

JOINT STOCK COMPANY "ALT UNIVERSITY"
NAMED AFTER MUKHAMETZHAN TYNYSHPAYEV"



APPROVED
by decision of the ALT US from
«24» 03 2025г. (Minutes №8)
Chairman of the Board - Rector
Zharmagambetova M. S.

EDUCATIONAL PROGRAM

Name: «6B07177 – Oil and Gas Transportation Engineering»

Training level: Bachelor's degree

Code and classification of training directions: 6B071 – Engineering and Engineering affairs

Code and group of educational programs: B165 –Transmission sistem and infrastructure

Date of registration in the Register: 04.06.2025.

Registration number: 6B07100148

Almaty, 2025

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

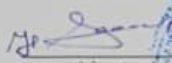
1 DEVELOPED:

Assistant Professor
(position)


(signature)

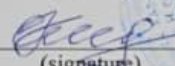
Dzheksenbaev E.K.
(Full name)

Director of Scientific and Innovation
Center LLP
(position)


(signature)

Smashov N.Zh.
(Full name)

Head of Department "ASI"
Assistant Professor
(position)


(signature)

Kulmanov K.S.
(Full name)

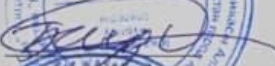
Assistant Professor
(position)


(signature)

Dzhumagaliev T.K.
(Full name)

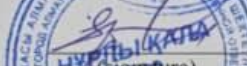
2 EXPERTS:

Chief Technologist of JSC
«Volkovgeologiya»
(position)


(signature)

Kudabaev B.A.
(Full name)

Chief engineer of LLP
"Nurly Kala 2030"
(position)


(signature)

Rabat D.K.
(Full name)

Director of Scientific and
Innovation Center LLP
(position)


(signature)

Smashov N.Zh.
(Full name)

3 RECENSEE:

Director of Nurly Kala 2030 LLC
(position)


(signature)

Abaykhan Yerbullan
(Full name)

Director of GEO TRACK LLP
(position)


(signature)

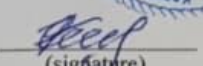
Nusupov D.K.
(Full name)

Engineer of GEO TRACK LLP
(position)


(signature)

Kuandykov Batyrbek
(Full name)

4 REVIEWED AND RECOMME:
ASI AC (Department) Meeting
Minutes № 7 «18» 02. 2025


(signature)

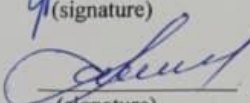
Kulmanov K.S.
(Full name)

Meeting of UMB "TC"
Protocol № 2 17. 03. 2025


(signature)

Abdreshov Sh.A.
(Full name)

Meeting UMS
Protocol № 4 «10» 03. 2025


(signature)

Kodzhabergenova A.K.
(Full name)

5 APPROVED by the decision of the Academic Council of «27» 03. 2025 №8

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	Note
1	Registration number	6B07100148
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 affairs
4	Code and group of educational programs	6B165 Transmission system and infrastructure
5	Name of the educational program	"6B07177 – Oil and Gas Transportation Engineering"
6	Type of educational program (OP)	New EP
7	Purpose of the OP	Training personnel with professional competencies for the oil and gas industry, taking into account the increasing demands on the quality of specialists in the design, construction, maintenance, and repair of oil and gas facilities.
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 the use of DOT
13	Language of instruction	Kazakh, Russian
14	Volume of loans	241
15	Academic degree awarded	<i>Bachelor of Engineering and Technology in the educational program "6B07177 – Oil and Gas Transportation Engineering "</i>
16	Availability of an application to the license for the direction of personnel training	KZ12LAA00025205 (005)
17	Availability of EP accreditation	
	Name of the accreditation body	
	Validity of accreditation	

4. THE GRADUATE'S COMPETENCE MODEL

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

Field of expertise: Oil and gas industry:

Learning outcomes

LO1- Demonstrate knowledge of engineering mathematics and construction physics methods, using modern graphics and computer modeling with artificial intelligence elements to analyze data on the physical parameters of oil and gas facilities during the use of transport facilities. Be able to write simple Python programs using functions, loops, and conditional operators.

LO2- To establish the level of stability, durability, reliability, and repair-suitability of objects based on theories and motion controls of the mechanical structure, hypotheses, and strength estimates.

LO3- To compare innovative building materials, building structures of crossings and pipes for functioning in regional geological formations and rocks, reliable foundations and foundations using geoinformation systems in geology and hydrology, taking into account the fundamentals of the oil and gas business.

LO4- Classify the mechanical properties of soils, including compression, shear and deformation, use a geoinformation system for visualization and interpretation of geological maps and soil data, when calculating the bearing capacity of foundations and their interaction with the soil, the risks associated with the design and construction of foundations in difficult geological conditions during the construction of foundations, taking into account all factors affecting their reliability and durability.

LO5- Formulate solutions to issues of occupational safety and conservation of biodiversity, life safety, based on the legislation of the Republic of Kazakhstan and interstate requirements, using resource-saving methods in the construction of transport complexes.

LO6- To introduce knowledge from economic theory to deepen the abilities of economic analysis and the application of models and features of economics, for the data matrix and structuring of interactive dashboards, BI technology models, using time resource management.

LO7- To recommend modern technologies of the construction process, with optimal organization and planning of the construction of transport facilities, with strict observance of environmental regulations and life safety, occupational health and safety requirements.

LO8- Choose construction machinery and equipment according to their performance from the available fleet of machines, for the mechanized method of construction, maintenance and repair of oil and gas storage facilities, optimal intersection of transport lines and their artificial structures, using theoretical knowledge during practice in the branches of the department.

LO9- To describe geological and exploration grounds for the design of gas and oil pipeline networks, for future operation in the field of gas and oil transportation, the use of logistics methods using scientific research methods, with the preparation of documentation in English, Russian and Kazakh (under an agreement with the customer) while observing the basics of law and anti-corruption legislation, knowledge of a professionally oriented foreign language.

LO10- To draw up projects of oil and gas pipelines and oil and gas storage facilities, pumps and compressors, justifying the geometric dimensions of the buildings, according to the volume of transportation and storage of oil and gas, control and exclusion of product loss in pipeline transportation of oil and gas using the requirements of the Sustainable Development Goal.

LO11- Consolidate a team of like-minded people, using socio-humanitarian, physical and moral guidelines to bring together management and staff, with the formation of corporate solidarity, to minimize the elimination of maintenance and repair of gas and oil pipelines focused on career growth and service to society.

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 works 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 corresponding to 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,

Professional certificates obtained at the end of training: Pipeline installer, 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, 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 "Saullet SKB". The form of control is the protection of the report.

Production practice 1.

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 2.

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	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	History of Kazakhstan	5											+
2	Philosophy	5											+
3	Physical Culture	8											+
4	Foreign language	10									+		
5	Kazakh (Russian) language	10									+		
6	Information and communication technologies	5				+							
The module of socio-political competencies		8											
7	Sociology	2											+
8	Cultural studies	2											+
9	Political Science	2											+
10	Psychology	2											+
11	Environmentally sustainable technologies	5									+		
12	Green economy and sustainable entrepreneurship										+		
13	Fundamentals of financial literacy										+		
14	Digital inclusion										+		
15	Fundamentals of law and anti-corruption culture										+		
16	Professionally oriented foreign language	3									+		
17	Engineering graphics and computer modeling	4	+										
18	Basics of Python programming	3	+										
19	Engineering mathematics 1	5	+										
20	Engineering mathematics 2	5	+										
21	Construction Physics	5	+										
22	Construction chemicals	4			+								
23	Engineering geodesy	6					+						
24	Building materials	6			+								
25	Building structures	5			+								
26	Occupational safety and health	5					+						
27	Educational practice (geodetic)	2								+			
28	Theoretical mechanics	5		+									
29	Fundamentals of classical mechanics			+									
30	Resistance of materials	5		+									
31	Applied mechanics	6		+									
32	Construction mechanics			+									
33	Mechanics of structural strength			+									
34	Geology and mechanics of	5											

	soils				+								
35	Geoinformation systems in geology				+								
36	Foundations and foundations	5			+								
37	Geotechnics in foundation engineering				+								
38	Hydraulics, hydrology, hydrometry	4						+					
39	Hydraulic engineering calculations and measurements							+					
40	Managerial economics	3						+					
41	Time management							+					
42	Fundamentals of oil and gas business	5			+	+							
43	Oil and gas pipelines	5									+	+	
44	Oil and gas storage facilities	5							+		+		
45	Maintenance and repair of oil and gas pipelines	6									+	+	
46	Maintenance and repair of oil and gas storage facilities	5							+		+		
47	Pumping and compressor stations in the oil and gas industry	7							+		+		
48	Production practice 1	5							+				
49	Production practice 2/ Pre-graduate practice	5							+				
50	Designing of oil and gas pipeline systems	5					+		+				
51	Design of oil storage facilities	5					+		+				
52	Design of gas storage facilities	5					+		+		+		
53	Automated design of oil and gas facilities	4						+			+		
54	Automated design systems for oil and gas facilities							+					
55	Fundamentals of reliability of pipeline systems	4							+				
56	Technological reliability of main pipelines								+				
57	Machinery and equipment for the construction and repair of oil and gas facilities	4							+				
58	Machines and mechanisms in pipeline construction								+				
59	Technology of construction of oil and gas facilities	6						+			+		
60	Technological processes of construction of oil and gas facilities							+					
61	Organization and planning of construction of transport facilities	5						+					
62	Organization of construction production							+					
63	Diagnostics of oil and gas facilities	5					+						

