

**NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL
SCIENCES OF UKRAINE**

Department of Management named after prof. J. S. Zavadskyi



Dean of the Faculty of Agrarian
Management

Anatolii OSTAPCHUK

“30” _____ 2023

“ENDORSED”

By the meeting of the Department of
Management named after
Prof. J. S. Zavadskyi
Record № 8 dated on “22” May 2023
Head of the Department

 Tetiana BALANOVSKA

“REVIEWED”

Guarantor of the Academic Program
Marketing

 Violeta HERAIMOVYCH

PROGRAM OF THE COURSE

“LOGISTICS”

Specialization 075 Marketing
Educational Program Marketing
Faculty of Agrarian Management

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1. Description of the academic discipline “LOGISTICS”

Field of knowledge, specialty, specialization, educational degree		
Educational degree	"Bachelor"	
Branch of knowledge	07 "Management and administration"	
Specialty	075 "Marketing"	
Educational program	"Marketing"	
Characteristics of the academic discipline		
Kind	Mandatory	
Total hours	120	
Number of ECTS credits	4	
Number of content modules	2	
Course project (work) (if it is in the working curriculum)	-	
Form of control	Test	
Indicators of academic discipline for full-time and part-time forms of education		
	full-time education	external form of education
A year of training	2 (shortened period of study)	
Semester	8	
Lecture classes	24 год.	
Practical, seminar classes	24 год.	
Independent work under the guidance of a teacher	72 год.	
Individual tasks	-	
Number of classrooms per week hours for full-time education	4 год.	

2. Purpose, tasks and competencies of the educational discipline

The purpose educational discipline is the formation of future specialists' system knowledge and understanding of the conceptual foundations of logistics, theory and practice of the development of this area, and the acquisition of independent work skills for the assimilation of educational material related to modern methods of managing material and other flows in modern conditions.

The task of the academic discipline is for students of higher education to acquire in-depth theoretical knowledge on the concept, strategy and tactics of logistics; mastering by students of methodological tools for the development and implementation of logistics tasks; mastering the skills of logistic thinking and developing proposals for improving logistics systems and their functioning mechanisms; acquisition of skills to assess the economic efficiency and consequences of the implementation of logistical decisions in the implementation of enterprise management.

Competence acquisition:

Integral competence (IC): the ability to solve complex specialized tasks and practical problems in the field of marketing activities or in the learning process, which involves the application of relevant theories and methods and is characterized by the complexity and uncertainty of conditions.

General competences (GC):

GC 1. The ability to realize one's rights and responsibilities as a member of society, to be aware of the values of a civil (free democratic) society and the need for its sustainable development, the rule of law, the rights and freedoms of a person and a citizen in Ukraine.

GC 4. Ability to learn and master modern knowledge.

GC 5. Determination and persistence in relation to assigned tasks and assumed responsibilities.

GC 6. Knowledge and understanding of the subject area and understanding of professional activity.

GC 10. Ability to communicate in a foreign language.

Special (professional) competences (SK):

SK 1. The ability to logically and consistently reproduce the acquired knowledge of the subject area of marketing.

SK 13. The ability to plan and implement effective marketing activities of a market entity in a cross-functional section.

SK 14. Ability to propose improvements to marketing functions.

Program learning outcomes (PLO):

PLO 4. Collect and analyze the necessary information, calculate economic and marketing indicators, justify management decisions based on the use of the necessary analytical and methodical tools.

PLO 5. Identify and analyze the key characteristics of marketing systems of various levels, as well as the peculiarities of the behavior of their subjects.

PLO 9. Assess the risks of conducting marketing activities, establish the level of uncertainty of the marketing environment when making management decisions.

PLO 17. Demonstrate written and oral professional communication skills in national and foreign languages, as well as proper use of professional terminology.

PLO 23. Conduct research on the international business environment, analyze the situation on the world market of goods and services, determine the specifics and marketing program of the enterprise entering foreign markets.

3. Program and structure of the academic discipline “LOGISTICS”

CONTENT MODULE 1

THEORETICAL BASIS OF LOGISTICS MANAGEMENT IN ENTERPRISES

Topic 1. Logistics in a market economy.

History of the term and definition of "logistics". The purpose of logistics. Rule "7 R" or logistic mix. System-forming, integrating, regulating resulting function. Stages of logistics development. Modern concept of logistics. Macrologistics, micrologistics. Types and areas of micrologistics. External and internal logistics.

Topic 2. Characteristics of the main elements of logistics.

