

Non-profit joint stock company  
"Kazakh National Agrarian Research University"

AGREED

Rector of the National Research University  
"Tashkent Institute of Irrigation and  
Agricultural Mechanization Engineers"  
("TIAME")



B. Mirzaev

03 2024

AGREED

General Director of LLP  
"Institute Kazgiprovodkhoz"



A. Ryabtsev

01 03 2024

APPROVE

Chairman of the Board - Rector of  
the Kazakh National Agrarian  
Research University (KazNARU)



A. Kurishbaev

03 2024

**EDUCATIONAL PROGRAM**

6B08604 - "Water management and melioration "

Degree Awarded : Bachelor of Agriculture in Educational Program

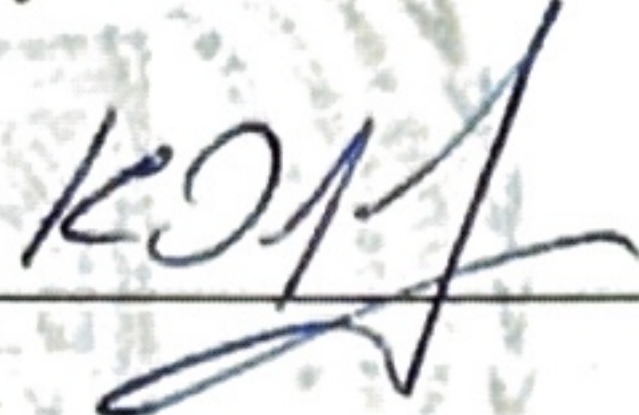
6B08604 - "Water management and melioration "

Almaty 2024

Approved at a meeting of the department "Water resources and melioration" chair  
protocol № 6 « 26 » 01 2024y.

Head of the department  
"Water resources and melioration" chair  E. Zhaparkulova

Considered at meetings Academic committee of the faculty of "Water, land and forest  
resources"  
protocol № 6 « 29 » 01 2024y.

Chairman of the AC of the faculty  K. Zholamanov

Reviewed by the Educational Methodological Council of the University and recommended to  
the Academic Council  
protocol № 4 « 01 » 02 2024y.

Chairman of the EMC of the University  A. Abdyrov

The educational program was approved at a meeting of the Academic Council of KazNARU  
protocol № 9 « 01 » 03 2024y.

**Developers:**

Dean of the faculty "Water, land and forest resources"



D. Sarsekova

Head department " Water resources and melioration "