64	Monitoring of the technical condition of oil and gas facilities						+						
65	Information modeling technology in architecture and construction	3											+
66	Minor program 1					+		+					
67	Regulatory and technical documentation in the oil and gas industry	3											+
68	Minor program 2	3				+		+					+
69	Estimated pricing in architecture and construction	3											+
70	Minor program 3					+		+					+
71	Service to society	1											+
72	Business communications												
73	FINAL CERTIFICATION	8	+	+	+	+	+	+	+	+	+	+	+

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

№ 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 7230	at least 241

7. WORKING CURRICULUM FOR THE ENTIRE PERIOD OF STUDY

ALT University named after Mukhamedzhan Tynyshepayev JSC

THE CURRICULUM

Form of study: full-time

The direction of training:
6B071 – Engineering and Engineering affairs

Group of educational programs:
B165 – Transmission system and infrastructure

Name of the educational program:
6B07177 – Oil and Gas Transportation Engineering

Degree: Bachelor of Engineering and Technology

Admission: 2025



№	The discipline code	Naming of cycles and disciplines	Total labor capacity		Form of control, trimester	The amount of study load, hours							Distribution by trimester									Securing a position at the department	
			In academic hours	In academic credits		Exam	KР (KR)	Total hours	Contact information				NWS	1st course			2nd course			3rd course			
									lectures	practical	laboratory facilities	NWST		10 weeks	10 weeks	10 weeks	10 weeks	10 weeks	10 weeks	10 weeks	10 weeks		10 weeks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1. THE CYCLE OF GENERAL EDUCATION DISCIPLINES (GED):																							
1.1.	Required component:		1530	51	21		1530	80	440	0	168	842	6	6	13	13	6	7	0	0	0		
M1 The module of general education competencies																							
1.1.1.	23-0-B-OK-KK	History of Kazakhstan	150	5	4		150	20	20		8	102				5						CHOPHE	
1.1.2.	23-0-B-OK-Fa	Philosophy	150	5	6		150	20	20		8	102					5					CHOPHE	
1.1.3.	23-0-B-OK-FK	Physical Culture	240	8	1.2, 3.4		240		40		32	168	2	2	2	2						CHOPHE	
M2 Language Competence Module																							
1.1.4.	23-0-B-OK-4Ya	Foreign language	300	10	1.2, 3.4.5		300		200		40	60	2	2	2	2	2					LE	
1.1.5.	23-0-B-OK-K(R)Ya	Kazakh (Russian) language	300	10	1.2, 3.4.5		300		100		40	160	2	2	2	2	2					LE	
M3 The module of socio-political competencies																							
1.1.6.	23-0-B-OK-Setz	Sociology	240	8	4		240	5	10		8	37				2						CHOPHE	
	23-0-B-OK-Kul	Cultural studies			3			5	10		8	37			2					CHOPHE			
	23-0-B-OK-Pol	Political Science			6			5	10		8	37					2				CHOPHE		
	23-0-B-OK-Psi	Psychology			5			5	10		8	37				2					CHOPHE		
M4 Information Technology and Artificial Intelligence Module																							
1.1.7.	23-0-B-OK-IT	Information and communication technologies	150	5	3		150	20	20		8	102			5							ICT	
1.2.	Component of choice:		150	5	1		150	20	20	0	8	102	0	0	0	0	5	0	0	0	0		
M5 The module of economic and managerial competencies																							
1.2.1.	25-0-B-KV-EUT	Environmentally sustainable technologies	150	5	5		150	20	20		8	102					5					CHOPHE	
	25-0-B-KV-ZEUP	Green economy and sustainable entrepreneurship																				CHOPHE	
	24-0-B-KV-OFG	Fundamentals of financial literacy																				CHOPHE	
	25-0-B-KV-CI	Digital inclusion																				ICT	
	23-0-B-KV-OPAK	Fundamentals of law and anti-corruption culture																				MBSL	
TOTAL for the GED cycle:			1680	56	22		1680	100	460	0	176	944	6	6	13	13	11	7	0	0	0		
2. THE CYCLE OF BASIC AND PROFILE DISCIPLINES (DB, PD):																							
2.1. CYCLE OF BASIC DISCIPLINES (BD):																							
2.1.1.	The university component:		1560	52	12		1560	100	200	40	165	895	14	18	8	4	0	3	0	5	0		
M6 The module of natural science competencies																							
2.1.1.1.	24-0-B-VK-IM1	Engineering mathematics 1	150	5	1		150	10	20		15	105	5									GE	
2.1.1.2.	24-0-B-VK-IM2	Engineering mathematics 2	150	5	2		150	10	20		15	105		5								GE	
2.1.1.3.	25-0-B-VK-SF	Construction Physics	150	5	1		150	10	10	10	15	105	5									GE	
2.1.1.4.	25-0-B-VK-SKh	Construction chemicals	120	4	2		120	10	10	10	15	75		4								GE	
M7 Professional module																							
2.1.1.5.	25-0-B-VK-Igeod	Engineering geodesy	180	6	3		180	10	20	10	15	125			6							Ti	
2.1.1.6.	25-0-B-VK-StrMat	Building materials	180	6	2		180	20	10	10	15	125		6								Aace	
2.1.1.7.	25-0-B-VK-SK	Building structures	120	4	4		120	10	20		15	75				4						Aace	
2.1.1.8.	25-0-B-VK-OTBZh	Occupational safety and health	150	5	8		150	10	20		15	105							5			Aace Ls	
M4 Information Technology and Artificial Intelligence Module																							
2.1.1.9.	25-0-B-VK-IGKM	Engineering graphics and computer modeling	120	4	1		120	10	20		15	75	4									Ti	
2.1.1.10.	25-0-B-VK-OPP	Basics of Python programming	90	3	2		90		10		15	65		3								ICT	
M8 A practice-oriented module																							
2.1.1.11.	25-0-B-VK-POIYa	Professionally oriented foreign language	90	3	6		90		40		15	35						3				LE	
2.1.1.12.	23-0-B-VK-UP(g)	Educational practice (geodetic)	60	2	3		60									2						Ti	
2.1.2.	Component of choice:		930	31	7		930	70	100	30	105	625	4	5	5	5	5	3	4	0	0		
M6 The module of natural science competencies																							
2.1.2.1.	25-0-B-VK/KV-TMeh	Theoretical mechanics	120	4	1		120	10	20		15	75	4									Ti	
	25-0-B-KV-OKMeh	Fundamentals of classical mechanics																					
2.1.2.2.	25-0-B-KV-SMat	Resistance of materials	150	5	2		150	10	10	10	15	105		5								Ti	
	25-0-B-KV-PMeh	Applied mechanics																					
2.1.2.3.	25-0-B-KV-SMeh	Construction mechanics	150	5	3		150	10	20		15	105				5						Ti	
	25-0-B-KV-MPS	Mechanics of structural strength																					
M7 Professional module																							
2.1.2.4.	25-0-B-KV-GMG	Geology and mechanics of soils	150	5	4		150	10	10	10	15	105				5						Aace	
	25-0-B-KV-GISG	Geoinformation systems in geology																					
2.1.2.5.	25-0-B-KV-OF	Foundations and foundations	150	5	5		150	10	20		15	105					5					Aace	
	25-0-B-KV-GFs	Geotechnics in foundation engineering																					

Kulmanov K. S.

