MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE LVIV POLYTECHNIC NATIONAL UNIVERSITY



EDUCATIONAL-SCIENTIFIC PROGRAMME

"Transport technologies (by type)"

of the third (educational-scientific) level of higher education

by specialty J8 Motor vehicle transport

of field of knowledge J Transport and services

Qualification: Doctor of Philosophy in motor vehicle transport

Adopted at the meeting
Academic Council of the University

(protocol № <u>LO</u>
from «<u>L5</u>» _____ 2025)

Developed by working group for ensuring the quality of the educational-scientific program by which training of applicants at the third (educational-scientific) level of higher education is carried out by specialty J8 *Motor vehicle transport* based on Resolution of CMU № 1021 from 30.08.24 « On amendments to the list of fields of knowledge and specialties in which higher and professional higher education applicants are trained», Standard of higher education of Ukraine, approved and enacted by the order of the Ministry of Education and Science of Ukraine №1468 from 17.10.2024 consisting of:

Head	of	the	working	group	(guarantor)

Yurii ROYKO CSc Tech, associate professor, head of transport technologies department

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Yevhen FORNALCHYK DSc Tech, professor, professor of

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Guarantor

CSc Tech, associate professor

Yurii ROYKO

Approved and brought into force

By order of the Acting rector of Lviv Polytechnic National University

from «<u>11</u> » <u>03</u> 2025 No <u>146-1-10</u>.

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LETTER OF CONFIRMATION of educational-scientific programme

Level of higher education
Field of knowledge
Specialty
Qualification

Third (educational-scientific)
J Transport and services
J8 Motor vehicle transport
Doctor of Philosophy in motor vehicle transport

APPROVED Scientific-methodological council of specialty J8 Motor vehicle transport Protocol № 1/2 from «18 » 2025	Vice Rector for Scientific Research Vice Rector for Scientific Research
Head of Scientific-methodological council of specialty J8 Motor vehicle transport Bohdan KINDRATSKYY	Vice Rector for Scientific-Pedagogical Work Oleh DAVYDCHAK 2025
from « 18 » 2025 Director of ESI of Mechanical Engineering and Transport Roman KACHMAR from « 20 » 2025	Head of Educational-methodological department of the university Vasyl TOMIUK 2025 Head of Department of Doctoral and Post-graduate studies
RECOMMENDED By scientific-methodological council of the university Protocol № 85 from « 20 » 02 2025 Head of Scientific-methodological council of the university Anatolii ZAHORODNII	Olena MUKAN 2025

I. EDUCATIONAL COMPONENT OF EDUCATIONAL-SCIENTIFIC PROGRAM

1. Profile of Doctor of Philosophy programme by specialty J8 Motor vehicle transport

1 – General information								
1	2							
Full name of HEI and	Lviv Polytechnic National University							
structural subdivision	Department of transport technologies							
Level of higher	Third (educational-scientific) level							
education								
Degree of higher	Doctor of Philosophy							
education								
The full title of the	Doctor of Philosophy in Motor vehicle transport							
qualification in the								
original language								
The official name of the	Transport technologies (by type)							
ESP								
Type of diploma and	Diploma of Doctor of Philosophy, single, 43 ECTS credits of the							
scope of educational—	educational component of the educational-scientific programme, the term							
scientific programme	of the educational component of the educational-scientific programme is 2							
	years							
Forms of education	Full-time, part-time							
Availability of	Accredited by the National Agency for Quality Assurance of Higher							
accreditation	Education (Certificate №8851 from 25.06.2024. Valid until 25.06.2025)							
Cycle/level	NFQ of Ukraine – 8 level, FQ-EHEA – third cycle,							
	EQF-LLL – 8 level							
Prerequisites	Persons who have obtained a master's degree may apply to obtain the							
	educational-scientific degree of Doctor of Philosophy in the specialty J8							
	Motor vehicle transport.							
	The program of professional entrance examinations for persons who have							
	obtained the previous level of higher education in other specialties should							
	include verification of the person's acquisition of competencies and							
	learning outcomes defined by the standard of higher education in the specialty 275 Transport Technologies (by type) for the second (master's)							
	level of higher education.							
Language(s) of teaching	Ukrainian							
Main terms and their	In the educational-scientific programme, the main terms and their							
definitions	definitions are used according to the Law of Ukraine "About higher							
definitions	education" from 01.07.2014 № 1556-VII with changes and additions, Law							
	of Ukraine "About scientific and scientific-technical activity" from							
	26.11.2015 № 848-VIII with changes and additions, The Order of							
	preparation of applicants of higher education of the degree of Doctor of							
	Philosophy and Doctor of Sciences in higher educational institutions							
	(scientific institutions), approved by the Resolution of the Cabinet of							
	Ministers from 23.03.2016 № 261, Standard of Higher Education in the							
	specialty 275 Transport Technologies (by type) for the third (educational-							
	scientific) level of higher education, approved by Order of the MES of							
	Ukraine №1468 from 17.10.2024.							

