

Joint Stock Company Academy of Logistics and Transport



APPROVE
S. ALT decision dated
2023_ (Protocol №)
President-Rector
Amirgalieva S.N.

EDUCATIONAL PROGRAM

Name: " 6B07329– Construction of Industrial and Civil Buildings and Structures"

Level of training: bachelor's degree

Code and classification of areas of training: 6B073 – Architecture and Civil engineering

Code and group of educational programs: B074 – Urban planning, construction work and civil engineering

Date of registration in the Register: 05.12.2023 _____

Registration number: _6B07300185 _____

Almaty, 2023

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

1 DEVELOPED BY:		
<u>Associate Professor</u> (position)	 (signature)	Alimkulov M.M. (Full name.)
<u>Associate Professor IEC</u> <u>KazGASA</u> (position)	 (signature)	Aubakirova B.M. (Full name.)
<u>Associate Professor</u> (position)	 (signature)	Ibraimov A.K. (Full name.)
<u>Assistant Professor</u> (position)	 (signature)	Dzheksenbaev E.K. (Full name.)
<u>Student gr. ADA-21-2</u> (position)	 (signature)	Orazbaeva M. (Full name.)
2 EXPERTS:	(at least 2)	
<u>Director LLP "Qazaqplan "</u> (position)	 (signature)	Akeshiev A.I. (Full name.)
<u>Director LLP « All Geo "</u> (position)	 (signature)	Zhumabekov A.S. (Full name.)
3 REVIEWER:	(at least 1)	
<u>Director LLP "Nurly Kala 2030"</u> (position)	 (signature)	Abaykhan E. (Full name.)
4 REVIEWED AND RECOMMENDED:		
Meeting of the AC (department) "SI" Protocol No. <u>6</u> " <u>15</u> " <u>03</u> 20 <u>23</u> g)	 (signature)	Ismagulova S.O. (Full name.)
Meeting of KOC-UMB "TI" Protocol No. <u>7</u> " <u>15</u> " <u>03</u> 20 <u>23</u> g)	 (signature)	Chigambaev T.O. (Full name.)
UMC meeting Protocol No. <u>9</u> " <u>29</u> " <u>03</u> 20 <u>23</u> g)	 (signature)	Zharmagambetova M.S. (Full name.)

5 APPROVED by the decision of the Academic Council of "30" 03 2023 y. No. 13

6 INTRODUCED for the first time (updated)

2. Normative references

1. The educational program is developed on the basis of the following regulations and professional standards:

2. Law of the Republic of Kazakhstan “On Education” dated July 27, 2007 No. 319-III (as amended and supplemented as of March 27, 2023) .

3. 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. Industry qualifications framework for the field of “Education”, approved by the Minutes of the meeting of the industry 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 compulsory standard of higher education (Order of the Minister of Science and Higher Education of the Republic of Kazakhstan dated February 20, 2023 No. 66) .

6. Qualification reference book for 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 for organizing the educational process on credit technology of education in organizations of higher and (or) postgraduate education, approved by Order of the Minister of the Ministry of Education and Science of the Republic of Kazakhstan No. 152 dated April 20, 2011 (with additions and changes dated April 4, 2023 No. 145).

8. Classifier of areas of training for personnel 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 5, 2020).

9. Algorithm for inclusion and exclusion of educational programs in the Register of educational programs of higher and postgraduate education, approved by Order of the Minister of Education and Science of the Republic of Kazakhstan dated December 4, 2018 No. 665 (with additions and changes as of December 23, 2020 No. 536) .

9. RI-ALT-33 “Regulations on the procedure for developing an educational program for higher and postgraduate education . ”

3. PASSPORT OF THE EDUCATIONAL PROGRAM

No	Field name	Note
1	Registration number	6B07300185
2	Code and classification of field of education	6B07 Engineering, manufacturing and construction industries
3	Code and classification of areas of training	6B073 – Architecture and construction
4	Code and group of educational programs	B074 Town planning, civil works and civil engineering
5	Name of educational program	6B07329 – Construction of industrial and civil structures
6	Type of OP	New
7	Purpose of the OP	Training of highly qualified specialists with a modern level of knowledge in the field of construction of industrial and civil buildings and structures, capable of fully satisfying the demands of the labor market and society.
8	ISCED level	6
9	Level according to NQF	6
10	ORK level	6
11	Distinctive features of the OP	<i>No</i>
	Partner university (SOP)	-
	Partner university (DDOP)	-
12	Form of study	Full-time, full-time with transfer to preschool education
13	Language of instruction	Kazakh, Russian
14	Volume of loans	241
15	Academic degree awarded	Bachelor of Engineering and Technology in the educational program “6B07329 – Construction of industrial and civil structures”
16	Availability of an annex to the license for the direction of personnel training	<i>KZ12LAA00025205 (010)</i>
17	Availability of EP accreditation	Available
	Name of accreditation body	Independent Quality Assurance Agency in Education (IQAA)
	Validity period of accreditation	

4. COMPETENCE MODEL OF A GRADUATE

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

Objectives of the educational program :

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

Learning outcomes:

PO1 - Demonstrate knowledge of mathematical and physical methods, measurement of electrical quantities during the operation of buildings and structures.

PO2 - Apply basic laws and theorems to create a physical and mathematical model of the process under study and methods in calculating the strength, stability and durability of buildings and structures.

PO3 - Be able to select building materials according to properties, conditions of use and purpose, particle size distribution and chemical properties for the design of building structures, demonstrating knowledge of the basic theory of soil mechanics, strength and stability of buildings and structures.

PO4 - Develop a topographic survey project for drawing up a general plan for the design of buildings and architectural structures using information and communication technologies (for example, Python , Java , etc.).

PO5 - Use modern methods and knowledge to ensure life safety, environmental protection and ecology using safe labor practices in the field of modern resource-saving technologies when operating transport infrastructure facilities for energy saving, water saving , heat saving .

PO6 - Select data from theoretical economic knowledge to develop economic analysis skills using models and patterns of enterprise economic science, to structure data and build interactive dashboards , VI technology models, using time resource management.

PO7 - Select technological processes of construction production for the construction of buildings and structures using effective building materials, products, structures and digital diagnostic tools for construction projects.

PO8 - Confirm knowledge of the provisions for the development of measures for planning, organizing and managing processes at all stages of general construction work using

lifting mechanisms, construction machines and equipment for excavation, drilling and piling works, fulfilling the conditions for further technical operation of buildings and structures during internships in construction enterprises .

PO9 - Develop projects of buildings and structures using various research methods (using the example of a “smart home”) in compliance with the fundamentals of law and the exclusion of corruption components and the main provisions of transport support for logistics systems, with the preparation of documents in the state, Russian, and English languages (at the request of the customer).

PO10 - Highlight priorities in the calculation of limit states of building structures during the operation and reconstruction of structures for their ventilation, gas supply, drainage, water supply using virtual programs (Revit , Navisworks , Microsoft Project , Primavera , SketchUp , InfraWorks).

PO11 - Apply knowledge of social and ethical values, the role of spiritual processes in society, moral and physical processes to effectively work in a team and lead a team of like-minded people to form a corporate culture aimed at professional growth.

