Syllabus
Educational Component of the Elective
(a conditional indication EC in Education Program (EP)

Discipline	**Practical aspects of supply chain management**
Higher Education Level	**The second one (educational and scientific)**
Moodle course page	***https://dl.khadi.kharkov.ua/course/view.php?id=1543***
Educational Component Volume	**4 credits (120 hours)**
Final Control	**Test**
Consultations	**According to the schedule**
Department	**Transport technologies**
Language of teaching	**English**
Lecturer	**Viktor Nefodov, PhD, Associated Professor of the Transport technologies department**
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Educational Component Summary:
The purpose is to develop theoretical, practical and methodical provisions for independent solution of theoretical and practical problems of supply chain management by using modern logistics methods in future specialists in the field of transport and transport infrastructure.
The subject of the study is pedagogically adapted system of issues about principles and methods of management of supply chain.
The main tasks of the academic discipline are:
- general principles, methods and methodologies of designing logistic systems;
- principles of functioning and interaction of the logistic system chains, as well as principles of distribution of powers and functions among the chains;
- principles, criteria, methods and algorithms of optimization of technological processes of cargo transportation;
- types, sources, structure, directions of information flows, which provide a logistic system, principles of their synchronization with material flows, methods of their management;
- types, sources, structure, the direction of financial flows, which provide a logistic system, principles of their synchronization with material flows, methods of their management.
Prerequisites for studying the educational component: EC of the first level(bachelor)

Competencies acquired by the applicants:
General competencies:

Ability to work in an international context.
Ability to search, process and analyze information from different sources.
Ability to communicate with representatives of other professional groups of different levels (experts from other branches of knowledge/types of economic activity).
Ability to assess and ensure the quality of the works performed.
Special (professional) competencies:
Ability to research and control the functioning of transport systems and technologies.
Ability to define and apply perspective directions of transport processes modeling.
Ability to manage supply chains and logistics centers.
Ability to manage transport flows.
Ability to use specialized software to solve complex problems in the sphere of transport systems and technologies.

Training results according to the educational program are to**:**

Search for necessary information in scientific and technical literature, databases, other sources, to analyze and objectively assess information in the sphere of transport systems and technologies and from sub-sectoral problems.

Discuss the issues of professional activity, objects and research in the field of transport systems and technologies fluently in writing and orally in the state and foreign languages.

Take effective decisions in the sphere of transport systems and technologies taking into account technical, social, economic and legal aspects, to generate and compare alternatives, to estimate necessary resources and limitations, to analyze risks.

Present their knowledge, decisions and grounds of their adoption to specialists and non-specialists in clear and unambiguous form.

Develop new and improve existing transport systems and technologies, define development goals, limitations, efficiency criteria and usage areas.

Develop and analyze graphical, mathematical and computer models of transport systems and technologies.

Develop technologies of cargo and passenger transportation by means of transport on the basis of researches and relevant data.

Analyze and evaluate the effectiveness of supply chains and logistics centers, to make calculations of corresponding indicators.

Use specialized software for analysis, development and improvement of transport systems and technologies.

Thematic plan

Theme, №	Theme (L, LW, PW, SEW)	Hours	
		full-time training	part-time training
1	L - Logistics systems	4	2
	R (LW, SEW) - Determine the region of the distribution center location	2	2
	SEW - Methods of marketing analysis (marketing models)	16	18
2	L - Criteria and limitations in logistics systems	2	-
	PR (LW, SEW) - Complex optimization of order size and insurance stock	4	-
	SEW - General quality management	10	16
3	L - Estimation of the system variants	2	2
	ETC (LW, SEW) – Optimization of the supply chain length	4	-
	SEW - Statistical analysis	14	18
4	L - Choice of logistics system	2	2
	R (LW, SEW) - Choice of logistics system	4	-
	SEW 2PL, 3PL, 4PL - Logistics providers	10	14
5	L - Requirements to the transportation process	2	-
	R (LW, SEW)	-	-
	Current state and prospects of the market of shipments of batch cargoes	14	16
6	L - Requirements to the information support system	2	-
	PR (LW, SEW) - Determination of the expected value of the full information	2	-
	SEW - Management of the logistics system by means of information systems	10	14
7	L - Requirements to the financial flow organization	2	-
	R (LW, SEW)	-	-
	Financial analysis	14	16
In total	L	16	6
	R (LW, SEW)	16	2

