(Ф 03.02 – 110)

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL AVIATION UNIVERSITY
Faculty of Transport, Management and Logistics
Logistics Department

AGREED
Dean of the Faculty of Transport,
Management and Logistics
_____ Tetiana MOSTENSKA
«29» 11 2023

APPROVED
Vice-Rector for Academics
_____ Anatolii POLUKHIN
«30» 11 2023

Quality Management System

COURSE TRAINING PROGRAM
on
«Aviation Management»

Educational Professional Programs: «Aviation Logistics»

Field of study: 07 «Management and Administration»

Specialty: 073 «Management»

Form of study	Seme-ster	Total (hours/ credits ECTS)	Lectu-res	Prac-ticals	Self-Study	HW/CGP/ CW	TP/ CPr	Form of semester control
Full-time	8	105 / 3.5	24	24	57	1 HW – 8 s.	-	Examination – 8s

Index: CB-7-073-4/21-2.1.33

QMS NAU CTP 19.05-01-2023

The Course Training Program on «Aviation Management» is developed on the basis of the Educational Professional Program «Aviation Logistics», Bachelor Curriculum CB-7-073-4/21 and Bachelor Extended Curriculums № ECB-7-073-4/23 for Specialty 073 «Management» and corresponding normative documents.

Developed by
Professor of the Logistics Department _____ Volodymyr KULYK

Senior Lecturer of
the Logistics Department _____ Myroslava SEMERIAHINA

Discussed and approved by the Graduate Department for Specialty 073 «Management», Educational and Professional Program «Aviation Logistics» – Logistics Department, Minutes № 18 of 20.11.2023.

Guarantor of Educational Professional
Program «Aviation Logistics» _____ Oksana POZNYAK

Acting Head of the Department _____ Svitlana SMERICHEVSKA

Vice Rector on International
Collaboration and Education

_____ Iryna ZARUBINSKA

29.11.2023р

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INTRODUCTION

The Course Training Program on "Aviation Management" is developed based on the "Methodical guidance for the subject Course Training Program", approved by the order № 249/од, of 29.04.2021 and corresponding normative documents.

1. EXPLANATORY NOTES

1.1. Place, objectives, tasks of the subject

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

The main aim of the subject is the mastering theoretical knowledge on logistics management and acquiring practical skills and abilities in using the principles and methods of aviation logistics management in the process of managing air transport and enterprises of various fields of activity to increase their stability, coordinate actions and resolve conflict situations.

The objectives of the subject are:

– acquisition of theoretical knowledge on the management and regulation of air transport and logistics management of airlines of various activities and their logistics administration;

– organization of the activity of the logistics service at the airline;

– understanding of tasks related to design, planning, regulation, control in logistics systems of air transportation;

– formation of skills related to the organization of coordination of the activities of the structural department of airlines, airports and enterprises of aeronautical support of air traffic, as well as interaction with business partners.

1.2. Learning outcomes the subject makes it possible to achieve

As a result of the study of the subject, the student must achieve the following program **learning outcomes** (hereinafter referred to as PLO) in combination with other educational components:

– PLO 3. Demonstrate knowledge of theories, methods and functions of management, modern concepts of leadership;

– PLO 4. Demonstrate skills in identifying problems and justifying management decisions;

– PLO 12. Assess the legal, social and economic consequences of the organization's functioning.

– PLO 13. Communicate orally and in writing in national and foreign languages.

– PLO 14. Identify the causes of stress, adapt yourself and team members to a stressful situation, find means to neutralize it.

– PLO 18. Determine the parameters of management of material and related flows, comply with environmental requirements and safety rules of goods movement in the aviation industry.

– PLO 21. Demonstrate skills in optimizing the organizational and technological aspects of managing material and related flows in operational logistics activities in aviation supply chains (transportation operations, cargo processing, storage, sorting, marking, consolidation, customs clearance, information support, etc.) taking into account rules, practices and procedures to protect civil aviation from acts of illegal interference, taking into account aspects of safety, regularity and efficiency of flights.

1.3. Competences the subject makes it possible to acquire

As a result of studying the subject the student must acquire the following integral competencies (hereinafter referred to as the IC), general competencies (hereinafter referred to as the GC), professional competencies (hereinafter referred to as the PC) in combination with other educational components:

– IC 1. The ability to solve complex specialized tasks and practical problems, which are characterized by complexity and uncertainty of conditions, in the field of management and logistics or in the learning process, which involves the application of theories and methods of social and behavioral sciences;

– IC 2. Operational and tactical management of logistics business processes of aviation companies, organization of complex logistics service for consumers of aviation industry products, organization of operational logistics activities in the field of civil aviation;

– GC 4. Ability to apply knowledge in practical situations.