Field of professional activity: It includes the design, construction, reconstruction and operation of various facilities, such as plants, factories, warehouses, office buildings, shops, residential buildings and other structures related to the construction industry.

Objects of professional activity:

- development of architectural and structural projects, creation of drawings and specifications, as well as performing calculations to ensure the safety and reliability of structures.
- organization and coordination of construction work, including preparation of the construction site, construction of the foundation, installation of load-bearing structures, installation of communications, finishing work and other processes related to the creation of structures.
- planning and monitoring the progress of construction, managing budgets and resources, coordinating the work of various contractors and specialists, ensuring compliance with building codes and standards.
- assessing the quality of building materials, testing and monitoring compliance with standards, ensuring safety on the construction site and compliance with regulatory requirements.
- carrying out maintenance and repair of structures, monitoring the operation of engineering systems, managing energy resources, ensuring the safety and comfort of users.

Types of professional activities:

- design;
- construction;
- project management;
- quality and safety;
- operation and maintenance.

Functions of professional activity:

- 1) Design and Planning: Develop architectural and engineering designs for structures, including defining requirements, creating drawings, selecting materials and technologies, and planning construction phases.
- 2) Construction and installation: Organization and implementation of construction work in accordance with the project, installation of load-bearing structures, installation of engineering systems, finishing work and installation of equipment.
- 3) Quality control: Assessing the quality of building materials, monitoring the compliance of work with design solutions and building codes, conducting tests and monitoring the implementation of technical requirements.
- 4) Project management: Planning and coordination of construction progress, resource allocation, budget control, management of a team of specialists and contractors.
- 5) Safety on a construction site: Ensuring compliance with rules and regulations on labor protection and safety on a construction site, preventing accidents and incidents.

6) Operation and maintenance: Ensuring the correct operation of finished structures, maintenance, repair and replacement of worn-out elements, management of engineering systems.

7) Accounting and documentation: Maintaining documentation on the progress of construction, accounting for materials and costs, as well as drawing up reports on work performed and results achieved.

8) Interaction with customers and counterparties: Communication with customers, government officials, contractors, consultants and other stakeholders.

Application of innovations and new technologies: Introduction of modern construction methods, technologies and innovative solutions to improve the efficiency and quality of work.

The list of specialist positions: civil engineer, architect, technical director, construction site manager, head of the capital construction department, head of the production (technical, production-technical) department, head of the section (shop), head of the logistics department, head of the labor safety and health department, head of the labor standard research laboratory, head of the tool department, head of production laboratories (for production control), construction foreman, foreman, work foreman (foreman), industrial training foreman, project manager, project manager, leading engineer, operation and maintenance engineer, design engineer, process engineer (technologist), software engineer repair, inventory engineer of buildings and structures, metrology engineer, labor organization engineer, labor standards engineer, occupational safety and health engineer, environmental protection engineer (ecologist), laboratory engineer, engineer, quality engineer, chief specialist, leading specialist, specialist, designer, design technician, site technician, process technician, building inventory technician, metrology technician, labor technician, technician, laboratory technician, laboratory assistant.

Professional certificates received upon completion of training:

Certificate of Construction Competence: This certificate confirms that the specialist has the necessary knowledge and skills to work in the field of construction of industrial and civil structures.

Certificate in Project Management: This certificate validates knowledge and ability to apply the principles and techniques of project management in the construction industry.

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

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

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

Educational practice (geodetic)

The organization of educational practice is aimed at ensuring that bachelors are familiar with the areas of professional activity and training profiles, with the ability to geodetic survey of terrain, forward and backward travel, leveling survey, reference to benchmarks, carrying out points and elevation marks from the map, solving typical engineering and geodetic problems, as well as visiting a branch of the department on the basis of the limited liability partnership. Form of control - report protection.

Production practice

The main objectives of industrial practice are: consolidation of theoretical knowledge and practical skills in the chosen educational program in a production environment, gaining experience in organizational work, obtaining a working specialty, developing practical skills and competencies in the process of mastering the bachelor's program. Conducted in practice bases at enterprises in accordance with this educational program. Form of control - report protection.

Pre-graduation/industrial practice

The purpose of internship for bachelors is to ensure the relationship between theoretical knowledge acquired through mastering the chosen educational program and practical activities. The objectives of this practice are to consolidate and deepen the theoretical knowledge acquired by students during the learning process, collect information for writing a final qualifying work, study best practices at the enterprise, as well as gain experience in independent research work,

mastering a variety of methods of scientific work. Conducted in practice bases at enterprises in accordance with this educational program. Form of control - report protection.

Final certification

The goals of the thesis are to identify the degree to which the bachelor has mastered the content of the educational program, test his readiness for independent activities in the area of the educational program, consolidate and deepen practical work skills. A comprehensive exam is also required.

5. MATRIX FOR CORRELATION OF LEARNING RESULTS IN THE EDUCATIONAL PROGRAM WITH ACADEMIC DISCIPLINES/MODULES

No.	Name of the discipline	Number of credits	Matrix for correlating learning outcomes in the educational program with academic disciplines											
			ON1	ON2	ON3	ON4	ON5	ON6	ON7	ON8	ON9	ON10	ON11	ON12
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	History of Kazakhstan	5	+											
2	Philosophy	5	+											
3	Foreign language	10				+								
4	Kazakh (Russian) language	10				+								
5	Information and communication technologies	5					+							
Socio-political knowledge module		8	+											
6	Sociology	2	+											
7	Cultural studies	2	+											
8	Political science	2	+											
9	Psychology	2	+											
10	Physical Culture	8	+											
eleven	Ecology and life safety	5					+							
12	Scientific Research Methods	5									+		+	
13	Fundamentals of Economics and Entrepreneurship	5							+					
14	Fundamentals of law and anti-corruption culture	5									+		+	
15	Engineering mathematics	9	+											
16	applied Physics	9	+											
17	Basics of computer modeling	6				+								
18	Construction Materials	6			+									
19	Geology, soil mechanics, bases and foundations	6			+									
20	Typology of buildings and structures	6			+									
21	Electrical engineering and electronics fundamentals	6	+											
22	Occupational Safety and Health	6					+							
23	Educational practice (godetic)													
24	Theoretical mechanics	6		+										
25	Engineering mechanics 1	6		+										
26	Strength of materials	6		+										
27	Engineering mechanics 2	6		+										
28	Structural mechanics	6		+										
29	Engineering mechanics 3	6		+										
thirty	The engineering geodesy	6				+								
31	Basics of geoinformatics	6				+								
32	Basics of design of buildings and structures	6									+			
33	Introduction to construction design	6				+								
34	Construction machinery and equipment	6								+				
35	Construction mechanization	6								+				
36	Building construction	9			+									
37	Basics of calculation of limit states of building structures	9										+		
38	Basics of water supply and	6										+		

