Syllabus
of the elective component

Logistics

Discipline	**Logistics**
Higher education level	**first (bachelor's degree)**
Moodle course web-page	*https://dl2022.khadi-kh.com/course/view.php?id=304*
Educational component volume	**4 credits (120 hours)**
Final control form	**test**
Consultations	**according to the schedule**
Department	**Transport Systems and Logistics Department**
Language of teaching	**English**
Course leader	**Ocheretenko Serhii, PhD, Associate Professor**
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The educational component summary:

The purpose is training of highly qualified specialists capable using information and communication technologies, developing and managing projects, working autonomously and in a team, using knowledge and understanding of the subject area and understanding of professional activity, analyzing and forecasting the parameters and indicators of the functioning of motor transport systems and technologies taking into account the influence of the external environment, organize and manage loading and unloading operations and warehouse operations in road transport, organize and manage the transportation of goods by road transport, optimize logistics operations and coordinate orders for the transportation of goods from the manufacturer to the consumer, comply with laws, regulations and requirements of quality management systems, design transport (transport-production, transport-warehousing) systems and their separate elements, evaluate operational, technical and economical, technological, legal, social and ecological aspects to organize transportation, to organize international transportation, to use modern information technologies, automated management systems and geo-information systems during the transportation process organization.
The subject of the study is theoretical and methodological foundations, a system of concepts about the patterns of mutual influence of material, financial and information flows in specific conditions.
The main tasks of the academic discipline are:

- formation of directions for improving transport processes and evaluating the parameters of transport systems and technologies;
– application of methods and techniques for determining supply chains and evaluating their effectiveness, establishing connections between different supply chains;
- determine the immobilization costs of the enterprise financial resources;
- to determine the technical and operational indicators of the routes and the time of cargo delivery;
– predict the amount of material flow in different types of markets;
- conduct a comparative analysis of the economic efficiency of various types of cargo delivery routes;
- determine the optimal size of the warehouse system order and stock;
- choose the optimal location of the distribution center;

- to conduct a comparative analysis of the economic efficiency of product distribution channels.

Prerequisites for studying the educational component: Higher mathematics.

Competencies acquired by the applicants:

General competences:

- skills in using information and communication technologies;
- ability to develop and manage projects;
- ability to work autonomously and in a team;
- knowledge and understanding of the subject area and understanding of professional activity.

Special (professional) competences:

- the ability to analyze and forecast the parameters and indicators of the functioning of motor vehicle systems and technologies, taking into account the influence of the external environment;
- the ability to organize and manage loading and unloading operations and warehouse operations on road transport;
- the ability to organize and manage the transportation of goods by road transport;
- the ability to optimize logistics operations and coordinate orders for transportation of goods from the manufacturer to the consumer, comply with laws, regulations and requirements of quality management systems;
- the ability to design transport (transport-production, transport-warehousing) systems and their separate elements;
- the ability to evaluate the operational, technical and economic, technological, legal, social and environmental components of the transportation organization;
- the ability to organize international transportation;
- the ability to use modern information technologies, automated control systems and GSO information systems when organizing the transportation process.

Training results:

- critically evaluate scientific values and achievements of society in the development of transport technologies;
- research transport processes, experiment, analyze and evaluate the parameters of transport systems and technologies;
- develop, design, manage projects in the field of transport systems and technologies;
- develop and use transport technologies taking into account requirements for environmental protection;
- develop supply chains and evaluate their effectiveness. Establish connections between different supply chains. Defining the functions of logistics centers. Analyze the features of accompanying information and financial flows;
- explain operational, technical and economic, technological, legal, social and environmental efficiency of transportation organization;
- organize international transportation, apply methods of customs documentation, use methods of customs control;
- to choose information systems of the day of transportation organization. Operate automated control systems and navigation systems in the transportation process. Use electronic cards.

