

Joint Stock Company Academy of Logistics and Transport



APPROVE
ALT decision dated
" 30 " 06 2023 (Protocol № 13)
President-Rector
Amirgalieva S.N.

EDUCATIONAL PROGRAM

Name: "6B07131 – Linear pipelines"

Level of training: bachelor's degree

Code and classification of training areas: 6B071 – Engineering and Engineering

Code and group of educational programs: B166 – Transport facilities

Date of registration in the Registry: 10.06.2021

Registration number: 6B07100353

Almaty, 2023

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1. INFORMATION ABOUT CONSIDERATION, APPROVAL AND APPROVAL OF THE PROGRAM, DEVELOPERS, EXPERTS AND REVIEWERS

1 DEVELOPED BY:

Assistant Professor
(position)

Director of Scientific and Innovation Center LLP
(position)

Associate Professor
(position)

Associate Professor
(position)

Student gr.LT-21-1
(position)

(signature)
(signature)
(signature)
(signature)
(signature)

Jeksenbaev E.K.
(Full name)

Smashov N.Zh.
(Full name)

Ibragimov A.K.
(Full name)

Alimkulov M.M.
(Full name)

Amanzholov K.
(Full name)

2 EXPERTS

Chief Technologist of JSC
"Volkovgeologiya"

Advisor to the Chairman of the Board of JSC "Volkovgeologiya"
(position)

(signature)
(signature)
(signature)

Kudabaev B.A.
(Full name)

Asanov N.
S. (Full name)

3 REVIEWER:

Candidate of Technical Sciences,
Professor, Dean of the School of
Energy and Oil and Gas Power
Engineering of KBTU JSC

(signature)

Ismailov A.A.
(Full name)

4 REVIEWED AND RECOMMENDED:

Meeting of the AK (Department)
"SJ"
Protocol №6 "15" 03 2023 d)

Meeting of the COC-UMB "TI"
Protocol №7 "15" 03 2023 d)

EMC meeting
Protocol №4 "03" 03 2023 d)

(signature)

Ismagulova S.O.
(Full name)

(signature)

T.O. Chigambayev
(Full name)

(signature)

Zharmagambetov
M.S.
(Full name)

5 APPROVED by the decision of the Academic Council of "30" 03 2023 G. No.13
6 UPDATED ON 04/28/2023

2. Normative references

1. The educational program has been developed on the basis of the following regulatory legal acts and professional standards:
2. The Law of the Republic of Kazakhstan "On Education" dated July 27, 2007 No. 319-III (with amendments and additions as of January 08, 2021).
3. The National Qualifications Framework approved by the Protocol of March 16, 2016 by the Republican Tripartite Commission on Social Partnership and Regulation of Social and Labor Relations.
4. The sectoral qualifications framework of the field of "Education", approved by the Minutes 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 dated November 27, 2019 No. 3.
5. State mandatory standard of higher and Postgraduate education (Order of the Minister of Science and Higher Education of the Republic of Kazakhstan dated February 20, 2023 No. 66).
6. Qualification directory of positions of managers, specialists and other employees, approved by Order of the Minister of Labor and Social Protection of the Population of the Republic of Kazakhstan dated August 12, 2022 No. 309.
7. Rules organization of the educational process on credit technology of education in organizations of higher and (or) postgraduate education, approved by the Order of the Minister of the Ministry of Education and Science of the Republic of Kazakhstan No. 152 dated 20.04.2011. (with additions and amendments dated April 04, 2023 No. 145).
8. Classifier of training areas with higher and postgraduate education, approved by Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 13, 2018 No. 569 (with amendments and additions as of June 05, 2020).
9. The 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 No. 665 (with additions and amendments as of December 23, 2020 No. 536).
10. RI-ALT-33 "Regulations on the procedure for development educational programs of higher and postgraduate education".

3. PASSPORT OF THE EDUCATIONAL PROGRAM

№	Field name	Примечание
1	Registration number	6B07100353
2	Code and classification of the field of education	6B07 Engineering, manufacturing and construction industries
3	Code and classification of training areas	6B071 – Engineering and Engineering
4	Code and group of the educational program (OP)	B166 Transport facilities
5	Name of the educational program (OP)	6B07131 – Линейные трубопроводы
6	Type of educational program (OP)	New
7	The purpose of the educational program (OP)	Training of professional personnel with theoretical and practical knowledge on the design, maintenance and repair of linear pipelines in the oil and gas industry.
8	Level according to the International Standard Classification of Education (ISCED)	6
9	National Qualification Framework (NQF) level	6
10	Level according to the Industry Qualification Framework (ORC)	6
11	Distinctive features of the educational program (OP)	No
	Partner university, joint educational program (SOP)	-
	Partner university, double-degree educational program (DDOP)	-
12	Form of training	Full-time, full-time with translation to
13	Language of instruction	Kazakh, Russian
14	Volume of loans	240
15	Academic degree awarded	Bachelor of Engineering and Technology in the educational program "6B07131 – Linear pipelines"
16	Availability of an application to the license for the direction of personnel training	KZ12LAA00025205 (005)
17	Availability of EP accreditation	Have
	Name of the accreditation body	Independent Agency for Quality Assurance in Education (IQAA)
	Validity of accreditation	28.05.2022 – 27.05.2027

4. COMPETENCE MODEL OF A GRADUATE

The purpose of the educational program: Training of personnel in demand in the labor market for the road industry for the operation of transport facilities, with innovative and professional competencies and skills to solve current and production problems.

Objectives of the educational program:

1. Formation of a person capable of professional activity to participate in the survey and design of highways and airfields, in the organization of works on the production of road-building materials, in the organization of works on the construction of highways and airfields, in the operation of highways and airfields.

2. Formation of the ability to carry out work on the continuation of the route on the ground and the restoration of the route in accordance with the project documentation; to maintain and execute the documentation of the survey party.

3. Formation of the ability: to design a route plan, longitudinal and transverse road profiles; to make technical and economic comparisons; to use modern computer equipment; to use personal computers and programs for them for the design of highways and airfields; to draw up design documentation; to navigate the main stages of preparing the field for development.

4. Formation of the ability to: reasonably choose the working schemes of mining equipment; establish the technological sequence of preparation of asphalt concrete, cement concrete and other mixtures according to the schemes; build, maintain and repair highways and airfields, independently form tasks and determine ways to solve them within professional competence; work with regulatory documents, standard design and technological documentation; use modern information technology;

5. Assistance in the formation of a graduate's readiness to: assess and analyze the condition of highways, airfields and their structures; develop a technological sequence of processes for the maintenance of various types of coatings and elements of road and airfield construction; perform calculations of the need for snow removal machines from highways and airfields and the distribution of deicing materials on them; develop a technological sequence of processes.

6. Formation of graduates' readiness to determine the types of work to be accepted and assess the quality of repair and maintenance, highways and airfields.

7. Assistance in the formation of graduates' readiness for the economical and safe use of natural resources, energy and materials in the design, construction, survey and design of highways and airfields

Результаты обучения

LO1 - Demonstrate knowledge of mathematical and physical methods, measurement of electrical quantities during the operation of transport infrastructure facilities.

LO2 - Apply the basic laws and theorems to create a physical and mathematical model of the process under study and methods in calculating the strength, stability and durability of transport structures.

LO3 - Choose building materials according to properties, conditions of use and purpose, granulometric composition and chemical properties for the design of strong, stable building structures with a long service life of oil and gas equipment, taking into account geological conditions and soil mechanics for a reliable foundation and foundations.

LO4 - To organize a geodetic survey of the route using the basics of geoinformatics, the design of transport structures, computer modeling, information and communication technologies with the consolidation of theoretical knowledge during practice and further use in the design of transport infrastructure facilities.

LO5 - To use knowledge of the legislation of the Republic of Kazakhstan and international regulatory documents on labor protection and environmental safety of life and the environment, in the field of modern resource-saving technologies for primary and secondary use of building materials.

LO6 - Calculate tasks of an economic, technological nature for a construction company by orienting in any economic situations and developing models of economic analysis, with an understanding of the essence and types of time management for data collection, in order to design interactive dashboards and multidimensional MDX factors and algorithms for projects in various areas of BI technology.

