the motor carrier. Procedure for insurance payment of a property claim. Motor carrier liability insurance. Liability insurance of airport owners. Risks in shipowners' liability insurance.

The list of practical (seminar) and laboratory studies by academic discipline is given in the table. 2.

Table 2

List of practical (seminar) and laboratory studies

Name of the task	Content
Topic 1. Economic essence of risk in logistics	Practical (seminar) studies: 1.1. Definition of the term "risk". 1.2. Classification of risks. 1.3. Risk, reliability and insurance in logistics systems Laboratory studies 1: Risk in logistics and its insurance in the system
Topic 2. Risk assessment methods	Practical (seminar) studies: 2.1. Risk measurement. 2.2. Assessment of the probability of adverse events. 2.3. Damage assessment Laboratory studies 2: Assessment of risk and loss
Topic 3. Risk management	Practical (seminar) studies: 3.1. General scheme of the risk management process. 3.2. Organization of risk management at the enterprise. 3.3. Risk management methods and their selection Laboratory studies 3: Organization of the process and selection of risk management methods
Topic 4. Risk insurance	Practical (seminar) studies: 4.1. Basic concepts, types and methods of insurance. 4.2. Land and water transport insurance. 4.3. Air transport insurance. 4.4. Cargo insurance. 4.5. Liability insurance of the carrier Laboratory studies 4: Risk insurance

The list of self-studies in the course is given in table 3.

Table 3

List of self-studies

Name of the theme	Content
Topic 1. Economic essence of risk in logistics	1. Approaches to defining the concept of "risk". 2. Basic risk classification 3. Features of logistics risks. 4. Relationship of management and insurance in logistics systems. 5. The main elements of risk in logistics systems
Topic 2. Risk assessment methods	1. Tools of the statistical method of risk calculation. 2. Analogous methods of assessing the level of risk. 3. Direct and indirect damages. 4. Integrated risk assessment.
Topic 3. Risk management	1. The main stages of the risk management process. 2. Documentation for risk management. 3. Risk management program at the enterprise: the procedure for drawing up
Topic 4. Risk insurance	1. The relationship between the cargo insurance system and

	the carrier's liability. 2. Rules of cargo transport insurance. 3. Claims under the freight forwarder's insurance policy and the procedure for considering the claim

The number of hours of lectures, practical (seminar) and laboratory studies and hours of self-study is given in the technological card of the course.

TEACHING METHODS

In the process of teaching an educational discipline, in order to acquire certain learning outcomes, to activate the educational process, it is envisaged to use such learning methods as:

Verbal (lecture (Topic 1, 4), problematic lecture (Topic 2), lecture provocation (Topic 3)).

In person (demonstration (Topic 1 - 4)).

Practical (practical and laboratory work (Topic 1 - 4), essay (Topic 1), case method (Topic 3, 4)).

FORMS AND METHODS OF ASSESSMENT

The University uses a 100-point cumulative system for assessing the learning outcomes of students.

Current control is carried out during lectures, practical, laboratory and seminar classes and is aimed at checking the level of readiness of the student to perform a specific job and is evaluated by the amount of points scored:

− for courses with a form of semester control as an exam: maximum amount is 60 points; minimum amount required is 35 points.

The final control includes current control and an exam.

Semester control is carried out in the form of a semester exam.

The final grade in the course is determined:

− for disciplines with a form of exam, the final grade is the amount of all points received during the current control and the exam grade.

During the teaching of the course, the following control measures are used:

Current control: Individual educational and research tasks (25 points), written test (10 points), colloquium (20 points), essay (5 points).

Semester control: Grading including Exam (40 points).

More detailed information on the assessment system is provided in technological card of the course.