Thematic plan

Theme №	Theme (L, PW, SEW)	Hours	
		full-time training	part-time training
1	L. Logistics systems.	4	2
	PW. Material flow prediction	2	
	SEW. General Logistics costs. System approach as a method of logistics science	8	12
2	L. Quality management	4	
	PW. Order size optimization	2	
	SEW. The essence of the objectives conflict. Hierarchy and structuring of logistic goals.	6	12
3	L. Purchasing management	4	2
	PW. Parameters calculation of the inventory management system and graphical modeling of the operation of the system with a fixed order size	2	
	SEW. Economical and mathematical methods of inventory management	8	12
4	L. Inventory management	4	
	PW. Parameters calculation of the inventory management system and graphical modeling of the system operation with a fixed time interval between orders	2	
	SEW. ABC-XYZ analysis technology.	8	16
5	L. Management of goods distribution	4	
	PW. Calculation of the parameters of the stock management system with the established periodicity of stock replenishment to a constant level PW. Calculation of the parameters of the "minimum - maximum" inventory management system	2	
	SEW. The concept of stock-to-market approach	8	12
6	L. Storage systems and logistics system functioning	2	
	PW. Selection of the distribution center location	2	
	SEW. Combining private and shared use in the logistics system	8	12
7	L Definition of the technological process of logistics system transportation	2	
	SEW. Organizational principles of transportation	8	
8	L. Service logistics.	4	
	PW. Transport logistics	2	
	SEW. Types of service. Current state and development prospects of the logistics services market.	5	12
9	L. Logistics information systems	2	
	SEW. Hierarchy of management decisions, authorities and information aggregation.	5	12
10	L. Designing the delivery system	2	
	PW. Multi-item inventory management	2	
	CP. The main directions of package formation of transport and forwarding services.	8	12
Sum	**L**	**32**	**4**
	PW	**16**	**-**
	SEW	**72**	**116**
Total		**120**	**120**

Teaching methods:

1) verbal:

1.1 traditional: lectures, explanations, talks, etc.;
1.2 interactive (non-traditional): problematic lectures, discussions, etc.;
2) visual: illustration method, demonstration method;
3) practical:
3.1 traditional: practical classes, seminars;
3.2 interactive (non-traditional): business and role-playing games.

Evaluation system and requirements:

Ongoing achievements
1 The applicants' ongoing achievement in the performance of the both educational activities and self-education work while training is evaluated using a four-point scale with the further conversion into the 100-point scale. While evaluating all kinds of works provided by the educational program are taken into account.
1.1 Lectures are evaluated by determining the quality of specific tasks performance.
1.2 Practical classes are evaluated by the quality of performance of the tests or individual tasks, execution and design of the report on practical works.
2 The final evaluation of the discipline is determined as a sum of points on:
- passed standard tests, verbal questioning, attendance and communication activity level;
- in-class practical tasks execution and theoretical preparation.
Applicants' evaluation score scale according to the ongoing control is given in table1.

Table 1 – Points distribution under the themes defining a final test score according to the discipline ongoing assessment

Ongoing Assessment										Discipline total score
Theme 1	Theme 2	Theme 3	Theme 4	Theme 5	Theme 6	Theme 7	Theme 8	Theme 9	Theme 10	100
14	12	14	14	14	12	10	11	7	12	

Final estimation
1 The final test score is got by the applicant at the last double-lesson according to the discipline ongoing assessment. The condition to pass the test is not less than 60 points score.
2 Higher education applicants who have an ongoing assessment score less than 60 points can increase it at the last class by taking a combination of written and oral tests that comprise both answering 2 professionally-oriented question and a problem solution with further commenting the work done or standard tests. The applicants who made the tasks previewed by the practical classes are allowed to pass the final test.
3 Extra-points are awarded to the applicants for participation in scientific events.
3.1 Extra-points are added to the achieved sum of points by the higher education applicant for the current educational activity.
3.2 The number of extra-points awarded for different types of individual tasks depends on their volume and importance:
– discipline prize-winning places on the at the international / all-ukrainian competition of scientific students' works – 20 points;
– discipline prize-winning places at all-Ukrainian olympiads – 20 points;
– participation in the international / all-Ukrainian competition of scientific students' works – 15 points
– participation in international / all-Ukrainian scientific conferences of students and young scientists – 12 points;

– participation in all-Ukrainian discipline competitions – 10 points

– participation in KhNAHU discipline competitions and scientific conferences – 5 points;

– implementation of individual scientific and research (educational and research) tasks of increased complexity – 5 points.