LO7 - Plan the construction of oil and gas infrastructure facilities using technologies for new and reconstruction of existing pipelines using modern methods.

LO8 - To develop survey works and projects of oil and gas pipeline systems using various methods of research and development in compliance with the fundamentals of law and the exclusion of corrupt matching and basic provisions of transport logistics systems, with the preparation of documents in the state, Russian, English languages (at the request of the customer).

LO9 - To develop survey works and projects of oil and gas pipeline systems using various methods of research and development in compliance with the fundamentals of law and the exclusion of corrupt matching and basic provisions of transport logistics systems, with the preparation of documents in the state, Russian, English languages (at the request of the customer).

LO10 - To justify the design of oil depots and gas tanks, oil storage facilities and gas storage facilities in connection with the construction and their planned operation, knowing the current state of pipeline transport.

LO11 - To predict the spiritual, moral and physical achievements of a person for setting and solving problems arising during the maintenance and repairs of oil and gas pipelines, using the ability to work in a team, team management and socio-psychological factors aimed at personal achievements of a person.

Field of professional activity: Oil and gas industry: design, repair, maintenance of linear pipelines.

objects of professional activity:

- local executive authorities in the oil and gas industry and their regional structures;
- organizations and enterprises of the oil and gas industry in the field of design, repair, maintenance of linear pipelines;
- organizations and enterprises in the field of manufacturing of building materials and structures for objects of the transport and communication complex.

Types of professional activity:

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

Functions of professional activity:

1) Organization of manufacturing materials and structures for transport and communication facilities; organization of design, maintenance and repair of linear pipelines; use of standard methods for calculating the reliability of linear pipeline structures.

2) Management of production processes, analysis of the results of production activities; management of work on the implementation of design and maintenance, repair of linear pipelines; technical diagnostics of oil and gas facilities, the use of measuring instruments; analysis and evaluation of production and non-production costs or resources for high-quality design, repair, maintenance of linear pipelines.

3) Development of new technologies, development of design and technological documentation using computer technology; calculation of strength and stability in various linear pipelines, development of projects for new and reconstruction (modernization) of existing linear pipelines; selection of materials for the manufacture of linear pipeline structures, justification of technical solutions; development of technical specifications and technical conditions for projects of new and reconstruction (modernization) of existing linear pipelines, linear pipeline structures,

technological processes of maintenance and repair of linear pipelines, design of new linear pipeline structures that meet the latest achievements of science and technology, safety requirements.

The list of specialist positions: Head of the Capital Construction Department, head of the production (technical, production and technical) department, head of the site (workshop), head of the logistics Department, Head of the Safety and Labor Protection Department, Head of the regulatory research Laboratory for Labor, Head of the tool Department, head of the production laboratory (production control), head of the quality control department, site foreman, construction foreman, work producer (foreman), master of industrial training, foreman, project manager, project manager, lead engineer, design engineer, process engineer (technologist), repair engineer, inventory engineer of buildings and structures, metrology engineer, labor organization engineer, labor rationing engineer, safety and labor protection engineer, environmental engineer (ecologist), laboratory engineer, engineer, chief specialist, leading specialist, specialist, design technician, site technician, process technician, inventory technician of buildings and structures, metrology technician, labor technician, technician, laboratory technician, laboratory assistant

Professional certificates obtained at the end of training: Pipeline installer, installer of main and linear pipelines, welder.

Requirements for the previous level of education: Secondary education, post-secondary education, technical and vocational education, higher education.

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

- educational;
- production;
- production (pre-graduate).

Educational practice (geodetic)

The organization of educational practice is aimed at providing bachelors with familiarization with the fields of professional activity and training profiles, with the ability of geodetic survey of the terrain, forward and reverse course, leveling survey, reference to reference points, removal of points and elevations from the map, solving typical engineering and geodetic tasks, as well as departure to the branch of the department on the basis of LLP "Saulek SKB". The form of control is the protection of the report.

Production practice

The main objectives of industrial practice are: consolidation of theoretical knowledge and practical skills in the chosen educational program in production conditions, acquisition of organizational work experience, obtaining a working specialty, formation of practical skills and competencies in the process of mastering the bachelor's program. It is conducted in the practice bases at enterprises according to this educational program. The form of control is the protection of the report.

Pre-graduate/industrial practice

The purpose of the practice for bachelors is to ensure the relationship between the theoretical knowledge gained during the assimilation of the chosen educational program and practical activities. The objectives of this practice are to consolidate and deepen the theoretical knowledge gained by students in the learning process, to collect information for writing a final qualifying work, to study best practices at the enterprise, as well as to gain experience in independent research work, mastering various methods of scientific work. It is conducted in the practice bases at enterprises according to this educational program. The form of control is the protection of the report.

Final certification

The objectives of the thesis are to identify the degree of assimilation of the content of the educational program by the bachelor, to check his readiness for independent activity in the direction of the educational program, to consolidate and deepen practical work skills. It also provides for the passing of a comprehensive exam.

**5. MATRIX OF CORRELATION OF LEARNING OUTCOMES ACCORDING
TO THE EDUCATIONAL PROGRAM WITH ACADEMIC DISCIPLINES/MODULES**

№	Наименование дисциплины	Кол-во кредитов	LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10	LO11
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	History of Kazakhstan	5											+
2	Philosophy	5											+
3	Foreign language	10									+		
4	Kazakh (Russian) language	10									+		
5	Information and communication technologies	5				+							
	Socio-political knowledge module	8											+
6	Sociology	2											+
7	Cultural studies	2											+
8	Political Science	2											+
9	Psychology	2											+
10	Physical Culture	8											+
11	Ecology and life safety	5					+						
12	Methods of scientific research	5									+		
13	Fundamentals of law and anti-corruption culture	5									+		
14	Fundamentals of Economics and Entrepreneurship	5						+					
15	Engineering Mathematics	9	+										
16	Applied Physics	9	+										
17	Fundamentals of computer modeling	6				+							
18	Building materials	6			+								
19	Geology, soil mechanics, foundations and foundations	6			+								
20	Building structures	6			+								
21	Labor protection	6					+						
22	Electrical engineering and the basics of electronics	6	+										
23	Educational practice (geodetic)	2				+							
24	Theoretical mechanics	6		+									
25	Engineering Mechanics 1	6		+									
26	Resistance of materials	6		+									
27	Engineering Mechanics 2	6		+									

28	Construction mechanics	6		+									
29	Engineering Mechanics 3	6		+									
30	Engineering geodesy	6				+							
31	Fundamentals of geoinformatics	6				+							
32	Fundamentals of design of transport facilities	6				+							
33	Introduction to the design of transport infrastructure facilities	6				+							
34	Fundamentals of oil and gas business	9			+								
35	Mechanization of pipeline construction	6								+			
36	Machinery and equipment for construction and repair of oil and gas facilities	9								+			
37	Pipeline transportation of oil and gas	9										+	
38	Operation of oil and gas storage facilities	6										+	
39	Designing of oil and gas pipeline systems	9									+		
40	Maintenance and repair of oil and gas pipelines	9											+
41	Maintenance and repair of oil and gas storage facilities	9								+			
42	Production practice 1	3								+			
43	Production practice 2	4								+			
44	Pipeline construction technology	6							+				
45	Technology of construction of oil and gas facilities	6							+				
46	Organization of construction of transport infrastructure facilities	6							+				
47	Organization and planning of construction of transport facilities	6							+				
48	Design of oil depots and gas tanks	6										+	
49	Design of oil and gas storage facilities	6										+	
50	Managerial Economics (Minor)	3						+					
51	Transport Logistics (Minor)	3									+		
52	Resource conservation in transport (Minor)	3					+						
53	Time Management (Minor)	3						+					
54	Digital diagnostics of construction objects	3								+			
55	Power BI Business Analytics (Minor)	3						+					
56	FINAL CERTIFICATION	8	+	+	+	+	+	+	+	+	+	+	+