4	
1	2
	2 – Aim of educational program
	To deepen theoretical knowledge and practical skills and abilities in the
	field of Transport and services by specialty Motor vehicle transport, to
	develop philosophical and linguistic competences, form universal skills of
	a researcher, sufficient for conducting and successfully completing
	scientific research and further professional and scientific activities
	3 – Characteristic of educational program
Orientation of the	The educational-scientific program is based on normative regulations and
educational-scientific	the results of modern scientific research on transport technologies, transport
programme	systems, systems of passenger and cargo transportation, peculiarities of
programme	traffic flow management, traffic safety and directs the applicant to solving
	, , , , , , , , , , , , , , , , , , , ,
D	current problems and problems in the field of transport.
Description of the	Object(s) of study and/or activity: functioning and development of
subject area	transport systems, creation and improvement of transport technologies.
	Learning objectives: acquiring the ability to produce new ideas, solve
	complex problems of professional and/or research and innovation activities
	in the field of transport systems and technologies, mastering the
	methodology of scientific and pedagogical activities, as well as conducting
	one's own scientific research, the results of which have scientific novelty,
	theoretical and practical significance.
	Theoretical content of the subject area: principles, concepts, theories of
	functioning of transport systems and technologies.
	Methods, techniques and technologies: analytical, numerical and
	experimental methods of studying the functioning of transport systems,
	methods of long-term, short-term and operational management of transport
	systems, methods of assessing the effectiveness of transport technologies.
	Tools and equipment: specialized computer and software, multimedia
	tools; modern devices for transportation control, management of transport
	systems; field samples and models of transport facilities.
The main focus of the	The educational-scientific program provides linguistic competences and
educational-scientific	universal skills of the researcher, as well as in-depth knowledge in the field
	of transport systems and technologies.
programme	Key words: foreign language, philosophy, methodology, pedagogics,
	scientific basics, system analysis, transport, transport system, technological
F 4 64	processes in transport, traffic, transportation, project management.
Features of the	The educational component of the programme is implemented during 4
programme	semesters, with a duration of 43 credits and has disciplines in the
	corresponding 2 cycles, which provide: language competences, universal
	skills of the researcher, knowledge in the chosen specialty, disciplines of
	the student's free choice, including from master's programmes
	4 – Feasibility of graduates
	to employment and further education
Feasibility to	Employment as research and teaching staff in scientific institutions and
employment	higher education institutions, as well as highly qualified employees in
	research, design, development and other institutions and departments of
	transport and related industries.
Academic rights of	Obtaining a doctoral degree and additional qualifications in the adult
graduates	education system
gi auuaics	concanon system

