

Ministry of Education and Science of Ukraine
Sumy National Agrarian University
Faculty of Economics and Management
Department of Marketing and Logistics

PROJECT

Work program (syllabus) of the educational component

OK 26 Logistics

status – mandatory

Implemented within the educational program «**Management**»
in specialty 073 "Management "
at **I (bachelor's)** higher education levels

Sumy – 2024

Developer:  Natalia MAKARENKO, Doctor of Economics, Professor, Head of the Department of Marketing and Logistics

Reviewed, approved and ratified at a meeting of the Department of <u>Marketing and Logistics</u>	protocol dated _____ <u>04.06.2024</u> _____ № <u>17</u> _____
	Head department  <u>Natalia MAKARENKO</u>

Agreed:

Educational program guarantor  Natalia STOYANETS

1. GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT

1.	Name EC	Logistics			
2.	Faculty/department	Economics and Management			
3.	Status EC	Mandatory			
4.	Program/specialty(s) that include EC	EP "Management" (2024 recruitment year)			
5.	NQF level	6th			
6.	Semester and duration of study	7th, 1-15 weeks, 4th year			
7.	Number of ECTS credits	Full-time study – 5			
8.	Total hours and their distribution	Contact work (classes)			Independent work
		Lectures	Practical	Laboratory	
		46 hours	30 hours	-	74 hours
9.	Language of instruction	Ukrainian			
10.	Teacher/Educational Component Coordinator	Doctor of Economics, Professor Makarenko N.O.			
11.	Contact information	audio 213 e; phone: +380664214790; nmakar165@ukr.net .			
12.	General description of the educational component	<p>The discipline is based on tasks, principles and approaches that provide for the consideration of theoretical issues of the essence of logistics, functions and tasks performed at the enterprise. The discipline is aimed at forming in students the ability to use the basic principles of material flow management; providing practical decision-making skills in planning, managing and controlling logistics flows in micro- and macro-logistics; familiarization with the basic decision-making methods used in logistics.</p> <p>The discipline is a course aimed at developing students' the ability to independently draw up a scheme for the promotion of material flow depending on the form of ownership and specialization of the enterprise; analyze the organizational structures of the enterprise and the logistics management services on them; develop strategies in the field of logistics; identify the most significant shortcomings of the practical activities of enterprises and develop substantiated proposals in the field of logistics; study and use modern methods of analytical and design work in the field of logistics systems; forecast material flow and determine the main indicators of the functional areas of the logistics system; calculate the optimal batch of orders; solve the problem of "make or buy"; make decisions on the choice of suppliers; make the purpose and placement of stocks; determine the list of products that belong to the logistics service; calculate the stability of supplies using XYZ analysis; determine the types of products that belong to the JIT supply system; calculate the location of the distribution center; draw up transportation plans and routes; determine the main characteristics of the product by marking elements.</p> <p>Discipline allows you to develop responsibility for your own learning, as well as skills such as: applying knowledge in practical situations, conduct research at the appropriate level, ability to work in a team.</p>			
13.	Purpose of the	The goal of the discipline is to master theoretical knowledge in			

