

**JOINT STOCK COMPANY «ACADEMY OF LOGISTICS AND  
TRANSPORTATION»**

**ALT** FOUNDED  
**1931**



**APPROVED**  
by decision of the ALT US from  
~~«30» March 2023 г.~~ (Minutes №13)  
President-Rector  
Amirgalieva S.N.

**EDUCATIONAL PROGRAM**

**Name:** «6B07129 - Bridges, Tunnels and Subways»

**Training level:** Bachelor's degree

**Code and classification of training directions:** 6B071 - Engineering and engineering business.

**Code and group of educational programs:** B165 - Backbone networks and infrastructure.

**Date of registration in the Register:** 08.07.2021.

**Registration number:** 6B07100001

**Almaty, 2023.**

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**1 DEVELOPED:**

Doctor of Technical Sciences, Academic  
Professor  
(jobtitle)

  
(signature)


Khasenov S.S.  
(FULL NAME)

Ph. D. Associate  
professor ALaT  
(position)

  
(signature)

Bondar I.S.  
(FULL NAME)

Doctor of Technical Sciences,  
Professor  
(position)

  
(signature)

Makhmetova N.M.  
(FULL NAME)

Ph.D., professor ALaT  
(position)

  
(signature)

Kvashnin M.Ya.  
(FULL NAME)

V.S.N., Doctor of Technical Sciences,  
Professor of «KazdorNII» JSC  
(position)

  
(signature)

Shalkarov A.A.  
(FULL NAME)

2nd year Master's,  
group MN-ITI-21-1 (position)

  
(signature)

Konyasbai A.D.  
(FULL NAME)

**2 EXPERTS:**

Candidate of Technical Sciences,  
Director of «GEO TRACK»  
(position)

  
(signature)

Nusupov D.K.  
(FULL NAME)


Candidate of Technical Sciences,  
Director of «GEO TRACK»  
(position)

(signature)

Masanov T.K.  
(FULL NAME)

**3 RECENSEE:**


«Kazakh National  
Research Technical University  
K.I. Satpayev Kazakh National Research  
Technical University  
Professor of «SISM» department  
Doctor of Technical Sciences  
(position)

  
(signature)

Shayakhmetov S.B.  
(FULL NAME)

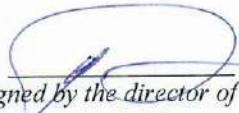
**4 REVIEWED AND RECOMMENDED:**

Meeting of the AC (Chair of the SI  
Department)  
Protocol №, «6»  
15.03.2023.

  
(Signature of the head of the  
department)

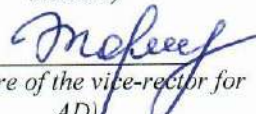
Ismagulova S.O.  
(FULL NAME).

Meeting COC-UMB  
Protocol №, «7»  
15.03. 2023.

  
(signed by the director of the  
institute)

Chigambaev T.O.  
(FULL NAME)

Meeting UMS  
Protocol №, «10»  
29.03.2023.

  
(signature of the vice-rector for  
AD)

Zharmagambetova M.S.  
(FULL NAME)

**5 APPROVED** by the decision of the Academic Council of 30 March 2023 № 13

**6 INTRODUCED** 12.05.2023

## 2. NORMATIVE REFERENCES

The educational program is developed on the basis of the following normative legal acts and professional standards:

1. Law of the Republic of Kazakhstan «On Education» dated July 27, 2007 № 319-III (with amendments and additions as of March 27, 2023).
2. The National Qualifications Framework approved by the minutes of March 16, 2016 by the Republican Tripartite Commission on Social Partnership and Regulation of Social and Labor Relations.
3. Sectoral Qualifications Framework of the sphere of «Education», approved by the Protocol of the meeting of the sectoral commission of the Ministry of Education and Science of the Republic of Kazakhstan on social partnership and regulation of social and labor relations in the field of education and science from November 27, 2019 №
4. State obligatory standard of higher education (Order of the Minister of Science and Higher Education of the Republic of Kazakhstan from February 20, 2023 № 66).Классификатор направлений подготовки кадров с высшим и послевузовским образованием, утвержденный приказом Министра образования и науки Республики Казахстан от 13 октября 2018 года № 569 (с изменениями и дополнениями по состоянию на 05 июня 2020 года).
5. Qualification directory of positions of managers, specialists and other employees, approved by the order of the Minister of Labor and Social Protection of Population of the Republic of Kazakhstan from 12avgusta 2022 № 309.
6. Rules of organization of educational process on credit technology of training in organizations of higher and (or) postgraduate education, approved by the Order of the Minister of MES RK № 152 from 20.04.2011 (with additions and amendments from 04 April 2023 № 145).
7. Classifier of directions of training of personnel with higher and postgraduate education, approved by the Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 13, 2018 № 569 (with amendments and additions as of June 05, 2020).
8. Algorithm of inclusion and exclusion of educational programs in the Register of educational programs of higher and postgraduate education, approved by the Order of the Minister of Education and Science of the Republic of Kazakhstan dated December 4, 2018 № 665 (with additions and amendments as of December 23, 2020 № 536).
9. RI-ALT-33 «Regulations on the order of development of the educational program of higher and postgraduate education».
10. Atlas of new professions: «Innovation Manager in Construction».

