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MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL AVIATION UNIVERSITY
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Air Transportation Management Department

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«24» 06 2021

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«25» 06 2021



Quality Management System
COURSE TRAINING PROGRAM
on

«Transport Geography»

Educational Professional Program: «Air Transportation Management»
«Multimodal Transport and Logistics»
«Onboard Support of Air Passenger Transportation»

Field of study: 27 «Transport»
Speciality: 275 «Air Transport Technologies»
Specialization: 275.04 «Air Transport Technologies»

Training Form	Semester	Total (hours/credits ECTS)	Lectures	Practicals	Lab. classes	Self-Study	HW/CGP	TP/CP	Semester Grade
Full-time	2	135/4,5	34	34	–	67	Homework 2st	–	Graded Tests

Index: CB-7-275-1/21-2.1.7
CB-7-275-3/21-2.1.7
CB-7-275-4/21-2.1.7

QMS NAU CTP 19.01–01–2021



Quality Management System.
Course Training Program
on
«Transport Geography»

Document
Code

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2021

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Course Training Program on «Transport Geography» is developed on the basis of Educational Professional Program «Air Transportation Management», «Multimodal Transport and Logistics», «Onboard Support of Air Passenger Transportation» Bachelor Curriculum and Bachelor Extended Curriculums №CB-7-275-1/21, №CB-7-275-3/21, №CB-7-275-4/21, №ECB-7-275-1/21, №ECB-7-275-3/21, №ECB-7-275-4/21 for Speciality 275 «Air Transport Technologies» and corresponding normative documents.

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INTRODUCTION

Course Training Program on «Transport Geography» 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, goals of the subject.

The place of this subject in the system of professional training is a component of the theoretical basis of knowledge and skills for the study of technological disciplines of training in the field of transportation.

The aim of the subject is to provide a sufficient level of training for transportation organization and transport systems for decision-making on the organization of transportation by various modes of transport, the formation of a system of scientific knowledge in the field of transport systems in modern transport systems. meets the requirements of the bachelor's degree in this field.

The tasks of the subject are: students gain knowledge about the geographical structure of the world transport system and the peculiarities of the distribution of transport facilities by mode of transport, as well as the creation of a holistic geographical picture of the transport system.

1.2. Planned results.

- Acquisition by students of knowledge about the geographical structure of the world transport system and about the peculiarities of the distribution of transport objects by types of transport;
- Creation in the imagination of students of a holistic geographical picture of the transport system.

1.3. Outcome Competencies.

- Ability to analyze and predict the parameters and performance indicators of transport systems and technologies, taking into account the impact of the external environment;
- Ability to critically analyze and solve practical problems in the field of air transport and related industries to ensure timely decisions, taking into account technical, regulatory, commercial, political, social and environmental constraints;
- Ability: to describe the key components of the air transport system, to explain their essential characteristics, goals, functions, tasks and problems; recognize and interpret technical, technological, legal, economic and environmental aspects of the development of aviation transport technologies.

1.4. Interdisciplinary Links.

The subject is based on following subjects, as: "Introduction to the profession", "General course of transport" and is the basis for the study of further disciplines, namely: "Organization of interaction between air transport and travel companies", "Air passenger transport", "Air freight" ", " Sale of air transportation ".

2. SUBJECT PROGRAM

2.1. Subject content.


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

- training **module № 1 "Transport systems of the world"**
- **training module № 2 "Transport Geography of IATA"**, each of which is a logically complete, relatively independent, integral part of the discipline, the mastering of which involves a modular test and analysis of the results of its implementation.

Module № 1 "Transport systems of the world"

Integrated requirements of module №1:

know the transport component of the factor factor of the geographical division of labor and integration, regional transport systems of the world.

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be able to characterize the world's transport systems and transport and logistics systems.

Topic 1. Transport geography and its place in the system of sciences. The place of discipline in the system of specialist training. History of formation of transport geography. Transport as a component of the geographical division of labor and a factor of integration.

The concept and subject of transport geography. The role of transport in the modern world. Basic definitions. The concept of transport system. The main parameters of the world transport system, its structure. The place and role of transport systems in the development of countries and regions. The purpose of studying the course. Functional significance of transport geography

Topic 2. Regional transport systems of the world. Characteristics of the world transport system. Transport and logistics systems of the world.

. General information about transport systems of different countries and regions of the world. Criteria for comparing transport systems of different regions. Characteristics of transport systems of European, Asian, American, Australian type regions. Regional differences in transport systems. Freight and passenger flows between regional systems.