E. Zhaparkulova

Professor of the department



I. Seitassanov

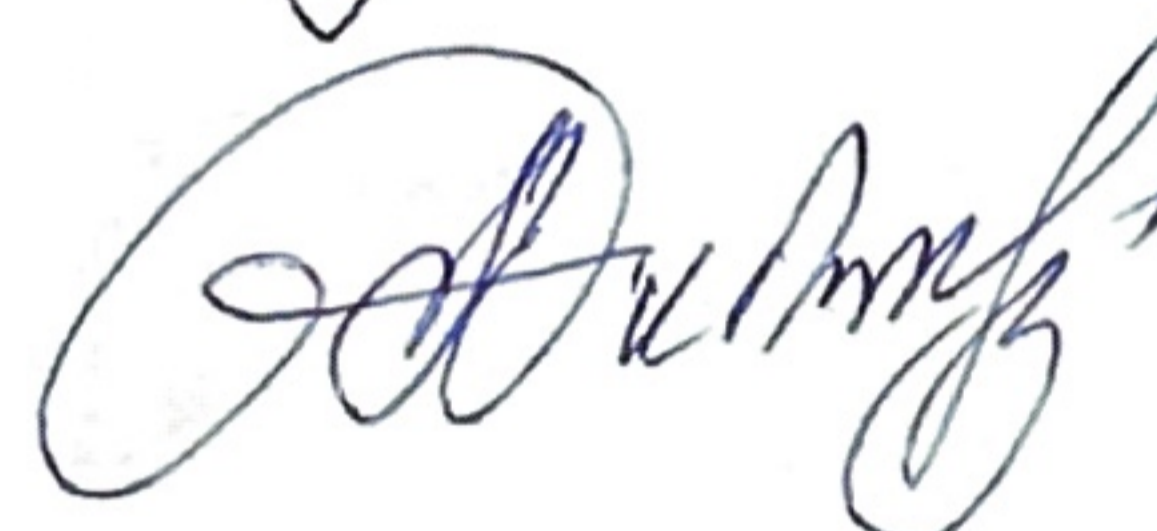
Associate Professor of the Department



T. Ishangaliyev

**Employers:**

General Director of LLP "Kazgiprovod-khoz Design  
Institute"



A. Ryabtsev

**Agreed:**

Head of the Educational Programs Design  
Department



Zh. Kussainova

### **Application area**

Designed to carry out the training of bachelors in the educational program 6B08604 - "Water management and melioration " at the NJSC "Kazakh National Agrarian Research University" .

### **Regulations**

"On Education" Law of the Republic of Kazakhstan dated July 27, 2007 No. 319-III;

State obligatory standard of higher education. Order of the Minister of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022 No. 2;

Classifier of areas for training personnel with higher and postgraduate education. Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 13, 2018 No. 569;

Model rules for the activities of educational organizations implementing educational programs of higher and (or) postgraduate education. Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 30, 2018 No. 595;

Rules for the organization of the educational process on the credit technology of education. Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 12, 2018 No. 563;

Algorithm for inclusion and exclusion of educational programs in the Register of educational programs of higher and postgraduate education. Order of the Minister of Education and Science of the Republic of Kazakhstan No. 665 dated December 4, 2018;

Professional standard "Design and operation of reservoirs of seasonal regulation" (Appendix No. 7 to the order of the Deputy Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" dated December 26, 2019 No. 263) . 150h \_

Professional standard "Construction of dams and dams" (Appendix No. 9 to the order of the Deputy Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" dated December 26, 2019 No. 262) .

Professional standard " Hydrotechnical melioration". Annex No. 72 to the order of the Deputy Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" dated December 11, 2018 No. 339.

## 1. Passport of the educational program

Code and classification of the field of education	6B08 Agriculture and bioresources
Code and classification of areas of study	6B086 Water resources and water use
Code and name of the educational program	6B08604 - "Water management and melioration"
Type of educational program	new
Purpose of the educational program	Training of competitive water management specialists with in-depth knowledge of the basics of land reclamation
ISCED level	6
NQF level	6
ORC level	6
Application number to the license for the direction of personnel training	KZ89LAA00031870 05 August 2021 year
EP Accreditation Name of the accreditation body Validity of accreditation	
Degree awarded	of Agriculture in Educational Program 6B08604 - "Water management and melioration"
Learning Outcomes	table 2
List of qualifications and positions	<ol style="list-style-type: none"> <li>1. hydraulic engineer</li> <li>2. reclamation engineer</li> <li>3. hydrological engineer</li> </ol>
Area of professional activity	<p>Rational use of water resources and their protection from pollution, clogging, depletion; maintenance and operation of water management systems and structures; control of water consumption and sanitation standards, control of the hydrological regime and their rational use, state monitoring of surface water bodies and water resources management.</p> <p>reclamation systems and structures, natural and man-made complexes.</p>
Sphere and object of professional activity	<ul style="list-style-type: none"> <li>• surface and groundwater bodies</li> <li>• ameliorative systems and structures, natural-technogenic complexes.</li> <li>• irrigation and drainage systems of irrigated lands</li> <li>• hydraulic structures</li> <li>• design, survey, research, design organizations</li> </ul>
Functions of professional activity	<ul style="list-style-type: none"> <li>• Exploitation hydraulic structures of irrigation and drainage systems ;</li> <li>• Organization and management of the work of design, water management, hydropower, agricultural, municipal organizations and enterprises;</li> </ul>