### 3. Passport of the educational program

№	Fieldname	Примечание
1	Registrationnumber	6B07100001
2	Code and classification of the field of education	6B07 Engineering, manufacturing and construction industries
3	Code and classification of training directions	6B071 - Engineering and Engineering Science
4	Code and group of educational programs	B165 Backbone networks and infrastructure
5	Nameofeducationalprogram	6B07129 - Bridges, Tunnels and Subways
6	Typeof OP	New
7	Purposeoftheprogram	Preparation of competitive and highly qualified specialists who realize in their professional activity analytical and engineering abilities based on modern and resource-saving technologies of design, operation, maintenance and repair of bridges, tunnels and subways.
8	ISCED level	6 - Bachelor'sDegree
9	NQF level	6 - Bachelor'sdegree
10	Levelby NQF	6 - Bachelor'sdegree
11	Distinctive features of the OP	No
	Partner HEI (SOP)	
	Partner HEI (SOP)	
12	Formofeducation	Full-time, full-time with application of DOT
13	Languageofinstruction	Kazakh, Russian
14	Creditvolume	241
15	Academicdegreeawarded	Bachelor of Engineering and Technology in the educational program «6B07321 - Construction of bridges, tunnels and subways»
16	Availability of an annex to the license for the training direction	KZ12LAA00025205 (005)
17	Availability of accreditation of the OP	<i>Have</i>
	Nameofaccreditationbody	<i>NAOKO</i>
	Accreditationvalidityperiod	<i>28.05.2022-12.05.2027</i>

#### 4. Competence model of a graduate

##### **Objectives of the educational program:**

1. Formation of a personality capable of self-improvement and professional growth with versatile socio-humanitarian, natural science, special and profile knowledge and interests.
2. Formation of the ability to critically rethink the accumulated experience, to change, if necessary, the profile of their professional activity, to realize the social significance of their future profession, to have a high motivation to perform professional activities.
3. Formation of the ability to: find a compromise between different requirements (cost, quality, safety and terms of performance) in long-term and short-term planning and make optimal decisions in the field of design, construction and operation of transport structures; conduct work in research organizations under the guidance of leading specialists; possess the culture of thinking.
4. Formation of the ability to: generalize, analyze and perceive information; setting a goal and choosing ways to achieve it.
5. Facilitating the formation of the graduate's readiness to: perform calculation and design work; develop design and technical documentation; develop methodological materials, proposals and measures for the design, construction, operation and modernization of transport buildings and structures.
6. Formation of graduates' readiness to conduct technical and economic analysis, justification of accepted and implemented decisions in the field of design, construction, operation and modernization of transport buildings and structures; application of results in practice, striving for self-development and improvement of their qualifications and skills.
7. Facilitating the formation of graduates' readiness for economical and safe use of natural resources, energy and materials in the design, construction, operation and modernization of transport buildings and structures.

##### **Learning Outcomes:**

LO1-Develop a world outlook, civic and professional position on the basis of knowledge of social and humanitarian disciplines, moral values, healthy lifestyle, ability to interpersonal social and professional communication in the state Russian and foreign languages.

LO2- Use IT-technologies, basics of computer modeling and electronics in diagnostics of transport structures of different purposes and solutions of engineering problems.

LO3- Apply criteria, theorems and differential equations of natural science disciplines when studying specialized disciplines and solving applied problems on the basis of scientific research methods in the field of professional activity.

LO4- Develop a set of measures aimed at ensuring occupational health and safety, environmental safety, economic issues, anti-corruption culture and access to management decisions using Power BI.

LO5- Evaluate the stability and strength of transportation structures using computational methods of engineering geology, geodesy and geoinformatics, soil mechanics and foundations in the field of professional activity.

LO6- Formulate logistic planning of transport infrastructure, rules of operation based on resource-saving technology in transport and communication complex and time resource management methods.

LO7- Determine cost-effective solutions of construction structures using modern building materials and design schemes of load-bearing structures in the construction of transport infrastructure facilities.

LO8- Analyze the results of strength calculations of artificial structures in determining the reliability and load-bearing capacity.

LO9-Classify the list of modern specialized construction machinery and equipment in identifying the optimal level of mechanization and mechanization of production processes.

LO10- Justify ways of planning and organizing the construction of artificial structures on the basis of integrated mechanization, automation of technological processes in the operation of facilities in the transport industry.

LO11- Organize rational methods of production processes for the effective performance of various types of work in the maintenance and repair of bridges, pipes, tunnels and subways.

LO12-Design artificial structures with economical and rational parameters of bearing structures, providing a sufficient level of stability, strength and durability.

**Area of professional activity:** Enterprises, organizations and complexes that provide current maintenance, inspection, repair and reconstruction of bridges, tunnels and subways.

**Objects of professional activity:**

- **Local executive authorities in the field of railway and road transport and their regional structures;**

- organizations and enterprises of the transport industry in the sphere of design, construction, maintenance and repair of bridges and tunnels of the main network of railroads, subways and access railroads, and highways of industrial enterprises;

- organizations and enterprises in the sphere of manufacturing of construction materials and structures for objects of transport and communication complex.

**Types of professional activity:**

- production-technological;
- organizational and managerial;
- service-operational;
- design.

**Functions of professional activity:**

1) Organization of manufacturing of construction materials and structures for objects of transport and communication complex; organization of design, construction, maintenance and repair of bridges, tunnels and subways; use of standard methods of calculation of reliability of structures of bridges, tunnels and subways;

2) Management of production processes, analysis of the results of production activities; management of design and construction works, maintenance and repair of bridges, tunnels and subways; technical diagnostics of bridges, tunnels and subways, application of measuring means of bridge testing laboratories; analysis and evaluation of production and non-production costs or resources for quality design, construction, maintenance and repair of bridges, tunnels and subways;

3)Development of new technologies, development of design and technological documentation using computer technologies; calculation of strength and stability under various types of loading of bridges, tunnels and subways, development of projects for new and reconstruction (modernization) of existing railway and road bridges and tunnels; selection of building materials for the manufacture of structures of bridges, tunnels and subways, justification of technical solutions; development of technical specifications and technical conditions for projects of new and reconstruction (modernization) of existing railway and road bridges and tunnels, structures of bridges, tunnels and subways, technological processes for maintenance and repair of bridges, tunnels and subways, means of technical diagnostics of bridges, tunnels and subways with use of modern information technologies and computer programs; designing new structures of bridges, tunnels and subways that meet the latest achievements of science and technology, safety requirements..

