

# Supply chain management

## COURSE SYLLABUS

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

### LECTURER

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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, Production logistics, 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 "Supply chain management" is focused on mastering of modern methods of the supply chain management and development, as well as the use of modern technologies to ensure effectiveness of logistics processes in a supply chain.
Course objectives	Development of modern managerial thinking and knowledge in the field of supply chain management and logistics management.
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

GC04. The ability to apply knowledge in practical situations.  
GC05. Knowledge and understanding the subject area and understanding the professional activity.  
GC06. The ability to communicate by the national language both orally and in writing.  
GC08. Skills of information and communication technology usage.  
GC09. The ability to learn and to master modern knowledge.  
GC14. The ability to work in an international context.

SC02. The ability to analyze the results of organization activity, to compare them with the factors of the external and internal environment.  
 SC04. The ability to determine the functional areas of the organization and the relationships between them.  
 SC07. The ability to choose and to use modern tools of management.  
 SC08. The ability to plan the organization activity and to manage time.  
 SSC1.1. Understanding of modern approaches to supply chain management  
 SSC1.2. The ability to describe business processes in supply chains and to manage material, information, financial and other flows

Learning outcomes	Teaching and learning methods	Forms of assessment (continuous assessment CAS, final assessment FAS)
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	Written assignment and exam (FAS), practical assessment (CAS), online tests (CAS)
LO 07. To show skills of organizational planning	Interactive lectures with presentations, discussions, workshops, project-based learning, teamwork	Written assignment and exam (FAS), practical assessment (CAS), online tests (CAS)
LO 09. To plan and to organize an operational activities, to manage the business entity resources effectively.	Interactive lectures with presentations, discussions, workshops, project-based learning	Written assignment and exam (FAS), practical assessment (CAS), online tests (CAS)
LO 13. To communicate in an oral and written form in the state and foreign languages.	Interactive lectures with presentations, discussions, workshops, project-based learning, teamwork	Written assignment and exam (FAS), practical assessment (CAS), online tests (CAS)
LO 15. To show the ability to act socially responsibly and socially consciously on the basis of ethical reasons (motives), respect for a variety, and interlevel of culture.	Interactive lectures with presentations, discussions, workshops, project-based learning	Written assignment and exam (FAS), online tests (CAS)
LO 16. To demonstrate skills of independent work, flexible thinking, openness to new knowledge, be critical and self-critical.	Interactive lectures with presentations, discussions, workshops, project-based learning	Written assignment and exam (FAS), practical assessment (CAS), individual assignment (CAS), online tests (CAS)
LO1.2. To evaluate the effectiveness of supply chain management and to identify areas for optimization	Interactive lectures with presentations, discussions, workshops, project-based learning	Written assignment and exam (FAS), practical assessment (CAS), individual assignment (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.
	82-89	B	good	
	74-81	C		

	64-73	D	satisfactory		<b>60% Continuous assessment:</b> online tests and individual calculation assignment.
	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					
<b>Lectures 1-2</b>	The concept and essence of Supply Chain Management (SCM).	<b>Workshops 1-2</b>	Building the structure of the logistics network. Its modeling.	<b>S e l f - s t u d y</b>	Study of the lecture and additional materials. Study of business process modeling tools.
<b>Lectures 3-4</b>	Logistics concept. The purpose of logistics activities in SCM.	<b>Workshops 3-4</b>	Logistics processes at enterprises. Toyota case		Study of the lecture and additional materials on key stages of development and history of logistics
<b>Lectures 5-6</b>	Material and information flows.	<b>Workshops 5-6</b>	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.
<b>Lectures 7-8</b>	Functions of supply chains.	<b>Workshops 7-8</b>	Modeling of SC functions.		Study of the lecture and additional materials. Research of examples of SCM structures.
<b>Lectures 9-10</b>	SCOR model	<b>Workshops 9-10</b>	Distribution of management functions by stages of logistics processes. SCOR model		Study of the lecture and additional materials. Organizational development of logistics structures.
<b>Lectures 11-12</b>	Management of logistics costs of supply chain. Evaluation of SCM efficiency.	<b>Workshops 11-12</b>	Types and essence 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 of supply chain members.
<b>Lectures 13-14</b>	Information technologies in SCM.	<b>Workshops 13-14</b>	Construction of information systems in SCM. 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.
<b>Lectures 15-16</b>	SCM strategy.	<b>Workshops 15-16</b>	Formation of strategy of SCM activity		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. (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](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. Retrieved from <https://doi.org/10.5772/intechopen.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», 45, 24–31.
8. Ковшик, В. І. (2015). Інформаційні технології в контексті управління логістичними витратами промислових підприємств. Вісник Хмельницького Національного Університету. Економічні Науки, 4 (1), 208–212.
9. Ковшик, В. І., Зубкова, А. Б. (2013). Система показників ефективності маркетингової логістики підприємства. Вісник НТУ «ХПІ», 7, 36–45.
10. Гаврись, О. М., Ковшик, В. І. (2014). Фасетна класифікація логістичних витрат промислових підприємств. Економічний Аналіз, 16(2), 90–97.

**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.