	SEW	88	112

Teaching methods:
1) verbal: 1.1 traditional: lectures, explanations, stories, etc.;
2) visual: illustration method, demonstration method
3) practical: 3.1 traditional: practical classes, seminars;

Evaluation system and requirements:
The final evaluation of the discipline is determined by adding the total sum of points on practical and theoretical preparation.

Ongoing achievement

- survey (0-20 points);
- level of knowledge on defending practical (laboratory) works (0-20 points);
- timely execution and defending practical (laboratory) works (0-10 points);
- attendance (0-10 points).

Table 1 – Assessment of the level of practical training

Component of the final evaluation	Points			
	16-20	11-15	6-10	0-5
Survey	The answer to the question is complete, concrete, contains definitions of terms, classification	The answer contains not a complete definition of terms, classification	The answer contains the definition of the basic terms with the help of the teacher	The wrong answer is given, the undiscovered essence of the question
Level of knowledge on defending practical (laboratory) works	The student gives the answer to the method of decision, correctly presented calculations and complete conclusions	The student gives the answer to the method of decision, in calculations there are minor errors or inaccuracies, conclusions are not presented completely	The student passes the general sense on the method of decision, in calculations there are significant errors or inaccuracies, conclusions are not presented completely	The student cannot convey the general sense of work, in calculations there are significant errors or inaccuracies, no conclusions are given
Component of the final evaluation	Points			
	9-10	6-8	2-5	0-1
Timeliness of execution and defending practical (laboratory) works	The student defends the work the same week, when it began	The student defends the work during the next week, after its beginning	The student defends the work during the month when it started	The student defends the work before the final control
Attendence	The student attended more than 90% of the classes	The student attended from 75% to 90% of the classes	The student attended from 50% to 75% of the classes	The student attended less than 50% of the classes

Assessment of theoretical training level (0-40 points):
- polling or conducting of the current control in the form of the test or control tasks (0-30 points);
- attendance (0-10 points).

Table 2 – Assessment of the level of theoretical training

Component of the final evaluation	Points			
	24-30	16-23	8-15	0-7
Survey	The answer to the question is complete, concrete, contains definitions of terms, classification	The answer contains definitions of terms, classification	The answer includes the definition of the basic terms	The given answers are incorrect , the question essence is undiscovered
Component of the final evaluation	Points			
	9-10	6-8	2-5	0-1
Attendence	The student attended more than 90% of the classes	The student attended from 75% to 90% of the classes	The student attended from 50% to 75% of the classes	The student attended less than 50% of the classes

The result of the study is estimated (choose required):
– on a double scale (passed/failed) according to table 2;
– on a 100-point scale (for differentiated test) according to table 3.

Table 3 – Conversion of the score into the 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

Table 4 – Applicants' evaluation score scale according to the final control of the academic discipline.

Evaluation score in points	Evaluation score according to national scale		ECTS grades	
	exam	test	Grade	Criteria
90-100	**Excellent**	**passed**	**A**	The theoretical content of the course is mastered completely, without gaps, the necessary practical skills to work over the mastered material are developed, all the training tasks provided by the program are accomplished, the quality of their performance is estimated by the number of points close to the maximum

<table>
<tr><td rowspan="2">Evaluation score in points</td><td colspan="2">Evaluation score according to national scale</td><td colspan="2">ECTS grades</td></tr>
<tr><td>exam</td><td>test</td><td>Grade</td><td>Criteria</td></tr>
<tr><td>80–89</td><td rowspan="4">Very good