3.3 The number of extra points might not exceed 20 points.

4 The result of the study is evaluated on a two-point scale (passed/failed) according to table 2. The total score comprising the extra-points might not exceed 100 points.

Table 2 – Conversion of the score into national evaluation system

According to 100-point scale	According to the national scale
between 60 scores and 100 scores	Passed
Less than 60 scores	Failed

Course policy:

– the course involves working in the team, the environment in the audience is friendly, creative, open to constructive criticism;

–the discipline requires mandatory attendance of lectures and practical classes, as well as self-education work;

– self-education work involves studying certain discipline themes, which are submitted in accordance with the program for self-education work, or have been considered briefly;

– all the tasks provided by the program must be completed within the prescribed time-frame;

– if the higher education applicant is absent for valid reasons, he/she passes the completed tasks during the self-education work and consultations provided by the teacher;

– while studying the course, higher education applicants should follow the rules of academic integrity set out in such documents: «Rules of academic integrity of participants of the KhNAHU Education process» (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_dobroch_1.pdf), «Academic integrity. The text check of academic, scientific and qualification works for the plagiarism» (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_85_1_01.pdf), «Moral and ethical code of participants of the KhNAHU educational process» (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_MEK_1.pdf).

– in case of detecting the plagiarism, the applicant receives 0 points for the task and must retake the tasks provided in the syllabus;

– cheating during control works and examinations is prohibited (including mobile devices). Mobile devices are only allowed to be used during online testing.

Recommended literature:

1. Тюріна Н.М., Гой І.В., Бабій І.В. Логістика : навч. посіб. К.: Центр навчальної літератури, 2021. 392 с.

2. Теорія та практика / Кислий В. М., Біловодська О. А., Олефіренко О. М., Соляник О. М. К.: Центр навчальної літератури, 2019. 360 с.

3. Крикавський Є.В. Логістика / Є.В. Крикавський. – Львів: Львівська політехніка, 2014. – 476 с.

4. Bowersox D. Logistical Management: The Integrated Supply Chain Process / Donald Bowersox, David Closs. – McGraw Hill Education, 2017. – 752 p.

5. Окландер М.А. Логістика : навчальний посібник. К.: Центр навчальної літератури, 2018. 346 с.

6. Крикавський Є.В., Чорнописька Н.В. Логістичні системи : навч. посіб. Львів:

Львівська політехніка, 2019. 288 с.

7. Bowersox D. Supply Chain Logistics Management / Donald Bowersox, David Closs, M. Bixby Cooper. – McGraw-Hill Education, 2019 – 480 p.

8. Очеретенко С.В. До питання управління запасами автомобільних запчастин на торгових підприємствах / С.В. Очеретенко // Комунальне господарство міст. – 2018. – Вип. 142. – С. 114-118.

9. Очеретенко С.В. Використання знижок в логістичних системах підприємствах / С.В. Очеретенко, В.Ю. Кудріна // Системи управління, навігації та зв'язку: збірник наукових праць. – Вип. 3(55). – П.: ПНТУ ім. Ю. Кондратюка, 2019. – С. 72-75.

10. Очеретенко С.В. Управління складськими запасами та їх оптимізація на підприємствах по ремонту автомобілів / С.В. Очеретенко // Системи управління, навігації та зв'язку: збірник наукових праць. – Вип. 2(64). – П.: ПНТУ ім. Ю. Кондратюка, 2021. – С. 50-52.

11. Нефьодов М.А. Логістика / М.А. Нефьодов, С.В. Очеретенко. – Х.: ХНАДУ, 2013. – 164 с.

Additional sources:

1. Дистанційний курс «Логістика». URL: https://dl.khadi.kharkov.ua/course/view.php?id=304

2. Асоціація «Український логістичний альянс» : Офіційний веб-сайт. URL: http://ula-online.org/.

3. Council of Supply Chain Management Professionals : Official web-site. URL: http://cscmp.org/.

4. http://www.bvl.de/en.

5. Empowering Logistics: Competence, Network, Standard [Електронний ресурс] / Official web-site of the European Logistics Association.

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