1	2
-	5 – Teaching and evaluation
Teaching and studying	A combination of lectures, practical classes, consultations, independent
· ·	work on solving problems, consultations with teachers, preparation of the
	theoretical part of the dissertation of Doctor of Philosophy.
Evaluation	Exams, final tests, oral presentations, defense of the theoretical part of the
	PhD dissertation.
	6 – List of graduate competencies
Integral competency	Ability to generate new ideas, solve complex problems of professional
(INT)	and/or research and innovation activities in the field of transport systems
	and technologies, apply the methodology of scientific and pedagogical
	activities, conduct own research, the results of which have scientific
	novelty, theoretical and practical significance.
General competencies	GC01. Ability to think abstractly, analyze and synthesize.
(GC)	GC02. Ability to search, process and analyze scientific information from
	various sources.
	GC03. Ability to work in an international context.
	GC04. Ability to solve complex problems in the field of transport
	technologies on the basis of a systematic scientific outlook and general
	cultural outlook in compliance with the principles of professional ethics and academic integrity.
	GC05. Ability to communicate in Ukrainian and foreign languages
	(according to the list of the Common European Framework of Reference
	for Languages) in written and oral form.
Special (professional)	SC 01. Ability to carry out original research, to achieve scientific results
competencies (SC)	that create new knowledge in the field of transport systems and
P ************************************	technologies, the results of which can be published in leading scientific
	journals in transport technologies and related fields.
	SC 02. Ability to carry out research and teaching activities in higher
	education.
	SC 03. Ability to identify, formulate and solve research problems in the
	field of transport systems and technologies, evaluate and ensure the quality
	of research.
	SC 04. Ability to develop and manage research projects in the field of
	transport systems and technologies.
	SC 05. Ability to apply appropriate mathematical methods, models, digital technologies to solve complex problems of transport systems and
	technologies.
	SC 06. Ability to integrate knowledge from different fields to solve
	problems in the field of transport systems and technologies, apply a
	systematic approach and take into account non-technical aspects in solving
	engineering problems and conducting research.
	SC 07. In-depth knowledge of basic regulations, reference materials,
	current standards, specifications, instructions, and other regulatory
	documents in the field of transport.
	Octor of Philosophy training, formulated in terms of learning outcomes
Learning outcomes (LO)	LO01. To have advanced conceptual and methodological knowledge of
	transport systems and technologies and related subject areas, as well as
	research skills sufficient to conduct scientific and applied research at the
	level of the latest world achievements, obtain new knowledge and/or
	implement innovations.

	$\boldsymbol{\gamma}$
1	2
	Freely present and discuss with specialists and non-specialists the results of
	research, scientific and applied problems of transport systems and
	technologies in the native and foreign languages, publish research results
	in leading international scientific journals.
	LO02. Formulate and test hypotheses; use appropriate evidence to
	substantiate conclusions, in particular, the results of theoretical analysis,
	experimental studies (surveys, observations, etc.) and mathematical and/or
	computer modeling, available literature. Apply modern tools and
	technologies for searching, processing and analyzing information,
	including cloud technologies, methods of analyzing large amounts of data.
	LO03. Develop and research conceptual, mathematical and computer
	models of processes and systems, effectively use them to obtain new
	knowledge and/or create innovative products in the field of transport
	systems and technologies.
	LO04. Plan and perform experimental and/or theoretical research in the
	field of transport systems and technologies to solve problems in the field of
	transport systems and technologies using modern tools, critically analyze
	the results of their own research and the results of other researchers in the
	context of the whole range of modern knowledge on the problem under
	study.
	LO05. Deeply understand the general principles and methods of technical
	sciences, as well as the methodology of scientific research, apply them in
	their own research in the field of transport systems and technologies and in
	teaching practice.
	LO06. To develop research and innovation projects in the field of transport
	systems and technologies, to justify their social, economic, environmental
	efficiency, to organize their implementation.
	L07. To carry out scientific and pedagogical activities in higher education
	institutions, using innovative forms, means and technologies, to carry out
	· · · · · · · · · · · · · · · · · · ·
	scientific, educational, methodological and regulatory support of the
	educational process, to develop and teach special disciplines.
	LO08. In-depth knowledge of the laws of formation of cargo and passenger
	flows, organization of their management and development of methods for
	organizing transport processes based on the principles of logistics.
	LO09. Knowledge of modern achievements of innovative technologies in
	the field of transport, traffic regulation, traffic flow management.
8 - De	scriptors of the national qualifications framework
Knowledge (KN)	Conceptual and methodological knowledge in a field or on the verge of a
	field of knowledge or professional activity.
Skills (SK)	1. Specialized abilities/skills and methods necessary to solve significant
DMIIS (DIX)	problems in the field of professional activity, science and/or innovation, to
	expand and reassess existing knowledge and professional practice.
	2. Initiation, planning, implementation and adjustment of a consistent
	process of thorough scientific research in compliance with proper academic
	integrity.
	3. Critical analysis, evaluation and synthesis of new and complex ideas.
Communication (C)	1. Free communication on issues related to the field of scientific and expert
	knowledge with colleagues, the broader scientific community, and society
	as a whole.
	2. Use of academic Ukrainian and foreign languages in professional
	activities and research.
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Table continuation