	educational component	logistics, active integrating potential capable of improving interaction between basic functional areas: supply, production, marketing, distribution, sales organization, and acquiring practical skills and abilities in using the principles of logistics flow management to increase the competitiveness of enterprises.
14	Prerequisites for studying EC, connection with other educational components of EP	<p>1. The educational component is based on the study of OK: Management, Marketing, Analysis of economic activity, Information professional technologies, International economic relations, Operations management</p> <p>2. The educational component is the basis for studying OK: Project Management, Agrarian Management, Sustainable Development Management</p>
15	Academic Integrity Policy	<p>Course policy – no forms of violation of academic integrity are tolerated. In the case of such events, the response will be in accordance with the regulatory documents of the Ukrainian National Academy of Sciences on the academic integrity of participants in the educational process.</p> <p>https://snau.edu.ua/viddil-zabezpechennya-yakosti-osviti/zabezpechennya-yakosti-osviti/academic-dobrochesnist/</p> <p>It is unacceptable for students to:</p> <ul style="list-style-type: none"> - When performing tests and theoretical surveys, use sources of information (oral (prompts), written (works of other people), printed (books, methodical manuals), electronic (telephones, tablets) that are not permitted by the teacher. For using telephones and computer equipment without the permission of the teacher, violation of discipline, the student receives 0 points for the lesson and is obliged to complete such a lesson. - Cheating during tests is prohibited. Mobile devices are allowed to be used only during online testing. When working on assignments, academic integrity must not be violated: when using Internet resources and other sources of information, the student must indicate the source used during the assignment.
16	Link to Moodle	https://cdn.snau.edu.ua/moodle/course/view.php?id=583
17	Keywords	Logistics, material flow, flow management systems, logistics operation, procurement logistics, logistics chain, logistics channel, distribution logistics, warehousing logistics, transport logistics, distribution center, inventory management system, Internet logistics, international logistics, logistics system, information logistics.

2. LEARNING OUTCOMES BY EDUCATIONAL COMPONENT AND THEIR RELATIONSHIP WITH PROGRAM LEARNING OUTCOMES

Learning outcomes for EC: After studying the educational component, the student is expected to be able to...	Program learning outcomes that the EC aims to achieve (indicate the number according to the numbering given in the EP)		How is LOEC assessed?
	PLO ₁₂ - Assess the legal, social and economic consequences of the organization's operations	PLO ₂₂ - Demonstrate the ability to ensure legal justification, financial feasibility, customs and logistical support, and safety of business operations of business entities in agricultural and food markets	
LOEC 1. Describe the conceptual provisions and basic elements of logistics for business entities	x		Theoretical knowledge section – oral interview.
LOEC 2. Use modern methods of analytical and managerial work in logistics systems		x	Multiple choice test
LOEC 3. Make decisions on the selection of suppliers; determine the optimal inventory management system and calculate the sustainability of supplies.	x	x	Execution and defense of team calculation works
LOEC 4. Draw up a scheme for the promotion of material flow depending on the form of ownership and specialization of the enterprise, determine the optimal location of the distribution center and draw up transportation plans and traffic routes.		x	Development and defense of cases
LOEC 5. Calculate the efficiency of doing business in Internet logistics, identify the most significant shortcomings of the practical activities of enterprises and develop substantiated proposals in the field of logistics activities of enterprises.	x	x	Performing individual calculation work

3. CONTENT OF THE EDUCATIONAL COMPONENT

Topic. List of issues to be addressed within the topic	Distribution within the overall time budget			Recommended reading
	Classroom work		Independent work	
	Lec.	Prac.		
1	2	3	4	5
<p><i>Topic 1. Logistics in a market economy</i></p> <p>1.1. History of the development of logistics as a science.</p> <p>1.2. Main stages of development of logistics management.</p> <p>1.3. The purpose and objectives of logistics.</p> <p>1.4. General objectives of the logistics organization.</p> <p>1.5. Logistics functions.</p> <p>1.6. Types of logistics and their classification.</p> <p>1.7. The essence of the 7R rule. JIT system.</p>	4	2	6	<p>main sources: 1, 4, 5 other sources: 4, 6 methodological support: 1, 2, 3</p>
<p><i>Topic 2. Conceptual provisions of logistics</i></p> <p>2.1. Concepts and principles of logistics.</p> <p>2.2. Logistics service.</p> <p>2.3. Principles of accounting for logistics costs.</p> <p>2.4. Risk system in the logistics process.</p> <p>2.5. Strategic approaches to logistics organization.</p>	4	2		<p>main sources: 1, 4, 5 other sources: 1, 4, 6 methodological support: 1, 2, 3</p>
<p><i>Topic 3. Characteristics of the main elements of logistics</i></p> <p>3.1. The essence of the categories "logistics flow".</p> <p>3.2. Material, financial and information flow.</p> <p>3.3. Types of material flows.</p> <p>3.4. Organization of material flows at the enterprise.</p> <p>3.5. Logistics chain, logistics channel.</p> <p>3.6. Logistics operation, types of logistics operations.</p> <p>3.7. Cold chain system in agricultural business.</p>	4	2	8	<p>main sources: 2, 4 other sources: 3, 4, 6 methodological support: 1, 2, 3</p>
<p><i>Topic 4. Flow control systems</i></p> <p>4.1. PO (Purchase order).</p> <p>4.2. MPS (master production schedule).</p> <p>4.3. MRP I (material requirements planning) and MRP II (material requirements production).</p> <p>4.4. CRM (customer relationship management).</p> <p>4.5. WMS (warehouse management system).</p> <p>4.6. Kanban quality system and quality circle.</p> <p>4.7. The poka-yoke and zidoka system.</p>	4	2	8	<p>main sources: 3, 4, 5 other sources: 2, 3, 6 methodological support: 1, 2, 3</p>