Element of logistics. Supply logistics. Tasks of procurement logistics. The duration of the order. Frequency of placing orders. Order fulfillment period. Costs per order. Distribution. Efficiency of the logistics system. The purpose of logistics management. Costs. Customer service. The concept of perfect order. Productivity. Cost minimization. Classification of logistics costs. Logistics information system.

Topic 3. Technological processes and management of material flows.

The only technological process in logistics. Technological process of cargo processing. Control over the execution of technological processes. Material flow. Elementary material flow. Integral (general) material flow. The tension of the material flow. Power of material flow. Material flow parameters. Problems in managing material and information flows. Classification of material flows. Management of material flows.

Topic 4. Management of material flows in logistics systems.

Flow management. Marketing logistics. Forms of organization of material and technical support and sales in logistics systems. The main advantages of centralizing the management of logistics and sales services. Disadvantages of the decentralized form of organization of supply and sales services. Material stocks. Purpose of stock rationing. Motives for stockpiling. Types of stocks. Stock management system with fixed order size. Inventory management system with fixed order frequency. A system with a set periodicity of stock replenishment to a set level. The "Minimum-Maximum" system. Operational management system. Parameters of the inventory management system. ABC analysis. XYZ analysis.

CONTENT MODULE 2

CHARACTERISTICS OF THE MAIN TYPES OF LOGISTICS

Topic 5. Procurement logistics and order placement

Purchasing logistics. Purpose of procurement logistics. The process of managing material flows in procurement logistics. Make or buy tasks. Decision in favor of purchases. Stages of supplier selection. Search for potential suppliers. Analysis of potential suppliers. Evaluation of the results of work with suppliers. Supplier development. The optimal (economical) size of the order. Just-in-time delivery system. Comparative characteristics of traditional delivery and just-in-time delivery. Advantages of the "just in time" concept. Disadvantages of the "just in time" system.

Topic 6. Production logistics

Production logistics. The purpose of production logistics. Basic production processes. Auxiliary production processes. Service production processes. Comparative analysis of traditional and logistic management concepts. "Push" system of production organization. MRP system. "Pulling" system of production organization. KANBAN micrologistics system. "Optimized production technology." The logistic concept of "lean production" (lean production, LP). Comparison of "pull" and "push" production systems.

Topic 7. Distribution logistics

Distribution logistics. Composition of distribution logistics tasks at the micro and macro levels. Distribution network. Advantages and disadvantages of involving intermediaries in sales. Criteria for choosing distribution channels. Approaches to choosing a distribution channel. Distribution center. Location of warehouses near sales markets. Location of warehouses near production facilities. Intermediate location. The method of complete search. Heuristic methods. The method of determining the center of gravity. Test point method.

Topic 8. Logistics of storage.

The main purpose of warehouses. Functions of warehouses. Types of warehouses. Logistics process in the warehouse. Basic module. Technological map. Technological graphics.

Topic 9. Transport logistics.

Tasks of transport logistics. Means of transport. Logistic assessment of modes of transport. Transport system of Ukraine. Means for moving products. Modern cargo delivery systems. Unimodal (unimodal) transportation. Multimodal transportation. Intermodal transportation. Types of tariffs.

Topic 10. Transport and forwarding logistics services.

Classification of transport and forwarding services. Transport services, including the organization and transportation of goods from the supplier to the recipient. Loading and unloading services. Expedition services. Transport and forwarding service. Transport and forwarding agents. Organization of transport and forwarding service. Organization of centralized transportation. Calendar schedule of transportation. Transportation routing. Pendulum routes. Ring routes. Routing schemes of intra-production transportation. Transport and technological systems of cargo delivery. Container, roller, package, light cargo delivery system. Criteria for selecting freight forwarders and transport forwarding agents.

The structure of the academic discipline

Names of content modules and topics	Number of hours											
	Full-time						Correspondence form					
	everything	including					everything	including				
		1	p	lab	ind	s.r.		1	p	lab	ind	s.r.
Content module 1. Theoretical basis of logistics management in enterprises												
Topic 1. Logistics in a market economy	12	2	2			8						
Topic 2. Characteristics of the main elements of logistics	14	3	3			8						
Topic 3. Technological processes and management of material flows.	14	3	3			8						
Topic 4. Management of material flows in logistics systems.	20	4	4			12						
Together according to content module 1	60	12	12			36						
Content module 2. Characteristics of the main types of logistics												
Topic 5. Procurement logistics and order placement	8	2	2			4						
Topic 6. Production logistics	10	2	2			6						
Topic 7. Distribution logistics	10	2	2			6						
Topic 8. Logistics of storage	10	2	2			6						
Topic 9. Transport logistics	10	2	2			6						
Topic 10. Transport and forwarding logistics services	12	2	2			8						
Together according to content module 2	60	12	12			36						
Only hours	120	24	24			72						