**8.CATALOG OF DISCIPLINES OF THE UNIVERSITY COMPONENT
EDUCATIONAL PROGRAM
«6B07177 – Oil and Gas Transportation Engineering»
Education level: Bachelor's degree Duration of study: 3 years Admission year: 2025**

AGREED Director of Scientific and Innovation Center "ALMAS" LLP " <i>[Signature]</i> Smashev N. Zh "17" 2025 zh.		I approve "Transport and construction" Director of the Institute <i>[Signature]</i> Abdrashitov A. T. "19" 2025 zh. АД «АЛТ Университет имени Мухамеджана Тынышпаева»
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CATALOG OF DISCIPLINES OF THE COMPONENT BY CHOICE
EDUCATIONAL PROGRAM «6B07177– Oil and gas transportation engineering»
Education level: Bachelor's degree Duration of study: 3 years Admission year: 2025

Cycle	Component	Name of the discipline	Total labor intensity		Term	Learning outcomes academic hours	Brief description of the discipline	Prerequisites	Post-requirements academic hours
			academic hours	academic hours					
1	2	3	4	5	6	7	8	9	10
BD	KV	Engineering mathematics 1	150	5	1	LO 1	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 course sections include elements of linear algebra and analytical geometry, an introduction to mathematical analysis, and differential calculus of functions of one and several variables. provide students with the necessary mathematical tools to solve problems related to the design, analysis and optimization	History of Kazakhstan. Kazakh (Russian) language, Professionally oriented foreign language, Professionally oriented foreign language, Cultural studies, Political Science, Psychology.	Final certification

							of engineering systems.		
BD	KV	Engineering mathematics 2	150	5	2	LO 1	The formation of students' mathematical knowledge and skills necessary for the study of related natural science disciplines, disciplines of the professional cycle and skills of mathematical modeling and research in professional activities. The course sections include integral calculus of functions of one and several variables, ordinary differential equations, and series theory. Special attention is paid to the application of mathematical methods to solve engineering problems.	History of Kazakhstan. Kazakh (Russian) language, Professionally oriented foreign language, Professionally oriented foreign language, Cultural studies, Political Science, Psychology.	Final certification
BD	KV	Construction Physics	150	5	1	LO 1	Formation of knowledge, skills and competencies necessary for the development, design and operation of energy-efficient, comfortable and durable buildings and structures. He studies the physical processes and phenomena occurring in building structures and buildings, as well as their interaction with the environment, the basics of construction and architectural acoustics, building climatology, lighting engineering, thermal engineering. The course helps to learn how to minimize the negative impact of external and internal physical factors on buildings.	History of Kazakhstan. Kazakh (Russian) language, Professionally oriented foreign language, Professionally oriented foreign language, Cultural studies, Political Science, Psychology.	Final certification
BD	KV	Construction chemicals	120	4	2	LO 1	The formation of knowledge in the field of building chemistry is associated with the development of science and technology aimed at improving building materials and their application processes. Construction chemistry studies and develops chemical materials, additives and substances that affect the properties of building structures, ensuring their strength, durability, resistance to external influences and energy efficiency. An important part of the course is studying the environmental impact of building chemicals.	Engineering mathematics 1.2, Construction Physics	Innovative building materials, Construction mechanics.
BD	KV	Engineering geodesy	180	6	3	LO 1	It forms professional competencies that determine the bachelor's willingness and ability to use basic knowledge in the field of geodesy,	Engineering mathematics 2. Construction chemicals. Building materials. Basics	Educational practice (geodetic). Construction

							allows for geodetic measurements related to solving typical construction tasks, detailed breakdown of structures, control geometric shapes of structures under construction, perform executive surveys of the results of individual stages of construction and installation work, provides skills in using basic geodetic instruments for specific production conditions.	of Python programming. Resistance of materials. Applied mechanics.	mechanics. Mechanics of structural strength.
BD	KV	Building materials	180	6	2	LO 3	The formation of knowledge about building materials consists in obtaining in-depth knowledge about various types of materials, their characteristics and methods of application. This knowledge is necessary in order to choose the materials for construction competently, thereby ensuring the durability, safety, economic efficiency and functionality of the facilities. The course is aimed at familiarizing students with various types of building materials, such as concrete, brick, metal, wood, glass, insulation and finishing materials. An important task is to study their physical and mechanical properties.	Engineering mathematics 1.2, Construction Physics, Building materials,	Engineering geodesy, Construction structures, Labor protection..
BD	KV	Construction structures	120	4	4	LO 3	Forms the basic knowledge of shaping, calculation and construction of load-bearing structures, the ability to choose the right materials, cross-section shape, design scheme, based on the purpose and purpose of operation, develop design solutions for buildings and structures under construction, master the skills of calculating structural elements according to limiting conditions, ensuring compliance with the required indicators of reliability, efficiency, efficiency. The main purpose of the course is to teach the principles of building structure design. This includes knowledge of the requirements for strength, safety, stability, and cost-effectiveness of design solutions.	Engineering mathematics 1.2, Construction Physics, Engineering geodesy, Building materials Innovative building materials.	Labor protection, Designing of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines, Maintenance and repair of oil and gas storage facilities, Industrial practice 2.
BD	KV	Occupational safety and health	150	5	8	LO 7	The discipline examines the main dangerous and harmful production factors affecting workers of automobile and railway transport,	Resistance of materials, Engineering geodesy, Innovative building	Pipeline transport of oil and gas, Industrial practice 2, Design of oil

							during the operation and repair of rolling stock, advanced methods and technical solutions to reduce occupational injuries, improve working conditions and workplace safety, ways of organizing and managing occupational safety, fire and electrical safety, the main activities in the organization jobs. Training methods - analysis of specific situations, group discussions..	materials, Construction structures.	and gas storage facilities, Minor program 3.
BD	KV	Engineering graphics and computer modeling	150	5	1	LO 1	To master the basic images of spatial forms on a plane and teach how to work in modern modeling systems in order to develop innovative computer models.He studies spatial representation and imagination, constructive geometric thinking based on graphical models of spatial forms, and practical skills in building computer models and applying them to solving real-world problems. An important part of the course is computer modeling training.Students are taught how to use software to create 3D models of objects, analyze their characteristics (for example, strength, dynamics, heat transfer, etc.) and optimize design solutions.	Physical CultureForeign language. Foreign language. Kazakh (Russian) language. Engineering mathematics 1. Construction Physics.	Physical Culture. Foreign language. Kazakh (Russian) language. Engineering mathematics 2. Construction chemicals. Building materials. Basics of Python programming. Resistance of materials. Applied mechanics.
BD	KV	Basics of Python Programming	90	3	2	LO 1	The discipline consists in developing students' basic knowledge and skills necessary to effectively use Python to solve various programming problems. This includes mastering the syntax and basic constructions of the language, as well as developing the ability to think logically and solve practical problems using programming. The course is aimed at mastering the basic elements of the Python language, such as variables, operators, data structures (lists, tuples, sets, dictionaries), conditional operators, loops, functions, and classes.	Engineering mathematics 1. Construction Physics. Engineering graphics and computer modeling. Theoretical mechanics. Fundamentals of classical mechanics.	Engineering geodesy. Educational practice (geodetic). Construction mechanics. Mechanics of structural strength.
BD	KV	Professionally oriented foreign language	90	3	6	LO 9	A professionally oriented foreign language is based on taking into account the needs of students in learning a foreign language dictated by the specifics of their future profession or	Computer and engineering modeling, The basics of artificial intelligence, , Engineering mathematics	Political Science, Labor protection, Designing of oil and gas pipeline systems,

							specialty. It involves a combination of mastering a professionally oriented foreign language with the development of personal qualities of students, knowledge of the culture of the country of the language being studied and the acquisition of special skills based on professional and linguistic knowledge. The course is aimed at mastering specialized vocabulary and phraseology used in a specific professional field.	1.2, Construction Physics.	Maintenance and repair of oil and gas pipelines, Maintenance and repair of oil and gas storage facilities.
BD	KV	Educational practice (geodetic)	60	2	3	LO 8	The organization of educational practice is aimed at ensuring that bachelors become familiar with the fields of professional activity and training profiles, with the ability to survey the area, forward and reverse, leveling, reference to reference points, removing points and elevations from the map, solving typical engineering and geodetic problems. Trainees are taught how to properly use various types of geodetic equipment to make accurate measurements and surveys. This includes setting up and calibrating instruments, as well as working with software to process the received data.	Engineering mathematics 1.2, Construction Physics. Engineering geodesy, Building materials, Innovative building materials.	The basics of artificial intelligence, Labor protection, , Fundamentals of financial literacy.
BD	KV	Designing of oil and gas pipeline system	150	5	5	LO 4,5	The discipline develops students' knowledge in the field of pipeline system design for distillation of various media, to ensure the safety, efficiency, long-term and cost of oil and gas pipeline systems. Studies the characteristics and calculations of oil and gas pipeline systems (loads and pressures, the need for additional equipment), theoretical and practical issues in the design of various natural and climatic conditions.	Geology and mechanics of soils. Geoinformation systems in geology. Fundamentals of oil and gas business.	Managerial economics. Time management. Design of gas storage facilities. Oil and gas pipelines.
BD	KV	Design of oil storage facilities	150	5	5		The discipline is aimed at developing students' knowledge and skills necessary to develop engineering solutions that ensure safe and efficient storage of oil and petroleum products. The course examines the principles of designing oil storage facilities, taking into account safety	Geology and mechanics of soils. Geoinformation systems in geology. Fundamentals of oil and gas business.	Managerial economics. Time management. Design of gas storage facilities. Oil and gas pipelines.