1	2	3	4	5
<p><i>Topic 5. Material flow management in logistics systems</i></p> <p>5.1. Properties of logistics systems.</p> <p>5.2. System of indicators that characterize the operation of the logistics system.</p> <p>5.3. Logistics system management mechanism.</p> <p>5.4. Principles of organization and planning of logistics at the enterprise.</p> <p>5.5. System of laws and principles of material flow management.</p> <p>5.6. The essence of the 5S logistics principle.</p> <p>5.7. Equipment and facility layout models.</p> <p>5.8. Efficiency of material flow management and indicators that characterize it.</p>	4	2	1	<p>main sources: 1, 3, 4</p> <p>other sources: 2, 3, 6</p> <p>methodological support: 1, 2, 3, 4</p> <p>additional sources: 3</p>
<p><i>Topic 6. International logistics</i></p> <p>6.1. Main features of international logistics.</p> <p>6.2. Organizational foundations of international logistics.</p> <p>6.3. Implementation of marketing functions in the practice of international logistics.</p> <p>6.4. List of documents in international transport.</p> <p>6.5. Transnational companies and alliances.</p>	4	2	4	<p>main sources: 1, 4, 5</p> <p>other sources: 1, 5, 6</p> <p>methodological support: 1, 2, 3</p> <p>additional sources: 1, 2, 4</p>
<p><i>Topic 7. Procurement logistics</i></p> <p>7.1. The essence of the category "supply logistics".</p> <p>7.2. Tasks performed by supply logistics.</p> <p>7.3. Methods used in the study of the supply process.</p> <p>7.4. Stages of supplier selection.</p> <p>7.5. Organization of warehouse stocks.</p> <p>7.6. The need and benefits of stockpiling.</p>	4	2	4	<p>main sources: 1, 3, 4</p> <p>other sources: 3, 4, 5</p> <p>methodological support: 1, 2, 3</p> <p>additional sources: 3</p>
<p><i>Topic 8. Intra-production logistics</i></p> <p>8.1. The essence of the category "production logistics" and the tasks it performs.</p> <p>8.2. Methods used in the study of the production process.</p> <p>8.3. General characteristics of internal production systems.</p> <p>8.4. Characteristics of technological processes.</p>	2	2	6	<p>main sources: 3, 4, 5</p> <p>other sources: 2, 3, 6</p> <p>methodological support: 1, 2, 3</p>
<p>8.5. Organization of technological process movement.</p> <p>8.6. Functioning and essence of logistics cycles.</p> <p>8.7. Innovative approaches in organizing intra-production logistics.</p>				