1. Preparation of initial data for the development of the project of work production (PWP), including the use of Project Information Model (PIM) (if necessary) (if TIMSO is used in the organization):

- preparation of work descriptions, specifications, tables and other technical documentation for the development of line and network schedules of work production;
- development of technological and labor process maps;
- preparation of information for operational meetings on construction progress;
- preparation of statements and other technological documentation;
- calculation of operational norms of consumption of materials, tools, fuel and electricity, labor costs;

- preparation of applications for technological equipment. Tools, devices for construction production Implementation of optimal modes of production.

2. Making proposals to improve the quality of work.

3. Making plans for the placement of equipment, technical equipment and organization of workplaces.

4. Calculation of production capacity and equipment utilization.

**List of specialist positions:** Head of capital construction department, Head of production (technical, production and technical) department, Head of site (shop), Head of logistics department, Head of safety and labor protection department, Head of normative and research laboratory on labor, Head of instrumental department, Head of production laboratory (production control), Head of quality control department, Head of bridge testing laboratory, bridge foreman, foreman of bridge, mastconstruction, work producer (foreman), master of industrial training, foreman for current maintenance and repair of artificial structures, bypasser of artificial structures, project manager, project manager, leading engineer, design engineer, engineering technologist (technologist), repair engineer, engineer for inventory of buildings and structures, engineer for metrology, engineer for labor organization, engineer on labor standardization, engineer on safety and labor protection, engineer on environmental protection (ecologist), laboratory engineer, engineer, chief specialist, leading specialist, specialist, technician-designer, site technician, technologist-technologist, technician on inventory of buildings and structures, technician on metrology, technician on labor, technician, laboratory technician, laboratory technician, laboratory assistant.

**Professional certificates obtained upon completion of training:**

Repairer of artificial constructions, cladding worker.

**Requirements to the previous level of education:** Secondary education, post-secondary education, technical and professional education, higher education.

In the process of training, students undergo various types of professional practice:

- educational;
- industrial;
- industrial (pre-diploma).

**Training practice (geodetic)**

Organization of training practice is aimed at providing familiarization of bachelors with the areas of professional activity and training profiles, with the ability of geodetic surveying terrain, forward and backward travel, leveling survey, tying to the reference points, the removal of points and height marks from the map, the solution of typical engineering and geodetic problems, as well as a trip to the branch of the department on the basis of LLP "Saulat SKB".  
Form of control - report defense.

**Industrial practice 1.**

The main objectives of industrial practice are: consolidation of theoretical knowledge and practical skills on the selected educational program in production conditions, gaining experience



in organizational work, gaining a working specialty, formation of practical skills and competencies in the process of mastering the bachelor's program. It is carried out in practice bases at the enterprises according to the given educational program. Form of control - report defense.

**Pre-diploma/production practice 2.**

The purpose of practice for bachelors is to ensure the relationship between the theoretical knowledge obtained during the assimilation of the chosen educational program and practical activity. The tasks of this practice are consolidation and deepening of theoretical knowledge obtained by students in the process of education, collection of information for writing a graduate qualification work, study of advanced experience at the enterprise, as well as gaining experience in independent research work, mastering a variety of methods of scientific work. It is carried out in practice bases at the enterprises according to the given educational program. Form of control - report defense.

**Final certification**

The objectives of the diploma work are to determine the degree of mastering the content of the educational program by a bachelor, to check his/her preparedness for independent activity in the direction of the educational program, to consolidate and deepen the practical skills of work. It is also envisaged to pass a comprehensive examination.

## 5.MATRIX OF CORRELATION OF EDUCATIONAL PROGRAM LEARNING OUTCOMES WITH ACADEMIC DISCIPLINES/MODULES

№	Name of discipline	Number of credits	Matrix of correlation of educational program learning outcomes with academic disciplines											
			LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10	LO11	LO12
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	HistoryofKazakhstan	5	+											
2	Philosophy	5	+											
3	Foreignlanguage	10				+								
4	Kazakh (Russian) language	10				+								
5	Informationandcommunicationtechnologies	5					+							
	Socio-politicalknowledgemodule	8	+											
6	Sociology	2	+											
7	CulturalStudies	2	+											
8	PoliticalScience	2	+											
9	Psychology	2	+											
10	PhysicalCulture	8	+											
11	EcologyandLifeSafety	5				+								
12	Methodsofscientificresearch	5			+									
13	Basics of law and anti-corruption culture	5	+			+								
14	Fundamentals of Economics and Entrepreneurship	5	+			+								
15	EngineeringMathematics	9			+									
16	AppliedPhysics	9			+									
17	Fundamentalsofcomputermodeling	6		+										
18	Constructionmaterials	6							+					
19	Geology, Soil Mechanics, Grounds and Foundations	6					+							
20	Buildingconstructions	6							+					
21	Laborprotection	6				+								
22	Electrical engineering and basics of electronics	6		+										
23	Educationalpractice (godesic)													
24	Theoreticalmechanics	6			+									
25	Engineeringmechanics 1	6			+									
26	Resistanceofmaterials	6			+									
27	Engineeringmechanics 2	6			+									
28	Constructionmechanics	6			+									
29	EngineeringMechanics 3	6			+									
30	EngineeringGeodesy	6					+							
31	Fundamentalsofgeoinformatics	6					+							
32	Fundamentals of Transportation Structures Design	6							+					
33	Introduction to design of transportation infrastructure facilities	6							+					
34	Machinery and equipment in bridge and tunnel construction	6									+	+	+	
35	Mechanization of bridge and tunnel construction	6									+	+	+	
36	Bridgeandpipeconstruction	9								+				
37	Tunnels	9								+				
38	Subways	6								+				
39	Design of bridge crossings and tunnel crossings	9								+				
40	Maintenance and repair of bridges and pipes	9								+				
41	Maintenance and repair of tunnels and	9								+				