– GC 5. Knowledge and understanding of the subject area and understanding of professional activity.

– GC 9. Ability to learn and master modern knowledge.

– GC 11. Ability to adapt and act in a new situation.

– GC 15. Ability to act on the basis of ethical considerations (motives).

– GC 16. Strive for personal and professional self-development, awareness of the social significance of one's future profession, possession of high motivation to perform professional activities.

– GC 17. Acquisition of flexible and critical thinking, the ability to critically evaluate personal merits and shortcomings.

– GC 18. Ability to carry out communication activities and business communication: public speeches, negotiations, meetings, business correspondence, electronic communications, etc.

– GC 19. Ability to work in a team and team, readiness for cooperation with colleagues and information exchange in aviation supply chains and aviation logistics networks.

– GC 20. The ability to assess the conditions and consequences of organizational and management decisions, the ability to justify management decisions and the ability to ensure their legitimacy from the standpoint of social responsibility.

– PC 2. The ability to analyze the results of the organization's activities, to compare them with the factors influencing the external and internal environment.

– PC 3. The ability to determine the prospects of the organization's development.

– PC 5. The ability to manage the organization and its divisions through the implementation of management functions.

– PC 6. The ability to act socially responsibly and consciously.

– PC 7. Ability to choose and use modern management tools.

– PC 8. Ability to plan the activities of the organization and manage time.

– PC 12. The ability to analyze and structure the problems of the organization, to form reasonable solutions.

– PC 16. The ability to set and solve tasks for the management of aviation material and related flows in logistics systems at the micro and macro levels.

– PC 19. The ability to formulate requirements for transport, for systems of storage and warehouse processing of air cargo, for information systems that ensure the movement of cargo and passengers, and to make decisions regarding their selection.

1.4. Interdisciplinary connections

Interdisciplinary connections: «Aviation Management» is based on the knowledge of such subjects as «International Flight Management», «Strategic Management» and forms practical competence for Major-related Training and carrying out of Qualification Paper.

2. COURSE TRAINING PROGRAM ON THE SUBJECT

2.1. The subject content

Training material is structured according to the module principle and consists of two modules, namely:

– **module № 1 «Principles, functions and methods of interaction management of aviation supply chain entities»,** which is logically complete, relatively independent, holistic part of the Bachelor Curriculum and Bachelor Extended Curriculums, learning of which provides for Module Test and analysis of its implementation.

2.2. Modular structuring and integrated requirements for each module

Module № 1 «Principles, functions and methods of interaction management of aviation supply chain entities»

Integrated requirements of module № 1:

Know:

– scientific principles of logistics management in the air transport regulation and management system;

– strategy and tactics of logistics management in the conditions of air transport activity;

– basic requirements for the development of effective management of logistics systems based on the principles of unity of hierarchy and heterarchy;

– existing types of organizational structures or enterprises of various profiles;

– logistics management strategy and tactics in supply chain management;

– the technology of developing the job description of the aviation logistics manager;

– logistics management system, methods and techniques of logistics analysis;

– principles of motivation of logistics managers.

Learning outcomes:

– to apply a system approach in airline management;

– to develop optimal organizational structures of the logistics service;

– to organize logistics in air transport and other companies;

– to apply methods of motivating logistics personnel to reduce total costs;

– to develop logistics strategies for airlines of different types of activity;

– to draw up plans for current and operational logistics activities of the enterprise;

– to conduct a logistics audit of an airline;

– to develop systems of balanced indicators and a structure of indicators of logistics activity.

Topic 1. Evolution of the scientific foundations of management

Schools of scientific management: the theory of scientific management by F. Taylor, the theory of human relations in management by E. Mayo, the theory of classical management by A. Fayol, the theory of rational management by P. Drucker. Prerequisites of corporate management and logistics management. Basic principles of logistics management.

Topic 2. The essence, tasks and features of aviation management as an air transport management system

Basic definitions of regulation and management. An integrated system of effective logistics management, supply objects, and subjects of logistics activity. Aviation logistics management as an integrated system of administration and interaction of business entities of air transport. Features and main directions of effective logistics management of aviation companies. Criteria of air transport activity, aviation logistics and criteria of effective logistics management.