1	2	3	4	5
<p><i>Topic 9. Warehousing logistics</i></p> <p>9.1. The essence of warehousing logistics: logistics operation, management.</p> <p>9.2. Types of warehouses and organization of the warehousing process.</p> <p>9.3. Modern inventory management systems in warehouses.</p> <p>9.4. Efficiency of the logistics system for storing products.</p> <p>9.5. Methods for calculating the size of warehouses and storage facilities.</p> <p>9.6. Organization of accounting for goods in the warehouse.</p>		2	4	<p>main sources: 1, 3, 4</p> <p>other sources: 3, 4, 5</p> <p>methodological support: 1, 2, 3</p> <p>additional sources: 3</p>
<p><i>Topic 10. Distribution logistics</i></p> <p>10.1. The essence of the category "sales logistics" and the tasks it performs.</p> <p>10.2. Methods used in the study of the product distribution process.</p> <p>10.3. Concepts and methods of location of distribution centers .</p> <p>10.4. Container and packaging systems for goods.</p> <p>10.5. Infrastructure of distribution logistics entities.</p>	4	2		<p>main sources: 1, 2, 4</p> <p>other sources: 1, 3, 4</p> <p>methodological support: 1, 2, 3</p> <p>additional sources: 3</p>
<p><i>Topic 11. Logistics of mediation</i></p> <p>11.1. Types of intermediaries.</p> <p>11.2. Types of intermediary integration.</p> <p>11.3. Principles of material flow management in mediation.</p> <p>11.4. Effectiveness of mediation in logistics management.</p> <p>11.5. Main types of documents valid between the manufacturer and the intermediary.</p>	4	2	4	<p>main sources: 1, 2, 4</p> <p>other sources: 1, 3, 4</p> <p>methodological support: 1, 2, 3</p> <p>additional sources: 3</p>
<p><i>Topic 12. Transport logistics</i></p> <p>12.1. The essence of the category "transport logistics" and the tasks it performs.</p> <p>12.2. Methods used in the study of the product transportation process.</p> <p>12.3. Classification of transport operations.</p> <p>12.4. Requirements for the transportation of agricultural products.</p> <p>12.5. Cold chain principles.</p>	4	4	8	<p>main sources: 2, 4, 5</p> <p>other sources: 1, 3, 4, 6</p> <p>methodological support: 2, 3</p> <p>additional sources: 1, 2, 4</p>
<p>12.6. Freight transportation planning methodology.</p> <p>12.7. Transport characteristics of cargo and freight transportation.</p> <p>12.8. Transport documentation.</p> <p>12.9. Tariff system in transport logistics.</p>				

1	2	3	4	5
<p><i>Topic 13. Internet logistics</i></p> <p>13.1. The essence of Internet logistics, types and types of objects of the logistics Internet system.</p> <p>13.2. Efficiency of doing business in Internet logistics.</p> <p>13.3. Experience of international logistics Internet entities.</p> <p>13.4. System for accounting of logistics flows in Internet logistics.</p>	4	2	2	main sources: 1, 2, 4 other sources: 3, 4 methodological support: 1, 2, 3
<p><i>Topic 14. Information logistics</i></p> <p>14.1. The essence of the category "information logistics" and the tasks it performs.</p> <p>14.2. Methods used in researching the information provision process.</p> <p>14.3. Types of information recorded in logistics systems.</p> <p>14.4. Logistics flow monitoring system.</p>	4	2	2	main sources: 1, 3, 4 other sources: 3, 4 methodological support: 1, 2, 3
Total	46	30	74	