							requirements, environmental standards and operational efficiency, which contributes to the training of specialists capable of creating a modern and reliable infrastructure for the storage of petroleum products.		
BD	KV	Design of gas storage facilities	150	5	5		The discipline is aimed at developing students' knowledge in the field of a set of engineering measures that ensure the creation of reliable, safe and cost-effective facilities for storing natural, liquefied and compressed gas. Gas storage facilities are considered as a key element of the energy infrastructure that ensures the stability of gas supply, the regulation of seasonal and daily fluctuations in consumption, as well as the formation of strategic reserves and reserves.	Foundations and foundations. Geotechnics in foundation engineering. Designing of oil and gas pipeline systems. Design of oil storage facilities.	Hydraulics, hydrology, hydrometry. Hydraulic engineering calculations and measurements. Oil and gas storage facilities. Pumping and compressor stations in the oil and gas industry. Fundamentals of reliability of pipeline systems. Machinery and equipment for the construction and repair of oil and gas facilities.
BD	KV	Fundamentals of oil and gas business	150	5	4	LO 3,4	Students of the discipline have the skills to know the basics of oil and gas business, search, exploration and development of oil and gas facilities, collection, storage and transportation of hydrocarbons, pumping surface and groundwater, well maintenance and repair, oil and gas geology, well construction, design, development and operation of oil and gas fields forms skills. Students use this data in the design, construction and operation of oil and gas pipelines.	Engineering mathematics 1.2, Construction Physics	Oil and gas pipelines, Oil and gas storage facilities, Pipeline transport of oil and gas, , Designing of oil and gas pipeline systems.
BD	KV	Oil and gas pipelines	150	5	6	LO 10,11	The discipline forms students' knowledge skills for the requirements of oil and gas pipeline structures, the procedure for laying linear pipes and structures, supports for pipelines, the regulations for connecting pipes to each other, the construction of main oil and gas pipelines,	Fundamentals of oil and gas business, Engineering mathematics 1.2, Construction Physics	Designing of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines, Maintenance and repair of oil and gas storage

							methods of hydraulic and technological calculation of the facility for the transfer of oil and gas, pressure characteristics of the pipeline and pumping stations, the specifics of temperature conditions in pipelines.		facilities, Pumps and compressors
BD	KV	Oil and gas storage facilities	150	5	7	LO 8,10	The discipline studies various rules for storing oil and gas in tanks, preventing product loss during operation, the draft master plan for the construction of oil and gas storage facilities, tank designs, provisions for checking the dimensions of the tank body for stability, measuring and accounting for oil and gas products, laying pipelines for tanks, water pipes for fire extinguishing. Fundamentals of design and construction of various types of oil and gas storage facilities, such as oil and gas storage tanks, underground storage facilities, and others.	Fundamentals of oil and gas business, Oil and gas pipelines, Engineering mathematics 1.2, Construction Physics	Designing of oil and gas pipeline systems, Maintenance and repair of oil and gas pipelines, Maintenance and repair of oil and gas storage facilities, Pumps and compressors, Minor program 1.
BD	KV	Pumping and compressor stations in the oil and gas industry	150	5	7	LO 10	The discipline provides students with the knowledge and skills necessary for effective design, operation and maintenance of pumping and compressor stations, as well as understanding their role in the technological processes of oil and gas production, transportation and refining. These systems play a key role in ensuring the stable operation of the entire oil and gas production, ensuring the efficient movement of oil and gas through pipeline systems, as well as providing the necessary pressure and volume for various production processes.	Fundamentals of oil and gas business, Oil and gas pipelines, Oil and gas storage facilities, Designing of oil and gas pipeline systems, Maintenance and repair of oil and gas storage facilities.	Pipeline transport of oil and gas, Industrial practice 2, Design of oil and gas storage facilities, Design of oil and gas storage facilities

BD	KV	Maintenance and repair of oil and gas pipelines	180	6	8	LO 10,11	The discipline provides students with knowledge about the maintenance and repair of oil and gas pipelines, incomplete replacement and (or) restoration of pipeline equipment elements, repair work with linear fittings and equipment, communication and power supply lines, cleaning and anti-corrosion painting of pipeline surfaces, and the full name of technical measures aimed at comprehensive or partial restoration of the linear part of the pipeline. Studies regulatory and technical documentation for the maintenance and repair of oil and gas pipelines, calculation and graphic work.	Fundamentals of oil and gas business, Oil and gas pipelines, Oil and gas storage facilities.	Maintenance and repair of oil and gas pipelines, Pipeline transport of oil and gas, Industrial practice 2, Design of oil and gas storage facilities, Design of oil and gas storage facilities.
BD	KV	Maintenance and repair of oil and gas storage facilities	150	5	7	LO 8,10	The discipline forms the study of 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 work, rules for checking the operability of devices, mechanisms and equipment, general construction processes for the construction of structures, methods for the construction of structures in accordance with design and regulatory documents.	Fundamentals of oil and gas business, Oil and gas pipelines, , Oil and gas storage facilities,	Maintenance and repair of oil and gas pipelines, Pipeline transport of oil and gas, Industrial practice 2, Design of oil and gas storage facilities, Design of oil and gas storage facilities.

		Production practice 1	150	5	6	LO 4,6	The main objectives of industrial practice are: consolidation of theoretical knowledge and practical skills in the chosen educational program in an industrial environment, acquisition of organizational work experience, obtaining a working specialty, formation of practical skills and competencies in the process of mastering the bachelor's program. Students have the opportunity to work with those technologies and methods that have been studied in theory, which allows them to strengthen their understanding and see how this knowledge is applied in practice.	Fundamentals of oil and gas business, Oil and gas pipelines, Oil and gas storage facilities.	Pipeline transport of oil and gas, Industrial practice 2, Design of oil and gas storage facilities, Design of oil and gas storage facilities.
BD	KV	Production practice 2/ Pre-graduate practice	150	5	9	LO 4,6	The discipline forms students' knowledge and skills necessary for successful preparation for professional activity. At this stage of the training, students have the opportunity to apply the theoretical knowledge acquired during the educational process in a real-world production environment. Pre-graduate practice includes preparation for writing a thesis related to real problems and tasks at the enterprise.	Fundamentals of oil and gas business, , Oil and gas pipelines, Oil and gas storage facilities, Pipeline transport of oil and gas, Industrial practice 2.	Design of oil and gas storage facilities, Design of oil and gas storage facilities, Minor program 3.

9. CATALOGUE OF DISCIPLINES OF THE COMPONENT BY CHOICE OF EDUCATIONAL PROGRAM
«6B07177 – Oil and Gas Transportation Engineering»
Education level: Bachelor's degree Duration of study: 3 years Admission year: 2025

AGREED Director of Scientific and Innovation Center "ALMAS" LLP <i>[Signature]</i> Smashev N. Zh "17" 2025 zh.	I approve Transport and construction Director of the Institute <i>[Signature]</i> Abdreshov S. Zh "17" 2025 zh.
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CATALOG OF DISCIPLINES OF THE COMPONENT BY CHOICE
EDUCATIONAL PROGRAM «6B07177– Oil and gas transportation engineering»
Education level: Bachelor's degree Duration of study: 3 years Admission year: 2025

Cycl e	Co mp one nt	Name of the discipline	Total labor intensity		Term	Learning outcomes academic hours	Brief description of the discipline	Prerequisites	Post-requirements academic hours
			acade mic hours	acade mic hours					
1	2	3	4	5	6	7	8	9	10
ООД	КВ	Environmentally sustainable technologies				LO 7	The formation of students' knowledge about environmentally sustainable technologies includes the study and development of solutions aimed at the sustainable development of society with minimal impact on the environment. These technologies play a key role in reducing pollution, managing natural resources, reducing greenhouse gas emissions, and preserving ecosystems. Teaching environmentally sustainable technologies helps students develop the competencies necessary to create and implement innovative solutions aimed at a sustainable future.	History of Kazakhstan, Kazakh (Russian) language, Professionally oriented foreign language, Professionally oriented foreign language, Cultural studies, Political Science, Psychology	Final certification