## 6. STRUCTURE OF THE BACHELOR'S DEGREE PROGRAM

№ п/п	Name of cycles of disciplines	Общая трудоемкость	
		в академических часах	в академических кредитах
<b>1</b>	Cycle of General Education Disciplines (GED)	<b>1680</b>	<b>56</b>
<b>1)</b>	Compulsory component	<b>1530</b>	<b>51</b>
	History of Kazakhstan	150	5
	Philosophy	150	5
	Foreign language	300	10
	Kazakh (Russian) language	300	10
	Information and communication technologies	150	5
	Module of socio-political knowledge (sociology, political science, culturology, psychology)	240	8
	Physical culture	240	8
<b>2)</b>	University component and (or) elective component	<b>150</b>	<b>5</b>
<b>2</b>	Cycle of basic and profile disciplines (DB, PD)	at least 5280	at least 176
<b>1)</b>	University component and (or) elective component		
<b>2)</b>	Professional practice		
<b>3</b>	Additional types of training (DVO)		
<b>1)</b>	Optional component		
<b>4</b>	Final certification	at least 240	at least 8
	Total	at least 7200	at least 240

## 7. Working curriculum for the entire term of study

АО "Академия логистики и транспорта"

### УЧЕБНЫЙ ПЛАН

Форма обучения: очная

Направление подготовки:  
6В071 – Инженерия и инженерное дело

Срок обучения: 4 года

Группа образовательных программ:  
В165 – Магистральные сети и инфраструктура

Наименование образовательной программы:  
6В07129 – Мосты, тоннели и метрополитены

Степень: бакалавр техники и технологий

Прием: 2023 год



УТВЕРЖДЕН

Решением Ученого совета АЛТ  
от "12" 08. 2023 г. Протокол № 13

Председатель Ученого совета

С.Н. Амиргалиева

№	Код дисциплины	Наименование цикла и дисциплин	Общая трудоемкость		Форма контроля, семестр		Объем учебной нагрузки, контактные часы		Распределение по семестрам												Закрепление за кафедрой		
			в академических часах	в академических кредитах	Экзамен	КП (КР)	Всего часов	Аудиторные		1 курс		2 курс		3 курс		4 курс							
								лекции	практические	1 сем.	2 сем.	3 сем.	4 сем.	5 сем.	6 сем.	7 сем.	8 сем.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
<b>ЦИКЛ ОБЩЕОБРАЗОВАТЕЛЬНЫХ ДИСЦИПЛИН (ООД):</b>																							
1.	Обязательный компонент:		1530	51	13		1530	120	358	15	120	917	21	16	7	7	0	0	0	0	0	0	СГДИФ
1.1.	23-0-В-ОК-Ж	История Казахстана	150	5	3		150	30	15		8	97			5								СГДИФ
1.1.1.	23-0-В-ОК-Ж	История Казахстана	150	5	3		150	30	15		8	97			5								СГДИФ
1.1.2.	23-0-В-ОК-Ф	Философия	160	5	4		160	30	15		8	97				6							ЯП
1.1.3.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-И	Иностранный язык	300	10	1,2		300		90		16	19											



## 8. CATALOG OF DISCIPLINES OF THE UNIVERSITY COMPONENT

### EDUCATIONAL PROGRAM

6B07129 – Bridges, tunnels and subways

Level of education: bachelor's

degree Duration of study: 4 years

Year of admission: 2023

Cycle	Component	Name of the discipline	Total labor intensity		Semester	Learning outcomes	Brief description of the discipline	Prerequisites	Post-requisites
			academic hours	academic credits					
1	2	3	4	5	6	7	8	9	10
DB	VK	Engineering mathematics	270	9	2	LO3	Mastering the mathematical apparatus for solving theoretical and applied problems of a specific profile, gaining an understanding of mathematical modeling and interpretation of the solutions obtained. Issues of linear algebra, analytical geometry, mathematical analysis, differential equations, and series theory are considered.	Engineering mathematics applied Physics Basics of computer modeling	Geology, soil mechanics, bases and foundations Building construction Theoretical mechanics Engineering mechanics 1 Strength of materials Engineering mechanics 2
DB	VK	applied Physics	270	9	1	LO3	Formation in students of skills in the use of fundamental laws, theories of classical and modern physics, as well as methods of physical research, thinking, scientific worldview, with independent cognitive activity, to be able to simulate physical situations using computer technology and ideas about the modern natural science picture of the world.	Engineering mathematics applied Physics Basics of computer modeling	Geology, soil mechanics, bases and foundations Building construction Electrical engineering and electronics fundamentals Design of bridges and pipes, tunnels and metro stations Strength of materials Engineering mechanics 2
DB	VK	Basic of computer modeling	180	6	2	LO2	Forms theoretical and practical knowledge, skills and abilities in the	Engineering mathematics	Design of artificial structures in transport