4. TEACHING AND LEARNING METHODS

LOEC	Teaching methods (work that will be carried out by the teacher <u>during classroom lessons</u> , consultations)	Teaching methods (what types of learning activities should <u>the student perform independently</u>)
LOEC 1. Describe the conceptual provisions and basic elements of logistics for business entities	Verbal methods: lecture, consultation	The method of ready knowledge, "brainstorming"
	Visual methods: demonstration, illustration	Method of forming skills and abilities, "Brownian motion"
	Practical methods: conducting and defending research papers, "decision tree"	Analytical learning methods; comparing alternative positions, exchanging ideas (think-pair-share)
	Tutoring method*	Methods of testing and assessing knowledge, skills and abilities
LOEC 2. Use modern methods of analytical and managerial work in logistics systems	Verbal methods: lecture, consultation, educational debate	The method of ready knowledge, comparison of alternative positions
	Visual methods: demonstration, illustration	Method of forming skills and abilities, "Brownian motion"
	Practical methods: case study, teamwork, "decision tree"	Analytical learning methods; think-pair-share, collaborative project, debate
	Tutoring method*	Methods of testing and assessing knowledge, skills and abilities
LOEC 3. Make decisions on the selection of suppliers; determine the optimal inventory management system and calculate the sustainability of supplies.	Verbal methods: lecture, consultation	The method of ready-made knowledge, peer to peer learning,
	Visual methods: demonstration	Method of forming skills and abilities
	Practical methods: exercises, practical work, "decision tree"	Analytical teaching methods; think-pair-share, debate
	Tutoring method*	Methods of testing and assessing knowledge, skills and abilities
LOEC 4. Draw up a scheme for the promotion of material flow depending on the form of	Verbal methods: lecture, consultation, "flipped classroom"	Method of ready knowledge, method of determining position
	Visual methods: demonstration,	The method of forming skills and abilities

ownership and specialization of the enterprise, determine the optimal location of the distribution center and draw up transportation plans and traffic routes.	illustration	"Brownian motion"
	Practical methods: case study, small group work, teamwork	Research, explanatory and illustrative methods, joint project
	Tutoring method*	Methods of testing and assessing knowledge, skills and abilities
LOEC 5. Calculate the efficiency of doing business in Internet logistics, identify the most significant shortcomings of the practical activities of enterprises and develop substantiated proposals in the field of logistics activities of enterprises.	Verbal methods: lecture, consultation, educational debate	Method of ready knowledge, method of determining position
	Visual methods: demonstration, illustration	Method of forming skills and abilities
	Practical methods: exercises, case studies, teamwork, decision tree	Explanatory and illustrative methods, joint project, partial search methods, peer to peer learning,
	Tutoring method*	Methods of testing and assessing knowledge, skills and abilities

* Subject to changes in the learning process

5. EVALUATION BY EDUCATIONAL COMPONENT

5.1. Summative assessment

5.1.1. To assess the expected learning outcomes, there are

No.	Summative assessment methods	Points / Weight in the overall score	Date of compilation
1	Module 1:	35 points / 35%	Week 7
1.1	Theoretical knowledge: Oral interview (1 point for each correct answer). Maximum score for the first theoretical boundary control - 10 points	10 points / 10%	3rd week
1.2	Multiple choice test (module 1)	5 points /5%	4th week
1.3	Performing individual calculation work (2 practical tasks) for the first boundary control	10 points /20%	Week 5
1.4	Participation in non-formal education courses (on the Prometheus, Coursera platforms)	10 points / 10%	Week 6
2	Module 2:	35 points / 35%	14 week
2.1	Theoretical knowledge: Oral questioning (1 point for each correct answer). Maximum score for the second theoretical boundary control - 10 points	10 points / 10%	Week 11
2.2	Completion of individual calculation work (1 practical task) for the second boundary control	5 points /5%	12th week
2.3	Protect a workbook	5 points /5%	
2.4	Multiple choice test (module 2)	5 points /5%	Week 13
2.5	Multiple choice test (independent work)	10 points /10%	Week 14
	TOGETHER	70 points / 70%	Week 15
3	<u>Final control (Exam)</u> : written execution of examination papers: - 2 theoretical questions (5 points each) - calculation and practical task (20 points)	30 points /30%	according to the approved schedule
	Total	100 points /100%	