		Green economy and sustainable entrepreneurship					Formation of students' knowledge about concepts aimed at developing economic models that promote environmental sustainability, social progress and economic growth, while not depleting natural resources. This includes studying the principles of the green economy and sustainable entrepreneurship, which are focused on creating innovative solutions for the conservation of ecosystems, the efficient use of resources and the promotion of sustainable development in various sectors of the economy.	History of Kazakhstan. Kazakh (Russian) language, Professionally oriented foreign language, Professionally oriented foreign language, Cultural studies, Political Science, Psychology	Final certification
		Fundamentals of financial literacy				LO 9	The formation of students' knowledge about the principles of managing personal and family finances includes the development of skills for making informed financial decisions. This important skill helps you effectively plan your budget, manage income and expenses, invest, and properly plan your retirement savings and manage your debts. Knowledge of financial literacy contributes to the development of the ability to make informed decisions that ensure financial stability and well-being.	History of Kazakhstan. Kazakh (Russian) language, Professionally oriented foreign language, Professionally oriented foreign language, Cultural studies, Political Science, Psychology	Final certification
		Digital inclusion					The formation of students' knowledge about the process of ensuring equal access to digital technologies and Internet resources is aimed at eliminating digital inequality and creating conditions for the full participation of every person in the digital society, regardless of their age, social status, education, physical condition or place of residence. The goal of digital inclusion is to ensure equal opportunities for everyone in the use of modern technologies, which contributes to the integration of various population groups into the digital environment and to improving the quality of life.	History of Kazakhstan. Kazakh (Russian) language, Professionally oriented foreign language, Professionally oriented foreign language, Cultural studies, Political Science, Psychology	Final certification
		Fundamentals					The formation of students' knowledge about the	History of Kazakhstan.	Final certification

		of law and anti-corruption culture					basics of law and anti-corruption culture is the development of important concepts aimed at developing legal awareness and shaping public behavior focused on upholding the rule of law and combating corruption. This helps to foster responsibility, respect for the law and an active civic position. Training in the basics of law (for example, the Constitution, laws, regulations), so that participants understand their rights and obligations, as well as be aware of the possible consequences of violations.	Kazakh (Russian) language, Professionally oriented foreign language, Professionally oriented foreign language, Cultural studies, Political Science, Psychology	
BD	KB	Theoretical mechanics	120	4	1	LO 2	Formation of logical thinking and scientific foundation of engineering education. He studies the basic concepts, axioms, laws and theorems that make it possible to formulate equations describing the behavior of systems, a specific phenomenon in mathematical form, mathematical models of the behavior of material bodies, the basic methods of classical mechanics in the study of motion and equilibrium of mechanical systems in the study of professional disciplines. It allows you to delve into Newton's laws, conservation laws (energy, momentum, etc.), as well as their application to a wide range of mechanical systems.	Engineering mathematics 1, Construction Physics , Building materials , Computer and engineering modeling.	Engineering geodesy , Construction structures , Labor protection , Building materials , Applied mechanics.
		Fundamentals of classical mechanics					The objectives of the discipline are to teach students scientific knowledge in the theoretical branch of physics - classical mechanics; mastering theoretical methods for solving physical problems; forming a modern physical picture of the world. In the process of studying mechanical phenomena, an understanding of the physical essence of electrical and magnetic phenomena must be achieved. This makes it possible to form a physical picture of the world. With the help of Newton's laws, it is possible to predict how bodies will move under the influence of forces. This includes both simple cases (such as an object falling) and more	Engineering mathematics 1, Construction Physics , Building materials , Computer and engineering modeling..	Engineering geodesy , Construction structures , Labor protection , Building materials , Applied mechanics.

							complex ones (such as the movement of planets or spaceships).		
BD	KB	Resistance of materials	150	5	3	LO 2	Formation of knowledge about the strength, rigidity and stability of rods and rod systems, study of the basics of designing rod structures working on tension, compression, shear, shear, torsion and bending. Studies methods and practical techniques for calculating rods, flat and volumetric structures under various force, deformation and temperature influences using classical and modern methods of calculating structures and mechanical tests.	Theoretical mechanics, Fundamentals of classical mechanics, Innovative building materials.	Fundamentals of financial literacy, Critical thinking, Managerial economics, Time management.
		Applied mechanics					Formation of students' theoretical basis for understanding calculation methods for strength, rigidity and stability of machine and equipment elements, ensuring its reliability and efficiency. It studies the deformations and strength conditions of bodies and provides the general principles necessary to ensure the reliability of structures of any purpose, the correct calculation of the dimensions of structural elements and parts. The subject helps to find effective solutions for the design, operation and optimization of various mechanisms, machines and structures.	Theoretical mechanics, Fundamentals of classical mechanics, Innovative building materials.	Fundamentals of financial literacy, Critical thinking, Managerial economics, Time management.
BD	KB	Construction mechanics	150	5	3	LO 2	Formation of skills in designing standard structures related to the choice of a design scheme, determining the most loaded structural elements and calculating internal forces and stresses. Studies methods for calculating forces in statically definable and indeterminate rod systems under the action of constant and temporary loads, determining displacement in rod systems to ensure the strength and reliability of structures in combination with high efficiency.	Theoretical mechanics, , Fundamentals of classical mechanics, Applied mechanics, Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology.	Fundamentals of financial literacy, Critical thinking, Managerial economics, Time management.
		Mechanics of structural strength					Formation of skills in the field of work analysis and calculation of structures made of various materials under various influences using modern computing equipment. He studies the	Theoretical mechanics, , Fundamentals of classical mechanics, Applied mechanics,	Fundamentals of financial literacy, Critical thinking, Managerial economics, Time management.

							features of the laws of stress and strain distribution in structural elements under various conditions of external load, principles and methods of static and dynamic calculation of engineering structures for strength, rigidity, stability. The search for the most effective solutions that provide the necessary strength with minimal cost of materials and resources.	Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology.	
BD	KB	Geology and mechanics of soils	150	5	4	LO 3	The formation of skills in the field of geology and mechanics of soils is aimed at studying the structure, composition, properties and behavior of soils (land masses), as well as their interaction with engineering structures and structures. These disciplines are the basis for the design and construction of infrastructure facilities such as buildings, bridges, roads, and other structures. The training includes the development of methods for analyzing and evaluating ground conditions, which contributes to the effective design and safety of construction facilities.	Resistance of materials, Innovative building materials, Theoretical mechanics, Fundamentals of classical mechanics.	Construction mechanics, Mechanics of structural strength, Foundations and foundations, Geotechnics in foundation engineering, Design of oil and gas storage facilities, Modernization of oil depots and gas tanks.
		Geoinformation systems in geology					The formation of skills in the field of geographic information systems (GIS) includes the development of technologies and tools that allow you to collect, analyze, visualize and manage geographical and geological data to solve various problems in geological research and development. This helps students effectively use GIS to create geological maps, model processes, evaluate natural resources, and analyze geological phenomena, which helps improve the quality of research and informed decision-making.	Resistance of materials, Innovative building materials, Theoretical mechanics, Fundamentals of classical mechanics.	Construction mechanics, Mechanics of structural strength, Foundations and foundations, Geotechnics in foundation engineering, Design of oil and gas storage facilities, Modernization of oil depots and gas tanks.
BD		Foundations and foundations	150	5	5	LO 3	Formation of knowledge about the basic laws of soil behavior under load, the theory of stress-strain state and their interaction with structures. He studies the basic methods for determining the sedimentation of foundations, the stability of slopes and slopes, as well as the morphology, dynamics and regional features of the upper	Theoretical mechanics, Fundamentals of classical mechanics, Resistance of materials, Applied mechanics, Engineering geology, hydrogeology and soil	Fundamentals of financial literacy, Critical thinking, Managerial economics, Time management.

	KB						horizons of the Earth's crust (lithosphere) and their relationship with engineering structures. One of the main tasks is to create foundations that will ensure the stability of the entire building or structure under any external influences.	mechanics, Geoinformation systems in geology and hydrogeology.	
		Geotechnics in foundation engineering					Formation of knowledge about the basic laws of soil behavior under load, the theory of stress-strain state and their interaction with structures. He studies the basic methods for determining the sedimentation of foundations, the stability of slopes and slopes, as well as the morphology, dynamics and regional features of the upper horizons of the Earth's crust (lithosphere) and their relationship with engineering structures. It is important to correctly determine the physical, mechanical, and hydrological properties of the soils at the construction site (density, strength, subsidence, groundwater level, seismic activity, and other characteristics).	Theoretical mechanics, Fundamentals of classical mechanics, Resistance of materials, Applied mechanics, Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology.	Fundamentals of financial literacy, Critical thinking, Managerial economics, Time management.
		Hydraulics, hydrology, hydrometry	120	4	7	LO 6	The discipline develops students' skills and knowledge in the field of science and engineering, which study the properties of water and its behavior in both natural and artificial systems, as well as methods for measuring and analyzing water processes. These skills include the basics of hydraulics, hydrology and hydrometry, which allows students to effectively apply them to solving problems related to water resources management, design of hydraulic structures and environmental monitoring of water systems.	Theoretical mechanics, Fundamentals of classical mechanics, Resistance of materials, Applied mechanics, Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology, Foundations and foundations, Geotechnics in foundation engineering.	Managerial economics, Time management, Organization and planning of construction of transport facilities, Organization of transport construction.