	<ul style="list-style-type: none"> <li>• monitoring and evaluation of hydromeliorat and irrigated lands _____</li> <li>• Conducting state monitoring of surface water bodies , state accounting of water and their use _____</li> <li>• Performing research work in educational institutions and research centers of water, agriculture and energy sectors;</li> </ul>
Types of professional activity	<p><b>1. Estimated:</b></p> <p>1. Conducting state monitoring of surface water bodies, state accounting of waters and their use;</p> <p>2. <b>the hydro- reclamation state of irrigated lands</b> Development of schemes for the integrated use and protection of water resources Design hydraulic structures of irrigation and drainage systems ;</p> <p><b>3. Information technology:</b></p> <p>1. Development of a plan for the rational use of water bodies;</p> <p>2. Development of measures for the conservation, improvement of the state of water bodies; irrigation and melioration, reclamation of irrigated lands</p>
Be competent	<p>Construction and operation of hydraulic structures of irrigation and drainage systems ; irrigation and drainage facilities, monitoring and assessment of the hydro-reclamation state of irrigated lands; about types of land reclamation ; Conducting state monitoring of surface water bodies, state accounting of waters and their use.</p>

### EP learning outcomes

Codes	Learning Outcomes
RO 1	Define the basic principles and cultures of academic integrity, ethical and legal norms in the field of natural sciences .
RO 2	Interpret the fundamentals of engineering sciences: mathematics , physics, chemistry, geodesy, technical mechanics, engineering and computer graphics, hydrometric work on water sources using measuring instruments, calculations for water management and land reclamation .
RO 3	Argue decisions with knowledge of hydraulics, geology and hydrogeology, climatology and meteorology, land hydrology, engineering fundamentals at a professional level for water management calculations.
RO 4	Use scientific research methods, regulatory, technical and legal bases and a system of automated design of structures, computer modeling in the design of structures for water management and land reclamation .
RO 5	Apply theoretical and practical knowledge of the design of hydraulic structures of water management systems, modern building materials and engineering structures and a modern system of computer-aided design of hydraulic structures and analyze soil mechanics, carry out technical control during the construction of hydraulic structures and their use (operation).
RO 6	Assess the integrated use of water resources with knowledge of the water cadastre, hydraulic structures, methods for constructing river water intake systems, design of reclamation systems, water use and the basics of agricultural water supply and watering of pastures.
RO 7	Distinguish designs and principle of operation , the scope of pumps of various types, evaluate their technical characteristics and mode of operation .
RO 8	Show knowledge of soil science, agriculture, land reclamation and conservation, reclamation and construction machines for irrigation and land reclamation.
RO 9	Select technologies for rational water use in agriculture, modern technologies for washing saline lands, organizing and planning work on the construction, reconstruction and repair of irrigation systems and hydraulic structures and systems to ensure the efficient operation of water management systems.
RO 10	To offer modern technologies for automation and digitalization of irrigation systems in the design and operation of water management systems.
RO 11	Recommend modern methods of irrigation and melioration on the irrigated area .
RO 12	Demonstrate knowledge of the agrarian economy and propose activities for the effective management of river water resources, taking into account the interests of all water users and water consumers .

CONTENT OF THE EDUCATIONAL PROGRAM

6B08604 - "Water management and melioration "