5.1.2. Evaluation criteria

Component	Unsatisfactorily	Satisfactorily	Good	Perfectly
Theoretical knowledge: Oral survey (1 point for each correct answer) on the first and second border control The maximum score for the first theoretical boundary control is 5 points. The maximum score for the second theoretical boundary control is 5 points.	<6 points	6-7 points	8 points	9-10 points
	The applicant possesses some theoretical elements of the course. There is no complete understanding of the theoretical material.	The applicant has mastered the basic theoretical material provided for in the discipline program, which is the minimum acceptable. Understands the basic provisions, but makes a significant number of inaccuracies and gross errors, which can be eliminated with the help of the teacher.	The applicant demonstrates good knowledge, has a good command of the material, which corresponds to the program of the discipline, but allows for some inaccuracies.	The applicant demonstrates complete and solid knowledge of the theoretical educational material in the volume corresponding to the content of the OC. Knows modern technologies and calculation methods in this discipline.
Performing individual calculation work for 2 boundary controls	<6 points	6-7 points	8 points	9-10 points
	The requirements for the calculation control work have not been met.	Most of the calculations have been completed, but individual components are missing or insufficiently disclosed, and there is no description of the management solution to the problem.	All requirements of the task have been met, but there are inaccuracies in the described management decisions. Errors in decisions and calculations are not systemic.	All requirements for the calculation test were met, creativity and thoughtfulness were demonstrated, and an original solution to the problem was proposed.
Multiple choice test	<60% correct answers	60-74% correct answers	75-89% correct answers	90-100% correct answers
	The applicant possesses some theoretical elements of the course. There is no complete understanding of the theoretical material.	The applicant has mastered the basic theoretical material provided for in the discipline program, which is the minimum acceptable level. Understands the basic provisions, but makes a significant number of inaccuracies and gross errors.	The applicant demonstrates good knowledge, has a good command of the material, which corresponds to the program of the discipline, but allows for some inaccuracies.	the applicant demonstrates complete and solid knowledge of the theoretical educational material in a volume that corresponds to the content of the OK.
<u>Final control (Exam)</u> : written execution of examination papers: - 2 theoretical questions - calculation and practical task	< 19 points	19 – 23 points	24 - 28 points	29- 30 points
	The theoretical task is partially covered; the requirements for the practical task are not met, and there are no management solutions.	Most of the requirements are met, but individual components are missing or insufficiently disclosed, there is no analysis of individual elements of the problem, and the management decision does not fully disclose the calculations made.	All requirements for the theoretical and practical task have been met, there are inaccuracies in the proposals.	All requirements for the task were met, theoretical knowledge and practical skills in calculating tasks and formulating management decisions were demonstrated.

5.2. Formative assessment:

To assess current progress in learning and understand areas for further improvement,

No.	Elements of formative assessment	Date
1	Theoretical knowledge section: oral interview	3rd, 11th week
2	Multiple choice test (module 1, 2, independent work)	4th, 13th, 14th week
3	Performing individual calculation work for two border controls	5th, 12th week
4	Participation in non-formal education courses (on the Prometheus ,	Week 6

	Coursera platforms)	
5	Protect a workbook	12th week

6. LEARNING RESOURCES (LITERATURE)

6.1. Main sources

6.1.1. Textbooks, manuals:

1. Balabanova L.V., Germanchuk A.M. Logistics: a textbook for universities . Lviv: Publishing house "Magnolia-2006", 2019. 368 p. URL: <https://magnolia.lviv.ua/?p=1461>
2. Krykavskiy E., Pokhilchenko O., Fertch M. Logistics and supply chain management: a textbook. Lviv: Lviv Polytechnic Publishing House, 2019. 848 p. URL: <https://vlp.com.ua/node/20038>
3. Izteleuova M.S., Hrytsuk I.V., Arimbekova P.M., Tarandushka L.A. Organization and logistics of transportation : manual. Kyiv : Ekonomika biznesu , 2021. 2 64 p . ISBN : 978-966-289-543-8
4. Makarenko N.O., Gutsal T.I. Logistics. Textbook for applicants of the first (bachelor's) level of higher education in the field of knowledge 07 "Management and Administration". Sumy: "University Book", 2024. 209 p.
5. Marketing and Logistics: Conceptual Frameworks and Strategic Solutions: teaching aids in diagrams and tables / edited by S.V. Smerichevsky. Lviv: "Magnolia 2006". 2021. 548p.