		Hydraulic engineering calculations and measurements					The discipline develops students' skills and knowledge in the field of engineering related to the analysis, design and operation of hydraulic structures such as dams, bridges, canals, reservoirs, pumping stations and other objects interacting with water. Students master the methods of hydraulic engineering calculations and measurements, which makes it possible to effectively solve problems related to the safety and stability of water bodies in various operational conditions.	Theoretical mechanics, Fundamentals of classical mechanics, Resistance of materials, Applied mechanics, Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology, Foundations and foundations, Geotechnics in foundation engineering.	Managerial economics, Time management, Organization and planning of construction of transport facilities, Organization of transport construction.
BD	KB	Managerial economics	90	3	6	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. Studying this discipline will allow students to gain and develop knowledge in the field of analytical research of economic, technological and technical parameters of an enterprise, as well as to master the skills of using special methods of economic justification of management decisions and assessment of their consequences.	Theoretical mechanics, Fundamentals of classical mechanics, Resistance of materials, Applied mechanics, Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology, Foundations and foundations, Geotechnics in foundation engineering, Fundamentals of financial literacy, Critical thinking.	Bridges and tunnels on highways, Artificial structures on highways, Organization and planning of construction of transport facilities, Organization of transport construction.
BD	KB	Time management					The discipline studies a system of methods, tools and approaches that are aimed at effective time management in order to achieve the tasks set. The course is designed to improve the skills of organizing and optimizing the use of working	Theoretical mechanics, Fundamentals of classical mechanics, Resistance of materials, Applied mechanics,	Bridges and tunnels on highways, Artificial structures on highways, Organization and planning of construction of transport

							time, increase work productivity, reduce stress, planning, delegation, use of tools and technologies, as well as to know your time and energy rhythms in order to use your time effectively.	Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology, Foundations and foundations, Geotechnics in foundation engineering, Fundamentals of financial literacy, Critical thinking.	facilities, Organization of transport construction.
BD	KB	Automated design of oil and gas facilities	120	4	8	LO	Students are trained in the use of computer technologies and specialized software for the development, modeling and optimization of design solutions in the field of oil and gas production, processing and transportation. The use of specialized software products reduces the number of errors related to the human factor and guarantees the accuracy of calculations and design decisions. For example, automated systems can integrate data from various design stages (geophysics, hydrodynamics, mechanics, etc.) and instantly update all relevant parts of the project.		
		Automated design systems for oil and gas facilities					The discipline studies the formation of students' skills in working with specialized software designed to automate the design and development of various facilities in the oil and gas industry. These systems can improve the accuracy and speed of design, improve coordination between different departments, and effectively manage data and documentation. The main purpose of CAD is to automate routine and time-consuming design processes, such as creating drawings, calculating structures, modeling engineering systems, and creating documentation. This significantly		

							reduces the time spent on design and improves the accuracy of calculations.		
BD	KB	Fundamentals of reliability of pipeline systems	150	5	6	LO 8	The discipline studies the formation of students' analysis and risk management related to the operation of pipelines, as well as the development of measures aimed at minimizing the likelihood of their destruction or emergency situations. Key aspects include the following. The main goal is to ensure uninterrupted transportation of materials through pipelines, which is critical for industries such as the oil and gas and chemical industries, where even short-term disruptions can lead to significant economic and environmental consequences.	Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology, Foundations and foundations, Geotechnics in foundation engineering.	Bridges and tunnels on highways, Artificial structures on highways, Design of oil and gas storage facilities, Modernization of oil depots and gas tanks, Organization and planning of construction of transport facilities, Organization of transport construction.
		Technological reliability of main pipelines					The discipline studies the formation of students' knowledge about the purpose of pipeline systems that ensure uninterrupted and safe transportation of various substances (oil, gas, chemical and other liquids) for a long time while minimizing the risk of accidents, breakdowns and failures. The main goal is to minimize the risks of accidents, such as leaks, explosions, fires, or other accidents that may cause damage to people, the environment, or the economy.	Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology, Foundations and foundations, Geotechnics in foundation engineering.	Bridges and tunnels on highways, Artificial structures on highways, Design of oil and gas storage facilities, Modernization of oil depots and gas tanks, Organization and planning of construction of transport facilities, Organization of transport construction
BD	KB	Machinery and equipment for the construction and repair of oil and gas facilities	120		8	LO 8	The discipline studies students' knowledge in the field of specialized equipment used for installation, maintenance, repair and reconstruction of oil and gas industry facilities such as drilling rigs, gas processing plants, pipelines, platforms and other structures. These machines and equipment play a key role in ensuring the safety, efficiency and reliability of all processes related to the extraction, transportation and processing of hydrocarbons.	Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology, Foundations and foundations,	Modernization of oil depots and gas tanks, Organization and planning of construction of transport facilities, Organization of transport construction.
		Machines and mechanisms in pipeline					The discipline studies the formation of students' knowledge in the field of automation and	Engineering geology, hydrogeology and soil mechanics,	Проектирование нефтехранилищ и газохранилищ,

		construction		4			mechanization of labor-intensive processes, increasing productivity, reducing the impact of the human factor and increasing safety on construction sites. Machines and mechanisms help to speed up the installation of pipelines, ensure the accuracy and high quality of connections, as well as ensure operation in difficult and adverse conditions. The use of mechanized processes reduces the likelihood of human error, which is critically important in the construction of pipeline systems, where high accuracy is of great importance for durability and reliability of operation.	Geoinformation systems in geology and hydrogeology, Foundations and foundations,	Модернизация нефтебаз и газгольдеров, Организация и планирование строительства транспортных сооружений, Организация транспортного строительства.
BD	KB	Technology of construction of oil and gas facilities	180	6	7	LO 5,8	The discipline studies the formation of students' knowledge in the field of ensuring an effective, safe and economically sound process for the design, construction and commissioning of facilities related to the extraction, processing, transportation and storage of oil and gas. The construction of such facilities includes the use of advanced technologies and materials to minimize risks, reduce environmental impact, and increase the durability and reliability of facilities.	Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology, Bridges and tunnels on highways..	Minor program 3, Final certification.
		Technological processes of construction of oil and gas facilities					The discipline studies the formation of students' skills in working with specialized software tools designed to automate the design and development of various facilities in the oil and gas industry. These systems can improve the accuracy and speed of design, improve coordination between different departments, and effectively manage data and documentation.	Engineering geology, hydrogeology and soil mechanics, Geoinformation systems in geology and hydrogeology, Bridges and tunnels on highways..	Minor program 3, Final certification.
		Organization and planning of construction of transport facilities					The discipline studies the formation of students' analysis and risk management related to the operation of pipelines, as well as the development of measures aimed at minimizing the likelihood of their destruction or emergency situations. Key aspects include the following.	Road construction machinery and equipment, Artificial structures on highways, Minor program 1.	Minor program 3, Final certification.

BD	KB	Organization of transport construction	150	5	8	LO 7	The discipline studies the formation of students' knowledge about the purpose of pipeline systems that ensure uninterrupted and safe transportation of various substances (oil, gas, chemical and other liquids) for a long time while minimizing the risk of accidents, breakdowns and failures.	Road construction machinery and equipment, Artificial structures on highways, Minor program 1.	Minor program 3, Final certification.
BD	KB	Diagnostics of oil and gas facilities					The discipline studies the formation of students' knowledge and skills necessary to assess the technical condition of oil and gas infrastructure facilities. This includes the study of methods and tools for diagnosis, control and monitoring of the condition of structures, equipment and systems used in the oil and gas industry. An important task is to identify defects, corrosion, cracks and other damages at an early stage, which helps prevent accidents, improve operational safety and extend the service life of facilities.	Technology of construction of oil and gas facilities. Technological processes of construction of oil and gas facilities. Organization and planning of construction of transport facilities. Organization of construction production. Regulatory and technical documentation in the oil and gas industry. Minor program 2.	Maintenance and repair of oil and gas storage facilities. Production practice 2/ Pre-graduate practice. Estimated pricing in architecture and construction. Minor program 3.
		Monitoring of the technical condition of oil and gas facilities					The discipline studies the formation of students' knowledge and skills necessary for conducting regular inspections, diagnostics and monitoring of the condition of oil and gas infrastructure facilities. This includes the study of control methods and technologies aimed at timely detection of defects, damage and wear of structures, equipment and systems. An important task is to ensure the safety of operation, prevent accidents and breakdowns, as	Technology of construction of oil and gas facilities. Technological processes of construction of oil and gas facilities. Organization and planning of construction of	Maintenance and repair of oil and gas storage facilities. Production practice 2/ Pre-graduate practice. Estimated pricing in architecture and construction. Minor program 3.