6. STRUCTURE OF THE BACHELOR'S DEGREE PROGRAM

№ п/п	Name of cycles of disciplines	Total labor intensity	
		in academic hours	in academic credits
1	The cycle of general education disciplines (OOD)	1680	56
1)	is a mandatory component	1530	51
	History of Kazakhstan	150	5
	Philosophy	150	5
	Foreign language	300	10
	Kazakh (Russian) language	300	10
	Information and Communication Technologies (in English)	150	5
	Module of socio-political knowledge (sociology, political science, cultural studies, psychology)	240	8
	Physical Culture	240	8
2)	Component of choice	150	5
2	Cycle of basic disciplines (DB)	at least 5280	at least 176
1)	University component		
2)	Professional practice		
3	Cycle of profile disciplines (PD)		
1)	University component		
2)	Professional practice		
4	Additional types of training (DVO)		
1)	Component of choice		
5	Final certification		
1)	Writing and defending a thesis, graduation project, or preparing and passing a comprehensive exam	at least 240	at least 8
	Total	at least 7200	at least 240

7. WORKING CURRICULUM FOR THE ENTIRE PERIOD OF STUDY

JSC "Academy of Logistics and Transport"

CURRICULUM

Form of study: full-time

Training area:
6B071-Engineering and Engineering

Duration of training: 4 years

Group of educational programs:
B166-Transport facilities

Name of the educational program:
6B07131-Linear pipelines

Admission: 2023

Degree: Bachelor of Engineering and Technology

APPROVED
By the decision of the ALT Academic Council
from 30.03.2023 d. Protocol no. 13
Chairman of the Academic Council
S.N. Amirkhalieva

№	Disciple code	Name of cycles and disciplines	Total labor intensity		Form of control, semester	Amount of training load, contact hours	Distribution by semester																Assignment to the department
			In academic hours	In academic credits			1st course	2nd course		3rd year		4th year											
								1 sem.	2 sem.	3 sem.	4 sem.	5 sem.	6 sem.	7 sem.	8 sem.	9 sem.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1.1.	CYCLE OF GENERAL EDUCATION SUBJECTS (OED):																						
1.1.1.	23-0-B-OK-K	History of Kazakhstan	150	5	3	150	30	15	8	97						5						SRSIFV	
1.1.2.	23-0-B-OK-Fil	Philosophy	150	5	4	150	30	15	8	97						5						SRSIFV	
1.1.3.	23-0-B-OK-IYa	Foreign language	300	10	1,2	300		90	16	194	5	5										YAP	
1.1.4.	23-0-B-OK-K(R)Ya	Kazakh (Russian) language	300	10	1,2	300		90	16	194	5	5										YAP	
1.1.5.	23-0-B-OK-IKT	Information and communication technologies	150	5	1	150	30	15	8	97	5											ICTs	
1.1.6.	23-0-B-OK-Sotz	Sociology					7	15	8	30				4								SRSIFV	
1.1.6.	23-0-B-OK-Kul	Cultural Studies					8	15	8	29												SRSIFV	
1.1.6.	23-0-B-OK-Pol	Political Science					7	15	8	30												SRSIFV	
1.1.6.	23-0-B-OK-Psi	Psychology					8	15	8	29			4									SRSIFV	
1.1.7.	23-0-B-OK-FK	Physical Culture	240	8	1,2,3,4	240		88	32	120	2	2	2	2								SRSIFV	
1.2.	Component of your choice:		150	5	1	0	150	30	15	0	8	97	0	0	5	0	0	0	0	0	0	0	
1.2.1.	23-0-B-KV-EBGD	Ecology and life safety																				ATSBZHD	
1.2.1.	23-0-B-KV-MNI	Methods of scientific research																				SRSIFV	
1.2.1.	23-0-B-KV-OEIP	Fundamentals of economics and entrepreneurship	150	5	3		150	30	15	8	97			5								LMT	
1.2.1.	23-0-B-KV-OPAK	Fundamentals of law and anti-corruption culture																				SRSIFV	
2.	CYCLE OF BASIC DISCIPLINES (DB):																						
2.1.	University component:		1680	56	9		1680	270	195	75	64	1016	9	15	6	2	6	12	6	0	0		
2.1.1.	23-0-B-VK-IM	Engineering Mathematics	270	9	2		270	45	45	8	172		9									OI	
2.1.2.	23-0-B-VK-PF	Applied Physics	270	9	1		270	45	30	15	8	172	9									OI	
2.1.3.	23-0-B-VK-OKM	Fundamentals of computer modeling	180	6	2		180	30	30	8	112		6									ICTs	
2.1.4.	23-0-B-VK-StrMat	Building materials	180	6	3		180	30	15	15	8	112			6							SI	
2.1.5.	23-0-B-VK-GMGOF	Geology, soil mechanics, foundations and foundations	180	6	5		180	30	15	15	8	112				6						SI	
2.1.6.	23-0-B-VK-SK	Building structures	180	6	6		180	30	30	8	112						6					SI	
2.1.7.	23-0-B-VK-EOE	Electrical engineering and basic electronics	180	6	6		180	30	15	15	8	112					6					E	
2.1.8.	23-0-B-VK-OT	Labor protection	180	6	7		180	30	15	15	8	112						6				ATSBZHD	
2.1.9.	23-0-B-VK-UPr(g)	Training practice (geodesic)	60	2	4		60								2							SI	
2.2.	Component of your choice:		1080	36	6		1080	150	150	60	48	672	0	0	12	12	12	0	0	0	0	0	
2.2.1.	23-0-B-VK-KV-TMeh	Theoretical mechanics	180	6	3		180	30	30	8	112			6								SI	
2.2.1.	23-0-B-KV-IMeh1	Engineering mechanics 1																					
2.2.2.	23-0-B-KV-SMat	Material resistance	180	6	4		180	15	30	15	8	112			6							SI	
2.2.2.	23-0-B-KV-IMeh2	Engineering mechanics 2																					
2.2.3.	23-0-B-KV-SMeh	Construction mechanics	180	6	5		180	30	30	8	112					6						SI	
2.2.3.	23-0-B-KV-IMeh3	Engineering mechanics 3																					

8. CATALOG OF DISCIPLINES OF THE UNIVERSITY COMPONENT

EDUCATIONAL PROGRAM "6B07131 – Linear pipelines"

Education level: Bachelor's degree Duration of study: 4 years Admission year: 2023

Cycle	Comp onent	Name of the discipline	Total labor intensity		Term	Learning outcomes	Brief description of the discipline	Prerequisites	Post-requirements
			academic hours	academic credits					
1	2	3	4	5	6	7	8	9	10
DB	VK	Engineering Mathematics	270	9	2		Mastering the mathematical apparatus for solving theoretical and applied problems of a specific profile, getting an idea of mathematical modeling and interpretation of the solutions obtained. The questions of linear algebra, analytical geometry, mathematical analysis, differential equations, series theory are considered. Calculation and graphic work is performed within the discipline. Methods of active learning – teamwork, "brainstorming".	Basic school knowledge in mathematics	Applied Physics
DB	VK	Applied Physics	270	9	1		Formation of students' skills and abilities when using 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 model physical situations using computer technology and ideas about the modern natural science picture of the world. Calculation and graphic work is performed within the discipline. Laboratory work is performed on the Coursera platform. Methods of active learning – teamwork, "brainstorming".	Basic school knowledge in mathematics	Engineering mathematics, Fundamentals of computer modeling.
DB	VK	Fundamentals of computer modeling	180	6	2		Competencies are formed on the purpose of modeling tools, technical and software tools, as well as in the development of object models for various purposes, as well as programming languages Python, Java, etc. Within the framework of the discipline, interactive teaching methods, computational and analytical method, case-task	Basic school knowledge in mathematics	Fundamentals of transport ecology, Labor protection