Topic 3. Theoretical and methodological foundations of aviation logistics management

Basic regulations, standards and rules of regulation of international air transport. Market laws of logistics as a methodological basis for the unity of logistics management. Evolution of logistics management methodology and its main stages: reactive logistics, marketing logistics, strategic and global logistics management. Hierarchy of logistics activities and levels of logistics management: intra-operational, inter-operational, inter-functional, production, corporate, inter-organizational, global logistics management. Logistics mission and logistics goals. Organization and functioning of logistic business processes, networks, chains, flows, systems. Hierarchy and heterarchy of logistics systems management. Organizational and economic mechanisms of effective aviation logistics management.

Topic 4. Scientific principles of aviation logistics management

Process system as the basic basis of effective logistics management. Main properties of the system. Integrated logistics systems in air transport. Qualities of logistics systems. Complex and integration principle of management. Use of the marketing-behavioral principle of management. Reproducible and optimization management principle. Optimization of investment and resource provision of management decisions based on the use of economic and mathematical methods. Applying of the situational and variable principle. Directive-dynamic principle of management. Use of the functional-cost principle in the system of economic regulation of aviation tariffs and fees.

Topic 5. Functions of logistics management of airlines

The concept of production (operation) functions of logistics: ordering, transportation, production, warehousing, distribution, implementation, consumption, customer service. Functions of logistics management: 1) logistics goal setting, 2) logistics planning, 3) organization of logistics activities, 4) motivation of activities, 5) coordination of the movement of supply objects and interaction of logistics subjects, 6) controlling the formation, provision and use of logistics functions.

Topic 6. Methods and technologies of aviation logistics management

Specifics of organizational forms of business process management in logistics systems of airline companies. Classification of logistics management methods. Methods of effective logistics management: normative-legal, organizational-technological, research-analytical, economic, economic-mathematical, moral-psychological. Algorithms of management decisions in logistics activities of airline companies. Peculiarities of managing modern logistics technologies: customer orientation and complexity of logistics services ERP, MRP, DRP and other IT technologies in the management of logistics business processes and business functions.

Topic 7. Strategy and tactics of logistics management of aviation companies

Strategic planning of long-term logistics activities. The innovative nature of the development of economic entities of aviation logistics. Conditions, opportunities and expediency of creating stabilization, functioning, transformation, development and liquidation of logistics departments or enterprises and networks. The search for modern ways of implementing partnership and integration of enterprises and organizations of a complete system of air transport activities and logistics service for the production of the final product and service for the final consumer - the client-customer of complex logistics services. Applying of basic strategic directions of organization and management of logistics functions and business processes: diversification, specialization, concentration, differentiation, integration and competition of enterprises in the market of logistics services.

Topic 8. Modern organizational forms of partnership management in logistics chains of air transportation

Modern trends of vertical integration. Consecutive stages of the formation of a chain of complex logistics services. Twelve stages of partnership formation. Market distribution of risks, powers and responsibilities of logistics network entities. Applying of outsourcing and vertical disintegration. Creation of e-commerce logistics hubs. Applying of forms and methods of management of virtual logistics corporate associations. Development of the functions of a system integrator and coordinator of logistics system entities. Development of international transport infrastructure. Management of the integration of national transport systems and the creation of a single information logistics space, a single global cross-border logistics system.

Topic 9. Cluster strategy of airport-hubs in the system of regulation of air transportation of chains

Prerequisites and expediency of the geo-economic stage of strategic management of the development of transport activities. The transport and logistics

cluster of airports as a modern form of air transport organization at the national and international levels. Basic concepts of clustering. Cluster according to M. Porter. Classification of clusters. The dual character of the concept of logistics clustering in air transport. Formation of transport and logistics clusters and their cores. Formation of horizontal functional integration of economic entities. A set of business enterprises: logistics centers, adjacent support and service companies as an informal association, functioning on the basis of the "4C" criteria: 1) concentration within the territory and industry, 2) competition in the fight for the market of consumers of services of the business environment of the cluster, 3) cooperation in ensuring the complexity and efficiency of logistics services in the air transportation system, 4) competitiveness in the quality of services and interaction of the subjects of the logistics chain of air transportation.

Topic 10. Regulation of international air transport

Peculiarities of control, regulation and management systems in air transport. The structure, legal framework of the bodies carrying out the regulatory process at the national, regional and international levels.

ICAO standards, regulations, rules and other instructional materials on the regulation of air transport activities. Categories of air transport markets: between a pair of cities, between a pair of states, interregional, intercontinental and worldwide air markets. Peculiarities of legislation on open competition. Rules of negotiations, consultations, coordination and conclusion of agreements, regulation and resolution of conflicts on terms of mutual benefits, liberalization, respect and courtesy. Regulatory actions – permit system, licensing, rights to transport, route, operation, etc. with the aim of regulating various types of activities of people and organizations in air transport (Doc. ICAO 9626).