The essence and objectives of transport logistics. Logistics solutions in transportation. Cargo delivery systems. Transport costs and tariffs. The essence of transport problems and methods of their solution. World market of transport and logistics services. Geographical structure of the world market of logistics services. The world's largest logistics operators.

Topic 3. Characteristics of transport systems in Europe.

General information about European highways. Characteristics of passenger and freight traffic density of road transport, railway transport, as well as sea and river routes. The presence of major transport hubs in Europe. The role of international and transit traffic in this region.

Topic 4. Characteristics of transport systems in Eastern Europe.

General characteristics of subregions. Characteristics of the main modes of transport. Transport mobility of the population. Features of equipment, technology, organization and management of each mode of transport in the region.

Topic 5. Characteristics of transport systems in Asia.

Formation of the transport system of Asia. Review of the availability of the length of the railway network, road network. General information about the presence in the semi-deserts of Asia (in South and Southeast Asia.) - rickshaw and rickshaw. The transport system of one of the most highly developed countries - Japan.

Topic 6. Characteristics of transport systems in Africa.

Territorial structure of the African economy. Urbanized areas of Africa. Formation of coastal and deep mono- and polyfunctional nodes. Hinterlands of African seaports.

Topic 7. Characteristics of transport systems in North America.

Characteristics of the countries of the region with a high technical level of transport development. General information on the concentration of airports, railways, rolling stock, highways, fleets, etc. Overview of US overall transport performance.



Topic 8. Characteristics of transport systems in Latin America, Australia. "Transitional" features of the transport system of the continent - Australia. Characteristics by mode of transport of the Australian continent.

Existence in many Latin American countries of such archaic modes of transport as pack and cart. Regularities of the territorial structure of its economy depend on the level of development and location of transport infrastructure. Review of the peculiarities of preserving the sharp regional disparities of the economy fixed by the inadequacy (in particular, diversity) and inertia of the already formed networks.

Module № 2 "IATA Transport Geography"

Integrated requirements of module №2:

know the industry structure of the transport system of the world and Ukraine by modes of transport, geography of IATA, time zone algorithm and international time calculator, date lines;

be able to determine global directions, work with IATA directories (ABC, OAG.), work with the cartographic method.

Topic 1. Sectoral structure of the transport system of the world. Rail and road transport.

Railway transport. General overview of the railway transport network, its structure, distribution by regions (statistics). Basic connections, nodal points. Historical tracks and the latest technical solutions. Tourist component of the railway. Geography of interaction with other modes of transport.

Road transport. Overview of the state of the road transport system by region. Motor transport hubs. Interaction with other forks of transport. Perspective directions of motor transport development.

Topic 2. Sectoral structure of the transport system of the world. Sea and inland water transport.

Sea and river and lake transport. Structure and sectoral distribution of maritime transport. The main seaports, the structure of their cargo turnover. Sea passenger traffic, their dynamics. Characteristics of maritime transport in the basins.

Topic 3. Sectoral structure of the transport system of the world. Pipeline transport.

Pipelines of world importance, their purpose and classification. Pipeline transport standards. Characteristics of the largest pipeline systems in the world


Topic 4. Sectoral structure of the transport system of the world. Air transport.

Air transport. World structure and distribution of the air transport network, hubs of global importance. The impact of international agreements on the geographical distribution of the system. Promising routes.

Topic 5. Sectoral structure of the transport system of Ukraine by mode of transport.

Railway and road transport. Geography of railway transport of Ukraine. The role and significance of ST in Ukraine. Performance indicators of railway transport. Territorial organization of ST in Ukraine. Problems and prospects of ST development.

The role of maritime transport in the transport system of Ukraine and other countries. The main directions of perspective development of sea transport of Ukraine. The role of inland water transport in the transport system of Ukraine and the world. Characteristics of the industry. Passenger and freight transportation on waterways. Classification of modern ports. The main problems of improving the territorial organization of inland water transport of Ukraine.

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The role of pipeline transport in the TC of Ukraine and the world. Geography of oil and gas pipelines. Transit value of the pipeline network of Ukraine. Problems of territorial organization of pipeline transport, ways of solution. Ecological aspects of pipeline transport operation

Air transport. The concept, content and legal basis of air transport of Ukraine. History of air transport development. Air system management of Ukraine. Performance indicators of air transport. Territorial organization of PA in Ukraine. Problems and prospects of PA development. World structure and distribution of the air transport network, hubs of global importance.