6 . STRUCTURE OF THE BACHELOR'S EDUCATIONAL PROGRAM

No.	Name of discipline cycles	Total labor intensity	
		in academic hours	in academic credits
1	Cycle of general education disciplines (GED)	1680	56
1)	Required component	1530	51
	History of Kazakhstan	150	5
	Philosophy	150	5
	Foreign language	300	10
	Kazakh (Russian) language	300	10
	Information and communication technologies	150	5
	Module of socio-political knowledge (sociology, political science, cultural studies, psychology)	240	8
	Physical Culture	240	8
2)	University component and (or) elective component	150	5
2	Cycle of basic and major disciplines (DB, PD)	at least 5280	at least 176
1)	University component and (or) elective component		
2)	Professional practice		
3	Additional types of training (ADE)		
1)	Component of choice		
4	final examination	at least 240	at least 8
	Total	at least 7230	at least 240

7. WORKING CURRICULUM FOR THE ENTIRE PERIOD OF STUDY

АО "Академия логистики и транспорта"

УЧЕБНЫЙ ПЛАН

Форма обучения: очная

Направление подготовки:
6В073 – Архитектура и строительство

Группа образовательных программ:
В074 – Градостроительство, строительные работы и гражданское строительство

Наименование образовательной программы:
6В07329 – Строительство промышленных и гражданских сооружений

Степень: бакалавр техники и технологий



Срок обучения: 4 года

Прием: 2023 год

№	Код дисциплины	Наименование циклов и дисциплин	Общая трудоемкость		Форма контроля, семестр		Объем учебной нагрузки, контактные часы						Распределение по семестрам								Закрепление за кафедрой		
			в академических часах	в академических кредитах	Экзамен	КП (КР)	Всего часов	Аудиторные			СРО		1 курс		2 курс		3 курс		4 курс				
								лекции	практические	лабораторные	СРОП	СРО	1 сем. 15 недель	2 сем. 15 недель	3 сем. 15 недель	4 сем. 15 недель	5 сем. 15 недель	6 сем. 15 недель	7 сем. 15 недель	8 сем. 7 недель		9 сем. 8 недель	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
ЦИКЛ ОБЩЕОБРАЗОВАТЕЛЬНЫХ ДИСЦИПЛИН (ООД):																							
1.	Обязательный компонент:		1530	51	13		1530	120	358	15	120	917	21	16	7	7	0	0	0	0	0	0	СГДиФВ
1.1.1.	23-0-В-ОК-Ж	История Казахстана	150	5	3		150	30	15		8	97			5								СГДиФВ
1.1.2.	23-0-В-ОК-Фил	Философия	160	5	4		150	30	15		8	97			5								ЯП
1.1.3.	23-0-В-ОК-Яз	Иностранный язык	300	10	1,2		300		90		16	194	5	5									ЯП
1.1.4.	23-0-В-ОК-К(Р)Уа	Казахский (Русский) язык	300	10	1,2		300		90		16	194	5	5									ИКТ
1.1.5.	23-0-В-ОК-ИКТ	Информационно-коммуникационные технологии	150	5	1		150	30		15	8	97	5										
1.1.6.	23-0-В-ОК-Соц	Модуль социально-политических знаний:	240	8	1,2		240	7	15		8	30			4								СГДиФВ
		Социология																					
		Культурология																					
		Политология																					
23-0-В-ОК-Пси	Психология					8	15		8	29			4									СГДиФВ	
1.1.7.	23-0-В-ОК-ФК	Физическая культура	240	8	1,2,3,4		240		88		32	120	2	2	2	2							СГДиФВ
1.2.	Компонент по выбору:		150	5	1	0	150	30	15	0	8	97	0	0	5	0	0	0	0	0	0	0	
1.2.1.	23-0-В-КВ-ЕВGD	Модуль компонента по выбору ООД:	150	5	3		150	30	15		8	97			5								АТСиБЖД
		Экология и безопасность жизнедеятельности																					
		Методы научных исследований																					
		Основы экономики и предпринимательства																					
23-0-В-КВ-ОРАК	Основы права и антикоррупционной культуры																					СГДиФВ	
ВСЕГО по циклу ООД:			1680	56	14	0	1680	150	373	15	128	1014	21	16	12	7	0	0	0	0	0	0	
ЦИКЛ БАЗОВЫХ ДИСЦИПЛИН (БД):																							
2.1.	Вузовский компонент:		1680	56	9		1680	270	195	75	64	1016	9	15	6	2	6	12	6	0	0		
2.1.1.	23-0-В-ВК-М	Инженерная математика	270	9	2		270	45	45		8	172		9									СИ
2.1.2.	23-0-В-ВК-ФФ	Прикладная физика	270	9	1		270	45	30	15	8	172	8										СИ
2.1.3.	23-0-В-ВК-ОКМ	Основы компьютерного моделирования	180	6	2		180	30	30		8	112		6									ИКТ
2.1.4.	23-0-В-ВК-СтрMat	Строительные материалы	180	6	3		180	30	15	15	8	112			6								СИ
2.1.5.	23-0-В-ВК-ГМСOF	Геология, механика грунтов, основания и фундаменты	180	6	5		180	30	15	15	8	112					6						СИ
2.1.6.	23-20/30-В-ВК-TZS	Типология зданий и сооружений	180	6	6		180	30	30		9	112						6					Э
2.1.7.	23-0-В-ВК-ЕОЕ	Электротехника и основы электроники	180	6	6		180	30	15	15	8	112							6				СИ
2.1.8.	23-0-В-ВК-ОТ	Охрана труда	180	6	7		180	30	15	15	8	112								6			АТСиБЖД
2.1.9.	23-0-ВК-UPr(g)	Учебная практика (геодезическая)	60	2	4		60								2								СИ
2.2.	Компонент по выбору:		1080	36	6		1080	150	150	60	48	672	0	0	12	12	12	12	0	0	0	0	
2.2.1.	23-0-В-ВК-ТМeh	Теоретическая механика	180	6	3		180	30	30		8	112			6								СИ
	23-0-В-ВК-ИМeh1	Инженерная механика 1																					
2.2.2.	23-0-В-ВК-СMat	Сопротивление материалов	180	6	4		180	15	30	15	8	112			6								СИ
	23-0-В-ВК-ИМeh2	Инженерная механика 2																					