							field of computer modeling of various types of processes (physical, technological, economic, etc.), the ability to use tools (application software packages) using three-dimensional visualization tools and methods to solve applied engineering and technical problems. technical and economic problems, planning and carrying out work on bridge, tunnel and subway projects.	applied Physics Basics of computer modeling	Design of bridges and pipes, tunnels and metro stations Strength of materials Engineering mechanics 2 Tunnels Subways
DB	VK		180	6	3	LO7	Use modern building materials, demonstrate basic quality indicators, modern methods of production of building materials for the transport industry, basic patterns and dependencies on physical and mechanical properties, production technology and formation conditions, finishing methods, mastering technological processes of construction production, products of building materials, products and structures on erected artificial structures.	Engineering mathematics applied Physics Basics of computer modeling	Construction of bridges and pipes Tunnels Subways Maintenance and repair of bridges and pipes Maintenance and repair of tunnels and subways Geology, soil mechanics, bases and foundations Building construction
DB	VK		270	9	5	LO5	Forms theoretical and practical knowledge, skills and abilities that allow one to master the general laws and principles of engineering geology and soil mechanics, engineering geological processes and phenomena in soil massifs, basic calculations, physical and mechanical properties of soils at the base of foundations and their joint work with superstructures in order to ensure the reliability and durability of transport structures.	Engineering mathematics applied Physics Basics of computer modeling Construction Materials The engineering geodesy Introduction to the design of transport infrastructure facilities	Technology of construction of bridges, tunnels and subways Organization of construction of transport infrastructure facilities Organization and planning of construction of transport facilities Design of artificial structures in transport
DB	VK		180	6	6	LO7	Forms basic knowledge of shaping, calculation and design of load-bearing structures, the ability to correctly select	Basics of computer modeling Construction	Construction of bridges and pipes Tunnels



DB	VK							materials, section shapes, design design diagrams of structures, based on the purpose and purposes of operation, develop design solutions for newly constructed or strengthened transport structures, master the skills of calculating structural elements based on limit states, ensuring compliance with the required indicators of reliability, efficiency, and effectiveness.	Materials Theoretical mechanics The engineering geodesy Strength of materials Introduction to the design of transport infrastructure facilities	Subways Design of bridge crossings and tunnel crossings Occupational Safety and Health Design of artificial structures in transport Design of bridges and pipes, tunnels and metro stations
DB	VK	180	6	6	6	LO2	The study of electrical circuits of direct, alternating and three-phase current, the principle of operation, purpose and operating rules of transformers and electrical machines, methods for measuring electrical quantities, general rules for the operation of semiconductor devices during the operation of power supply and lighting circuits at transport construction sites.	Engineering mathematics applied Physics Basics of computer modeling Strength of materials Engineering mechanics 2 Introduction to the design of transport infrastructure facilities	Design of artificial structures in transport Design of bridges and pipes, tunnels and metro stations Machinery and equipment in bridge and tunnel construction Mechanization of bridge-tunnel construction	
DB	VK	180	6	7	7	LO4	Training of specialists on the theoretical and practical foundations of safety, harmlessness and facilitation of working conditions with maximum productivity, on the legislative and regulatory framework in the field of labor protection.	Construction Materials Theoretical mechanics The engineering geodesy Construction Materials The engineering geodesy Introduction to the design of transport infrastructure facilities	Bridge-tunnel construction technology Technology of construction of bridges, tunnels and subways Organization of construction of transport infrastructure facilities Organization and planning of construction of transport facilities	
DB	VK	60	2	4	4	LO3,5,7	Educational practice (geodetic) The organization of educational practice is aimed at ensuring that bachelors are	Engineering mathematics applied Physics	Building construction Bridge-tunnel construction technology	

								familiar with the areas of professional activity and training profiles, with the ability to geodetic survey of terrain, forward and backward movement, leveling survey, reference to benchmarks, carrying out points and elevation marks from the map, solving standard engineering - geodetic tasks.	Basics of computer modeling	Technology of construction of bridges, tunnels and subways Tunnels Subways Design of bridge crossings and tunnel crossings
PD	VK	Construction of bridges and pipes	270	9	4	LO8	Forms theoretical and practical knowledge on the use of methods for constructing load-bearing structures when designing bridges and pipes, methods for calculating the most economic, efficient and functional requirements for bridges and pipes, norms and rules for choosing indicators of their reliability and load-bearing capacity, basic properties, characteristics and operating features of structural materials for various operating conditions.	Engineering mathematics applied Physics Basics of computer modeling Construction Materials Theoretical mechanics The engineering geodesy	Tunnels Subways Design of bridge crossings and tunnel crossings Maintenance and repair of bridges and pipes Design of bridges and pipes, tunnels and metro stations	
PD	VK	Tunnels	270	9	5	LO8	Forms theoretical and practical knowledge and skills of the basic principles of design, their classification and scope of application, the selection of basic dimensions, design and technological solutions for tunnel structures for various purposes, the arrangement of internal equipment of railway and road tunnels, the technology of constructing tunnels using mining and panel methods to select calculation methods and methods for constructing transport tunnels.	Engineering mathematics Basics of computer modeling Construction Materials Theoretical mechanics The engineering geodesy Strengthofmaterials	Maintenance and repair of tunnels and subways Bridge-tunnel construction technology Organization of construction of transport infrastructure facilities Design of bridges and pipes, tunnels and metro stations	
PD	VK	Subways	180	6	6	LO8	Gives an idea of the loads acting on the load-bearing structures of transition and station tunnels of the metro, about the features of geodetic work for the construction of subways, the physical and mechanical essence of the internal processes occurring in the soil mass	Engineering mathematics Basics of computer modeling Construction Materials Theoretical	Maintenance and repair of tunnels and subways Bridge-tunnel construction technology Organization of construction of transport infrastructure facilities	