Модульдің шифрі / Шифр модуля / Module code	Модульдің атауы / Наименование модуля / Module name	Пәннің циклы / Цикл дисциплины / Discipline cycle	Пәннің компоненті / Компонент дисциплины / Discipline component	Пәннің коды / Код дисциплины / Code of subject	Пәннің атауы / Наименование дисциплины / Subject name	Академиялық кредиттер / Academic credits	Дәрістер / Лекции / Lectures	Лабораториялық / Laboratory / Лабораторные / Laboratory	Тәжірибелік / Practice / Практические / Practice	СӨЖ / СРСН / IWS CPC / IWS	СӨЖ / CPC / IWS	Кредиттерді академиялық мерзімге бөлу / Распределение кредитов по академическим периодам /								
													1 курс / course	2 курс / course	3 курс / course	4 курс / course	5	6	7	8
													Академиялық мерзімдегі апталар саны / Недель в академическом периоде / Number of weeks in the academic period							
15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15			
Жалпы модульдер / Общие модули / General modules																				
1	Гуманитарлық және тілдік / Гуманитарный и языковой / Humanitarian and linguistic	ЖБП / ООД / GER	МК / / ОК / / CS	SHT / Iya / FL 1103	Шет тілі / Иностранный язык / Foreign language	5			45		30	75	5.0							
2		ЖБП / ООД / GER	МК / / ОК / / CS	KOT / KRYa / KRL 1105	Қазақ (Орыс) тілі / Казахский (Русский) язык / Kazakh (Russian) language	5			45		30	75	5.0							
3		ЖБП / ООД / GER	МК / / ОК / / CS	KTM / IKG / HOKS 1101	Қазақстан тарихы (МЕ) / История Казахстана (ГЭ) / History of Kazakhstan (SEC)	5	15		30		30	75	5.0							
4		ЖБП / ООД / GER	МК / / ОК / / CS	SHT / Iya / FL 1104	Шет тілі / Иностранный язык / Foreign language	5			45		30	75		5.0						
5		ЖБП / ООД / GER	МК / / ОК / / CS	KOT / KRYa / KOT / KRYa /	Қазақ (Орыс) тілі / Казахский (Русский) язык / Kazakh (Russian) language	5			45		30	75		5.0						





22		БП / БД / BS	ЖК /БК /UC	IG / EH 1202	Инженерлік гидрометрия / Инженерная гидрометрия / Engineering hydrometry	6	15	30.0	15		30	90				6.0			
23		БП / БД / BS	ЖК /БК /UC	IG / EG 1203	Инженерлік геодезия / Инженерная геодезия / Engineering geodesy	5	15		30		30	75				5.0			
24		БП / БД / BS	ЖК /БК /UC	OP / UP / TP 1205	Оқу практикасы / Учебная практика / Training practice	2				20		40				2.0			
25		БП / БД / BS	ЖК /БК /UC	Him / Che 2207	Химия / Chemistry	5	15	15.0	15		30	75				5.0			
26		БП / БД / BS	ТК / КВ / ES	КМ / САМ 2219	Климатология және метеорология / Климатология и метеорология / Climatology and meteorology	5	15		30		30	75				5.0			
27		БП / БД / BS		Gid / Hyd 2220	Гидрометеорология / Hydrometeorology														
28		БП / БД / BS	ТК / КВ / ES	ТМ 2228	Техникалық механика / Техническая механика / Technical mechanics	5	15	15.0	15		30	75				5.0			
29		БП / БД / BS		Fiz / Phy 2228	Физика / Physics														
30		БП / БД / BS	ТК / КВ / ES	SSS / NNS /PAPS 3229	Сорап және сорап станциялары / Насосы и насосные станции / Pumps and pumping stations	7	30		45		45	90				7.0			
31		БП / БД / BS		GK / GU / HI 3229	Гидроқуштік қондырғылар / Гидросиловые установки / Hydropower Installations														
32		БП / БД / BS	ЖК /БК /UC	AE 4206	Аграрлық экономика / Аграрная экономика / Agrarian Economy	5	15		30		30	75						5.0	