An example of an examination paper

Simon Kuznets Kharkiv National University of Economics
First (bachelor) level of higher education
"Management" specialty
Study programme "Logistics".
Course "Management risks in logistics"

EXAM CARD 1

Task 1 (test), 20 points

1. The modern concept of "risk":

A. It is used to indicate possible material damage;

B. Associated with both possible material loss and possible gain;

C. Identified only with material damage received.

2. Changes in currency exchange rates, market conditions, tax legislation are factors:

A. Pure risks;

B. Speculative risks.

3. Indirect profit losses associated with the influence of risk factors are:

A. Losses from failure to perform a transaction, failure to conclude an agreement, failure to sell goods;

B. Costs for organizing and conducting risk management activities;

C. Possible losses arising from business operations.

4. The size of the risk coefficient in the range from 0.3 to 0.6 characterizes:

A. Minimum level of risk;

B. Acceptable level of risk;

C. High level of risk;

D. Unacceptable level of risk.

5. The criterion for making a decision under conditions of uncertainty, based on the choice of the maximum average value, is called:

A. Laplace's criterion; B. Wald's criterion;

B. Hurwitz criterion;

C. Savage's criterion.

6. In a developed risk management system, risk management tactics are implemented on the basis of ...

A. Systems of organizational documentation - resolutions, instructions, methodical and technological materials that ensure effective implementation of the chosen risk alternative;

B. Developed and approved risk management concept;

C. Situational approach, in which risk assessment and implementation of risk measures takes place according to the risk situation, taking into account specific factors and conditions.

7. Formation of the system of insurance stocks and reserves refers to the method:

A. Diversification;

B. Limitation;

C. Compensation;

D. Insurance.

8. The risks associated with the purchasing power of money include:

A. Liquidity risks, currency, deflationary, inflationary risks;

B. Risk of reduced profitability, risk of direct financial losses, risk of lost profit;

C. Investment and financial risks.

9. Expert methods of risk decision-making are:

A. Qualitative evaluations by specialists, which allow to most fully describe the situation of making a risky decision and to consider options that are difficult to formalize;

B. A complex of logical and mathematical procedures aimed at obtaining information from experts, its analysis and generalization for the purpose of choosing rational solutions.

10. The concept of acceptable risk involves ...

A. The need to choose management decisions in accordance with the manager's subjective assessment of the level of risk;

B. Ability to take a risk, if its value is no more than 10%;

C. Identification of the starting, estimated and final level of risk and continuous implementation of risk management measures on this basis.

Task 2 (diagnostic), 8 points

Using the data of the table. 1, determine the level of profitability of assets in the planned period, it is necessary to calculate the variation, dispersion, standard root mean square deviation.

Table 1

Economic profitability of the company's assets for 2013–2022, %

Profitability of enterprise assets	Years									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	3	11	11	1	9	11	11	4	8	13

Task 3 (heuristic), 12 points

Kharkiv company "T Prestige" LLC is a manufacturer of confectionery products. One of the products offered by the company is cakes with custard cream. The company sells 15, 16 and 10 boxes over five days. The enterprise receives UAH 450 from the sale of each box. profit As you know, cakes with custard have a very short shelf life. Therefore, if the box is not sold within 5 days, it must be destroyed. Production of one box of cakes costs the company UAH 108. The probabilities of selling 15, 16, and 10 boxes during the week are 0.45, respectively; 0.25; 0.3. Provide recommendations on the volume of cake production to the head of the enterprise. Construct a matrix of the game with nature (the LLC is a player with nature, and nature is a trading environment). Calculate the producer's average expected profit using state of nature probabilities. Draw conclusions based on the calculations.

Approved at the meeting of the Department of management, logistics and innovation No. ____ dated "___"_____20___.

Examiner Assoc.prof. Lidiia MAZHNYK

Chief of Department Prof. Olena IASTREMSKA

Evaluation criteria

The final marks for the exam consist of the sum of the marks for the completion of all tasks, rounded to a whole number according to the rules of mathematics.

The algorithm for solving each task includes separate stages that differ in complexity, time-consumingness, and importance for solving the task. Therefore, individual tasks and stages of their solution are evaluated separately from each other as follows:

each correct answer to a test question is valued at 2 points.

The maximum number of points for the correct solution of test tasks is equal to 20 points. The maximum number of points for the diagnostic task is 8 points, for the heuristic task – 12 points.

The following criteria are used to assess the level of compliance of students in solving practical tasks:

Diagnostic task. A score of 8–7 points is given if the practical task is performed correctly using a typical algorithm. A score of 6–4 points is given if the task is completed in full, but inaccuracies in calculations and design are admitted; wording of terms, categories, small arithmetic errors in calculations when making a decision; or provided that the task is completed properly by at least 70%. A score of 3–2 points is given if the task is completed by at least 50%, provided that it is properly completed; or at least by 70%, subject to errors in calculations and registration.