2.2.3.	23-0-B-KV-BMeh	Строительная механика	180	6	5		180	30	30		8	112																									СИ
	23-0-B-KV-IMeh3	Инженерная механика 3																																		СИ	
2.2.4.	23-0-B-KV-IGeod	Инженерная геодезия	180	6	3		180	30	15	15		8	112																							СИ	
	23-0-B-KV-OGI	Основы геоинформатики																																		СИ	
2.2.5.	23-29-B-KV-OPZS	Основы проектирования зданий и сооружений	180	6	4		180	15	15	30		8	112																							СИ	
	23-29-B-KV-VPOS	Введение в проектирование объектов строительства																																		СИ	
2.2.6.	23-29-B-KV-SMO	Строительные машины и оборудование	180	8	5		180	30	30			8	112																							АТСИБЖД	
	23-29-B-KV-M8	Механизация строительства																																		АТСИБЖД	
ВСЕГО по циклу БД:			2760	92	15	0	2760	420	345	135	112	1688	9	15	18	14	18	12	6	0	0																
3. ЦИКЛ ПРОФИЛИРУЮЩИХ ДИСЦИПЛИН (ПД):																																					
3.1.	Вузовский компонент:		1740	58	8		1740	255	255	0	48	972	0	0	0	9	9	9	18	9	4																СИ
3.1.1.	23-0-B-VK-SK	Строительные конструкции	270	8	4		270	45	45		8	172																								СИ	
3.1.2.	23-29-B-VK-ORPSSK	Основы расчета предельных состояний строительных конструкций	270	9	5		270	45	45		8	172																								СИ	
3.1.3.	23-29-B-VK-OTsVoTGSyV	Основы водоснабжения и водоотведения, теплогасоснабжения и вентиляции	180	8	6		180	30	30		8	112																								СИ	
3.1.4.	23-29-B-VK-ASPZS	Архитектурно-строительное проектирование зданий и сооружений	270	9	7		270	45	45		8	172																								СИ	
3.1.5.	23-29-B-VK-TVZS	Технология возведения зданий и сооружений	270	9	7		270	45	45		8	172																								СИ	
3.1.6.	23-29-B-VK-TEZS	Техническая эксплуатация зданий и сооружений	270	9	8		270	45	45		8	172																								СИ	
3.1.7.	23-0-B-VK-PP1	Производственная практика 1	90	3	6		90																												СИ		
3.1.8.	23-0-B-VK-PP-2	Производственная практика 2	120	4	9		120																													СИ	
3.2. Компонент по выбору:			810	27	6	0	810	135	135	0	48	492	0	0	0	0	0	3	9	9	6	0															
3.2.1.	23-29-B-KV-TSP	Технология строительного производства	180	6	6		180	30	30		8	112																								СИ	
	23-29-B-KV-TPSR	Технологические процессы строительных работ																																			
3.2.2.	23-29-B-KV-OSP	Организация строительного производства	180	6	7		180	30	30		8	112																								СИ	
	23-29-B-KV-OPSZS	Организация и планирование строительства зданий и сооружений																																		СИ	
3.2.3.	23-29-B-KV-RZS	Реконструкция зданий и сооружений	180	6	8		180	30	30		8	112																								СИ	
	23-29-B-KV-UKZS	Усиление конструкций зданий и сооружений																																			
Минорная программа 1 "Управление ресурсами"																																					
3.2.4.	23-0-B-UE	Управленческая экономика	90	3	5		90	15	15		8	52																								ЛМТ	
3.2.5.	23-0-B-TL	Транспортная логистика	90	3	8		90	15	15		8	52																								ЛМТ	
3.2.6.	23-0-B-RT	Ресурсосбережение на транспорте	90	3	7		90	15	15		8	52																								ПС	
Минорная программа 2 "Цифровые компетенции"																																					
3.2.4.	23-0-B-TM	Тайм-менеджмент	90	3	5		90	15	15		8	52																								ЛМТ	
3.2.5.	23-0-B-TaDOS	Цифровая диагностика объектов строительства	90	3	8		90	15	15		8	52																								СИ	
3.2.6.	23-0-B-BAPI	Бизнес аналитика Power BI	90	3	7		90	15	15		8	52																								ИКТ	
ВСЕГО по циклу ПД:			2550	85	14	0	2550	390	390	0	96	1464	0	0	0	9	12	18	27	15	4																
ИТОГО ПО ТЕОРЕТИЧЕСКОМУ КУРСУ ОБУЧЕНИЯ (ТКО):			6990	233	43	0	6990	960	1108	150	336	4166	30	31	30	30	30	30	33	15	4															СИ	
4.	23-0-B-VK-IA	ИТОГОВАЯ АТТЕСТАЦИЯ	240	8																																	
ИТОГО ЗА ВЕСЬ ПЕРИОД ОБУЧЕНИЯ:			7230	241																																	
5. ДОПОЛНИТЕЛЬНЫЕ ВИДЫ ОБУЧЕНИЯ (ДВО):																																					
5.1.	23-0-B-DVO-V	Волонтерство	30	1	1		30				8	12	1																						СИ		
5.2.	23-0-B-DVO-FG	Финансовая грамотность	90	3	3		90	15	15		8	52																								ЛМТ	

СОГЛАСОВАНО:

Проректор по АД

Директор ДАПК





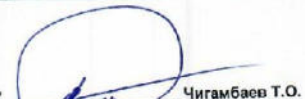
Жармагамбетова М.С.


Липская М.А.

РАЗРАБОТАНО:

Директор института "ТИ"

Заведующая кафедрой "СИ"





Чигамбаев Т.О.

Исмагулова С.О.



8. CATALOG OF DISCIPLINES OF THE UNIVERSITY COMPONENT

EDUCATIONAL PROGRAM

6B07329 – Construction of industrial and civil structures

Level of education: bachelor's

degree Duration of study: 4 years

Year of admission: 2023

Cycle	Component	Name of the discipline	Total labor intensity		Term	Learning outcomes	Brief description of the discipline	Prerequisites	Post-requisites
			academic hours	academic credits					
1	2	3	4	5	6	7	8	9	10
DB	VK	Engineering mathematics	270	9	2	ON1	Mastering the mathematical apparatus for solving theoretical and applied problems of a specific profile, gaining an understanding of mathematical modeling and interpretation of the solutions obtained. Issues of linear algebra, analytical geometry, mathematical analysis, differential equations, and series theory are considered.	Basic school knowledge in mathematics	applied Physics
DB	VK	applied Physics	270	9	1	ON 1	Formation in students of skills in the use of fundamental laws, theories of classical and modern physics, as well as methods of physical research, thinking, scientific worldview, with independent cognitive activity, to be able to simulate physical situations using computer technology and ideas about the modern natural science picture of the world.	Basic school knowledge in mathematics	Engineering mathematics, Fundamentals of computer modeling.
DB	VK	Basics of computer modeling	180	6	2	ON 4	Forms theoretical and practical knowledge, skills and abilities in the field of computer modeling of various types of processes (physical, technological, economic, etc.), the ability to use tools (application software packages) using three-dimensional visualization tools and methods to solve applied engineering and technical problems, planning and carrying out work on bridge, tunnel and subway projects.	Basic school knowledge in mathematics	Fundamentals of transport ecology, Occupational safety
DB	VK	Construction Materials	180	6	3	ON 3	The discipline provides for the study of the chemical composition, structural structure, properties, types of building materials, their purpose, the relationship	Ecology and life safety.	Geology and soil mechanics, foundations and

							between the material and the structure, methods of their production, testing methods, protecting them from various types of corrosion, principles for assessing quality indicators, the determining influence on the durability and reliability of building structures , using new technology.		foundations
DB	VK	Geology, soil mechanics, bases and foundations	180	6	5	ON 3	Forms theoretical and practical knowledge, skills and abilities that allow one to master the general laws and principles of engineering geology and soil mechanics, engineering geological processes and phenomena in soil massifs, basic calculations, physical and mechanical properties of soils at the base of foundations and their joint work with superstructures in order to ensure the reliability and durability of transport structures.	Engineering mathematics, Applied physics	Engineering mechanics 1,2,3,Strength of materials
DB	VK	Typology of buildings and structures	180	6	6	ON 3	Study of types and types of structural and design schemes, design methodology for industrial and civil buildings and structures. Familiarization of students with the method of static calculation and design of the main types in planar and spatial reinforced concrete, stone and wooden structures, their types and methods of strengthening used for various construction projects. The discipline uses interactive teaching methods, calculation and analytical method, and case study method.	Engineering mathematics, Applied physics, Construction materials	Occupational Safety and Health, Architectural and construction design of buildings and structures, Technology of construction of buildings and structures, Technical operation of buildings and structures
DB	VK	Electrical engineering and electronics fundamentals	180	6	6	ON 1	The discipline studies electrical circuits of direct, alternating and three-phase currents, the principle of operation and purpose of transformers and electrical machines, methods for measuring electrical quantities, the application and general rules of operation of semiconductor devices and circuits.	Engineering mathematics, Applied physics	Occupational safety, Architectural and construction design of buildings and structures, Technology of