4. Topics of seminar classes

No s/p	Topic name	Number Hour
1	Logistics in a market economy	1
2	Characteristics of the main elements of logistics	3
3	Technological processes and management of material flows	3
4	Management of material flows in logistics systems	2
5	Procurement logistics and order placement	-
6	Production logistics	1
7	Distribution logistics	1
8	Logistics of storage	1
9	Transport logistics	-
10	Transport and forwarding logistics services	1
	Together	13

5. Topics of practical classes

No s/p	Topic name	Number Hour
1	Logistics in a market economy	1
2	Characteristics of the main elements of logistics	-
3	Technological processes and management of material flows	-
4	Management of material flows in logistics systems	2
5	Procurement logistics and order placement	2
6	Production logistics	1
7	Distribution logistics	1
8	Logistics of storage	1
9	Transport logistics	2
10	Transport and forwarding logistics services	1
	Together	11

6. Topics of laboratory classes

(Not provided for in the curriculum)

7. Topics of independent studies

No s/p	Topic name	Number Hour
1	Logistics in a market economy	8
2	Characteristics of the main elements of logistics	8
3	Technological processes and management of material flows	8
4	Management of material flows in logistics systems	12
5	Procurement logistics and order placement	4
6	Production logistics	6
7	Distribution logistics	6
8	Logistics of storage	6
9	Transport logistics	6
10	Transport and forwarding logistics services	8
	Together	72

8. Samples of control questions, tests to determine the level of knowledge acquisition of students

1. Material flows, their characteristics and classification.
2. Describe logistics channels and networks in logistics.
3. Reveal the purpose, tasks and functions of logistics.
4. Warehousing and its significance for the functioning of the logistics system.
5. Reveal the essence of logistics operations.
6. Justification of supplier selection.
7. The essence of the logistics subsystem, links and elements of the logistics system.
8. Reveal the essence of modern information technology in logistics.
9. Basic logistics concepts and their characteristics.
10. Reveal the essence of modern telecommunication systems for accompanying cargo transportation.
11. Organization and management of purchasing activities.
12. Reveal the essence of "push" and "pull" material flow management systems in production logistics.
13. Purchasing logistics: essence, tasks, parameters.
14. The concept of total costs: essence and appropriateness of application.
15. The concept of total quality management: basic principles.
16. Procurement logistics: purpose, tasks, principles.
17. Methodology for selecting suppliers of material resources.
18. Production logistics: definition and purpose.
19. Logistics system "Just in time".
20. Logistics system "Lean production"
21. Sales logistics: purpose and tasks.
22. Modern problems of sales logistics in agricultural production.

23. Warehouse logistics: basic concepts.
24. Purpose and functions of warehouses.
25. The essence and tasks of transport logistics.
26. Transport logistics system of the enterprise.
27. Retail logistics: purpose and meaning.
28. Compositions, their definitions, types and functions.
29. Describe the main models of inventory management.
30. Explain the purpose of maximum and minimum stocks.
31. Risks of holding stocks.
32. Requirements for the organization of material flow management.

Tests to determine the level of knowledge acquisition by students

1. Logistics as an economic science was formed on the basis of ideas and methods _____.
2. Logistics operations are _____
3. The founder of logistics is considered to be:
 - A. T. Levitt;
 - B. A. Jomini;
 - C. P. Drucker;
 - D. E. Meskona.
4. Logistics in translation from the Greek language means:
 - A. logic;
 - B. balance of systems;
 - C. the art of calculating, reasoning;
 - D. establish identity.
5. Management of material flows in the process of providing the enterprise with material resources is logistics:
 - A. production;
 - B. purchasing;
 - C. informative;
 - D. sales.

6. One-time supply of material resources is:

- A. continuous material flows;
- B. discrete material flows;
- C. constant material flows;
- D. blitz streams.

7. The concepts of "order placement frequency", "order fulfillment", "costs per order" are related to such an element of logistics as:

- A. supply;
- B. distribution;
- C. information support;
- D. warehousing.

8. The KANBAN system was first implemented by the corporation:

- A. Ford Motors;
- B. Toyota Motors;
- C. General Motors;
- D. Mitsubishi.

9. Depending on the type of logistics chains, logistics systems are distinguished:

- A. macrologistic and micrologistic;
- B. regional, national, international;
- C. with direct connections, staggered, flexible;
- D. external, internal.

