Production logistics

COURSE SYLLABUS

Code and name of specialty	**073 Management**	**Institute**	**Institute of Education and Science in Economics, Management and International Business**
Program name	**Management of Organizations and Administration**	**Department**	**Management and taxation**
Type of program	**Educational and Professional**	**Language of instruction**	**English / Ukrainian**

LECTURER

Валентин Ковшик, ***valentin.kovshik@khpi.edu.ua***

Ph.D. (C.Sc.) in Economic Sciences, Associate Professor, Department of Management and Taxation, NTU "KhPI". Authored and co-authored over 30 scientific and methodological publications.

Courses: Operations management, Supply chain management, Logistics management, Planning of entrepreneurial activity, Management of organizations, Information systems in taxation, Economic and mathematical methods in taxation

GENERAL DESCRIPTION OF THE COURSE

Summary	The course "Production Logistics" is focused on mastering of modern methods of the logistics systems development at industrial enterprises and their management, as well as the use of modern technologies to ensure effectiveness of logistics processes.
Course objectives	Formation of modern managerial thinking and knowledge system in the field of logistics, development of production logistics systems and organization of relevant management activities.
Types of classes and control	Lectures, workshops, consultations. Individual assignment (calculation task). Final control – exam.
Term	7

Student workload (credits) / Type of course	5 / Elective	**Lectures (hours)**	32	**Workshops (hours)**	32	**Self-study (hours)**	86

Program competencies	GC03. The ability to abstract thinking, analysis, synthesis. GC04. The ability to apply knowledge in practical situations. SC02. The ability to analyze the results of organization activity, to compare them with the factors of the external and internal environment. SC07. The ability to choose and to use modern tools of management. SC08. The ability to plan the organization activity and to manage time. SC10. The ability to assess the performed works, to ensure their quality, and to motivate the staff of the organization.

	SC1.2. Ability to formulate the main tasks associated with the implementation of risk management in the organization

Learning outcomes	Teaching and learning methods	Forms of assessment (continuous assessment CAS, final assessment FAS)
LO 04. To show skills of identification of problems and justification of management decisions.	Interactive lectures with presentations, discussions, workshops, project-based learning, teamwork	Written assignment and exam (FAS), practical assessment (CAS), online tests (CAS)
LO 06. To show skills of search, collecting, and analysis of information, calculation of indicators to substantiate management decisions.	Interactive lectures with presentations, discussions, workshops, project-based learning, teamwork, research methods	Written assignment and exam (FAS), practical assessment (CAS), online tests (CAS)
LO 08. To apply management methods to ensure the effectiveness of the organization.	Interactive lectures with presentations, discussions, workshops, project-based learning	Written assignment and exam (FAS), practical assessment (CAS), online tests (CAS)
LO 10. To have the skills to substantiate effective tools for motivating the staff of the organization.	Interactive lectures with presentations, discussions, workshops, project-based learning, teamwork	Written assignment and exam (FAS), practical assessment (CAS), online tests (CAS)
LO1.2. Explain the general principles and patterns of integrated management of material, information, financial and other flows	Interactive lectures with presentations, discussions, workshops, project-based learning	Written assignment and exam (FAS), individual assignment (CAS), online tests (CAS)
LO1.4. Demonstrate skills in risk analysis, identification and assessment	Interactive lectures with presentations, discussions, workshops, project-based learning	Written assignment and exam (FAS), practical assessment (CAS), online tests (CAS)

ASSESSMENT AND GRADING

Ranges of points corresponding to grades	Total score (points) for all types of learning activities	ECTS grading scale	The national grading scale	Allocation of grade points	
	90-100	A	excellent		**100% Final assessment as a result of Final exam (40%) and Continuous assessment (60%).** **40% Final exam:** written assignment (theory + problem solving) and its oral presentation. **60% Continuous assessment:** online tests and practical calculation assignment.
	82-89	B	good		
	74-81	C			
	64-73	D	satisfactory		
	60-63	E			
	35-59	FX	Unsatisfactory (with the exam retake option)		
	0-34	F	Unsatisfactory (with mandatory repetition of the course)		

Course policy	Students are expected to attend classes regularly, to get to class on time and stay for the duration of the class. In the case of absence, students will be required to submit all assignments to make up for the missed classes. Students are also expected to come to class having read all the required material and being ready to productively participate in the class discussions. Written assignments should be submitted before the specified deadlines.