									construction of buildings and structures, Technical operation of buildings and structures
DB	VK	Occupational Safety and Health	180	6	7	ON 5	Training of specialists on the theoretical and practical foundations of safety, harmlessness and facilitation of working conditions with maximum productivity, on the legislative and regulatory framework in the field of labor protection.	Engineering mathematics, Applied physics, Theoretical mechanics, Construction materials	Technical maintenance of buildings and structures, Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
DB	VK	Educational practice (<i>geodetic</i>)	60	2	4	ON	The organization of educational practice is aimed at ensuring that bachelors are familiar with the areas of professional activity and training profiles, with the ability to geodetic survey of terrain, forward and backward travel, leveling survey, reference to benchmarks, carrying out points and elevation marks from the map, solving typical engineering and geodetic problems.	Engineering Mathematics, Applied Physics, Basics of computer modeling, Construction Materials, Geology, soil mechanics, bases and foundations.	Industrial practice 1, Industrial practice 2.
PD	VK	Building construction	270	9	4	ON 3	Forms basic knowledge of shaping, calculation and design of load-bearing structures, the ability to correctly select materials, section shapes, design design diagrams of structures, based on the purpose and purposes of operation, develop design solutions for newly constructed or strengthened transport structures, master the skills of calculating structural elements based on limit states, ensuring compliance with the required indicators of reliability, efficiency, and effectiveness.	Engineering mathematics, Applied physics	Engineering mechanics 3, Occupational safety, Typology of buildings and structures, Basics of calculation of limit states of

									building structures, Architectural and construction design of buildings and structures
PD	VK	Basics of calculation of limit states of building structures	270	9	5	ON 10	The discipline provides for the study of methods for calculating building structures for various deformations (compression, tension, bending) according to limit states, taking into account the calculated and standard values of loads using software, materials, taking into account their advantages and disadvantages, their effective use in the main types of building structures for ensuring the necessary reliability.	Engineering mathematics, Applied physics, Fundamentals of calculation of limit states of building structures	Typology of buildings and structures, Architectural and construction design of buildings and structures, Technology of construction of buildings and structures, Technical operation of buildings and structures
PD	VK	Basics of water supply and sanitation, heat and gas supply and ventilation	180	6	6	ON 10	Studies the fundamentals of the function of designing water supply and sanitation systems, heating, ventilation, installation and operation technology, the main directions and prospects for the development of water supply systems of enterprises in various industries, transport and agriculture, methods for solving typical problems in the field of design and methods for calculating water supply systems of thermal power, taking into account the latest achievements of science and technology using virtual programs (Revit, Navisworks, Microsoft Project, Primavera, SketchUp, InfraWorks). Discussion is used within the discipline .	Engineering mathematics, Applied physics , Fundamentals of calculation of limit states of building structures	Occupational Safety and Health, Architectural and construction design of buildings and structures, Technology of construction of buildings and structures, Technical operation of buildings and

									structures
PD	VK	Architectural and construction design of buildings and structures	270	9	7	ON 4	Development of a systemic representation of industrial and civil buildings, their classification, technological process and its impact on space-planning and design solutions, methods of engineering surveys, fundamentals of designing parts and structures in accordance with the technical specifications using standard applied calculation and graphical software packages (for example , Python, Java, etc.) and requirements for the construction industry. Within the discipline, the calculation and analytical method is used.	Engineering mathematics, Applied physics, Fundamentals of calculation of limit states of building structures	Technical maintenance of buildings and structures, Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
PD	VK	Technology of construction of buildings and structures	270	9	7	ON 7	Development of a systemic representation of industrial and civil buildings, their classification, technological process and its impact on space-planning and design solutions, methods of engineering surveys, fundamentals of designing parts and structures in accordance with the technical specifications using standard applied calculation and graphical software packages (for example , Python, Java, etc.) and requirements for the construction industry. Within the discipline, the calculation and analytical method is used.	Engineering mathematics, Applied physics, Fundamentals of calculation of limit states of building structures	Technical maintenance of buildings and structures, Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
PD	VK	Technical operation of buildings and structures	270	9	8	ON 8	To form the necessary set of knowledge of regulatory and technical documentation and the legal framework for the subsequent technical use of construction projects, the procedure for accepting completed work and the procedure for putting the facility into operation, the responsibilities of services, technical documentation for the use of the facility, ensuring industrial and fire safety standards during use, sanitary and household requirements in residential and industrial premises. Within the discipline, the calculation and analytical method is used.	Engineering mathematics, Applied physics, Fundamentals of calculation of limit states of building structures, Occupational safety, Architectural and construction design of buildings and structures .	Industrial practice 2 , FINAL EXAMINATION
PD	VK	Industrial	90	3	6		The main objectives of industrial practice are:	Engineering	Industrial

		practice 1					consolidation of theoretical knowledge and practical skills in the chosen educational program in a production environment, gaining experience in organizational work, obtaining a working specialty, developing practical skills and competencies in the process of mastering the bachelor's program.	mathematics, Applied physics, Fundamentals of calculation of limit states of building structures, Labor protection.	practice 2
PD	VK	Industrial practice 2	120	4	9		The purpose of internship for bachelors is to ensure the relationship between theoretical knowledge acquired through mastering the chosen educational program and practical activities. The objectives of this practice are to consolidate and deepen the theoretical knowledge acquired by students during the learning process, collect information for writing a final qualifying work, study best practices at the enterprise, as well as gain experience in independent research work, mastering a variety of methods of scientific work.	Engineering mathematics, Applied physics, Fundamentals of calculation of limit states of building structures, Architectural and construction design of buildings and structures, Technical maintenance of buildings and structures, Reconstruction of buildings and structures, Strengthening of structures of buildings and structures	FINAL EXAMINATION
		FINAL EXAMINATION	240	8			The goals of the thesis are to identify the degree to which the bachelor has mastered the content of the educational program, check his readiness for independent activity in the direction of the educational		

							program, consolidate and deepen the practical skills acquired as a result of studying EP disciplines. A comprehensive exam is also required.		
Total			3660	122					