Good</td><td rowspan="5">passed</td><td>B</td><td>The theoretical content of the course is mastered completely, without gaps, the necessary practical skills to work over the mastered material are basically developed, all the training tasks provided by the program are accomplished, the quality of performance of most of them is estimated by the number of points close to the maximum.</td></tr>
<tr><td>75-79</td><td>C</td><td>The theoretical content of the course is mastered completely, without gaps, some practical skills to work with the mastered material are not developed sufficiently, all the training tasks provided by the program are accomplished, the quality of performance of none of them is estimated by the minimum number of points, some tasks can have mistakes</td></tr>
<tr><td>67-74</td><td rowspan="2">Satisfactory</td><td>D</td><td>The theoretical content of the course is partially mastered, but the gaps are not significant, the necessary practical skills to work over the mastered material are basically developed, most of the training tasks provided by the program are accomplished, some of the completed tasks may contain mistakes</td></tr>
<tr><td>60–66</td><td>E</td><td>The theoretical content of the course is partially mastered, some practical skills to work over the mastered material are not developed, many training tasks according to the program are not completed, or the quality of performance of some of them is estimated by the number of points close to the minimum.</td></tr>
<tr><td>35–59</td><td>Unsatisfactory</td><td rowspan="2">Failed</td><td>FX</td><td>The theoretical content of the course is partially mastered, practical skills to work over the mastered material are not developed, most of the tasks provided by the programs are not completed, or the quality of their performance is estimated by the number of points close to the minimum; additional self-education work according to the course can improve the quality of the performance of educational tasks (in case of the second study)</td></tr>
<tr><td>0–34</td><td>Failed</td><td>F</td><td>The theoretical content of the course is not mastered, the necessary practical skills to work over the mastered material are not developed, all the completed educational tasks contain serious errors, additional self-education work according to the course doesn’t have any significant quality improvement in educational tasks performance (due to mandatory second study)</td></tr>
</table>

Course policy:

– the course involves working in the team where the environment 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.

Reference:

1. Колодізєва Т. О. Управління ланцюгами поставок : навчальний посібник / Т. О. Колодізєва. ─ Харків : ХНЕУ ім. С. Кузнеця, 2016. ─ 164 с.
2. Крикавський Є. Логістика та управління ланцюгами поставок : підручник / Є. Крикавський, О. Похильченко, М. Фертч – Львів : Львівська політехніка, 2019. 848 с.
3. Нефьодов В. М., Павленко О. В., Калініченко О. П. Побудова моделі системи перевезення партіонних вантажів у міжміському сполученні. Науково-технічний збірник «Комунальне господарство міст», № 142. – 2018. – С.103-107.
4. Павленко О. В., Нефьодов В. М., Великодний Д. О. Побудова логістики поставки консолідованих вантажів з України в Європу. Науково-технічний збірник «Комунальне господарство міст», Том 1 № 161 (2021): Серія: Технічні науки та архітектура, с 191-198.
5. Петруня Ю. Є., Пасічник Т. О. Вплив новітніх технологій на логістику та управління ланцюгами поставок. Маркетинг і менеджмент інновацій. 2018. № 1. С. 130-139.

Extra-reference:

1. EC distant course / [Електронний ресурс]. – Access regime: https://dl.khadi.kharkov.ua/course/view.php?id=1543
2. Законодавство України. – [Електронний ресурс].- Legislation of Ukraine. – [Electronic resource]. – Access mode: https://zakon.rada.gov.ua/laws
3. Кабінет Міністрів України. – [Електронний ресурс]- The Cabinet of Ministers of Ukraine. – [Electronic resource]. –. – Access mode: https://www.kmu.gov.ua/ua
4. Міністерство інфраструктури України. – [Електронний ресурс]. –Ministry of Infrastructure of Ukraine. – [Electronic resource]. – Access mode: https://mtu.gov.ua/
5. Національна бібліотека ім. В.І. Вернадського. – [Електронний ресурс].- The National Library of Ukraine named by V.I. Vernadsky – Access mode: http://www.nbuv.gov.ua/

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