							well as optimize maintenance and repair processes in order to increase the service life of facilities and minimize the cost of their operation.	transport facilities. Organization of construction production. Regulatory and technical documentation in the oil and gas industry. Minor program 2.	
BD	KB	Information modeling technology in architecture and construction					The discipline studies the formation of students' knowledge and skills necessary for conducting regular inspections, diagnostics and monitoring of the condition of oil and gas infrastructure facilities. This includes the study of control methods and technologies aimed at timely detection of defects, damage and wear of structures, equipment and systems. An important task is to ensure the safety of operation, prevent accidents and breakdowns, as well as optimize maintenance and repair processes in order to increase the service life of facilities and minimize the cost of their operation.	Fundamentals of reliability of pipeline systems. Technological reliability of main pipelines. Technology of construction of oil and gas facilities. Technological processes of construction of oil and gas facilities.	Automated design of oil and gas facilities. Automated design systems for oil and gas facilities. Machinery and equipment for the construction and repair of oil and gas facilities. Machines and mechanisms in pipeline construction. Organization and planning of construction of transport facilities. Organization of construction production.
		Minor program 1					The first of the three disciplines, which allows you to form additional professional competencies in various subject areas. The program allows students to study disciplines in another field of knowledge that complements their main specialization (major). This helps to develop interdisciplinary thinking and provides an opportunity to gain additional skills and knowledge that may be useful in the future. In general, the aim is to provide students with the opportunity to expand their professional training, improve interdisciplinary skills and increase their competitiveness in the labor market..	Fundamentals of reliability of pipeline systems. Technological reliability of main pipelines. Technology of construction of oil and gas facilities. Technological processes of construction of oil and gas facilities.	Automated design of oil and gas facilities. Automated design systems for oil and gas facilities. Machinery and equipment for the construction and repair of oil and gas facilities. Machines and mechanisms in pipeline construction. Organization and planning of construction of transport facilities. Organization of construction production.

		Regulatory and technical documentation in the oil and gas industry					The discipline studies the formation of students' knowledge and skills necessary to understand and apply the regulatory and technical documentation governing the design, construction, operation and safety of oil and gas infrastructure facilities. This includes the study of standards, technical regulations, norms and rules, as well as the ability to work effectively with various types of documentation that ensure compliance with legal requirements, industrial safety and quality at all stages of the life cycle of oil and gas facilities. An important task is to train specialists who are able to correctly interpret and implement regulatory requirements to ensure safe, efficient and environmentally sustainable activities in the industry.	Fundamentals of reliability of pipeline systems. Technological reliability of main pipelines. Technology of construction of oil and gas facilities. Technological processes of construction of oil and gas facilities. Information modeling technology in architecture and construction. Minor program 1.	Automated design of oil and gas facilities. Automated design systems for oil and gas facilities. Machinery and equipment for the construction and repair of oil and gas facilities. Machines and mechanisms in pipeline construction. Organization and planning of construction of transport facilities. Organization of construction production. Estimated pricing in architecture and construction. Minor program 3.
		Minor program 2	90	3	8		The second of the three disciplines, which allows you to form additional professional competencies in various subject areas.. The program helps to develop skills that are useful in various professions, such as analytical skills, information processing, critical thinking and creativity. This makes students more flexible and ready to solve complex tasks in different fields and at that time.	Fundamentals of reliability of pipeline systems. Technological reliability of main pipelines. Technology of construction of oil and gas facilities. Technological processes of construction of oil and gas facilities. Information modeling technology in architecture and construction. Minor program 1.	Automated design of oil and gas facilities. Automated design systems for oil and gas facilities. Machinery and equipment for the construction and repair of oil and gas facilities. Machines and mechanisms in pipeline construction. Organization and planning of construction of transport facilities. Organization of construction production. Estimated pricing in architecture and construction. Minor program 3.
		Estimated pricing in architecture and construction					The discipline studies the formation of students' knowledge and skills related to the process of determining the cost of construction, repair and reconstruction of facilities based on the calculation of all costs associated with the performance of work and the use of materials. Estimated pricing includes the development of estimates that help to accurately plan costs,	Automated design of oil and gas facilities. Automated design systems for oil and gas facilities. Machinery and equipment for the construction and repair of oil and gas facilities.	Maintenance and repair of oil and gas storage facilities. Production practice 2/ Pre-graduate practice. Diagnostics of oil and gas facilities. Monitoring of the technical condition of oil and gas facilities.

BD	KB						assess the financial needs of the project and effectively manage resources at all stages of construction.	Machines and mechanisms in pipeline construction. Organization and planning of construction of transport facilities. Organization of construction production. Regulatory and technical documentation in the oil and gas industry. Minor program 2.	
		Minor program 3					The third of the three disciplines, which allows you to form additional professional competencies in various subject areas. The minor program gives students the opportunity to explore an additional area of knowledge that may be useful for their main profession. This helps to create a more harmonious and broad education, where knowledge from related disciplines is integrated with the main specialization in the oil and gas industry.	Automated design of oil and gas facilities. Automated design systems for oil and gas facilities. Machinery and equipment for the construction and repair of oil and gas facilities. Machines and mechanisms in pipeline construction. Organization and planning of construction of transport facilities. Organization of construction production. Regulatory and technical documentation in the oil and gas industry. Minor program 2.	Maintenance and repair of oil and gas storage facilities. Production practice 2/ Pre-graduate practice. Diagnostics of oil and gas facilities. Monitoring of the technical condition of oil and gas facilities.
BD	KB	Service to society					The discipline studies the formation of students' knowledge and skills necessary for active participation in society. One of the manifestations of such activity is service to	Physical Culture. Foreign language. Kazakh (Russian) language. Engineering	FINAL CERTIFICATION

							society — voluntary activity for the benefit of other people and society as a whole. This can take various forms: helping those in need, participating in charity, volunteering, protecting the environment, as well as working in the fields of education, healthcare, and culture. Such forms of service contribute to the development of social responsibility, humanity and civic engagement.	mathematics 1. Construction Physics. Engineering graphics and computer modeling. Theoretical mechanics. Fundamentals of classical mechanics	
		Business communications	30	1	1		The discipline studies the formation of students' knowledge and skills necessary for successful interaction in a professional environment. One of the key aspects is the process of information exchange between people in the business sector in order to achieve common goals. Such business communications include both oral and written communication, and can occur both within an organization (internal communications) and outside it (external communications). Effective mastery of these skills contributes to productive work, mutual understanding and the development of business relationships.	Physical Culture. Foreign language. Kazakh (Russian) language. Engineering mathematics 1. Construction Physics. Engineering graphics and computer modeling. Theoretical mechanics. Fundamentals of classical mechanics	FINAL CERTIFICATION

10. Expert opinions

ЭКСПЕРТНОЕ ЗАКЛЮЧЕНИЕ на образовательную программу «6B07177 – НЕФТЕГАЗОВАЯ ТРАНСПОРТНАЯ ИНЖЕНЕРИЯ»

Реализация образовательной программы «6B07177 – Нефтегазовая транспортная инженерия» 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 Акционерное общество «Волковгеология»

Образовательные траектории разработаны в соответствии с запросами транспортно-коммуникационной отрасли Строительство нефтегазовых сооружений»

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.

**Главный специалист АО
«Волковгеология»**



Кудабаев Б.А.,

ЭКСПЕРТНОЕ ЗАКЛЮЧЕНИЕ
на образовательную программу «6В07177 – НЕФТЕГАЗОВАЯ
ТРАНСПОРТНАЯ ИНЖЕНЕРИЯ»

Реализация образовательной программы «6В07177 – Нефтегазовая транспортная инженерия» 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 Акционерное общество «Волковгеология»

Образовательные траектории разработаны в соответствии с запросами транспортно-коммуникационной отрасли «Строительство нефтегазовых сооружений»

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 «6В07177 – Нефтегазовая транспортная инженерия» по направлению подготовки кадров «6В071 – Инженерия и технические науки», полностью соответствует требованиям ГОСО, имеет четкую последовательность при разработке, отвечает современным запросам рынка труда, профессиональным стандартам и может быть реализована для подготовки кадров по образовательной программе «6В07177 – Нефтегазовая транспортная инженерия по направлению «В165 – Магистральные сети и инфраструктура»

Эксперт

Главный инженер ТОО «Нурлы Кала 2030»
Рабат Д.К.

Рабат Д.К.



ЭКСПЕРТНОЕ ЗАКЛЮЧЕНИЕ

на образовательную программу «6В07177 – Нефтегазовая транспортная инженерия»

Руководство ТОО «Научно-внедренческий центр «Алмас» в лице Смахов Н.Ж., ознакомились с содержанием образовательной программы «6В07177 – Нефтегазовая транспортная инженерия» 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.

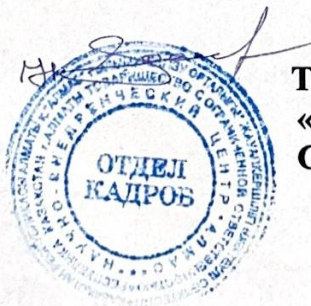
В учебном плане образовательной программы определен перечень всех учебных дисциплин обязательного компонента и компонента по выбору, трудоемкость каждой учебной дисциплины в кредитах, последовательность их изучения, виды учебных занятий и формы контроля. Актуально изучение вопросов экологической обстановки и обеспечение условий безопасной трудовой деятельности на предприятиях.