							when opening a working, about ventilation and lighting, power supply, alarm system, water supply, sewerage and heating of subways to perform calculations of their strength and load-bearing capacity.					mechanics The engineering geodesy Strength of materials Introduction to the design of transport infrastructure facilities	Design of artificial structures in transport
PD	VK	270	9	7	LO8	Design of bridge crossings and tunnel crossings	Forms theoretical and practical knowledge on the use of methods and techniques for selecting a bridge crossing location to create the most rational plan and longitudinal profile of the railway and highway when crossing river boundaries with a bridge crossing, taking into account the climatic, topographical, geotechnical, hydrological and environmental conditions of the area where the transport highway is being constructed with minimal expenditure of material and technical resources.					Engineering mathematics Basics of computer modeling Construction Materials Theoretical mechanics The engineering geodesy Strength of materials Introduction to the design of transport infrastructure facilities	Maintenance and repair of bridges and pipes Industrial practice 2 Design of artificial structures in transport Design of bridges and pipes, tunnels and metro stations
PD	VK	270	9	7	LO8	Maintenance and repair of bridges and pipes	Forms skills in the maintenance and repair of spans, supports, foundations and foundations of bridges and pipes, various methods and methods of maintaining spans, identifying defects and deformations of bridge structures and pipes, using the necessary equipment, machines and mechanisms to effectively carry out various types of repairs and reconstructions , drawing up technological maps for the production of work.					Engineering mathematics Basics of computer modeling Construction Materials Theoretical mechanics The engineering geodesy	Technology of construction of bridges, tunnels and subways Industrial practice 2 Design of artificial structures in transport Design of bridges and pipes, tunnels and metro stations
PD	VK	270	9	8	LO8	Maintenance and repair of tunnels and subways	Teaches the skills of identifying defects and damage to transport tunnels, haul tunnels and metro stations, using modern methods of major repairs and reconstruction of operating tunnels and subways, various types of equipment and					Engineering mathematics Basics of computer modeling Construction Materials	Industrial practice 2

										mechanisms used in current and major repairs and reconstruction of underground structures, knowledge of methods for restoring tunnels and subways to organize the normal operation of the structure.	The engineering geodesy Strength of materials Introduction to the design of transport infrastructure facilities	
PD	VK	Industrial practice 1	90	3	6	LO3,5,7,8				The main objectives of industrial practice are: consolidation of theoretical knowledge and practical skills in the chosen educational program in a production environment, gaining experience in organizational work, obtaining a working specialty, developing practical skills and competencies in the process of mastering the bachelor's program. Conducted in practice bases at enterprises in accordance with this educational program.	Engineering mathematics Basics of computer modeling Construction Materials The engineering geodesy Strength of materials	Design of bridge crossings and tunnel crossings Maintenance and repair of bridges and pipes Industrial practice 2 Organization of construction of transport infrastructure facilities
PD	VK	Industrial practice 2	120	4	9	LO3,5,7,8				The purpose of internship for bachelors is to ensure the relationship between theoretical knowledge acquired through mastering the chosen educational program and practical activities. The objectives of this practice are to consolidate and deepen the theoretical knowledge acquired by students during the learning process, collect information for writing a final qualifying work, study best practices at the enterprise, as well as gain experience in independent research work, mastering a variety of methods of scientific work. Conducted in practice bases at enterprises in accordance with this educational program.	Engineering mathematics Basics of computer modeling Construction Materials The engineering geodesy Strength of materials Introduction to the design of transport infrastructure facilities	FINAL EXAMINATION
Minorprogram 1 "Resource Management"												
DVO	IN	Managerial Economics	150	5	5	LO6				Formation of a conceptual apparatus and development of economic analysis skills using modern models and patterns of	Engineering Mathematics, Fundamentals of	finalexamination

DVO	IN	Transportlogistics	150	5	6	LO6	<p>economic science, consideration of economic problems and tasks facing the head of the company. Studying this discipline will allow students to gain and develop knowledge in the field of analytical research into the economic, technological and technical parameters of an enterprise, and will also allow them to master the skills of using special methods for economic justification of management decisions and assessing their consequences.</p> <p>Study of the basic provisions of transport support for logistics systems, activities in the field of transportation, covering the entire range of operations and services for the delivery of goods from the manufacturer to the consumer, principles of design and construction of logistics systems. Mastering the skills of optimizing and organizing rational cargo flows, their processing in specialized logistics centers, ensuring an increase in their efficiency, reducing unproductive costs and expenses. Teaching methods are: problem solving, thematic colloquiums, brainstorming seminars. The discipline includes guest lectures by leading specialists from transport and logistics companies.</p>	Economics and Entrepreneurship	<p>Engineering mathematics</p> <p>finalexamination</p>
DVO	IN	Resourcesaving in transport	150	5	7	LO6	<p>Study of the main types and characteristics of energy resources, regulatory support for energy saving, increasing the energy efficiency of the transportation process; energy-saving technologies in repair production and in the operation of transport infrastructure facilities; organization and methods of energy saving management. Problem solving, thematic colloquiums and debates are used. Guest lectures are being held by leading specialists in the transport and communications industry.</p>	<p>Applied physics, Engineering mathematics, Ecology and life safety</p> <p>finalexamination</p>	

DVO	IN	Time management	150	5	5	LO6	Formation among students of general ideas about the essence and types of time management, principles and methods of managing temporary resources for more successful implementation of professional activities.	EngineeringMathematics,	finalexamination
DVO	IN	Digital diagnostics of transport facilities	150	5	6	LO6	Study of digital information processing systems, main functional units, principles of information division and multiplexing, analysis of the characteristics of digital communication channels when diagnosing transport construction projects.	Basics of computer modeling Basics of designing transport structures Introduction to the design of transport infrastructure facilities	finalexamination
DVO	IN	Business analytics Power BI	150	5	7	LO6	Teaches the skills of creating interactive visualizations of data obtained from various sources and sharing them with employees of the organization, obtaining valuable information when making strategic decisions, analyzing historical and current data, presenting results in intuitive visual formats, providing shared access to business-critical analytical information with using Power BI.	EngineeringMathematics,	finalexamination