Heuristic task. An assessment of 12–10 points is given for the complete assimilation of the program material and the ability to navigate in it, the use of additional material, and manifestations of a creative nature. The student demonstrates conscious application of knowledge to solve practical situations. When performing the heuristic task, the student must make correct conclusions about the proposed production situation and formulate his own recommendation for improving the problem. The design of the completed task should be neat.

A score of 9–7 points is given for complete completion of the task, but lack of a creative approach and demonstration of knowledge of additional material. In general, the task was performed methodically correctly and neatly designed.

A score of 6–2 points is given for a partial ability to apply theoretical knowledge to solve practical problems; provided that the task is partially completed, and the student demonstrated understanding of the main provisions of the subject material when answering.

The final grade from the discipline "Management risks in logistics" is calculated in accordance with the Methodology for transferring the success indicators of the University's students' knowledge to the ECTS grading system and is converted into a final grade on the ECTS scale.

RECOMMENDED BOOKS

Main

1. Балуєва О. В. Управління ризиками в логістиці: навчальний посібник / О. В. Балуєва, В. М. Гончаров, Р. Р. Ларіна. – Львів: вид-во Магнолія 2006, 2021. – 254 с.

2. Боровик М. В. Ризик-менеджмент / М. В. Боровик ; Харків. нац. ун-т міськ. госп-ва ім. О. М. Бекетова. – Харків :ХНУМГ ім. О. М. Бекетова, 2018. – 65 с.

3. Мажник Л.О. Логістика невиробничої сфери: Управління ризиками в логістиці: навчальний посібник / Л. О. Мажник, В. О. Письмак. – Харків : ХНЕУ ім. С. Кузнеця, 2016. – 164 с. [Електронний ресурс]. – Режим доступу: http://www.repository.hneu.edu.ua/jspui/handle/123456789/14813.

Additional

4. Improvement of efficiency of enterprises operating in the services sector on the basis of logistics concepts / V. Pysmak, L. Mazhnyk // Економічний часопис-XXI, 2016. – 156 вип. – 101–104 p.

5. Pysmak V. Innovative development of the management potential at a modern enterprise / V. Pysmak, L. Mazhnyk, T. Sigaieva // Economics of Development, 2021. 20 (1), 46–55. – Режим доступу: http://repository.hneu.edu.ua/handle/123456789/27163.

6. Демченко Г. В. Ризик-менеджмент : конспект лекцій для студентів спеціальності 073 «Менеджмент» першого бакалаврського рівня. – Харків: ХНЕУ ім.С.Кузнеця, 2021. – 65 с. [Електронний ресурс]. – Режим доступу: http://repository.hneu.edu.ua/handle/123456789/25441.

7. Жовніренко Г. О. Економічні ризики : навч. посіб. – Донецьк : ДонІЗТ, 2011. – 142 с.

8. Коюда В. О. Ризик-менеджмент. Методичні рекомендації до самостійної роботи студентів спеціальності 073 «Менеджмент» першого (бакалаврського) рівня. – Харків : ХНЕУ ім. С. Кузнеця, 2017. – 48 с. [Електронний ресурс]. – Режим доступу: http://www.repository.hneu.edu.ua/bitstream/123456789/19808/1/2017-%D0%9A%D0%BE%D1%8E%D0%B4%D0%B0_%D0%92_%D0%9E__%D0%9A%D0%BE%D1%81%D1%82%D1%96%D0%BD%D0%B0_%D0%9E_%D0%9C.PDF.

9. Самойленко В. В. Особливості формування системи управління ризиками на підприємстві – Київ : Гельветика. – 2022. – Т. 33 (72). – № 1. – С. 28–36. [Електронний ресурс] – Режим доступу: http://repository.hneu.edu.ua/handle/123456789/27399.

Information resources

10. ISO 31000:2018(en). Risk management – Guidelines. [Електронний ресурс] – Режим доступу: https://www.iso.org/obp/ui/#iso:std:iso:31000:ed-2:v1:en.