10. A decision in favor of own production and against purchases can be made if:

- A. the need for product components is small;
- B. existing suppliers are unable to provide the required quality parameters;
- C. there is great flexibility in choosing possible sources of supply and substitute products;
- D. there is no administrative or technical experience for the production of the necessary products.

9. Teaching methods

Teaching methods are methods of joint activity and communication between the teacher and students of higher education, which ensure the development of positive motivation for learning, mastering the system of professional knowledge, abilities and skills, the formation of a scientific worldview, the development of cognitive powers, the culture of mental work of future specialists.

The following teaching methods are used during the educational process:

Depending on the source of knowledge: verbal (explanation, conversation, discussion, dialogue); visual (demonstration, illustration); practical (solving problems, business games).

According to the nature of cognitive activity: explanatory and visual problem presentation; partly search and research methods.

By place in educational activity:

- methods of organization and implementation of educational activities, combining verbal, visual and practical methods; reproductive and problem-searching; methods of educational work under the guidance of a teacher and methods of independent work of students of higher education;

- methods of stimulating and motivating educational work, including cognitive games, educational discussions, role-playing situations;

- methods of control and self-control of educational activities: methods of oral and written control; individual and frontal, thematic and systematic control.

In the process of teaching an academic discipline, the following educational technologies are used to activate the educational and cognitive activity of students of higher education:

- working in small groups makes it possible to structure practical-seminar classes in terms of form and content, creates opportunities for the participation of each student of higher education in work on the topic of the class, ensures the formation of personal qualities and experience of social communication;

- seminars-discussions provide for the exchange of thoughts and views of the participants on a given topic, and also develop thinking, help form views and beliefs, the ability to formulate opinions and express them, teach to evaluate other people's proposals, to critically approach one's own views;

- brainstorming - a method of solving urgent tasks, the essence of which is to express as many ideas as possible in a limited period of time, discuss and carry out their selection;

- case method – a method of analyzing specific situations, which makes it possible to bring the learning process closer to the real practical activity of specialists and involves consideration of production, management and other situations, complex conflict cases, problem situations, incidents in the process of learning educational material;

- presentations – speeches in front of the audience, used to present certain achievements, results of the group's work, a report on the performance of individual tasks, instruction, demonstration;

- didactic games – a method of imitation (imitation, reflection) of making management decisions in various situations according to rules that have already been developed or formed by the participants themselves, is implemented through the

independent solution of the given problem by students of higher education, provided that the necessary knowledge is insufficient, when there is a need to independently master new content or look for new connections in already learned material;

- banks of visual support contribute to the activation of creative perception of the content of the discipline with the help of visualization.

10. Forms of control

According to the "Regulations on examinations and assessments at the National University of Bioresources and Nature Management of Ukraine", approved by the Academic Council of the National University of Bioresources and Nature Management of Ukraine on April 26, 2023, protocol No. 10, the types of knowledge control of higher education students are current control, intermediate and final attestation.

Current control is carried out during practical and seminar classes and is aimed at checking the level of readiness of higher education applicants to perform specific work.

Intermediate attestation is conducted after studying the program material of each content module.

Intermediate attestation should determine the level of knowledge of the students of higher education from the program material of the content module (rating assessment from the content module), obtained during all types of classes and independent work.

Forms and methods of conducting intermediate certification, assimilation of the program material of the content module are developed by the lecturer of the discipline and approved by the relevant department in the form of testing, written control work, etc.

The assimilation of the program material of the content module by the student of higher education is considered successful if the rating is not less than 60 points on a 100-point scale.

Enrollment of all educational material of a discipline does not exempt a student of higher education from taking an exam in this discipline.

After conducting intermediate attestations for the content modules and determining their ratings, the lecturer of the discipline determines the rating of the student of higher education from the educational work of the R_{HP} (no more than 70 points) according to formula (1):

$$R_{HP} = \frac{0,7 \cdot (R^{(1)}_{3M} \cdot K^{(1)}_{3M} + \dots + R^{(n)}_{3M} \cdot K^{(n)}_{3M})}{K_{DIS}}, \quad (1)$$

where $R_{3M}^{(1)}, \dots, R_{3M}^{(n)}$ – are rating grades from content modules on a 100-point scale;

n – number of content modules;

$K_{3M}^{(1)}, \dots, K_{3M}^{(n)}$ – the number of credits of the European Credit Transfer and Accumulation System (ECTS) (or hours) provided for in the working curriculum for the corresponding content module;

$K_{\text{ДНС}} = K_{3M}^{(1)} + \dots + K_{3M}^{(n)}$ – the number of ECTS credits (or hours) provided for by the working curriculum for the discipline in the current semester.