## 9. CATALOG OF CHOICE COMPONENT DISCIPLINES

**EDUCATIONAL PROGRAM**

**6B07129 – Bridges, tunnels and subways**

**Level of education: bachelor's**

**degree Duration of study: 4 years**

**Year of admission: 2023**

Cycle	Component	Name of the discipline	Total labor intensity		Semester	Learning outcomes	Brief description of the discipline	Prerequisites	Post-requisites
			academic hours	academic credits					
1	2	3	4	5	6	7	8	9	10
OOD	KV	Ecology and life safety	150	5	3	LO4	Study of basic environmental concepts, environmental problems and approaches to their solution, sources and types of environmental pollution by enterprises, principles of standardization of air and water quality, basic provisions of legislation in various fields, natural and man-made emergencies, their causes, methods of prevention and protection. Teaching methods - analysis of specific situations ( case-study ).	Engineering mathematics applied Physics Basics of computer modeling	Introduction to the design of transport infrastructure facilities Construction of bridges and pipes Strength of materials Engineeringmechanics 2
		Scientific Research Methods				LO3	Students obtain theoretical and applied knowledge on methods of scientific research of problems in the field of study, train specialists with skills of cognitive activity in the field of science, formulate deep ideas about the content of scientific activity, its methods and forms of knowledge.	Engineering mathematics applied Physics Basics of computer modeling	Introduction to the design of transport infrastructure facilities Structural mechanics Machinery and equipment in bridge and tunnel construction Mechanization of bridge-tunnel construction
		Fundamentals of Economics and Entrepreneurs				LO1	Formation of analytical thinking skills on economic issues, the ability to independently draw conclusions based on the material being studied, navigate in any economic situations,	Engineering mathematics applied Physics Basics of	Introduction to the design of transport infrastructure facilities







							structures.		the design of transport infrastructure facilities	Maintenance and repair of tunnels and subways
							Studies the theoretical foundations and methods of carrying out calculations for strength, rigidity and stability of structural elements of transport structures, the main types of mechanisms, parts and components of machines, general principles of design and construction, construction of models and algorithms for calculating products according to the main performance criteria when assessing the reliability of existing equipment in conditions operation.	LO3	Engineering mathematics Basics of computer modeling Construction Materials Theoretical mechanics Strength of materials Engineering mechanics 2	Subways Design of bridge crossings and tunnel crossings Maintenance and repair of bridges and pipes Maintenance and repair of tunnels and subways Industrial practice 2
							Forms professional competencies that determine the bachelor's readiness and ability to use basic knowledge in the field of geodesy, allows for geodetic measurements related to solving typical construction problems, detailed breakdown of structures, control of the geometric shapes of the structure being built, and perform as-built surveys of the results of individual stages of construction and installation work , provides skills in using basic geodetic instruments for specific production conditions.	LO5	Engineering mathematics applied Physics Basics of computer modeling	Tunnels Subways Design of bridge crossings and tunnel crossings Design of artificial structures in transport. Design of bridges and pipes, tunnels and metro stations
							Studies the history of the development of geographic information systems (GIS), basic concepts and terms, general issues of geoinformatics , application technologies in subject areas of professional activity, the current state of technical, software and information support of GIS, forms an understanding of the features of creating a GIS, hardware and software, and applications GIS for use in business, management, science and technology.	LO5	Engineering mathematics applied Physics Basics of computer modeling	Tunnels Subways Design of bridge crossings and tunnel crossings Design of artificial structures in transport pipes, tunnels and metro stations
							Forms knowledge and skills in using	LO7	Engineering	Structural mechanics
DB	KV	180	6	4	3					
							Engineering mechanics 3			
							The engineering geodesy			
							Basics of geoinformatics			
DB	KV	180	6	4	3					









## Рецензия

на образовательную программу

«М07129 – Мосты, тоннели и метрополитены» по направлению подготовки  
«М071 – Инженерия и инженерное дело»

Образовательная программа (бакалавриат – 4 года) «М07129 – Мосты, тоннели и метрополитены» содержит следующую информацию: квалификация выпускника, форма и срок обучения, направление и характеристика деятельности выпускников, приведен полный перечень компетенций, которыми должен обладать выпускник в результате освоения данной образовательной программы.

Дисциплины учебного плана по рецензируемой образовательной программе формируют весь необходимый перечень общекультурных и профессиональных компетенций, предусмотренных ГОСО по соответствующим видам деятельности.

В учебном плане образовательной программы определен перечень всех учебных дисциплин обязательного компонента и компонента по выбору, трудоемкость каждой учебной дисциплины в кредитах, последовательность их изучения, виды учебных занятий и форма контроля. Каталог электронных ресурсов. Каталог внутривузовского компонента полностью отражает предметность дисциплины «Геология, механика грунтов, основания и фундаменты», «Проектирование искусственных сооружений на транспорте», «Удержание и ремонт мостов и туннелей», «Организация и планирование строительства транспортных сооружений».

Соблюдена последовательность изучения дисциплины, включены дисциплины необходимые для прикладства и технологического процесса.

Содержание рабочих программ учебных дисциплин и практик позволяет сделать вывод, что оно соответствует компетенционной модели выпускника.

Образовательная программа предусматривает профессионально-практическую подготовку бакалавров в виде практики. Содержание программ практик свидетельствует об их способности сформировать практические навыки обучающихся.

Для разработки образовательной программы были привлечены опытный профессорско-преподавательский состав, ведущие представители работодателя, обучающиеся, учтены их требования при формировании дисциплин профессионального цикла.