Topic 11. Economic aspects of air navigation service of air transport

Organizational structuring of the aeronautical flight service system. Formation and management of air navigation infrastructure, types and characteristics of services. System instructional rules and regulations for the functioning of state and operational services, airport and navigation fees assigning authorities. Principles, policies and procedures of navigation service. Valuation of air traffic navigation services (3 basic principles). The main 5 components of navigation service and air traffic service, aviation telecommunications, meteorological service, search and rescue service, aeronautical information service.

Functions of the state department. Autonomous organization of the public sector. Organization of the private sector. International cooperation in search and rescue. Activities of operational agencies of air navigation services and collection of fees.

Topic 12. Synergistic efficiency of aviation management

Social and economic efficiency of international air transport logistics activities in the conditions of globalization of the world market of production and consumption of products and services. The leading role of the interests of consumers - customers of logistics services. Corporateness as the main feature of logistics activity: the priority of serving corporate customers and the corporate principle of partnership interaction of business entities of the air transportation chain. Organizational corporate culture and moral and ethical principles of interaction between subjects of logistics activity. Synergy as a complementary effect of international partnership interaction. The geoeconomic effect of post-logistics influence on the integration processes of optimizing the use of resources, solving demographic problems. Additional possibilities of cognitive development of humanity, communication and mutual understanding.

2.3. Training schedule of the subject

№	Topic (thematic section)	Total, hour			
		Total	Lectures	Practi-cals	Self-study
8 semester					
Module 1 « Principles, functions and methods of interaction management of aviation supply chain entities »					
1.1	Evolution of the scientific foundations of management	6	2	–	4
1.2	The essence, tasks and features of aviation management as an air transport management system	8	2	2	4
1.3	Theoretical and methodological foundations of aviation logistics management	8	2	2	4
1.4	Scientific principles of aviation logistics management	8	2	2	4
1.5	Functions of logistics management of airlines	8	2	2	4
1.6	Methods and technologies of aviation logistics management	8	2	2	4
1.7	Strategy and tactics of logistics management of aviation companies	8	2	2	4

№	Topic (thematic section)	Total, hour			
		Total	Lectures	Practi-cals	Self-study
1.8	Modern organizational forms of partnership management in logistics chains of air transportation	8	2	2	4
1.9	Cluster strategy of airport-hubs in the system of regulation of air transportation of chains	8	2	2	4
1.10	Regulation of international air transport	8	2	2	4
1.11	Economic aspects of air navigation service of air transport	8	2	2	4
1.12	Synergistic efficiency of aviation management	8	2	2	4
1.13	Homework	8	–	–	8
1.14	Module Test №1	3	–	2	1
Total by the Module 1		**105**	**24**	**24**	**57**
Total for the Subject		**105**	**24**	**24**	**57**

2.4. Homework

Homework (HW) from the subject is carried out in the eighth semester, in accordance with the methodological recommendations approved in the established order, with the aim of consolidating and deepening the theoretical and practical knowledge and skills acquired in the process of assimilating the educational material of the subject in relation to market requirements for the system of general and professional competencies of managers, which will be mastered in the future when studying the following subjects of professional training of a specialist with a basic and full higher education.

The tasks to be performed are developed by the author of the CTP. Study materials are approved by the minutes of the meeting of the logistics department, brought to the attention of the seeker individually and performed in accordance with methodical recommendations.

Performance of Homework is carried out by the seeker individually in accordance with methodological recommendations developed by leading lecturer of the logistics department.

The time needed to carrying out the Homework is 8 hours of self-study.

3. BASIC CONCEPTS OF GUIDANCE ON THE SUBJECT

3.1. Teaching methods

The following educational technologies are used in the study of the subject: work in small groups, seminar-discussion, brainstorming, case study, presentation, business game, which are used to activate seekers' learning and cognitive activity in the study of this subject.

These methods are implemented during lectures, demonstrations, independent problem-solving, work with educational literature, analysis and problem-solving on the topics of the subject.

3.2. List of references (basic and additional)

Basic literature

3.2.1. Aviation Management. Tutorial points. (2022) by Tutorials Point (I) Pvt Ltd. URL: https://www.tutorialspoint.com/aviation_management/aviation_management_tutorial.pdf.