9. CATALOG OF DISCIPLINES OF THE COMPONENT BY CHOICE

EDUCATIONAL PROGRAM

6B07329 – Construction of industrial and civil structures

Education level: bachelor's

degree Duration of study: 4 years

Year of admission: 2023

Cycle	Component	Name of the discipline	Total labor intensity		Term	Learning outcomes	Brief description of the discipline	Prerequisites	Post-requisites
			academic hours	academic credits					
1	2	3	4	5	6	7	8	9	10
GED	EC	Ecology and life safety	150	5	3	ON5	Study of basic environmental concepts, environmental problems and approaches to their solution, sources and types of environmental pollution by enterprises, principles of standardization of air and water quality, basic provisions of legislation in various fields, natural and man-made emergencies, their causes, methods of prevention and protection .	History of Kazakhstan, Kazakh (Russian, foreign) language, Professional foreign language, Sociology, Culturology, Political science, Psychology	final examination
		Scientific Research Methods				ON 9, ON 11	Students obtain theoretical and applied knowledge on methods of scientific research of problems in the field of study, train specialists with skills of cognitive activity in the field of science, formulate deep ideas about the content of scientific activity, its methods and forms of knowledge.	History of Kazakhstan, Kazakh (Russian, foreign) language, Professional foreign language, Sociology, Culturology, Political science, Psychology	final examination
		Fundamentals of Economics and Entrepreneurship				ON 6	Formation of analytical thinking skills on economic issues, the ability to independently draw conclusions based on the material being studied, navigate in any economic situations, apply theoretical economic knowledge in practical activities, realize one's abilities, both personally and professionally.	History of Kazakhstan, Kazakh (Russian, foreign) language, Professional foreign language,	final examination

								Sociology, Culturology, Political science, Psychology	
		Fundamentals of law and anti- corruption culture				ON 9, ON 11	Increasing public and individual legal awareness and legal culture of students, as well as the formation of a system of knowledge and civic position to combat corruption as an antisocial phenomenon. As a result of studying the course, students must master the fundamental concepts of law, the constitutional structure of state power of the Republic of Kazakhstan, the rights and freedoms of citizens enshrined in the Constitution, the mechanism and protection of legitimate human interests in the event of their violation.	History of Kazakhstan, Kazakh (Russian, foreign) language, Professional foreign language, Sociology, Culturology, Political science, Psychology	final examination
BD	EC	Theoretical mechanics	180	6	3	ON 2	Formation of scientific engineering thinking, familiarization with the basic concepts, laws and theorems that allow one to draw up equations that describe the behavior of mechanical systems, the ability to write down a specific phenomenon in mathematical form, the application of basic methods of mechanics in the study of the motion and equilibrium of mechanical systems in the study of disciplines of the professional cycle.	Engineering mathematics, applied physics.	Strength of Materials, Engineering Mechanics 2, Structural Mechanics, Engineering Mechanics 2
		Engineering mechanics 1				ON 2	Formation of logical thinking and the scientific foundation of engineering education, study of the laws of motion and equilibrium of material bodies, construction of mathematical models of the behavior of mechanical systems using theorems of mechanics, use of methods for studying the equilibrium and motion of mechanical systems to solve technical problems.	Engineering mathematics, Applied physics	Strength of Materials, Engineering Mechanics 2, Structural Mechanics, Engineering Mechanics 2
BD	EC	Resistance of materials	180	6	4	ON 2	Formation of fundamental knowledge in the field of calculations of structural elements for strength, rigidity and stability, development of computational and experimental fundamentals and practical methods for calculating structures subject to reliability, durability, efficiency, taking into account the mechanical properties of structural materials and the ability to design according to strength criteria, correctly assessing the limit state, to carry out	Engineering mechanics 1, Geology and soil mechanics,	Structural Mechanics, Engineering Mechanics 3, Construction Machinery and Equipment, Construction Mechanization

							verification and design calculations using modern educational and information technologies.		
		Engineering mechanics 2				ON 2	To familiarize with the basic techniques for determining internal forces and stresses for each type of deformation, methods for calculating structures and their elements for strength, rigidity and stability, skills for studying loads, displacements and stress-strain states in structural elements, constructing design diagrams of machine parts and calculating products for meeting the requirements of reliability and efficiency under the influence of static and dynamic loads.	Engineering mechanics 1 Geology and soil mechanics, bases and foundations	Structural Mechanics, Engineering Mechanics 3, Construction Machinery and Equipment, Construction Mechanization
BD	EC	Structural mechanics	180	6	5	ON 2	Studies the basic methods of calculating structural elements and structures for strength, rigidity and stability, to carry out calculations of load-bearing elements of transport structures and structures for strength, rigidity, stability and durability, taking into account the time-varying mechanical properties of the materials used, to correctly select structural forms and materials that provide the required indicators of reliability, safety and efficiency of both operated and created structures and structures.	Engineering mathematics, Applied physics, Engineering mechanics 1.2	Construction technology , Organization and planning of construction of buildings and structures, Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
		Engineering mechanics 3				ON 2	Studies the theoretical foundations and methods of carrying out calculations for strength, rigidity and stability of structural elements of transport structures, the main types of mechanisms, parts and components of machines, general principles of design and construction, construction of models and algorithms for calculating products according to the main performance criteria when assessing the reliability of existing equipment in conditions operation.	Engineering mathematics, Applied physics, Engineering mechanics 1.2	Construction technology , Organization and planning of construction of buildings and structures, Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
BD	EC	The engineering	180	6	3	ON 4	Forms professional competencies that determine the	Engineering	Fundamentals of

		geodesy					bachelor's readiness and ability to use basic knowledge in the field of geodesy, allows for geodetic measurements related to solving typical construction problems, detailed breakdown of structures, control of the geometric shapes of the structure being built, and perform as-built surveys of the results of individual stages of construction and installation work , provides skills in using basic geodetic instruments for specific production conditions.	mathematics, Applied physics, Engineering mechanics 1,2,3	design of buildings and structures, Introduction to the design of construction projects, Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
		Basics of geoinformatics				ON 4	Studies the history of the development of geographic information systems (GIS), basic concepts and terms, general issues of geoinformatics, application technologies in subject areas of professional activity, the current state of technical, software and information support of GIS, forms an understanding of the features of creating a GIS, hardware and software, and applied GIS for use in business, management, science and technology.	Engineering mathematics, Applied physics, Engineering mechanics 1,2,3	Fundamentals of the design of buildings and structures, Introduction to the design of construction projects, Reconstruction of buildings and structures, Strengthening the structures of buildings and structures
BD	EC	Basics of design of buildings and structures	180	6	4	ON 9	Studies trends in modern urban planning and architecture, gaining knowledge about the basic principles of design of buildings and structures, basic space-planning schemes of buildings, fundamentals of building design. The influence of natural and climatic factors on the planning and development of urban areas, the concepts of unification, typification of construction. When studying the discipline, discussion is used.	Engineering mathematics, Applied physics, Engineering mechanics 1,2,3	Structural mechanics, Engineering mechanics 3, Construction machines and equipment, Construction mechanization, Reconstruction of buildings and structures,

