

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
NATIONAL AVIATION UNIVERSITY  
Faculty of Economics and Business Administration  
Logistics Department

APPROVED  
Acting Rector

« \_\_\_ » \_\_\_\_\_ 2018



Quality Management System

**SYLLABUS**

on

**«Logistics»**

Field of study: 07 «Management and Administration»  
Speciality: 073 «Management»  
Specialization: «Management of Foreign Economic Activity»  
«Management of Organizations and Administration  
(by types of economic activities)»

Year of study – 2 Semester – 3

Classroom Sessions – 51 Examination – 3 semester  
Self-study – 54  
Total (hours/ECTS credits) – 105/3,5

Index CB-6-073/16-2.1.13

**QMS NAU S 11.02.04-01-2018**



The Syllabus on “Logistics” is developed on the base of the educational and professional program and Bachelor Curriculum № CB-6-073/16 for Speciality 073 «Management», Specializations «Management of Foreign Economic Activity», «Management of Organizations and Administration (by types of economic activities)» and correspondent normative documents.

Developed by

Professor

of the Logistics Department \_\_\_\_\_ S. Smerichevska

Associate Professor

of the Logistics Department \_\_\_\_\_ Yu. Remyha

Discussed and approved by the Logistics Department, Minutes № \_\_\_\_ of  
«\_\_» \_\_\_\_\_ 2018.

Head of the Department \_\_\_\_\_ M. Grygorak

Discussed and approved by the Graduate Department for Speciality 073 «Management», Specializations «Management of Foreign Economic Activity», «Management of Organizations and Administration (by types of economic activities)» – Management of Foreign Economic Activity of Enterprises Department, Minutes № \_\_\_\_ of «\_\_» \_\_\_\_\_ 2018.

Head of the Department \_\_\_\_\_ O. Iliencko

Discussed and approved by the Scientific-Methodological-Editorial Board of the Faculty of Economics and Business Administration, Minutes № \_\_\_\_ of  
«\_\_» \_\_\_\_\_ 2018.

Head of the SMEB \_\_\_\_\_ A. Tofanchuk

“Agreed”

Acting Dean of the Faculty of  
Economics and Business Administration

\_\_\_\_\_ S. Petrovska

«\_\_» \_\_\_\_\_ 2018.

Director of the Center  
of Advanced Technologies

\_\_\_\_\_ V. Kazak

«\_\_» \_\_\_\_\_ 2018.

Level of document – 3b

Planned term between revisions – 1 year

**Registered copy**



## 1. EXPLANATORY NOTES

The Syllabus on “Logistics” is developed on the basis of “The guidelines for the development and execution of Syllabus and Course Training Program”, enacted by decree 16.06.2015 №37 / поз.

This subject is considered as a theoretical and practical basis of knowledge and skills that form the expert’s profile in the field of logistics.

The purpose of teaching this discipline is to create system knowledge and understanding of the conceptual foundations of logistics, theory and practice of logistics development as a modern concept of effective management of economic systems, and acquisition of skills of practical use of modern methods and tools of logistic control of flow processes in the conditions of integration and globalization of the economy.

Objectives to study the subject are:

- formation of a systematic understanding of the essence of logistics as a modern concept of crisis management and a tool for ensuring the competitiveness of individual economic entities, as well as entire supply chains;
- acquisition and systematization of knowledge about the essence of the interaction of logistics concepts, technologies and systems;
- mastering the peculiarities of system and operational approaches in logistics;
- mastering the methodical tools for making optimal managerial decisions in various functional areas of logistics;
- mastering the skills of logistics thinking and developing proposals for improving logistics systems and mechanisms for its functioning;
- acquisition of skills for assessing the economic efficiency of logistics solutions and the implications of logistics solutions.