3.2.2. Arya Raj. A Guide to Aviation Management. Independently published, 2022. 126 p.

3.2.3. Barry Humphreys. The Regulation of Air Transport: From Protection to Liberalisation, and Back Again. 1st Edition. Routledge, 2023. 266 p.

3.2.4. Victor Hughes Airline Governance. The Right Direction. 1st Edition Routledge, 2021. 168 p.

3.2.5. Peter Forsyth, Cathal Guiomard, Hans-Martin Niemeier. Airport Economics. 1st Edition. Routledge, 2023. 216 p.

3.2.6. Кулик В.А., Григорак М.Ю., Костюченко Л.В. Логістичний менеджмент: навч. посібник. К.: НАУ, 2012. 260 с.

Additional literature

3.2.7. Peter J. Bruce, Chris Mulholland. Airline Operations Control. 1st Edition Routledge, 2021. 220 p.

3.2.8. Markus Franke. Managing Airline Networks: Design, Integration and Innovative Technologies. 1st Edition Routledge, 2020. 196 p.

3.2.9. K. C. Khurana. Aviation Management: Global Perspectives. Global India Publications, 2009. 316 p.

3.2.10. Semeriahina M., Hryhorak M. Yu. The role of the airline as a logistics provider in the passenger travel chains involving air transport. Intellectualization of logistics and Supply Chain Management. 2021. № 5. P. 62-79. DOI: https://doi.org/10.46783/smart-scm/2021-5-5 .

3.2.11. Semeriahina M., Hryhorak M. Yu., Bugaiko D.O. Analysis of the impact of business process outsourcing on the profitability of commercial airline in

the conditions of a global pandemic. Logistics and Transport. 2021. No. 1-2 (49-50)/2021, P. 31-45. DOI: https://doi.org/10.26411/83-1734-2015-1-49-3-21 .

3.3. Internet resource

3.3.1. International Journal of Aviation Management. URL: https://www.inderscience.com/jhome.php?jcode=ijam.

3.3.2. Journal of Airline Operations and Aviation Management. URL: https://www.jaoam.com/index.php/jaoam.

3.3.3. The International Air Transport Association. URL: https://www.iata.org/.

3.3.4. The International Civil Aviation Organization. URL: https://www.icao.int/Pages/default.aspx.

3.3.5. ACI World - The Voice of the World's Airports. URL: https://aci.aero/.

4. RATING SYSTEM OF KNOWLEDGE AND SKILLS ASSESSMENT

4.1. Grading of certain kinds of academic activities is carried out in accordance with Table 4.1.

Table 4.1

Types of academic activities	**Max grade**
8th Semester	
Module № 1 «Principles, functions and methods of interaction management of aviation supply chain entities»	
Carrying out of tasks in practical classes, solving situational problems and considering business cases on the topic "Modern organizational forms of partnership management in logistics systems"	38 grades (2×16 grades 1×6 grades)
Carrying out homework	12
For carrying out module test module test 1, a student must receive not less than	*30 grades*
Carrying out Module Test №1	30
Total for Module № 1	**80**
Semester Examination	**20**
Total by the subject	**100**

4.2. A student gets a credit for the completed assignment if the student's performance has been assessed positively (Appendix 1).

4.3. The total of Grades for individual academic activities completed by a student constitutes a Current Semester Module Grade, which is entered into the Module Control Register.

4.4. The sum of the Total Semester Module Grade and the Semester Examination Grade constitute the Total Semester Grade which corresponds to a particular National Scale Rating and ECTS Rating (Appendix 2).

4.5. The Examination Grade consists of points based on the results of the examination tasks, approved by the department in accordance with the established procedure.

The sum of the Total Semester Module Grade and the Semester Examination Grade, in points, constitutes the Total Semester Grade, which is converted into grades according to the national scale and the ECTS scale.

4.6. The Total Semester Grade is entered in an Examination Register, a student's record book and academic card, e.g.: ***92/Ex/A, 87/Good/B, 79/Good/C, 68/Sat/D, 65/Sat./E***, etc.

4.7. The Total Grade on the subject corresponds to the Total Semester Grade.

The Total Grade on the subject is entered in Diploma Supplement.

(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 ознайом-лення	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	Дата внесення зміни	Дата введення зміни
	Зміненого	Заміненого	Нового	Анульо-ваного			

(Ф 03.02 – 32)

УЗГОДЖЕННЯ ЗМІН

	Підпис	Ініціали, прізвище	Посада	Дата
Розробник				
Узгоджено				
Узгоджено				
Узгоджено				