							method, game methods are used		
DB	VK	Building materials	180	6	3		Forms basic knowledge about the types of building materials, methods of their production, properties and applications of various building materials, familiarization with standard methods of testing building materials and determining their properties, standardization of requirements for building materials depending on the conditions of their use. Within the framework of the discipline, interactive teaching methods, case studies, and discussion are used.	Ecology and life safety. Fundamentals of transport ecology	Geology and mechanics of soils, foundations and foundations
DB	VK	Geology, soil mechanics, foundations and foundations	270	9	5		To form the necessary set of knowledge about engineering-geological processes and phenomena, properties of soils, defects arising from the joint work of soils, foundations and foundations, stressed conditions of the soils of the foundations, principles of the work of structures on modern field and laboratory installations and devices, to solve geotechnical problems, about the general laws and principles of the construction of structures. Guest lectures, calculation and analytical method are used.	Engineering Mathematics, Applied Physics	Engineering mechanics 1,2,3,Resistance of materials
DB	VK	Building structures	180	6	6		Forms basic knowledge of calculation and construction of load-bearing structures using computer technologies (Excel, AutoCAD, Revit). Also, to teach how to choose the right materials, the shape of sections, the design scheme of the structure, based on the purpose and purpose of operation, to develop constructive solutions for newly erected or reinforced transport structures. Within the framework of the discipline, interactive teaching methods, the computational and graphical method are used.	Engineering Mathematics, Applied Physics	Engineering mechanics, Labor protection, Maintenance and repair of oil and gas storage facilities, Design of tank farms and gas tanks, Design of oil and gas storage facilities
		Electrical engineering and the basics of electronics	180	6	6		Studies electrical circuits of direct, alternating and three-phase currents, the principle of operation, purpose and rules of operation of a transformer and electrical machines, methods of measuring electrical quantities, the use of semiconductor	Engineering Mathematics, Applied Physics	Engineering mechanics, Labor protection, Maintenance and repair of oil and gas storage

DB	VK						diodes in rectification circuits and logic elements. As a result of studying the discipline, students should be able to apply the basic laws and ratios of electrical circuits, read electrical and electronic circuits, understand the purpose of the main components of electrical equipment and electronic circuits, evaluate the accuracy of measurement tools and results, and carry out verification of electrical measuring devices. Within the framework of the discipline, interactive teaching methods, computational and analytical method, and the method of case tasks are used.		facilities, Design of tank farms and gas tanks, Design of oil and gas storage facilities
DB	VK	Labor protection	180	6	7		Training of specialists on the theoretical and practical foundations of safety, harmlessness and facilitation of working conditions at its maximum productivity, on the legislative and regulatory framework in the field of labor protection. Teaching methods - analysis of specific situations (case-study), group discussions.	Engineering Mathematics, Applied Physics, Theoretical Mechanics, Building Materials	Engineering mechanics 1,2,3, Geology and mechanics of soils, Design of oil depots and gas tanks, Design of oil and gas storage facilities.
DB	VK	Educational practice (geodetic)	60	2	4		Educational practice (geodesic) The organization of educational practice is aimed at providing bachelors with familiarization with the fields of professional activity and training profiles, with the ability to geodetic survey of the terrain, forward and reverse, leveling survey, reference to reference points, removal of points and elevations from the map, solving typical engineering and geodetic tasks.	Engineering Mathematics, Applied Physics, Fundamentals of computer modeling, Building materials, Geology, soil mechanics, foundations and foundations.	Production practice 1, Production practice 2.
		Fundamentals of oil and gas business	270	9	4		Studies the basics of oil and gas business, search, exploration and development of oil and gas facilities, collection, storage and transportation of hydrocarbons, injection of surface and underground	Engineering geodesy, Fundamentals of	Oil and gas pipelines, Oil and gas storage facilities, Design

PD	VK						water, well maintenance and repair, oil and gas geology, well construction, design, development and operation of oil and gas fields. Students will use this data in the design, construction and operation of oil and gas pipelines. The form of assessment is an oral exam.	Geoinformatics, Fundamentals of Design of transport structures	of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines, Maintenance and repair of oil and gas storage facilities.
PD	VK	Pipeline transportation of oil and gas	270	9	5	LO10	Studies the designs and features of laying linear pipes and structures, bases for pipelines, the principles of connecting pipes to each other, the construction of oil and gas pipelines, methods of hydraulic and technological calculation of pipelines when pumping oil and gas, pressure characteristics of oil pipelines and pumping stations, methods of pumping high-viscosity petroleum products, features of temperature conditions in pipelines. Guest lectures by specialists are provided..	Fundamentals of oil and gas business, Fundamentals of design of transport facilities Introduction to the design of transport infrastructure facilities	Operation of oil and gas storage facilities, Design of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines, Maintenance and repair of oil and gas pipelines
PD	VK	Operation of oil and gas storage facilities	180	6	6	LO10	Mastering students' knowledge in the field of operation and storage of oil and gas in tanks, measures to combat product losses during operation, development of a master plan for the construction area of oil and gas storage facilities, tank designs, the procedure for checking the size of the tank body for stability, measurement and accounting of oil and gas products, laying pipelines for tanks. Interactive teaching methods are used in the study.	Fundamentals of oil and gas business, Machinery and equipment for construction and repair of oil and gas facilities, Mechanization of pipeline construction, Pipeline transportation of oil and gas	Design of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines, Maintenance and repair of oil and gas pipelines
		Designing of oil and gas pipeline systems	270	9	7	LO9	Mastering students' knowledge in the field of designing pipeline systems for distillation of various media, to ensure the safety, efficiency, long-term and cost of oil and gas pipeline systems,	Fundamentals of oil and gas business, Machinery	Design of oil depots and gas tanks, Design of oil storage and

PD	VK						studying the characteristics (loads and pressures, the need for additional equipment). Theoretical and practical issues are considered: features of the design of oil and gas pipeline systems in various natural and climatic conditions. When studying the discipline, discussion is used.	and equipment for construction and repair of oil and gas facilities, Mechanization of pipeline construction, Pipeline transportation of oil and gas, Operation of oil and gas storage facilities	gas storage facilities
PD	VK	Maintenance and repair of oil and gas pipelines	270	9	7	LO11	To form the necessary set of knowledge about the maintenance and repair of oil and gas pipelines, partial replacement and (or) restoration of parts of pipeline equipment, restoration planned work with linear fittings and equipment, communication lines, electrical protection equipment, cleaning of the inner surface of pipelines, a set of technical measures aimed at the complete or partial restoration of the linear part of the operated pipeline. When studying the discipline, guest lectures are provided. The form of control is a combined exam.	Fundamentals of oil and gas business, Machinery and equipment for construction and repair of oil and gas facilities, Mechanization of pipeline construction, Pipeline transportation of oil and gas, Operation of oil and gas storage facilities	Maintenance and repair of oil and gas storage facilities, Production practice 2,
		Maintenance and repair of oil and gas storage facilities	270	9	8	LO8	To form the necessary set of knowledge on the maintenance and repair of tanks of different sizes and shapes, on the technological processes for the repair and maintenance of tanks, on the systems of planned preventive and preventive repairs of the	To form the necessary set of knowledge on the maintenance	Production practice 2, FINAL CERTIFICATION

PD	VK						tank farm, the parameters of the working processes of oil and gas storage, on the methods of installation and dismantling of thermal insulation coatings for tank equipment.	and repair of tanks of different sizes and shapes, on the technological processes for the repair and maintenance of tanks, on the systems of planned preventive and preventive repairs of the tank farm, the parameters of the working processes of oil and gas storage, on the methods of installation and dismantling of thermal insulation coatings for tank equipment.	
PD	VK	Production practice 1	90	3	6	LO8	The main objectives of industrial practice are: consolidation of theoretical knowledge and practical skills in the chosen educational program in production conditions, acquisition of organizational work experience, obtaining a working specialty, formation of practical skills and competencies in the process of mastering the bachelor's program. It is conducted in the practice bases at enterprises according to this	Fundamentals of oil and gas business, Pipeline transportation of oil and gas.	Production practice 2

							educational program.		
PD	VK	Производственная практика 2	120	4	9	LO8	The purpose of the practice for bachelors is to ensure the relationship between the theoretical knowledge gained during the assimilation of the chosen educational program and practical activities. The objectives of this practice are to consolidate and deepen the theoretical knowledge gained by students in the learning process, to collect information for writing a final qualifying work, to study best practices at the enterprise, as well as to gain experience in independent research work, mastering various methods of scientific work. It is conducted in the practice bases at enterprises according to this educational program.	Fundamentals of oil and gas business, Pipeline transportation of oil and gas, Operation of oil and gas storage facilities, Designing of oil and gas pipeline systems Maintenance and repair of oil and gas pipelines, Maintenance and repair of oil and gas storage facilities, Production practice 1.	FINAL CERTIFICATION
		FINAL CERTIFICATION	241	8			The objectives of the thesis are to identify the degree of assimilation of the content of the educational program by the bachelor, to check his readiness for independent activity in the direction of the educational program, to consolidate and deepen practical work skills. It also provides for the passing of a comprehensive exam.		
Total			3420	114					