As a result of this subject mastering a student should:

**Know:**

- the main principles, concepts, and methodology of logistics;
- peculiarities of operational decomposition of logistics activities;
- preconditions for the creation and functioning of logistics systems;
- peculiarities of logistics management and its place in the management system of the company;
- the state and trends of the market for logistics services in Ukraine and in the world;
- functional areas of logistics;
- the essence of the logistics approach to customer service and the peculiarities of the mechanism of logistics provision of the required quality for consumer goods;



- ways to increase the efficiency of managerial decisions based on the logistics approach;
- peculiarities of informational, organizational, legal provision of the logistics approach to management of the company with the purpose of rational use of resources and minimization of aggregate expenses.

**Be able to do:**

- independently organize the joint activity of the enterprise divisions to effectively promote products in the chain “procurement of raw materials – production – distribution – sales – consumption” on the basis of integration and coordination of logistics operations and functions;
- independently carry out the operational decomposition of the logistics process, design logistics systems and determine the optimal parameters of its operation;
- independently carry out the right choice of the supplier and conditions of delivery, vehicles and delivery routes, coordinate the processes of delivery with production processes, determine the rational levels of stocks and conditions of their storage;
- independently manage information and financial flows, coordinate them with material flows and flows of services;
- independently choose the optimal logistic strategy.

Training material is structured according to a module principle and consists of two educational modules:

- training module №1 **“Conceptual foundations of logistics and trends of its development”**;
- training module №2 **“Functional logistics subsystems and integrated logistics”**, each of which is logically completed, relatively independent, integral part of the discipline, learning which provides for modular test and analyze the results of its implementation.

Discipline “Logistics” is based on knowledge of such disciplines as “Introduction to Specialty”, “Business Ethics”, “Basis of Scientific Researches”, “Macroeconomics and Microeconomics” and is the basis for the study of such disciplines as “Management”, “Operations Management”, “Strategic Management” and others.

## 2. SUBJECT CONTENT

### 2.1. Module №1 “Conceptual foundations of logistics and trends of its development”.

#### Topic 2.1.1. Logistics: the essence and basic characteristics.

Retrospective view at logistics: evolution, paradigm of development. The purpose and tasks of logistics. The conceptual apparatus of logistics. Subject,



objects and subjects of logistics. Logistics mix «8R». Basic principles, functions and types of logistics. Experience of foreign countries in the application of logistics. The role of logistics in the global economy.

**Topic 2.1.2. Flow processes in logistics and their operational decomposition.**

Characteristics of flow processes in logistics. Essence, indicators and classification of material flows. Information flows and their classification. Financial flows and their classification. Streams of services. Generic flow diagrams. Integrated logistics flows. Criteria for optimal management of integrated flows. Logistics operations and their classification. Methodology of operational decomposition of managerial process.

**Topic 2.1.3. Logistics systems and its features as an object of management.**

Essential structuring and classification of logistics systems. Basic elements, connections and properties of logistics systems. Transport-logistics clusters as macro-logistics systems of innovation type. Mechanism and procedure of design and analysis of logistics systems. Criteria and approaches to assessing the efficiency of logistics systems operation.

**Topic 2.1.4. Logistics concepts and technologies.**

The essence and interconnection of logistics concepts and logistics technologies. The concept of “Material resources planning” (MRP). Concept of “Distribution resources planning” (DRP). Evolution of the concept of RRP (Requirements / resource planning). Concept “Just in time” (JIT). The concept of “Lean Production” (economical production). The concept of overall quality management (TQM). The concept of demand-oriented logistics (DDT – Demand-driven techniques). Integrated Logistics Concept (SCM – Supply Chain Management).

**Topic 2.1.5. Structure and development trends of logistics services market.**

Types of logistics services. Market segmentation of logistics services. Strategic directions of development of the logistics services market. The essence and types of logistics outsourcing. Risks and benefits of logistics outsourcing. Types of Logistics Providers. Problem of inforcing - outsourcing of logistics.

**2.2. Module №2 “Functional logistics subsystems and integrated logistics”.**

**Topic 2.2.1. Logistics of supply, procurement and placement of orders.**

The essence, task and process of procurement logistics. Determine the need for materials. Criteria and methods of selecting suppliers. Organization of cooperation with the supplier. Order Management. Method of calculating the optimal order size.