Elements of urban transport and key components of this system. Conditions of functioning of city transport, set of transport city networks and change of approaches to their operation. Urbanization processes in Ukraine. Priority directions of its development, and, accordingly, their realization, attraction of foreign experience of operation of system of city transport taking into account domestic realities.

Topic 6. State policy of Ukraine in the field of transport. Prospects for development Problems of international transportation planning in Ukraine. International transport corridors.

Transport development programs in Ukraine. The main directions of development and reforms in transport. Transport strategy of Ukraine for the period up to 2023. Investment transport projects.

The concept of international transport corridor. Prerequisites for the formation of international transport corridors. European system of international transport corridors.

Eurasian railway transport corridors. Transport corridor Europe-Caucasus-Asia. International transport corridors in the CIS and Baltic countries. Formation of the international transport corridor "North-South".

Development of transport corridors in the future. Logistics terminals as part of international transport corridors.

Topic 7. IATA transport geography.

IATA zoning. Determination of IATA optimal routes in the world transport air system.

Topic 8. Transportation planning using indicators of global directions.

Algorithm for determining global directions, work with IATA directories (ABC, OAG.).

Topic 9. Methodology and methods of research of transport geography. Time zone.

International time calculator, date lines. Cartographic method.

International time calculator, date lines. Cartographic method. Conditional division of the Earth into time zone. The time difference. Greenwich Meridian (GMT) Coordinated Universal Time (UTC). The time system is 24 hours versus the 12 hour system. International time calculator. Daylight saving period (DST). International date line. Determining local time. Total transportation time.

2.3. Thematic Plan.

№	Theme (thematic section)	Total, hours			
		Total	Lectures	Practicals	Self-study
1	2	3	4	5	6
Module № 1 «Transport systems of the world»					
1.1	Transport geography and its place in the system of sciences. The place of	1 semester			



	discipline in the system of specialist training. History of formation of transport geography. Transport as a component of the geographical division of labor and a factor of integration.	7	2	2	3
1.2	Regional transport systems of the world. Characteristics of the world transport system. Transport and logistics systems of the world.	7	2	2	3
1.3	Characteristics of transport systems of European regions.	7	2	2	3
1.4	Characteristics of transport systems in Eastern Europe.	7	2	2	3
1.5	Characteristics of transport systems in Asia.	7	2	2	3
1.6	Characteristics of transport systems in Africa.	7	2	2	3
1.7	Characteristics of transport systems in North America.	8	2	2	4
1.8	Characteristics of transport systems in Latin America, Australia.	2	2	-	4
1.9	Module Test №1	6	-	2	4
Total by the module №1		62	16	16	30
Module № 2 «Transport Geography of IATA»					
2.1	Sectoral structure of the world's transport system.	7	2	2	3
2.2	Rail and road transport.	7	2	2	3
2.3	Sectoral structure of the world's transport system.	7	2	2	3
2.4	Sea and inland water transport.	7	2	2	3
2.5	Sectoral structure of the world's transport system.	7	2	2	3
2.6	Pipeline transport.	7	2	2	3
2.7	Sectoral structure of the world's transport system.	7	2	2	3
2.8	Air transport.	7	2	2	3
2.9	Sectoral structure of the transport system of Ukraine for	5	2	-	3
2.10	Modes of transport.	8	-	-	8
2.11	State policy of Ukraine in the field of transport.	4	-	2	2
2.12	Development prospects Planning problems	-	-	-	-
2.13	International transportation in Ukraine.	-	-	-	-
Total by the module №2		73	18	18	37
Total by the subject		135	34	34	67

3. BASIC CONCEPTS OF GUIDANCE ON THE SUBJECT

3.1. Teaching methods

The following teaching methods of subject guidance are

- explanatory and illustrative method;
- method of problem presentation;
- reproductive method;
- research method.

The implementation of these methods are carried out during lectures, demonstrations, self-study, work with the educational material, analysis of transport technologies issues.

3.2. List of references (basic and additional)

Basic literature

3.2.1. Безуглий В.В., Козинець С.В. Регіональна економічна та соціальна географія світу. Навч. посіб. – 2-ге вид., стер. – К.:Т-во “Знання”, КОО, 2014. – 378 с.

3.2.2. В.М. Юрківський Регіональна економічна і соціальна географія зарубіжні країни. Підручник Київ «Либідь», 2016, 416 стор.



3.2.3. Щелкунов В.І., Григор'єв Г.С. Транспортна інфраструктура регіонів України: проблеми територіально – економічного реформування. – К.: Наук. думка, 2014. – 220 с.