1	2						
Autonomy and	1. Demonstration of significant credibility, innovation, a high degree of						
responsibility (AaR)	independence, academic and professional integrity, and a consistent						
	commitment to the development of new ideas or processes in advanced						
	contexts of professional and scholarly activity.						
	2. Ability to continuous self-development and self-improvement.						
8 -	- Resource support for program implementation						
Specific characteristics	100% of scientific and pedagogical workers engaged in teaching						
of personnel support	professionally oriented disciplines by educational-scientific program						
	"Transport technologies (by types)" have relevant scientific degrees and						
	academic titles.						
Specific characteristics	Use of modern applied programs: Cardiosens and Neurocom software						
of material-technical	complexes for the study of psychophysiological properties of drivers;						
support	specialized software products Vissim, Visum produced by PTV Vision for						
	researching traffic flow parameters and designing passenger						
	correspondence and public transport routes; MatCad and Statistica for						
	mathematical processing of research results						
Specific characteristics	Use of the virtual learning environment of the Lviv Polytechnic National						
of informational—	University and author's theoretical and scientific-applied developments of						
methodological support	the scientific and pedagogical staff of the university and other universities						
	and research institutes.						
	9 – Academic mobility						
	on of the CMU №579 «On the approval of the Regulation on the procedure						
	ng the right to academic mobility» from August, 12 2015)						
National credit mobility	Based on bilateral agreements between Lviv Polytechnic National						
	University and higher education institutions of Ukraine.						
International credit	Based on bilateral agreements between Lviv Polytechnic National						
mobility	University and higher education institutions of foreign partner countries.						
Education of foreign	Possible after studying Ukrainian language course.						
applicants of higher							
education							

2. Distribution of content of educational component of educational-scientific program

by component groups and training cycles

	<u> </u>		<u> </u>							
		The scope of the educational load of the student of higher education (credits / %)								
No	Training cycle	Compulsory	Selective	Total for the						
		educational	educational	entire period of						
		components	components	study						
1.	Cycle of disciplines that form general scientific competencies and universal skills of researcher	21/49	3/7	30/56						
2.	Cycle of disciplines that form professional competencies	10/23	6/14	27/37						
3.	Disciplines of free choice of postgraduate student	-	3/7	3/7						
Total for the entire period of study		31/72	12/28	43/100						

3. List of components of the educational component of the educational-scientific programme

Code e/c	Name of advectional component (EC)	Number of	Form of final
Code e/c	Name of educational component (EC)	credits	control
1	2	4	
	Compulsory components of educational	component	
Cycle o	of disciplines that form general scientific competencies a	nd universal skills	s of researcher
CC1.1.	Philosophy and methodology of science	3	exam
CC1.2.	Foreign language for academic purposes, part 1	4	final test
CC1.3.	Foreign language for academic purposes, part 2	4	exam
CC1.4.	Professional pedagogics	3	final test
CC1.5.	Academic entrepreneurship	4	final test
CC1.6.	Pedagogical practice	3	final test
Totally pe	r cycle:	21	
	Cycle of disciplines that form professional o	competencies	
CC2.1.*	System analysis in transport	4	exam
CC2.2.*	Research seminar in the field of transport	3	final test
CC2.3.	Modeling in transport systems	3	final test
Totally pe	r cycle:	10	
Totally pe	er CC	31	
	Selective components of educational co	omponent	
Cycle o	of disciplines that form general scientific competencies a	nd universal skills	s of researcher
SB1.1	Business Foreign Language	3	final test
SB1.2	Psychology of creativity and invention	3	final test
SB1.3	Management of research projects	3	final test
SB1.4	Technology of registration of grant applications and patent rights	3	final test
SB1.5	Rhetoric	3	final test
SB1.6	Modern inventory in research activities	3	final test
SB1.7	Open scientific practices	3	final test

Table continuation

1	2	3	4		
SB1.8	Academic integrity and quality of education	3	final test		
SB1.9	Methodology of preparation of scientific publications	3	final test		
SB1.10	Quality of higher education (formation of internal	3	final test		
	quality assurance systems)				
Totally pe	er cycle:	3			
	Cycle of disciplines that form professional co	mpetencies**			
SB2.1	Scientific bases of transport processes and systems	3	exam		
SB2.2	Methods of multidimensional analysis	3	exam		
SB2.3	Intelligent transport systems	3	exam		
SB2.4	Scientific research methods	3	exam		
SB2.5	Ergonomics in transport systems	3	exam		
SB2.6	Ecological transport	3	exam		
SB2.7	Systems of traffic organization and management	3	exam		
SB2.8	Technological processes of transportation	3	exam		
Totally pe	er cycle:	6			
	Disciplines of free choice of postgraduate	student***			
SB3.1	Discipline of free choice of postgraduate student	3	final test		
Totally pe	er cycle:	3			
Totally pe	er selective components	15			
Totally pe	er educational component	43			

Note:

^{* -} list of disciplines that form professional competencies is proposed mutual for ESP of related fields and specialties;

^{** -} list of disciplines that form professional competencies should contain ten disciplines, from which postgraduate student chooses two;

^{*** -} postgraduate student can select disciplines which are taught in Lviv Polytechnic National University or other domestic (foreign) HEI (scientific establishments) on all levels.