6.1.2. Methodological support

- 1 Makarenko N.O., Gutsal T.I. Logistics: a workbook for practical classes for full-time and part-time students of specialties 075 "Marketing", 073 "Management" of the bachelor's degree. Sumy: SNAU, 2023. 52 p. (*Minutes No. 2 dated 10/27/2023*)
- 2 Makarenko N.O. Logistics. Methodological instructions for performing independent work for 4th-year students of full-time and part-time study of the educational degree "bachelor" of specialties 075 "Marketing", 073 "Management", 281 "Public management and administration", 275 "Transport technologies" . Sumy: SNAU, 2020. 46 p. (*Minutes No. 4 dated 02/26/2020*)
- 3 The Logistics course page in the Moodle learning management system. URL: <https://cdn.snau.edu.ua/moodle/course/view.php?id=583>

6.1.3. Other sources:

1. Lozhachevska O. M., Orlova-Kurylova O. V., Makarenko N. O., Rubezhanska V. O. Modeling adaptive management of innovative enterprises in the context of transformation of logistics and marketing strategies of state-business interaction, digitalization and sustainable development. *Economy and State* . 2021. No. 11. P. 9–13 . http://www.economy.in.ua/pdf/11_2021/4.pdf
2. Makarenko N. O. Logistical integration as a means of ensuring the competitiveness of agricultural enterprises . *Black Sea Economic Studies*. 2021. Issue 61. P.56-60. http://bses.in.ua/journals/2021/61_2021/11.pdf
3. Makarenko N.O. Lyshenko M.O. Logistic approach to rational management and coordination of flow processes in agricultural enterprises . *Bulletin of the V.V. Dokuchaev Kharkiv National University. Ser. Economic Sciences*. 2020. No. 3. P. 121-132 https://visen.knau.kharkov.ua/visn20203_11.html
4. Makarenko N.O. Strategic management of logistics activities of agricultural enterprises on a competitive basis: monograph. Sumy: University Book, 2020. 266 p.
5. Makarenko N.O., Gutsal T.I., Bilogubets O.V. Integrated logistics management of supply chains in the process of sales of finished products of agricultural enterprises . *Effective Economy* . 2024. No. 2. URL : <https://www.nayka.com.ua/index.php/ee/article/view/3083/3119>
6. Makarenko N.O., Danko Y.I. Theoretical and methodological basis of managing the logistics activities of enterprises. *Bulletin of the V.V. Dokuchaev Kharkiv National University. Ser. Economic Sciences*. 2020. No. 4. Vol. 1. P. 66-79. http://visen.knau.kharkov.ua/visn202041_8.html

6.2. Additional sources:

1. Regulations on the form of foreign economic agreements (contracts): Order of the Ministry of Economy and European Integration of Ukraine dated 06.09.2001 No. 201. URL : <https://zakon.rada.gov.ua/laws/show/z0833-01#Text>
2. INCOTERMS 2020: features of possible application. URL : <http://www.visnuk.com.ua/uk/news/100015209-inkoterms-2020-osoblivosti-mozhlivogo-zastosuvannya-1>
3. Official website "Legislation of Ukraine". URL: <http://zakon0.rada.gov.ua>
4. . Official website of the European Logistics Association (ELA) URL: <https://www.elalog.eu/>
5. Official website of the consulting company Logistics Field Audit: URL: <http://www.lfa.lfa.ru/about.html>
6. Official website of Kyiv Logistics School. URL: <https://kyivlogisticsschool.com/>

6.3. Software

1. Using standard Microsoft packages: Word , Excel, PowerPoint .
2. Multimedia, video and sound reproduction, projection equipment (video cameras, projectors, screens).
3. Service for organizing online classes and webinars "Zoom".