Образовательные траектории разработаны в соответствии с запросами транспортно-коммуникационной отрасли «Строительство нефтегазовых сооружений»

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 «6В07177 – Нефтегазовая транспортная инженерия» по направлению подготовки кадров «6В071 – Инженерия и технические науки», полностью соответствует требованиям ГОСО, имеет четкую последовательность при разработке, отвечает современным запросам рынка труда, профессиональным стандартам и может быть реализована для подготовки кадров по образовательной программе «6В07177 – Нефтегазовая транспортная инженерия» по направлению «6В071 – Инженерия и технические науки»

Работодатель



ТОО «Научно-внедренческий центр
«Алмас» Директор к.т.н.,(РФ), PhD
Смахов Н.Ж.

11. REVIEWER'S CONCLUSION

Рецензия на образовательную программу по направлению подготовки «6В07177 – Нефтегазовая транспортная инженерия»

Образовательная программа (бакалавриат) «6В07177 – Нефтегазовая транспортная инженерия» 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 внутри вузовского компонента полностью отражают преемственность дисциплин: 1. Нефтегазопроводы; 2. Нефтегазохранилища; 3. Проектирование нефтегазопроводных систем.

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 технические науки».

Эксперт



Директор ТОО «Нурлы Кала 2030»

Абайхан Ербулан

**Рецензия
на образовательную программу
по направлению подготовки «6В07177 – Нефтегазовая
транспортная инженерия»**

Образовательная программа (бакалавриат) «6В07177 – Нефтегазовая транспортная инженерия» 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 внутри вузовского компонента полностью отражают преемственность дисциплин: 1. Нефтегазопроводы; 2. Нефтегазохранилища; 3. Проектирование нефтегазопроводных систем.

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 технические науки».

Эксперт



Директор ТОО «Нурлы Кала 2030»
Абайхан Ербулан

Рецензия
на образовательную программу
по направлению подготовки «6В07177 – Нефтегазовая транспортная инженерия»

Образовательная программа (бакалавриат) «6В07177 – Нефтегазовая транспортная инженерия» 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. Нефтегазопроводы; 2. Нефтегазохранилища; 3. Проектирование нефтегазопроводных систем.

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



ТОО «GEO TRACK»
Куандыков Батырбек.

12. LETTERS OF RECOMMENDATION

Акционерное общество
«Волковгеология»

Уважаемый (ая) Меруерт Советовна

Руководство «АО Волковгеология» в лице Главный специалист АО «Волковгеология» Кудабаяв Б.А., ознакомилось с содержанием образовательной программы «6B07177 – Нефтегазовая транспортная инженерия» 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. Нефтегазопроводы; 2. Нефтегазохранилищ; 3. Проектирование нефтегазопроводных систем.

- увеличить количество часов, выделяемых на проведение производственных практик;

включить дисциплины:

- Нефтегазопроводы;
- Нефтегазохранилищ;
- Проектирование нефтегазопроводных систем.

Работодатель



Главный специалист АО
«Волковгеология» Кудабаяв Б.А.

ТОО «GEO TRACK»

Уважаемый (ая) Меруерт Советовна

Руководство ТОО «GEO TRACK» в лице Директора ТОО «GEO TRACK» Нусупова Джетыбай Кожобековича ознакомилось с содержанием образовательной программы «6B07177 – Нефтегазовая транспортная инженерия» 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. Нефтегазопроводы; 2. Нефтегазохранилищ; 3. Проектирование нефтегазопроводных систем.

- увеличить количество часов, выделяемых на проведение производственных практик;

включить дисциплины:

- Нефтегазопроводы;
- Нефтегазохранилищ;
- Проектирование нефтегазопроводных систем.

Эксперт



Главный инженер ТОО «Нурлы Кала 2030»
Рабат Д.К.

**ТОО «Научно-внедренческий
центр «Алмас»**

Уважаемый (ая) Меруерт Советовна

Руководство «АО Волковгеология» в лице Директор ТОО «Научно внедренческий центр «Алмас» ознакомилось с содержанием образовательной программы «6B07177 – Нефтегазовая транспортная инженерия» 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. Нефтегазопроводы; 2. Нефтегазохранилищ; 3. Проектирование нефтегазопроводных систем.

- увеличить количество часов, выделяемых на проведение производственных практик;

включить дисциплины:

- Нефтегазопроводы;
- Нефтегазохранилищ;
- Проектирование нефтегазопроводных систем.

Работодатель



**ТОО «Научно-внедренческий центр
«Алмас» Директор к.т.н.,(РФ), PhD
Смашов Н.Ж.**

13. REVIEW AND APPROVAL PROTOCOLS

Акционерная общество «АЛТ университет имени Мухаметжана Тынышбаева»

ПРОТОКОЛ №7 (начало формирования ОП)

Заседания

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

г. Алматы

«18» 02 2025 года

Председатель: Кулманов К.С.

Секретарь: Бегежанова Г.С.

Присутствовали: члены Академического комитета, ведущие ППС кафедры

Представители с производства: Главный технолог АО «Волковгеология» Кудабаяв Б.А., Директор ТОО «Научно-внедренческий центр» Смашов Н.Ж.

Обучающиеся: Жауынбай Ж.

ПОВЕСТКА ДНЯ:

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

По первому вопросу

ВЫСТУПИЛ(а):

Зав. кафедр Кулманов К.С. 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 специалист АО «Волковгеология» Кудабаяв 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 Джумагалиев Т.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 кафедр Кулманов К.С. с предложением заслушать представителей работодателей и обучающихся по включению новых дисциплин в КЭД и РУП приема 2025г.

По второму вопросу
ВЫСТУПИЛ(а): зав кафедр Кулманов К.С. с предложением заслушать представителей работодателей и обучающихся по включению новых дисциплин в КЭД и РУП приема 2025г.

ВЫСТУПИЛ: Главный специалист АО «Волковгеология» Кудабаяв Б.А.,
Организация 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 Сатан А.

Считаем необходимым включить в РУП следующие дисциплины: Нефтегазопроводы, Нефтегазохранилищ, Проектирование нефтегазопроводных систем.

ПОСТАНОВИЛИ:

1. Информацию принять к сведению;
2. Учесть предложения и рекомендации работодателей и обучающихся;
3. Рассмотреть включение в РУП следующие дисциплины: Нефтегазопроводы, Нефтегазохранилищ, Проектирование нефтегазопроводных систем.

Председатель

Секретарь:



Кулманов К.С.

Бегежанова Г.С.

ПРОТОКОЛ №8 (перед утверждением ОП на УС)

Заседания УМБ института «Транспорт и строительство»

г. Алматы

«17» 03 2025 года

Председатель: Абдрешов Ш.А.

Секретарь: Мурзалина Г.Б.

Присутствовали: члены УМБ, члены Академического комитета

Представители с производства: Главный специалист АО «Волковгеология»
Кудабаев Б.А., Директор ТОО «Научно-внедренческий центр» Смашов Н.Ж.

Обучающиеся: Сатан А.

ПОВЕСТКА ДНЯ:

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

ВЫСТУПИЛ(а): зав. кафедр Кулманов К.С.. представил (а) на рассмотрение КЭД, РУП бакалавриата, магистратуры и докторантуры.

На кафедре «Архитектурно-строительная инженерия» было проведено заседание с привлечением представителей работодателей и обучающихся по обсуждению структуры и содержанию образовательной программы 6B07177 – Нефтегазовая транспортная инженерия

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

Секретарь:



Абдрешов Ш.А.

Мурзалина Г.Б.

14. APPROVAL SHEET

No	Full name	Place of work/study	Post	Date of approval	Signature
	Синелва А.З	УГУС	директор	18.02.2025	[Signature]
	Дайраев К.Ж	УМУБ	директор	18.02.2025	[Signature]
	Токмонова А.М	УКУС	директор	18.02.2025	[Signature]
	Андраимов А.С	АЛТ University	Head of Dept	18.02.2025	[Signature]
	Ширетова Р.Т.	АЛТ University	Head of Dep	18.02.2025	[Signature]
	Касымов Д.Т	МГУ University	Head of Dep	18.02.2025	[Signature]
	Смаилов Р.Д	АЛТ University	Head of LE	18.02.2025	[Signature]
	Мусамбаев Р.	Д. каф. ТГУД	зав. каф.	18.02.2025	[Signature]
	Токмонов Б.	Б. каф. АТСУБ	зав. каф.	18.02.2025	[Signature]
	Карымсакбаева Н.	каф. АЗ	зав. каф.	18.02.2025	[Signature]
	Кыменов К.С	каф. АС	зав. каф.	18.02.2025	[Signature]

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