4. Matrix of correspondence of programme competencies to educational components

												5-								- P								
	CC	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB																	
	1.1	1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	3.1
																												*
INT	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC01	+					+	+				+				+						+							+
GC02					+	+	+	+			+		+			+				+			+					+
GC03		+	+							+		+		+				+										+
GC04	+			+			+								+	+	+		+					+				+
GC05		+	+							+				+														+
SC01								+	+		+				+	+	+	+		+	+		+		+	+	+	+
SC02				+		+													+									+
SC03								+				+			+	+			+	+			+			+	+	+
SC04					+							+	+					+				+			+			+
SC05									+											+	+		+					+
SC06					+		+				+				+					+		+		+		+	+	+
SC07								+					+													+		+

Note:

5. Matrix of provision of programme results of the study

to corresponding components of educational-scientific programme

										8									16	,								
	CC	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB																	
	1.1	1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	3.1
LO01		+	+		+		+	+		+		+	+	+		+	+	+			+		+		+			+
LO02	+						+	+	+		+				+	+		+			+		+			+	+	+
LO03					+		+						+			+				+			+					+
LO04	+							+							+		+	+		+			+					+
LO05				+		+		+							+			+		+			+					+
LO06					+						+	+	+							+		+	+	+	+			+
LO07				+		+								+			+		+									+
LO08							+		+											+					+		+	+
LO09							+		+						+					+		+			+	+		+

Note:

^{* -} may ensure the acquisition of any of the following program competencies

^{* -} may ensure the acquisition of any of the following program results of the study

6. Matrix of compliance of the competencies / learning outcomes defined by the Standard with the NQF descriptors

00 11100111	or compliance of the compe	ichcies / icai imig outcomes ucime	a sy the standard a whi	i the right descriptors					
	Knowledge	Skills	Communication	Autonomy and Responsibility					
	Kn1 Conceptual and methodological	Sk1. Specialized abilities/skills and	C1. Free communication	AaR1. Demonstration of significant					
	knowledge in a field or on the verge	methods necessary to solve significant		credibility, innovation, a high degree					
Classification of	of a field of knowledge or	problems in the field of professional		of independence, academic and					
competencies	professional activity	activity, science and/or innovation, to	expert knowledge with	professional integrity, and a consistent					
(learning		expand and reassess existing knowledge	colleagues, the broader	commitment to the development of					
outcomes)		and professional practice.	scientific community, and	new ideas or processes in advanced					
according to the		Sk2. Initiation, planning, implementation	society as a whole.	contexts of professional and scholarly					
NQF		and adjustment of a consistent process of		activity.					
11Q1		thorough scientific research in compliance	Ukrainian and foreign	AaR2. Ability to continuous self-					
		with proper academic integrity.	languages in professional	development and self-improvement.					
		Sk3 . Critical analysis, evaluation and	activities and research.						
		synthesis of new and complex ideas.							
General competencies									
GC 01		Sk1		AaR2					
GC 02	Kn1			AaR2					
GC 03	Kn1	Sk2	C1	AaR2					
GC 04	Kn1	Sk2	C1	AaR1					
GC 05			C2						
Special (professional) competencies									
SC 01	Kn1	Sk3		AaR2					
SC 02		Sk1	C2	AaR1					
SC 03	Kn1	Sk3	C1	AaR1					
SC 04		Sk2	C1	AaR1					
SC 05	Kn1	Sk1							
SC 06			C2	AaR1					
SC 07	Kn1		C1						