									Strengthening the structures of buildings and structures
		Introduction to construction design				ON 4	To form the necessary set of knowledge on solving drawing and graphic problems using two-dimensional graphics, typical issues in the preparation of design documentation, methods for solving problems in the design of building structures using three-dimensional solid modeling methods, the use of computer technologies in the study of geometric and graphic problems. When studying the discipline, discussion is used.	Engineering mathematics, Applied physics, Engineering mechanics 1,2,3	Structural mechanics, Engineering mechanics 3, Construction machines and equipment, Construction mechanization, Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
BD	EC	Construction machinery and equipment	180	6	5	ON 8	Development of a systematic understanding of the mechanization of construction and construction machines, drives and running gear of construction machines, lifting and transport machines, machines for excavation work, machines for drilling and piling work, machines and equipment for preparing and transporting concrete and mortars and compacting concrete, machines for finishing works. Within the discipline, the calculation and analytical method is used.	Ecology and life safety, Engineering geodesy, Construction materials, Electrical engineering and fundamentals of electronics	Construction technology , Organization and planning of construction of buildings and structures, Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
		Construction mechanization				ON 8	Studies the general devices of construction machines, lifting - transport machines, machines for excavation and preparatory work, machines for crushing and sorting stone materials, machines and equipment for preparing concrete mixtures and solutions and their transportation, machines and equipment for distributing and compacting concrete mixtures,	Ecology and life safety, Engineering geodesy, Construction materials, Electrical	Construction technology , Organization and planning of construction of buildings and structures,

							mechanized tool. Discussion is used within the discipline.	engineering and fundamentals of electronics	Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
PD	EC	Construction mechanics	180	6	6	ON 7	It studies the basics of technical and tariff regulation in the construction industry, methods of performing construction work and processes, modern technologies used for the construction of buildings and structures to solve the problems of developing directive organizational and technological documentation on this informative basis. Discussion is used within the discipline.	Engineering mathematics, Applied physics, Engineering mechanics 1,2,3 Construction machinery and equipment, Construction mechanization	Occupational Safety and Health, Organization of construction production, Organization and planning of construction of buildings and structures, Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
		Technological processes of construction work				ON 7	Formation of the student's competencies in the field of construction processes using modern methods and technologies based on the use of effective building materials and structures, modern technical means, progressive labor organization, theoretical foundations of engineering calculations, design and execution of construction and installation work leading to the creation of the final construction products (individual parts of buildings and structures and completely finished objects) of the required quality. Discussion is used within the discipline.	Engineering mathematics, Applied physics, Engineering mechanics 1,2,3 Construction machinery and equipment, Construction mechanization	Occupational safety, Organization of construction production, Organization and planning of construction of buildings and structures, Reconstruction of buildings and structures, Strengthening of structures of buildings and

									structures
PD	EC	Organization of construction production	180	6	7	ON 8	Studies the basic methods and technology of performing production processes using high-quality building materials and structures, modern technical means, progressive organization of workers' labor, the structure and forms of organizing construction production, management in construction, methods for quality control of construction and operation of industrial and civil structures and linear facilities housing and communal services, machinery and equipment.	Engineering mathematics, Applied physics, Engineering mechanics 1,2,3 Construction machinery and equipment, Construction mechanization	Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
		Organization and planning of construction of buildings and structures				ON 8	It studies the basic provisions and sequence of technological operations during the construction of buildings and structures, the principles of organizing the construction of individual objects or their complexes, organizational structures and production activities of construction and installation organizations, the basics of management and business activities, planning work in the field of industrial and civil construction and the development of schedules production of work, selection of a set of construction equipment and staffing of specialized teams.	Engineering mathematics, Applied physics, Engineering mechanics 1,2,3 Construction machinery and equipment, Construction mechanization	Reconstruction of buildings and structures, Strengthening of structures of buildings and structures
PD	EC	Reconstruction of buildings and structures	180	6	8	ON 10	Studies the issues of inspection and inspection of buildings with the preparation of a technical report, methods of repair, strengthening and replacement of structures, redevelopment of premises, modernization of staircases and elevator units, construction of superstructures, extensions and built-in premises, methods of increasing the heat and waterproofing of buildings, modernization of external and internal networks, determines composition and procedure for developing design and estimate documentation for the reconstruction of buildings.	Engineering mathematics, Applied physics, Engineering mechanics 1,2,3 Construction machinery and equipment, Construction mechanization	final examination
		Strengthening the structures of buildings and structures				ON 10	Studies methods of design and calculation of structures when solving a set of problems in the field of strengthening and restoring elements of buildings and structures, the basic requirements for load-bearing and enclosed structures, the sequence and content of work when strengthening structures made of different materials, working documentation, design skills using technical literature . Guest lectures by	Engineering mathematics, Applied physics, Engineering mechanics 1,2,3 Construction machinery and equipment,	final examination

							specialists are provided.	Construction mechanization	
PD	EC	Managerial Economics (Minor)	90	3	5	ON 6	Formation of a conceptual apparatus and development of economic analysis skills 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 into the economic, technological and technical parameters of an enterprise, and will also allow them to master the skills of using special methods for economic justification of management decisions and assessing their consequences.	Fundamentals of economics and entrepreneurship, Fundamentals of law and anti-corruption culture	final examination
PD	EC	Transport logistics (Minor)	90	3	6	ON 9	Study of the basic provisions of transport support for logistics systems, activities in the field of transportation, covering the entire range of operations and services for the delivery of goods from the manufacturer to the consumer, principles of design and construction of logistics systems. Mastering the skills of optimizing and organizing rational cargo flows, their processing in specialized logistics centers, ensuring an increase in their efficiency, reducing unproductive costs and expenses. Teaching methods are: problem solving, thematic colloquiums, brainstorming seminars. The discipline includes guest lectures by leading specialists from transport and logistics companies.	Fundamentals of economics and entrepreneurship, Fundamentals of law and anti-corruption culture	final examination
PD	EC	Resource saving in transport (Minor)	90	3	7	ON 5	Study of the main types and characteristics of energy resources, regulatory support for energy saving, increasing the energy efficiency of the transportation process; energy-saving technologies in repair production and in the operation of transport infrastructure facilities; organization and methods of energy saving management. Problem solving, thematic colloquiums and debates are used. Guest lectures are being held by leading specialists in the transport and communications industry.	Fundamentals of economics and entrepreneurship, Fundamentals of law and anti-corruption culture	final examination
PD	EC	Time - management (Minor)	90	3	5	ON 6	Formation among students of general ideas about the essence and types of time management, principles and methods of managing time resources for more	Fundamentals of economics and entrepreneurship,	Transport logistics, Resource saving

							successful professional activities.	Fundamentals of law and anti-corruption culture	in transport Final certification
PD	EC	Digital diagnostics of construction objects (Minor)	90	3	6	ON 7	Study of digital information processing systems, main functional units, principles of information division and multiplexing, analysis of the characteristics of digital communication channels when diagnosing transport construction projects.	Fundamentals of computer modeling , Geology, soil mechanics, foundations and foundations , Fundamentals of calculation of limit states of building structures	Architectural and construction design of buildings and structures , Technology of construction of buildings and structures , Technical operation of buildings and structures
PD	EC	PowerBI Business Analytics (Minor)	90	3	7	ON 6	Teaches the skills of creating interactive visualizations of data obtained from various sources and sharing them with employees of the organization, obtaining valuable information when making strategic decisions, analyzing historical and current data, presenting results in intuitive visual formats, providing shared access to business-critical analytical information with using Power BI.	Fundamentals of economics and entrepreneurship, Fundamentals of law and anti-corruption culture	Technical operation of buildings and structures, Industrial practice 2, Reconstruction of buildings and structures, Strengthening of structures of buildings and structures.
Total			2310	77					

10. EXPERT OPINION

ЭКСПЕРТНОЕ ЗАКЛЮЧЕНИЕ

на образовательную программу 6B07329 – Строительство промышленных и гражданских сооружений

Реализация образовательной программы «6B07329 – Строительство промышленных и гражданских сооружений» 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.