3.2.4. І.М. Дудник Транспортна географія. Підручник. 2-ге вид., – К.: Видавництво Національного авіаційного університету «НАУ- друк», 2016.- 316 с.

3.2.5. Валько А.М., Матійчик О.М. Методичні рекомендації для проведення практичних занять та виконання домашнього завдання з дисципліни Транспортна географія/ Валько А.М., Матійчик О.М.- К.: Видавництво Національного авіаційного університету «НАУ- друк», 2017. - 64 с.

Additional Literature

3.2.6. Транспортна географія: Конспект лекцій/ М.Ю.Григорак, О.М.Гармаш, О.К.Катерна. – К.:Автограф, 2017. – 196 с

3.2.7. Єдина транспортна система: Навчальний посібник /Ю.В.Соболев, В.Л.Дикань, О.Г.Дейнека, І.М.Писаревський, Л.О.Поздзянкова. – Х.: ООО “Олант”, 2012. – 288с.

3.2.8. Закорецький В.А., Федорченко В.В. Г 35 Транспортна географія України (для студентів, які навчаються за напрямком „Транспортні технології” спеціальності „Організація перевезень і управління на транспорті” та „Транспортні системи”) /Навч. пос. – Луганськ: Вид-во СЛУ ім. В. Даля, 2016. - 120 с.

3.2.9. Новікова А.М. Україна в системі міжнародних транспортних коридорів. – К.:НППМБ, 2013 – 494 с.

3.2.10. В.Я.Савенко, В.А.Гайдукевич Транспорт і шляхи сполучення. Підручник, К., «Арістей», 2005, 285с.

3.2.11. Бейдик О.О. Словник-довідник з географії– К.:Автограф, 2017. – 156 с

3.2.12. Airline passenger tariff / rules , current edition.

3.2.13. Directories ABC, OAG, current edition.

3.3. Internet Information resource

3.3.1. http://www.lib.nau.edu.ua/viewer/Viewer.aspx?doc_id=368118

3.3.2. <http://uchebana5.ru/cont/2859609.html>

3.3.3. <http://er.nau.edu.ua/handle/NAU/34992/>

4. RATING SYSTEM OF KNOWLEDGE AND SKILLS ASSESSMENT

4.1. Assessment of certain kinds of student academic work is carried out in accordance with table 4.1.

Table 4.1

Kind of Academic Work	Maximum Grade Values
1 semester	
Module № 1 «Introduction into Major»	
Kind of Academic Work	Points
carrying out practicals and theoretical material (10p x 8)	28 (total)
<i>For admission to complete module test №1, a student must receive not less than</i>	<i>17points</i>
Module test №1	12
Total by the module №1	40
Module № 2 «Introduction into Major»	
Kind of Academic Work	Points
carrying out practicals and theoretical material (10p x 8)	24 (total)
Homework	20



<i>For admission to complete module test №1, a student must receive not less than</i>	<i>27 points</i>
Module test №1	16
Total by the module №2	60
Total by the subject	100

The credit rating is determined (in points and in a National Scale) based on the results of all types of academic work during the semester.

4.2. Completed types of educational work are credited to the student, if he received a positive rating for them.

4.3. The sum of rating assessments received by the student for certain types of completed academic work is the current modular rating assessment, which is recorded in the module control.

4.4. The final modular rating obtained by the student based on the results of the course defense and defense in points, on the national scale and ECTS scale is entered in the module control, as well as in the study card, individual student curriculum and Diploma Supplement, for example, as follows: **92 / Excellent / A, 87 / Good / B, 79 / Good / C, 68 / Sat./D, 65 / Sat./E, etc.**

4.5. The final semester rating is converted into a grade on the national scale and the ECTS scale.

4.6. The final semester rating in points, on the national scale and the ECTS scale is entered in the test report, study card and individual curriculum of the student (record book), for example, as follows: **92 / Excellent / A, 87 / Good / B, 79 / Good / C, 68 / Sat./D, 65 / Sat./E, etc.**

4.7. The Total Grade for the subject is equal to the average grade from Total Semester Grades with its further transformation into national scale and ECTS system.

The Total Grade is recorded to the Diploma Appendix



(Ф 03.02 – 01)

АРКУШ ПОШИРЕННЯ ДОКУМЕНТА

№ прим.	Куди передано (підрозділ)	Дата видачі	П.І.Б. отримувача	Підпис отримувача	Примітки
	УНІТ	03.11.21	Шевченко Т.І.		

(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				
Узгоджено				