9. CATALOG OF DISCIPLINES OF THE COMPONENT BY CHOICE

EDUCATIONAL PROGRAM "6B07131 – Linear pipelines"

Education level: Bachelor's degree Duration of study: 4 years Admission year: 2023

Cycle	Component	Name of the discipline	Total labor intensity		Term	Learning outcomes	Brief description of the discipline	Prerequisites	Post-requirements academic hours
			academic hours	academic credits					
1	2	3	4	5	6	7	8	9	10
GEB	EK	Ecology and life safety	150	5	3	LO 5	The study of the basic environmental concepts, environmental problems and approaches to their solution, sources and types of environmental pollution by enterprises, the principles of regulating the quality of atmospheric air and water, the main 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).	History of Kazakhstan, Kazakh (Russian, foreign) language, Professional foreign language, Sociology, Cultural Studies, Political Science, Psychology	Final certification
		Methods of scientific research				LO 9	Obtaining theoretical and applied knowledge by students on the methods of scientific research of problems in the studied area, training specialists with cognitive skills in the field of science, forming deep ideas about the content of scientific activity, its methods and forms of knowledge.	History of Kazakhstan, Kazakh (Russian, foreign) language, Professional foreign language, Sociology, Cultural Studies, Political Science, Psychology	Final certification
		Fundamentals of Economics and Entrepreneurship				LO 6	Studies the activities of enterprises in various types of market, the model of equilibrium and functioning of the market, state regulation of prices and tariffs. Examines the concept of entrepreneurship and the limits of its legal regulation, conditions for the development of entrepreneurship,	History of Kazakhstan, Kazakh (Russian, foreign) language, Professional foreign language, Sociology, Cultural Studies, Political Science,	Final certification

							organizational and legal forms of doing business, business planning, business secrecy, social responsibility of entrepreneurship. Active teaching methods: case methods; business role-playing games, group work.	Psychology	
		Fundamentals of law and anti-corruption culture					LO 9 Increase of public and individual legal awareness and legal culture of students, as well as the formation of a knowledge system and a civic position on combating corruption as an antisocial phenomenon. As a result of studying the course, the student must master the fundamental concepts of law, the constitutional structure of the state power of the Republic of Kazakhstan, the rights and freedoms of citizens enshrined in the Constitution, the mechanism and protection of legitimate human interests in case of their violation.	History of Kazakhstan, Kazakh (Russian, foreign) language, Professional foreign language, Sociology, Cultural Studies, Political Science, Psychology	Final certification
PD	VK	Theoretical mechanics	180	6	3	LO 2	To familiarize with the basic concepts, laws and theorems that make it possible to compose and study equations describing the behavior of mechanical systems, the development of logical thinking and understanding that the laws of mechanics express the laws of mechanical motion of bodies expressed in mathematical form, the ability to record a specific phenomenon in mathematical form, the formation of practical skills in applying the basic methods of mechanics in the study of motion and balances of mechanical systems in the study of disciplines of the professional cycle and solving specific tasks, which you have to face in your professional activity. Methods of active training – performance and protection of individual calculation and graphic works.	Engineering Mathematics, Applied Physics.	Resistance of Materials, Engineering Mechanics 2, Construction Mechanics, Engineering Mechanics 2

		Engineering Mechanics 1				LO 2	Formation of logical thinking and scientific foundation of engineering education. The study of the laws of motion and equilibrium of material bodies, the construction of mathematical models of the behavior of mechanical systems using the theorems of mechanics. Application of methods for studying the equilibrium and motion of mechanical systems for solving technical problems. Methods of active learning – the use of interactive tools, a blitz survey – a series of short questions, the performance of individual calculation and graphic works.	Engineering Mathematics, Applied Physics	Resistance of Materials, Engineering Mechanics 2, Construction Mechanics, Engineering Mechanics 2
PD	VK	Resistance of materials	180	6	4	LO 2	Formation of a complex of knowledge in the field of engineering calculations with simple and complex resistance to strength, rigidity and stability of structural elements that ensure the required reliability and safety of products under static and dynamic loads using forms of static equilibrium conditions, using methods of differential and integral calculus. Methods of active learning – performing individual computational and graphical tasks.	Engineering Mechanics 1, Geology and Soil Mechanics,	Construction mechanics, Engineering mechanics 3, Machinery and equipment for the construction and repair of oil and gas facilities, Mechanization of pipeline construction
		Engineering Mechanics 2				LO 2	To familiarize with the basic techniques for determining internal forces and stresses for each type of deformation, methods for calculating structures and their elements for strength, rigidity and stability, skills for studying loads, displacements and stress-strain state in structural elements, constructing design schemes of machine parts and product calculations to ensure reliability and cost-effectiveness requirements under the influence of static and dynamic loads. Methods of active learning – performing individual computational and	Engineering mechanics 1 Geology and mechanics of soils, foundations and foundations	Construction mechanics, Engineering mechanics 3, Machinery and equipment for the construction and repair of oil and gas facilities, Mechanization of pipeline construction

							graphical tasks.		
PD	VK	Construction mechanics	180	6	4	LO 2	Formation of the basic laws of deformation of core systems that make up the frame of structures when exposed to external forces in order to ensure strength, stability, basic methods of calculation of standard structures and structures. Formation of design skills of standard structures related to the selection of the design scheme and the determination of the most loaded structural elements and the calculation of internal forces and stresses.	Engineering Mathematics, Applied Physics, Engineering Mechanics 1,2	Operation of oil and gas storage facilities, Design of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines Maintenance and repair of oil and gas storage facilities,
		Engineering Mechanics 3				LO 2	Formation of design skills of structures and structures related to the selection of the design scheme and the determination of the most loaded structural elements and the calculation of internal forces and stresses, the basic laws of deformation of core systems that make up the frame of structures when exposed to external forces to ensure strength, stability, basic methods of calculation of standard structures and structures.	Engineering Mathematics, Applied Physics, Engineering Mechanics 1,2	Operation of oil and gas storage facilities, Design of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines Maintenance and repair of oil and gas storage facilities,
PD	VK	Engineering geodesy	180	6	3	LO 4	Studies the composition and technology of geodetic works that provide surveys, design, construction, operation of structures, the basic requirements for solving typical engineering and geodetic tasks, their geometric essence. Obtains the skills of reading a topographic map, solving on its basis the corresponding tasks of both graphical and mathematical computational nature. Interactive teaching methods are used within the discipline.	Engineering Mathematics, Applied Physics, Engineering Mechanics 1,2,3	Fundamentals of the design of transport facilities, Introduction to the design of transport infrastructure facilities, Machinery and equipment for the construction and repair of oil and gas facilities, Mechanization of pipeline construction.
		Fundamentals of geoinformatics				LO 4	The study of general information about geoinformation systems, basic terms and concepts, issues of data input and output, their digitization, ways of presenting spatial and attribute information, brief	Engineering Mathematics, Applied Physics, Engineering Mechanics 1,2,3	Fundamentals of the design of transport facilities, Introduction to the design of transport infrastructure facilities, Machinery and