### Выводы:

В целом, рецензируемая образовательная программа отвечает основным требованиям ГОСО, национальной системе квалификаций, отраслевой системе квалификаций, профессиональных стандартов. Адаптирована к списку новых профессий и способствует формированию общекультурных и профессиональных компетенций по направлению подготовки «М071 – Инженерия и инженерное дело».

### Рецензент

«Казахского национального  
инженерно-технического  
университета имени К.И. Сатпаева»  
Профессор кафедры «СИСМ»  
доктор технических наук



Шайхметов С.Б.

### 13. Protocols of review and approval

#### Academy of Logistics and Transport

#### PROTOCOL №.6 (beginning of the formation of the OP)

##### Meetings

#### Academic Committee for the Educational Program and Leading Teachers of the Department of Civil Engineering

Almaty

«15» 03 2023

**Chairman: Ismagulova S.O.**

**Secretary: Zhadraev R.Zh.**

**Present :** members of the Academic Committee, leading teaching staff of the department  
**Representatives from the production:** V.S.N., Doctor of Technical Sciences, Professor of «KazdorNII» JSC - Shalkarov A.A. Deputy Director of «GEO TRACK» LLP Masanov T.K., Director of «GEO TRACK» LLP Nusupov D.K.

**Students:** 2nd year Master's student, group MN-ITI-21-1 Konysbai A.D.

##### AGENDA :

5. Consideration of the graduate competency model
  6. Consideration of the possibility of including disciplines in QED and RUP
- On the first question

##### SPEAKER:

Head Department Ismagulova S.O. proposed to consider the competency model of a graduate at 3 levels of education: bachelor's, master's, and doctorate.

The graduate competency model includes the following parts:

- The purpose and objectives of the educational program;
- Learning outcomes;
- Area, objects, types and functions of professional activity;
- List of positions in the educational program;
- Professional certificates received upon completion of training;
- Requirements for previous level of education.

**SPEAKER:** V.S.N., Doctor of Technical Sciences, Professor of «KazdorNII» JSC - Shalkarov A.A., who proposed, due to the specifics of their organization, to reflect the following in the objects of professional activity: Modern innovative technologies in the transport and communications sector.

##### SPEAKED:

Member of the department Khasenov S.S., who proposed to approve.

After reviewing the graduate competency model, it was proposed to approve this Model for 3 levels of education.

##### DECIDED:

- provide a competency model of a graduate at 3 levels of education: bachelor's, master's, doctoral studies for consideration and approval by the Council of the Institute of Transport Engineering.



On the second question

**SPEAKER:** Head of the department Ismagulova S.O. with a proposal to hear representatives of employers and students on the inclusion of new disciplines in the QED and RUP of admission for 2023.

**SPEAKED BY:** Director of «GEO TRACK» LLP Nusupov D.K.

Organizations are interested in specialists with a good level of training and knowledge in the design and construction of bridges, tunnels and subways.

We make proposals to include the following popular disciplines in the RUP : Geology, soil mechanics, foundations and foundations, Design of artificial structures in transport, Maintenance and repair of bridges and pipes.

**SPEAKED BY:** 2nd year master's student, group MN-ITI-21-1 Konysbay A.D.

We consider it necessary to include the following disciplines in the RUP: Design of bridge crossings and tunnel intersections, Technology of construction of bridges, tunnels and subways, Maintenance and repair of tunnels and subways.

**DECIDED:**

5. Please take note of the information;

6. Take into account suggestions and recommendations of employers and students;

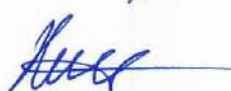
Consider including the following disciplines in the RUP: Geology, soil mechanics, foundations and foundations, Design of artificial structures in transport, Maintenance and repair of bridges and pipes. Design of bridge crossings and tunnel intersections, Technology of construction of bridges, tunnels and subways, Maintenance and repair of tunnels and subways.

**Chairman:**



**Ismagulova S.O.**

**Secretary:**



**Zhadraev R.Zh.**

## Academy of Logistics and Transport

PROTOCOL №7 (before approval of the OP on the CS)

Meetings of the COC UMB Institute of Transport Engineering

Almaty

«15» 03 2023

**Chairman: Chigambaev T.O.**

**Secretary: Utepova A.**

**Present :** members of the UMB KOC, members of the Academic Committee

**Representatives from the production:** V.S.N., Doctor of Technical Sciences, Professor of «KazdorNII» JSC - Shalkarov A.A. Deputy Director of «GEO TRACK» LLP Masanov T.K., Director of «GEO TRACK» LLP Nusupov D.K.

**Students:** 2nd year Master's student, group MN-ITI-21-1 Konysbai A.D.

### AGENDA :

1. Review of the Catalog of Elective Disciplines (CED), the Work Curriculum (WCU), passports of educational programs for bachelor's, master's and doctoral studies.

**SPEAKER: Head.** Department Ismagulova S.O. submitted (a) for consideration the QED, RUP of bachelor's, master's and doctoral studies.

At the Department of Civil Engineering, a meeting was held with the participation of representatives of employers and students to discuss the structure and content of the educational program 6B07129 - Bridges, tunnels and subways.

Representatives of employers and students proposed a number of new relevant disciplines, which the department approved and included in the new QED and RUP.

### DECIDED:

7. Please take note of the information;

8. Take into account all suggestions and recommendations of employers and representatives of student activists;

9. Submit KED, RUP and EP of bachelor's, master's and doctoral studies for consideration and approval by the Council of the Institute, the Academy's Board of Directors.

**Chairman of the COC UMB:**

**Secretary:**



**Chigambaev T.O.**

**Utepova A.**



### 15. CHANGE REGISTRATION SHEET

№	Section, paragra ph docume nt	Type of change (replace, cancel, add)	Number anddate notices	Changemade	
				date	Last name and initials, signature, position