COURSE STRUCTURE AND CONTENT

Lectures 1-2	The concept and essence of logistics. The purpose of logistics activities.	**Workshops 1-2**	Logistics processes at enterprises	**Self-study**	Study of the lecture and additional materials on key stages of development and history of logistics
Lectures 3-4	Supply Chain Management (SCM) concept.	**Workshops 3-4**	Building the structure of the logistics network. Its modeling.		Study of the lecture and additional materials. Study of business process modeling tools.
Lectures 5-6	Logistics flows and logistics operations.	**Workshops 5-6**	Economic order quantity. Inventory Planning (MRP)		Study of lecture and additional materials. The place of logistics operations in the production process. Estimated task for planning the order of product parts.
Lectures 7-8	Functions of production logistics at the enterprise and in supply chains.	**Workshops 7-8**	Modeling of logistics functions at the enterprise and their connection. Toyota case		Study of the lecture and additional materials. Research of examples of logistics organization at enterprises.
Lectures 9-10	Fundamentals of production logistics management	**Workshops 9-10**	Distribution of management functions by stages of logistics processes. SCOR model		Study of the lecture and additional materials. Organizational development of logistics structures.
Lectures 11-12	Management of logistics costs of enterprises. Evaluation of logistics efficiency.	**Workshops 11-12**	Types and essence of logistics costs. Determining the elements of logistics costs, forecasting.		Study of the lecture and additional materials. Methods of accounting for logistics costs, the place of logistics costs in accounting documentation.
Lectures 13-14	Information technologies in production logistics	**Workshops 13-14**	Construction of logistics information systems and SLM systems. Modern approaches to the organization of information flows in logistics.		Study of the lecture and additional materials. The concept of artificial intelligence and its place in modern logistics information systems. Expert systems.
Lectures 15-16	Logistics strategy of a company.	**Workshops 15-16**	Formation of strategy of logistic activity in production		Study of the lecture and additional materials. The concept of marketing logistics

RECOMMENDED READING

Compulsory	1. Gabrielova, T., Lytvynenko, S., Ivannikova, V., & Lytvynenko, L. (2020). Cargo Science and Logistics. Kyiv: Condor. 2. Rossi, R. (n.d.). Inventory Analytics. Retrieved from https://doi.org/10.11647/OBP.0252 3. Luca, S. D., Pace, R. D., & Djordjevic, B. (Eds.). (2020). Transportation Systems Analysis and Assessment. Retrieved from https://doi.org/10.5772/intechopen.75294 4. Szymonik, A. (2012). Logistics and Supply Chain Management. Retrieved from https://www.researchgate.net/publication/297369572_Logistics_and_Supply_Chain_Management 5. Agolla, J. E. (2021). Smart Manufacturing: Quality Control Perspectives. In Quality Control—Intelligent Manufacturing, Robust Design and Charts. IntechOpen. https://doi.org/10.5772/intechopen. Retrieved from 95143 6. Yuan, X.-M. (2020). Impact of Industry 4.0 on Inventory Systems and Optimization. In Industry 4.0—Impact on Intelligent Logistics and Manufacturing. IntechOpen. Retrieved from https://doi.org/10.5772/intechopen.90077	**Recommended**	1. Крикавський, Є. В. (2005). Логістичне управління. Львів: Львівська політехніка. 2. Окландер, М. А. (2008). Логістика. Київ: Центр учбової літератури. 3. Кальченко, А. Г. (2000). Логістика: Київ: КНЕУ. 4. Пономарьова, Ю. В. (2005). Логістика: Київ: Центр навчальної літератури. 5. Сумець, О. М., Голофаєва, І. П., & Білоцерківський, О. Б. (2010). Логістика: Теорія, ситуації, практичні завдання. Харків: Міськдрук. 6. PricewaterhouseCoopers. (n.d.). Shifting patterns: The future of the logistics industry. From PwC website: Retrieved from https://www.pwc.com/gx/en/industries/transportation-logistics/publications/the-future-of-the-logistics-industry.html 7. Ковшик, В. І. (2014). Алгоритм вибору підходу до управління логістичними витратами підприємства. Вісник НТУ «ХПІ»,. 8. Ковшик, В. І. (2015). Інформаційні технології в контексті управління логістичними витратами промислових підприємств. Вісник Хмельницького Національного Університету. Економічні Науки 9. Ковшик, В.І., Зубкова, А. Б. (2013). Система показників ефективності маркетингової логістики підприємства. Вісник НТУ «ХПІ» 10. Гаврись, О. М., & Ковшик, В. І. (2014). Фасетна класифікація логістичних витрат промислових підприємств. Економічний Аналіз

Academic integrity

Graduate students are expected to adhere to the Code of Ethics of Academic Relations and Integrity" of NTU "KhPI".

The content of this syllabus is consistent with the course program.