							characteristics of the main GIS, their advantages and disadvantages, general ideas about GIS software, basic geoinformation technologies and techniques for preparing initial information, creating and editing objects. Interactive teaching methods are used within the discipline.		equipment for the construction and repair of oil and gas facilities, Mechanization of pipeline construction.
PD	VK	Fundamentals of design of transport facilities	180	6	4	LO 4	Study of the basic rules (methods) for constructing and reading drawings, methods for solving metric and positional problems, rules for design documentation in accordance with the standards of the ESCD, mastering the skills of sketching, images of technical products, drawing drawings using graphical tools (AutoCAD, Compass 3D). The discipline provides software training, computer modeling and practical analysis of the results.	Engineering Mathematics, Applied Physics, Engineering Mechanics 1,2,3	Machinery and equipment for the construction and repair of oil and gas facilities, Mechanization of pipeline construction, Design of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines, Maintenance and repair of oil and gas storage facilities.
		Introduction to the design of transport infrastructure facilities				LO 4	Principles and methods of graphic and geometric modeling of engineering tasks, general requirements of the ESKD, SPDS and other regulatory documents for the execution and design of drawings, modern methods of automation of graphic works, the possibility of automated creation of geometric models of spatial objects and the execution of drawings. Creating 2D and 3D models within graphics systems (Compass 3D, Solidworks). The discipline provides software training, computer modeling and practical analysis of the results.	Engineering Mathematics, Applied Physics, Engineering Mechanics 1,2,3	Machinery and equipment for the construction and repair of oil and gas facilities, Mechanization of pipeline construction, Design of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines, Maintenance and repair of oil and gas storage facilities.
		Machinery and equipment for construction and repair of oil and gas facilities	180	6	5	LO 8	Studies the principles of operation and modern designs of special machines for the construction and repair of trunk and oil and gas pipelines, trench excavators, trench backfillers, machines for the development of trenches on flooded and swampy sections of	Ecology and life safety, Engineering geodesy, Building materials, Electrical engineering and the basics of electronics	Operation of oil and gas storage facilities, Design of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines, Maintenance

PD	VK						the route, for laying pipelines during the construction of crossings under roads, rivers and other obstacles, methods for calculating the parameters of working bodies and machines when performing various technological operations.		and repair of oil and gas storage facilities.
		Mechanization of pipeline construction				LO 8	The issues of the theory of complex mechanization of the construction of trunk pipelines, methods of formation, management and determination of the field of efficiency of the fleet of machines, methods of choosing rational options for mechanization, basic information about machines and equipment used in construction and repair work at the facilities of pipeline transportation of hydrocarbons, classification of modern technical means of mechanization of labor-intensive processes in the construction, operation and repair of pipelines are considered.	Ecology and life safety, Engineering geodesy, Building materials, Electrical engineering and the basics of electronics	Operation of oil and gas storage facilities, Design of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines, Maintenance and repair of oil and gas storage facilities.
PD	VK	Pipeline construction technology	180	6	6	LO 7	Studies modern technologies of pipeline construction for laying in various climatic areas, including at long distances from large industrial complexes, installation of pipelines during the seasonal period, formation of brigades and columns, equipping with various machinery and equipment, with safe working methods at a certain construction site. The discipline uses discussion.	Fundamentals of oil and gas business, , Pipeline transportation of oil and gas.	Organization of construction of transport infrastructure facilities, Organization and planning of construction of transport facilities, Design of oil depots and gas tanks, Design of oil and gas storage facilities.
		Technology of construction of oil and gas facilities				LO 7	Studies modern technologies for the construction of oil and gas structures, methods and technologies for the construction of oil and gas structures, rules for the installation of vertical and horizontal tanks, methods for testing tanks for tightness, installation and dismantling works, rules for checking the operability of devices,	Fundamentals of oil and gas business, , Pipeline transportation of oil and gas.	Organization of construction of transport infrastructure facilities, Organization and planning of construction of transport facilities, Design of oil depots and gas tanks, Design of oil and gas storage facilities.

							mechanisms and equipment, general construction processes for the construction of structures, methods for the construction of structures in accordance with design and regulatory documents. The discipline uses discussion.		
PD	VK	Organization of construction of transport infrastructure facilities	180	6	7	LO 7	Development of a systematic understanding of construction processes and types of work, the principles of their implementation, the requirements for the organization of work of the working link or team, in compliance with the requirements of safety and environmental protection, the fundamental principles of planning, industriality, complex mechanization and automation of production, the flow of construction, all seasonality of work.	Fundamentals of oil and gas business, , Pipeline transportation of oil and gas, Technology of pipeline construction, Technology of construction of oil and gas facilities.	Organization of construction of transport infrastructure facilities, Organization and planning of construction of transport facilities, Design of oil depots and gas tanks, Design of oil and gas storage facilities.
		Organization and planning of construction of transport facilities				LO 7	Studies the use of advanced technologies and the organization of construction and installation works, ensuring a reduction in labor, material and energy costs in compliance with the requirements of state standards, the order of execution of preparatory, basic and final works on the construction of transport facilities and commissioning of facilities, the needs of materials, equipment, labor and completion dates. Within the framework of the discipline, the computational and analytical method is used.	Fundamentals of oil and gas business, , Pipeline transportation of oil and gas, Technology of pipeline construction, Technology of construction of oil and gas facilities	Design of oil depots and gas tanks, Design of oil storage and gas storage facilities.
		Design of oil depots and gas tanks	180	6	8	LO 10	To form the necessary set of knowledge about the design of tank farms and gas tanks, methods of developing a master plan for the construction area of an oil depot and gas tanks, tank farm and gas tank structures, access roads, the procedure for checking the geometric parameters of the tank and gas	Fundamentals of oil and gas business, , Pipeline transportation of oil and gas, Pipeline construction technology, Technology of construction of oil and gas facilities,	Production practice 2, FINAL CERTIFICATION

PD	VK						tank housing for stability, ways of passing pipelines for the tank farm. Within the framework of the discipline, the computational and analytical method is used.	Organization of construction of transport infrastructure facilities, Organization and planning of construction of transport facilities	
		Design of oil and gas storage facilities				LO 10	To form the necessary set of knowledge about the design of oil storage and gas storage facilities, methods of developing a master plan for the construction of oil storage and gas storage facilities, tank and gas storage structures, access roads, the procedure for checking the geometric parameters of the tank body for stability, ways of passing pipelines for the tank farm. Within the framework of the discipline, the computational and analytical method is used.	Fundamentals of oil and gas business, , Pipeline transportation of oil and gas, Pipeline construction technology, Technology of construction of oil and gas facilities, Organization of construction of transport infrastructure facilities, Organization and planning of construction of transport facilities	Production practice 2, FINAL CERTIFICATION
PD	VK	Managerial economics	150	5	5	LO 6	Formation of the conceptual apparatus and development of skills of economic analysis using modern models and patterns of economic science, consideration of economic problems and tasks facing the head of the company. The study of this discipline will allow students to obtain and develop knowledge in the field of analytical studies of economic, technological and technical parameters of the enterprise, as well as will allow them to master the skills of applying special methods of economic justification of management decisions and assessing their consequences.		
		Time management				LO 6	Formation of students' general ideas about the essence and types of time management, principles and methods of time resource management for more successful implementation of professional activities.		
		Logistics in transport	150	5	6	LO 6	The study of the main provisions of transport support of logistics systems, activities in the field of transportation, covering the entire range of operations and services for the delivery of goods		

PD	VK						from the manufacturer of products to the consumer, the principles of design and construction of logistics systems. Mastering the skills of optimization and organization of rational cargo flows, their processing in specialized logistics centers, ensuring an increase in their efficiency, reducing unproductive costs and expenses. The teaching methods are: solving problems, conducting thematic colloquiums, seminars "brainstorming". Within the framework of the discipline, guest lectures are conducted by leading specialists of transport and logistics companies		
		Digital diagnostics of transport facilities				LO 6	Study of digital information processing systems, basic functional units, principles of information separation and multiplexing, analysis of characteristics of digital communication channels in the diagnosis of transport construction facilities		
PD	VK	Resource saving in transport	150	5	7	LO 6	The study of the main types and characteristics of energy resources, regulatory and legal support for energy conservation, improving the energy efficiency of the transportation process; energy-saving technologies in repair production and operation of transport infrastructure facilities; organization and methods of energy conservation management. They are used to solve problems, conduct thematic colloquiums, debates. Guest lectures are being held by leading experts of the transport and communication industry		
		Power BI Business Analytics				LO 6	Teaches the skills of creating interactive visualizations of data obtained from various sources and providing them to employees of this organization, obtaining valuable information when making strategic decisions, analyzing retrospective and current data, presenting results in intuitive visual formats, providing general access to business-critical analytical information using Power BI		
Total			1950	68					