### **Topic 2.2.2. Production Logistics.**

Purpose, tasks and functions of production logistics. “Pushing” and “pulling” systems for managing material flows in industrial logistics. In-house logistics systems: KANBAN, MRP-1; MRP-2; MRP-3; ERP; OPT and others. Using the concept of LP (Lean Production) in the production of Toyota. Efficiency of application of logistics in the management of material flows in production.

### **Topic 2.2.3. Distribution Logistics.**

Purpose, tasks and functions of distribution logistics. Structure and principles of the operation of logistics distribution channels. Logistics intermediaries in distribution, its classification and functions. Coordination and integration of logistics intermediaries. Placement of distribution centers in the logistics environment. Logistics concepts and systems in the field of product distribution: DRP and its modifications; DDT, QR, CPR, ECR and others. Efficiency of logistics in the management of material flows in the sphere of circulation.

### **Topic 2.2.4. Warehouse Logistics.**

Types and functions of warehouses in the logistics system. Organization of the logistics process in the warehouse. Parameters and principles of the effective functioning of the warehouse. Typical logistics solutions for optimizing warehouse subsystem. WMS Warehouse Management System. The role of packaging in reducing logistics costs. Distribution centers and its placement. New technologies in warehouse logistics.

### **Topic 2.2.5. Inventory Logistics.**

Location and role of inventory in the logistics system. Classification of inventories. Types of Inventory Management Systems (IMS). ABC and XYZ analysis in inventory management. “Stocks managed by the seller” (VMI).

### **Topic 2.2.6. Transport Logistics.**

The essence and tasks of transport logistics. Comparative logistics characteristics and infrastructure of different modes of transport. Modern transportation technologies. Methods of selecting the optimal method of transportation and optimal carrier. Modern telecommunication systems of freight transportation support.

### **Topic 2.2.7. Information Logistics.**

The essence and importance of information logistics. Information systems in logistics. Software for adoption and support of logistics solutions. Technologies of automatic identification and bar-coding in logistics. Corporate Information Systems (CIS) and Electronic Data Interchange (EDI). Electronic logistics and intelligent logistics systems.

### **Topic 2.2.8. Logistics approach to customer service (service logistics).**

The meaning, essence and types of logistics service. Formation of logistics service system. Parameters and characteristics of logistics service. Criteria for the quality of the logistics service. KPI-system in service logistics. Methods of



assessing the level of logistics service. Service Response Logistics (SRL). Estimation of consumer value of logistics services by the KANO method.

### **Topic 2.2.9. Integrated Logistics (SCM) and evaluation of its effectiveness.**

Integrated Logistics (SCM) as the main factor of competitiveness in the conditions of globalization of the economy. Functional and integral approaches to assessing the efficiency of logistics. Logistics concept of minimizing total costs in the supply chain. Types of logistics costs and problems of its calculation. Criteria and indicators for Integrated Logistics Performance Assessment (SCM). Methodology for estimating logistics efficiency by the international index LPI.

## **3. LIST OF REFERENCES**

### **3.1. The basic literature**

3.1.1. Гаджинский, А. М. Логистика: учебник для высших учебных заведений по направлению подготовки "Экономика" / А. М. Гаджинский. – М.: Дашков и К°, 2013. – 420 с.

3.1.2. Дыбская В. В. Логистика. В 2-х частях /В. В.Дыбская, В. И. Сергеев. - М.: Изд-во «Юрайт», 2016. Электронный ресурс. Режим доступа: <http://www.niv.ru/shop/book/1-2-4-3/1140739/1140779/logistika.htm>.

3.1.3. Логистика: тренинг и практикум: учебное пособие / Государственный университет управления. – М.: Проспект, 2014. – 442 с.

3.1.4. Логистика : учебное пособие для бакалавров / ред.: Б. А. Аникин, Т. А. Родкина. - М. : Проспект, 2014. - 408 с.

3.1.5. Логистика и управление цепями поставок: учебник / [В. В. Щербаков и др.]. – Москва: Юрайт, 2015. – 581 с.