Formula (1) can be simplified if accepted $K_{3M}^{(1)} = \dots = K_{3M}^{(n)}$. Then it will look like

$$R_{\text{HP}} = \frac{0,7 \cdot (R_{3M}^{(1)} + \dots + R_{3M}^{(n)})}{n} . \quad (2)$$

The rating of the student of higher education on academic work is rounded to the nearest whole number.

The rating for academic work can be affected by the rating from additional work and the penalty rating.

Final attestation includes semester and state attestation of students of higher education.

Semester attestation in the academic discipline “LOGISTICS” is conducted in the form of a semester credit.

11. Distribution of points received by students

The assessment of the knowledge of a higher education student takes place on a 100-point scale and is translated into national assessments according to the table. 1 "Regulations on examinations and credits at the National University of Bioresources and Nature Management of Ukraine", approved by the Scientific Council of NUBiP of Ukraine on April 26, 2023, protocol No. 10.

Rating of a higher education applicant, points	The assessment is national according to the results of the assembly	
	Exams	credits
90-100	Perfectly	Enrolled
74-89	Fine	
60-73	Satisfactorily	
0-59	Unsatisfactorily	Not counted

In order to determine the rating of a higher education seeker for mastering the RDYS discipline (up to 100 points), the obtained rating from the certification (up to 30 points) is added to the rating from the RHP educational work (up to 70 points):

$$R_{\text{ДНС}} = R_{\text{HP}} + R_{\text{АТ}} . \quad (3)$$

12. Educational and methodological support

1. Драмарецька К. П., Забуранна Л. В. Методичні вказівки для вивчення дисципліни «Логістика» для студентів ОС «Бакалавр» спеціальності 073 «Менеджмент», Київ: ЦП «Компринт», 2015. 105 с.
2. Драгнева Н. І., Драмарецька К. П. Методичні вказівки для вивчення дисципліни «Логістика» для студентів ОС «Бакалавр» спеціальності 075 «Маркетинг», Київ: ЦП «Компринт», 2019. 94 с.
3. Резнік Н. П. Логістика: навчальний посібник. Київ. НУБіП України, 2021. 200 с.
4. Electronic educational course "Logistics":
<https://elearn.nubip.edu.ua/course/view.php?id=1450>

13. Recommended sources of information

The main ones:

1. Резнік Н. П. Логістика: навчальний посібник. Київ. НУБіП України, 2021. 200 с.
2. Жарська І.О. Логістика: навчальний посібник. Одеса: ОНЕУ, 2019. 209 с.
3. Федорова В. О., Блага В. В. Логістика: навчальний посібник. Харків: ФОП Бровін О. В., 2019. 153 с.
4. Логістика: навчальний посібник. О. В. Безсмертна, О. О. Мороз, Т. М. Білоконь, І. В. Шварц. Вінниця: ВНТУ, 2018. URL: https://ecopy.posibnyky.vntu.edu.ua/txt/2018/Bezsmertna_moroz_bilok_shvarz_logistika_np_p023.pdf

Additional:

1. Кислий В. М., Біловодська О. А., Олефіренко О. М., Соляник О. М. Логістика: Теорія та практика: навчальний посібник. Київ: Центр учбової літератури, 2010. 360 с.
2. Крикавський Є. В., Чернописька Н. В. Логістичні системи: навчальний посібник, Львів: Видавництво Національного університету «Львівська політехніка», 2009. 264 с.
3. Логістика: навчальний посібник для студ. вищ. навч. закл. Київ: ДП «Видавничий дім «Персонал», 2008. 560 с.
4. Кальченко А. Г. Логістика: Підручник. Київ: КНЕУ, 2003. 284 с.

Information resources:

1. Про утворення Координаційної ради з питань логістики в сільському господарстві: Постанова Кабінету Міністрів України від 09.04.2022 р. № 427. URL: <https://zakon.rada.gov.ua/laws/show/427-2022-%D0%BF#Text>
2. Про транспортно-експедиторську діяльність: Закон України від 01.07.2004 р. № 1955-IV. URL: <https://zakon.rada.gov.ua/laws/show/1955-15#Text>
3. Про транспорт: Закон України від 10.11.1994 р. № 232/94-ВР. URL: <https://zakon.rada.gov.ua/laws/show/232/94-%D0%B2%D1%80#Text>
4. Про транзит вантажів: Закон України від 20.10.1999 р. № 1172-XIV. URL: <https://zakon.rada.gov.ua/laws/show/1172-14#Text>