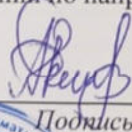
В учебном плане образовательной программы определен перечень всех учебных дисциплин обязательного компонента и компонента по выбору, трудоемкость каждой учебной дисциплины в кредитах, последовательность их изучения, виды учебных занятий и формы контроля. Актуально изучение вопросов экологической обстановки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

Образовательные траектории разработаны в соответствии с запросами промышленно - гражданских отрасли (каждый отмечает по своей ОП).

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 «6B07329 – Строительство промышленных и гражданских сооружений» по направлению подготовки кадров «6B073 Архитектура и строительство», 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 6B07329 – Строительство промышленных и гражданских сооружений по направлению «6B073 Архитектура и строительство».

Эксперт



Подпись

Ахметов А. – Директор ТОО «Qazaqplan»

Ф.И.О., место работы, должность, личная подпись,

М.П.



дата

11. REVIEWER'S CONCLUSION

Рецензия

на образовательную программу
по направлению подготовки 6В07329 – Строительство промышленных и
гражданских сооружений»

Образовательная программа (бакалавриат) «6В07329 – Строительство промышленных и гражданских сооружений» 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. Основы расчета предельных состояний строительных конструкций; 2. Основы водоснабжения и водоотведения, теплогазоснабжения и вентиляции; 3. Архитектурно-строительное проектирование зданий и сооружений.

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 компетентностной 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 «6В073 Архитектура и строительство».

Рецензент
директор
ТОО «Нурлы Сапа 2030»



Абайхан Е.

12. LETTERS OF RECOMMENDATION

РЕКОМЕНДАТЕЛЬНЫЕ ПИСЬМА

Уважаемый (ая) Салтанат Нурадиловна

Руководство ТОО «Qazaqplan» в лице Директора Акешеева А. ознакомилось с содержанием образовательной программы «6B07329 – Строительство промышленных и гражданских сооружений» и внесло следующие рекомендации:

- включить в содержание образовательной программы дисциплины: Типология зданий и сооружений.

- 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. Основы расчета предельных состояний строительных конструкций; 2. Основы водоснабжения и водоотведения, теплогазоснабжения и вентиляции; 3. Архитектурно-строительное проектирование зданий и сооружений.

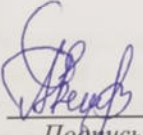
- увеличить количество часов, выделяемых на проведение производственных практик;

включить дисциплины:

1. Основы расчета предельных состояний строительных конструкций;

2. Основы водоснабжения и водоотведения, теплогазоснабжения и вентиляции;

3. Архитектурно-строительное проектирование зданий и сооружений.

Работодатель  Акешеев А.И. – Директор ТОО «Qazaqplan»

Подпись



13. REVIEW AND APPROVAL PROTOCOLS

Академия логистики и транспорта

ПРОТОКОЛ №6 (начало формирования ОП)

Заседания

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

г. Алматы

«_15_»_03_2022 года

Председатель: Исмагулова С.О.

Секретарь: Жадраев Р.Ж.

Присутствовали: члены Академического комитета, ведущие ППС кафедры

Представители с производства: Директор ТОО «Qazaq plan», директор ТОО «Нурлы Кала 2030», Директор_ТОО «All Geo».

Обучающиеся: Оразбаева М.

ПОВЕСТКА ДНЯ:

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

По первому вопросу

ВЫСТУПИЛ(а):

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

Компетентностная модель выпускника включает в себя следующие части:

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

ВЫСТУПИЛ:

Представитель работодателей: директор ТОО «Qazaq plan» Акешеев А., который предложил в силу специфики их организации отразить в объектах профессиональной деятельности следующее: Современные инновационные технологии в строительстве промышленных и гражданских сооружений.

ВЫСТУПИЛ:

Член кафедры Ибраимов А.К., который предложил утвердить

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

ПОСТАНОВИЛИ:

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

По второму вопросу

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

ВЫСТУПИЛ: представитель работодателей директор ТОО «Qazaq plan» Акешеев А.

Организации заинтересованы в специалистах, имеющих хороший уровень подготовки и знаний в области типология зданий и сооружений. Вносим предложения о внесении в РУП следующих востребованных дисциплин Основы расчета предельных состояний строительных конструкций, Основы водоснабжения и водоотведения, теплогазоснабжения и вентиляции, Архитектурно-строительное проектирование зданий и сооружений.

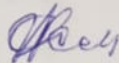
ВЫСТУПИЛ: обучающийся Оразбаева М.

Считаем необходимым включить в РУП следующие дисциплины Основы расчета предельных состояний строительных конструкций, Основы водоснабжения и водоотведения, теплогазоснабжения и вентиляции, Архитектурно-строительное проектирование зданий и сооружений.

ПОСТАНОВИЛИ:

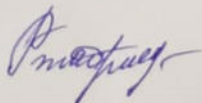
1. Информацию принять к сведению;
2. Учесть предложения и рекомендации работодателей и обучающихся;
3. Рассмотреть включение в РУП следующие дисциплины: Основы расчета предельных состояний строительных конструкций, Основы водоснабжения и водоотведения, теплогазоснабжения и вентиляции, Архитектурно-строительное проектирование зданий и сооружений.

Председатель:



Исмагулова С.О.

Секретарь:



Жадраев Р.Ж.

Академия логистики и транспорта
ПРОТОКОЛ №7 (перед утверждением ОП на УС)

Заседания КОК УМБ института «Транспортная инженерия»

г. Алматы

«_15_»_марта_2023 года

Председатель: Чигамбаев Т.О.

Секретарь: Утепова А.

Присутствовали: члены КОК УМБ, члены Академического комитета

Представители с производства: Директор ТОО «Qazaqlan», директор ТОО «Нурлы Кала 2030», Директор ТОО «All Geo».

Обучающиеся: Оразбаева М.

ПОВЕСТКА ДНЯ:

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

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


На кафедре «Строительная инженерия» было проведено заседание с привлечением представителей работодателей и обучающихся по обсуждению структуры и содержанию образовательной программы 6В07329 – Строительство промышленных и гражданских сооружений

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

ПОСТАНОВИЛИ:

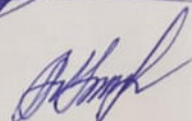
1. Информацию принять к сведению;
2. Учесть все предложения и рекомендации работодателей, представителей студенческого актива;
3. Представить КЭД, РУП и ОП бакалавриата, магистратуры и докторантуры для рассмотрения и утверждения на Совете института, УС Академии.

Председатель КОК УМБ



Чигамбаев Т.О.

Секретарь



Утепова А.

15. CHANGE REGISTRATION SHEET

No.	Section, paragraph document	Type of change (replace, cancel, add)	Number and date notices	Change made	
				date	Last name and initials, signature, position