10. EXPERT OPINIONS

«Волковгеология» акционерлік қоғамы

Қазақстан Республикасы, 050012,
Алматы қаласы, Бөгенбай батыр көшесі, 168,
Тел.: +7/727/343 60 00; +7/727/343 60 06
e-mail: priemnaya@vg.kazatomprom.kz
www.vg.kz



Акционерное общество «Волковгеология»

Республика Казахстан, 050012,
г. Алматы, ул. Бөгенбай батыра, 168,
Тел.: +7/727/343 60 00; +7/727/343 60 06
e-mail: priemnaya@vg.kazatomprom.kz
www.vg.kz

№ 2021

« 26 » 03 2023 ж/г.

ЭКСПЕРТНОЕ ЗАКЛЮЧЕНИЕ на образовательную программу «БВ07131 – Линейные трубопроводы»

Реализация образовательной программы «БВ07131 – Линейные трубопроводы» осуществляется посредством последовательности изучаемых дисциплин, с установлением конкретных задач и целевых индикаторов. Четко прослеживается междисциплинарное взаимодействие, которое заключается в комплексной связи между содержанием отдельных учебных дисциплин, посредством которых достигается внутреннее единство программы подготовки специалистов.

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 формы контроля. Актуально изучение вопросов экологической обстановки и обеспечение условий безопасной трудовой деятельности на предприятиях АО «НАК Казатомпром»

Образовательные траектории разработаны в соответствии с запросами транспортно-коммуникационной отрасли «Линейные трубопроводы»

Цель образовательной программы актуальна, сформулирована достаточно лаконично и объединяет в себе результаты обучения. В описании дисциплин отражены их цели и содержание, как индикатора достижения результатов обучения по данной образовательной программе. Также, в образовательной программе, разработанной на основе профессионального стандарта, отражены основные трудовые функции в компетенциях и результатах обучения, указаны виды связей с работодателями: проведение гостевых лекций, лекций ведущих топ менеджеров, наличие филиалов кафедр на базе организаций.

Таким образом, представленная на экспертизу образовательная программа «БВ07131 – Линейные трубопроводы» по направлению подготовки кадров «БВ071 – Инженерия и инженерное дело», полностью соответствует требованиям ГОСО, имеет четкую последовательность при разработке, отвечает современным запросам рынка труда, профессиональным стандартам и



Менеджмент жүйесі
ҚР СТ ISO 9001:2015
сәйкестігі бойынша МК
ҚРО «QS Azia Sertik» ЖШС
сертификаттаған
Система менеджмента
сертифицирована ОПС
СМ ТОО «QS Azia Sertik»
на соответствие
СТ РК ISO 9001:2015



Менеджмент жүйесі
ҚР СТ ISO 14001:2016
сәйкестігі бойынша МК
ҚРО «QS Azia Sertik» ЖШС
сертификаттаған
Система менеджмента
сертифицирована ОПС
СМ ТОО «QS Azia Sertik»
на соответствие
СТ РК ISO 14001:2016



Менеджмент жүйесі
ҚР СТ ISO 45001:2019
сәйкестігі бойынша МК
ҚРО «QS Azia Sertik» ЖШС
сертификаттаған
Система менеджмента
сертифицирована ОПС СМ
ТОО «QS Azia Sertik»
на соответствие
СТ РК ISO 45001:2019



Менеджмент жүйесі
ҚР СТ ISO 50001:2019
сәйкестігі бойынша МК
ҚРО «QS Azia Sertik» ЖШС
сертификаттаған
Система менеджмента
сертифицирована ОПС
СМ ТОО «QS Azia Sertik»
на соответствие
СТ РК ISO 50001:2019

может быть реализована для подготовки кадров по образовательной программе «6B07131 – Линейные трубопроводы» по направлению «6B071 – Инженерия и инженерное дело»

Эксперт Жаңабегі Асанов Н.С. – Советник Председателя
Подпись Ф.И.О., место работы, должность,

Правления АО «Волковгеология»

ученая степень (при наличии)

_____ дата



11. REVIEWER'S CONCLUSION

Рецензия

на образовательную программу
по направлению подготовки «6В07131 – Линейные трубопроводы»

Образовательная программа (бакалавриат) «6В07131 – Линейные трубопроводы» 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 формы контроля. Каталог элективных дисциплин, Каталог внутривузовского компонента полностью отражают преемственность дисциплин 1.Трубопроводный транспорт нефти и газа; 2. Эксплуатация нефтегазохранилищ; 3.Содержание и ремонт нефтегазопроводов.

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

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

Образовательная программа предусматривает профессионально-практическую подготовку обучающихся 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.

Заключение:

В целом, рецензируемая образовательная программа отвечает основным требованиям ГОСО, национальной рамке квалификаций, отраслевой рамке квалификаций, профессиональных стандартов, Атласу новых профессий и способствует формированию общекультурных и профессиональных компетенций по направлению подготовки «6В071 – Инженерия и инженерное дело»

Рецензент



Исмаилов А. А., кандидат технических наук,
профессор, декан Школы Энергетики и
нефтегазовой индустрии АО «КБТУ»

12. LETTERS OF RECOMMENDATION

«Волковгеология» акционерлік қоғамы

Қазақстан Республикасы, 050012,
Алматы қаласы, Бөгенбай батыр көшесі, 168,
Тел.: +7/727/343 60 00; +7/727/343 60 06
e-mail: priemnaya@vg.kazatomprom.kz
www.vg.kz



Акционерное общество «Волковгеология»

Республика Казахстан, 050012,
г. Алматы, ул. Бөгенбай батыра, 168,
Тел.: +7/727/343 60 00; +7/727/343 60 06
e-mail: priemnaya@vg.kazatomprom.kz
www.vg.kz

№ 2024

«26» 03 2023 ж/г.

Рекомендательное письмо

Уважаемый (ая) Салтанат Нурадиловна

Руководство АО «Волковгеология» в лице Советника Председателя Правления Асанова Н.С. ознакомилось с содержанием образовательной программы «6B07131 – Линейные трубопроводы» и внесло следующие рекомендации:

- включить в содержание образовательной программы дисциплины: Основы нефтегазового дела.

- увеличить количество часов, выделяемых на проведение части лабораторных и практических занятий на базах работодателей с целью формирования определенных видов профессиональных компетенций;

- актуализировать содержание образовательных программ путем включения в цикл базовых и профилирующих модулей дисциплины, отражающие современные инновационные технологии в транспортно-коммуникационной сфере. Предлагается включить следующие дисциплины: 1. Трубопроводный транспорт нефти и газа; 2. Эксплуатация нефтегазохранилищ; 3. Содержание и ремонт нефтегазопроводов.