3.1.6. Миротин Л. Б. Основы логистики : учебник / Л. Б. Миротин, А. К. Покровский. - М.: Академия, 2013. - 192 с.

3.1.7. Мерфи Пол Р., Вуд Дональд Ф.. Современная логистика. – М. : Изд-во: Диалектика-Вильямс, 2016. - 720 с.

3.1.8. Смерічевська С.В. Маркетинг і логістика: концептуальні основи та стратегічні рішення. /С.В.Смерічевська, М.В.Жаболенко, С.В.Чернишева та інш. За загальною редакцією С.В. Смерічевської // Навч. посібник у схемах і таблицях (для організації самост. роботи студентів ВНЗ). – Львів: «Магнолія 2006», 2013. – 552 с.

3.1.9. Сумец А. М. Логистика: теория, ситуации, практические задания: Учебное пособие.- К.: Хай-Тек Прес, 2008. – 320 с.

### **3.2. The additional literature**

3.2.1. Крикавський Є.В. Логістика: Компендіум і практикум / Є. В. Крикавський, Н. І. Чухрай, Н. В. Чернописька. – Київ : Кондор, 2007. - 340с.



3.2.2. Григорьев М. Н. Коммерческая логистика: теория и практика: учебник для бакалавров / Григорьев М. Н., Ткач В. В., Уваров С. А. — 2-е изд., перераб. и доп. — М.: Издательство Юрайт, 2014. — 490 с.

3.2.3. Григорьев М. Н. Логистика. Продвинутый курс. В 2 частях. / М. Н. Григорьев, А. П. Долгов, С. А. Уваров. - М. : Издательство Юрайт, 2016 - Ч.1 - 467 с., Ч 2 - 342 с.

3.2.4. Логистика снабжения: учебник / В. И. Сергеев, И. П. Эльяшевич. – Москва: Юрайт, 2014. – 522 с.

3.2.5. Смерічевська С. В. Формування освітньо-інноваційного потенціалу логістизації національної економіки : стратегічні імперативи [монографія] / С. В. Смерічевська. – Херсон : Вид-во «Гельветика», 2015. – 320 с.

3.2.6. Дистрибуция и логистика. Журнал. [Электронный ресурс] - Режим доступа : <http://www.ukrlogistica.com.ua/>. – Назва з екрану.

3.2.7. Логистика. Спец. научно-практический журнал. [Электронный ресурс] - Режим доступа: <http://www.logistika-prim.ru/>. — Назва з екрану.

3.2.8. Логистика и управление цепями поставок. Научно-аналитический журнал. [Электронный ресурс] - Режим доступа: <http://www.lscm.ru/index.php/ru/>. – Назва з екрану.

3.2.9. Транспорт і логістика. Журнал. [Електронний ресурс] - Режим доступа : <http://translog.com.ua/>. – Назва з екрану.





(Ф 03.02 – 01)

### АРКУШ ПОШИРЕННЯ ДОКУМЕНТА

№ прим.	Куди передано (підрозділ)	Дата видачі	П.І.Б. отримувача	Підпис отримувача	Примітки

(Ф 03.02 – 02)

### АРКУШ ОЗНАЙОМЛЕННЯ З ДОКУМЕНТОМ

№ пор.	Прізвище ім'я по-батькові	Підпис ознайомленої особи	Дата ознайомлення	Примітки

(Ф 03.02 – 04)

### АРКУШ РЕЄСТРАЦІЇ РЕВІЗІЇ

№ пор.	Прізвище ім'я по-батькові	Дата ревізії	Підпис	Висновок щодо адекватності

(Ф 03.02 – 03)

### АРКУШ ОБЛІКУ ЗМІН

№ зміни	№ листа (сторінки)				Підпис особи, яка внесла зміну	Дата внесення зміни	Дата введення зміни
	Зміненого	Заміненого	Нового	Анульованого			

(Ф 03.02 – 32)

### УЗГОДЖЕННЯ ЗМІН

	Підпис	Ініціали, прізвище	Посада	Дата
Розробник				
Узгоджено				
Узгоджено				