7. Matrix of compliance with the learning outcomes and competencies defined by the Standard

	Competencies												
Learning outcomes	Integral competency: Ability to generate new ideas, solve complex problems of professional and/or research and innovation activities in the field of transport systems and technologies, apply the methodology of scientific and pedagogical activities, conduct own research, the results of which have scientific novelty, theoretical and practical significance.												
		Special (professional, subject) competencies											
	GC01	GC02	GC03	GC04	GC05	SC01	SC02	SC03	SC04	SC05	SC06	SC07	
LO 01				+	+	+					+		
LO 02	+	+				+		+				+	
LO 03						+				+			
LO 04	+	+				+							
LO 05	+		+			+		+					
LO 06		+							+				
LO 07							+						
LO 08										+	+	+	
LO 09												+	

II. SCIENTIFIC COMPONENT OF EDUCATIONAL-SCIENTIFIC PROGRAM

Scientific component of educational-scientific program provides the conduction by postgraduate student his own scientific research under guidance of one or two scientific advisors and the preparation of the results in the form of a dissertation.

The dissertation for obtaining the scientific degree of Doctor of Philosophy is an independent study of a postgraduate student, which offers a solution to an actual scientific and applied task in the specialty J8 *Motor vehicle transport*, the results of which are characterized by scientific novelty and practical value and are published in relevant publications.

Scientific component of educational-scientific program is issued in the form of an individual plan of the postgraduate student's scientific work.

An integral part of the scientific component of the postgraduate educational-scientific program is the preparation and publication of scientific articles, speeches at scientific conferences, scientific professional seminars, round tables, and symposia.

According to the Regulations on academic integrity at Lviv Polytechnic National University, any scientist, including the applicant, is responsible for academic dishonesty, which can manifest itself in the following forms:

- academic plagiarism;
- academic fraud;
- execution to order and (or) sale of academic texts of dissertation studies;
- academic falsification and fabrication;
- publication of fictional research results, any data about the educational process;
- attribution of results of collective activity to one or specific persons without coordination with other members of author's collective or inclusion in the list of authors of scientific or educational-methodological work of persons who did not participate in the creation of the product;
- academic deception;
- academic bribery;
- conflict of interest;
- private interest.

Topics of scientific research by specialty J8 Motor vehicle transport

- 1. Improvement of means, technologies of goods, passenger and luggage transportation, and operational management methods of transhipping processes at nodes of the transport network.
- 2. Research and development the complex of technical means for the development and effective use of transport systems elements.
- 3. Determination of the regularities of mutual impact of transport systems and external environment.
- 4. Research on the regularities of formation of the demand on transport services at passenger and goods transportation. Development of decision-making models on deliveries of various freights in regional, interregional and international connections by subjects of transport markets.
- 5. Identification and justification of factors of traffic systems effectiveness, development of theory and methods of management of transport systems development.
- 6. Regularities of cargo flows formation, organization of their control and development of methods of transport process organization based on the principles of logistics, formation of appropriate systems of freight forwarding service.
- 7. Regularities of passenger flows formation, development of passenger systems of urban, rural areas and regions.
- 8. Justification of technological processes of passenger and cargo transportation, their organization and management in integrated systems and systems of particular types of transport: aviation, road, water, rail.
- 9. Development of rational systems and justification of means of complex mechanization and automation of loading and unloading operations at coincidence points of different modes of transport.
- 10. Regularities of traffic flow formation and development of their management's traffic organization systems and technology.
- 11. Transport safety problems. Regularities of the impact of human factor on transport processes.
- 12. Research on the effectiveness of transport processes, logistics management, interaction of different types of transport and optimization of cross-border tourist routes.

III. Certification of postgraduate students

Forms of certification of	Certification of applicants is carried out in the form of a							
higher education applicants	public defense of the dissertation.							
Requirements for qualifying	The dissertation for the degree of Doctor of Philosophy is							
paper for the degree of	an independent detailed study that offers a solution to a							
Doctor of Philosophy	complex scientific-applied problem in the field of transport							
	systems and technologies, the results of which have scientific							
	novelty and theoretical and practical significance.							
	The dissertation should not contain academic plagiarism,							
	falsification, or fabrication.							
	Dissertations of persons obtaining the degree of Doctor of							
	Philosophy, reviews and comments on them are published on							
	the official website of the relevant higher education							
	institution or research institution.							
	The volume of the main text of the dissertation of							
	applicants for the higher education of the degree of Doctor of							
	Philosophy in the educational-scientific program "Transport							
	Technologies (by type)" in specialty J8 Motor vehicle							
	transport is set in the number of 4.0 - 5.0 author's sheets.							

Structural—logical scheme of educational-scientific programme for preparation of Doctors of Philosophy in specialty J8 Motor vehicle transport