- увеличить количество часов, выделяемых на проведение производственных практик;

включить дисциплины:

1. Трубопроводный транспорт нефти и газа
2. Эксплуатация нефтегазохранилищ
3. Содержание и ремонт нефтегазопроводов);

Работодатель Жамбыл

Советник Председателя Правления АО «Волковгеология»

дата,



Менеджмент жүйесі
ҚР СТ ISO 9001-2016
сәйкестігі бойынша МҚ
СРО «QS Azia Sertik» ЖШС
сертификаттаған

Система менеджмента
сертифицирована ОПС
СМ ТОО «QS Azia Sertik»
на соответствие
СТ РК ISO 9001-2016



Менеджмент жүйесі
ҚР СТ ISO 14001-2016
сәйкестігі бойынша МҚ
СРО «QS Azia Sertik» ЖШС
сертификаттаған

Система менеджмента
сертифицирована ОПС
СМ ТОО «QS Azia Sertik»
на соответствие
СТ РК ISO 14001-2016



Менеджмент жүйесі
ҚР СТ ISO 45001-2019
сәйкестігі бойынша МҚ
СРО «QS Azia Sertik» ЖШС
сертификаттаған

Система менеджмента
сертифицирована ОПС СМ
ТОО «QS Azia Sertik»
на соответствие
СТ РК ISO 45001-2019



Менеджмент жүйесі
ҚР СТ ISO 50001-2019
сәйкестігі бойынша МҚ
СРО «QS Azia Sertik» ЖШС
сертификаттаған

Система менеджмента
сертифицирована ОПС
СМ ТОО «QS Azia Sertik»
на соответствие
СТ РК ISO 50001-2019

13. REVIEW AND APPROVAL PROTOCOLS

Академия логистики и транспорта

ПРОТОКОЛ №6 (начало формирования ОП)

Заседания

Академического комитета по образовательной программе и ведущих преподавателей кафедры «Строительная инженерия»

г. Алматы

«_15_»__03__2023 года

Председатель: Исмагулова С.О.

Секретарь: Жадраев Р.Ж.

Присутствовали: члены Академического комитета, ведущие ППС кафедры

Представители с производства: Главный технолог АО «Волковгеология» Кудабаяев Б.А., Советник Председателя Правления АО «Волковгеология» Асанов Н.С., Директор ТОО «Научно-внедренческий центр» Смашов Н.Ж.

Обучающиеся: Аманжолов К.

ПОВЕСТКА ДНЯ:

1. Рассмотрение компетентностной модели выпускника
2. Рассмотрение возможности включения дисциплин в КЭД и РУП

По первому вопросу

ВЫСТУПИЛ(а):

Зав. кафедрой Исмагулова С.О. предложила рассмотреть компетентностную модель выпускника по 3 уровням образования: бакалавриат, магистратура, докторантура.

Компетентностная модель выпускника включает в себя следующие части:

- Цель и задачи образовательной программы;
- Результаты обучения;
- Область, объекты, виды и функции профессиональной деятельности;
- Перечень должностей по образовательной программе;
- Профессиональные сертификаты, полученные по окончании обучения;
- Требования к предшествующему уровню образования.

ВЫСТУПИЛ: Главный технолог АО «Волковгеология» Кудабаяев Б.А., который предложил в силу специфики их организации отразить в объектах профессиональной деятельности следующее: Современные инновационные технологии в транспортно-коммуникационной сфере.

ВЫСТУПИЛ:

Член кафедры Ибраимов А.К., который предложил утвердить

После рассмотрения компетентностной модели выпускника было предложено утвердить данную Модель по 3 уровням образования.

ПОСТАНОВИЛИ:

- предоставить компетентностную модель выпускника по 3 уровням образования: бакалавриат, магистратура, докторантура для рассмотрения и утверждения на Совете института «Транспортная инженерия».

По второму вопросу

ВЫСТУПИЛ(а): зав кафедрой Исмагулова С.О. с предложением заслушать представителей работодателей и обучающихся по включению новых дисциплин в КЭД и РУП приема 2023г.

По второму вопросу

ВЫСТУПИЛ(а): зав кафедрой Исмагулова С.О. с предложением заслушать представителей работодателей и обучающихся по включению новых дисциплин в КЭД и РУП приема 2023г.

ВЫСТУПИЛ: представитель работодателей Советник Председателя Правления АО «Волковгеология» Асанов Н.С.

Организации заинтересованы в специалистах, имеющих хороший уровень подготовки и знаний в области проектирования и строительство линейных трубопроводов. Вносим предложения о внесении в РУП следующих востребованных дисциплин Трубопроводный транспорт нефти и газа, Эксплуатация нефтегазохранилищ, Содержание и ремонт нефтегазопроводов.

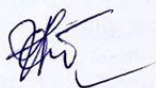
ВЫСТУПИЛ: обучающийся Аманжолов К.

Считаем необходимым включить в РУП следующие дисциплины Трубопроводный транспорт нефти и газа, Эксплуатация нефтегазохранилищ, Содержание и ремонт нефтегазопроводов.

ПОСТАНОВИЛИ:

1. Информацию принять к сведению;
2. Учесть предложения и рекомендации работодателей и обучающихся;
3. Рассмотреть включение в РУП следующие дисциплины: Трубопроводный транспорт нефти и газа, Эксплуатация нефтегазохранилищ, Содержание и ремонт нефтегазопроводов

Председатель:



Исмагулова С.О.

Секретарь:



Жадраев Р.Ж.

Академия логистики и транспорта

ПРОТОКОЛ №7 (перед утверждением ОП на УС)

Заседания КОК УМБ института «Транспортная инженерия»

г. Алматы

«15 » марта 2023 года

Председатель: Чигамбаев Т.О.

Секретарь: Утепова А.

Присутствовали: члены КОК УМБ, члены Академического комитета

Представители с производства: Главный технолог АО «Волковгеология»
Кудабаев Б.А., Советник Председателя Правления АО «Волковгеология» Асанов Н.С.,
Директор ТОО «Научно-внедренческий центр» Смашов Н.Ж.

Обучающиеся: Аманжолов К.

ПОВЕСТКА ДНЯ:

1. Рассмотрение Каталога элективных дисциплин (КЭД), Рабочей учебной программы (РУП), паспорта образовательных программ бакалавриата, магистратуры и докторантуры.

ВЫСТУПИЛ(а): зав. кафедрой Исмагулова С.О. представил (а) на рассмотрение КЭД, РУП бакалавриата, магистратуры и докторантуры.

На кафедре «Строительная инженерия» было проведено заседание с привлечением представителей работодателей и обучающихся по обсуждению структуры и содержанию образовательной программы 6В07131– Линеинные трубопроводы

Представителями работодателей и обучающимися были предложены ряд новых актуальных дисциплин, которые кафедра одобрила и включила в новые КЭД и РУП.

ПОСТАНОВИЛИ:

1. Информацию принять к сведению;
2. Учесть все предложения и рекомендации работодателей, представителей студенческого актива;
3. Представить КЭД, РУП и ОП бакалавриата, магистратуры и докторантуры для рассмотрения и утверждения на Совете института, УС Академии.

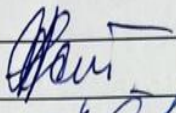
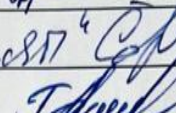
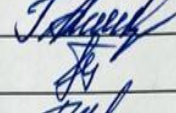
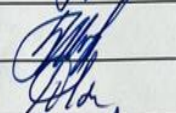

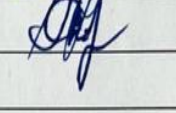
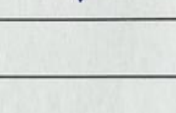
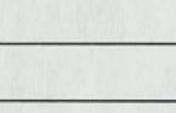
Председатель КОК УМБ

Чигамбаев Т.О.

Секретарь

Утепова А.

14. APPROVAL SHEET

№п/п	Ф.И.О.	Место работы и должность	Подпись	Дата
1	Минагулова С.Д.	зав. каф. "СИ"		30.03.23г.
2	Самасеева Ф.В.	зав. кафедрой "СР"		30.03.23г.
3	Ариурбаев ТК	зав. кафедрой "ТС"		30.03.23г.
4	Маминбетова А.Т.	зав. кафедрой		30.03.23г.
5	Шунгисов Б.Т.	зав. кафедрой		30.03.23г.
6	Касимов Д.Т.	зав. кафедрой		30.03.23г.
7	Мурсалиева Р.Д.	зав. кафедрой		30.03.23г.
8	Сусова А.Р.	зав. кафедрой		30.03.23г.

15. CHANGE REGISTRATION SHEET

№	Section, paragrap h of the documen t	Вид изменения (заменить, аннулировать, добавить)	Номер и дата извещения	Изменение внесено	
				Дата	Фамилия и инициалы, подпись, должность