33	Су шаруашылығындағы нормативтік-техникалық және құқықтық негіздер / Нормативно-технические и правовые основы в водном хозяйстве / Normative-technical and legal bases in water management	БП / БД / BS	ТК / КВ / ES	GKM / KMG / CMHE 2224	Гидротехникадағы компьютерлік модельдеу / Компьютерное моделирование в гидротехнике / Computer modeling in hydraulic engineering	5	15	30	30	75	5.0						
34		БП / БД / BS		GKEZh AZh / SAPEG S / CADSF EOHS 2223	Гидротехникалық құрылымдардың элементтерін жобалаудың автоматтандырылған жүйесі / Система автоматизированного проектирования элементов гидротехнических сооружений / Computer-aided design system for elements of hydrotechnical structures												
35		БП / БД / BS	ТК / КВ / ES	SK / VP / WL 3221	Су құқығы / Водное право / Water law	5	15	30	30	75	5.0						
36		БП / БД / BS		EK / EP / EL 3222	Экологиялық құқық / Экологическое право / Environmental law												
37	Су шаруашылығы ғылымының негіздері / Основы водохозяйственной науки / Fundamentals of water science	БП / БД / BS	ЖК / ВК / UC	GG / GAN 2210	Геология және гидрогеология / Геология и гидрогеология / Geology and hydrogeology	6	15	30.0	15	90	6.0						
38		БП / БД / BS	ЖК / ВК / UC	ZhG / GS / LH 2209	Жер гидрологиясы / Гидрология суши / Land hydrology	6	15		45	90	6.0						
39		БП / БД / BS	ЖК / ВК / UC	Gid / Hyd 2208	Гидравлика / Hydraulics	6	15	30.0	15	90	6.0						
40		БП / БД / BS	ЖК / ВК / UC	OP / PP 2211	Өндірістік практика / Производственная практика / Production practice	5			50	100	5.0						

41	Су ресурстарын пайдалану және басқару / Использование водных ресурсов и управление / Water use and management	БП / БД / BS	ЖК /БК /UC	SRKP / KIVR / IUOW R 3213	Су ресурстарын кешенді пайдалану / Комплексное использование водных ресурсов / Integrated use of water resources	7	30		45	45	90					7.0		
42		БП / БД / BS	ЖК /БК /UC	ASHSK EZhS / SOP / AWSA PW 3216	Ауыл шаруашылығын сумен қамтамасыз ету және жайылымдарды суландыру / Сельхозводоснабжение и обводнение пастбищ / Agricultural water supply and pasture watering	7	30		45	45	90					7.0		
43		Беп / ПД / AS	TK / KB / ES	SK / VK / WC 4314	Су кадастры / Водный кадастр / Water cadastre	6	15		45	30	90					6.0		
44		Беп / ПД / AS		SRB / UVR / MOWR 4314	Су ресурстарын басқару / Управление водными ресурсами / Management of water resources													
45	Жерді суару және мелиорациялау, гидротехникалық құрылыстар және мелиорациялық машиналар / Ирригация и мелиорация земель, гидротехнические сооружения и мелиоративные машины / Irrigation and land reclamation, hydraulic structures and land reclamation machines	БП / БД / BS	ЖК /БК /UC	TE / PZ / SSAA 3215	Топырақтану және егіншілік / Почвоведение и земледелие / Soil science and agriculture	5	15		30	30	75					5.0		
46		Беп / ПД / AS	ЖК /БК /UC	SM / IM / IAM 3301	Суару және мелиорация / Ирригация и мелиорация / Irrigation and melioration	7	15	30.0	30	45	90					7.0		
47		Беп / ПД / AS	ЖК /БК /UC	MKM / MSM / RACM 3305	Мелиоративтік және құрылыстық машиналар / Мелиоративные и строительные машины / Reclamation and construction machines	6	15		45	30	90					6.0		
48		Беп / ПД / AS	ЖК /БК /UC	OP / PP 3306	Өндірістік практика / Производственная практика / Production practice	5				50	100					5.0		

49		Беп / ПД / AS	ЖК /BK /UC	MZhZh / PMS / DORS 4302	Мелиоративтік жүйелерді жобалау / Проектирование мелиоративных систем / Design of reclamation systems	7	15	30.0	30		45	90						7.0	
50		Беп / ПД / AS	ЖК /BK /UC	ZhBK / ROZ / RALP 4303	Жерді баптау және қорғау / Рекультивация и охрана земель / reclamation and land protection	6	15		45		30	90					6.0		
51		Беп / ПД / AS	ЖК /BK /UC	GK / GS /HS 4304	Гидротехникалық құрылымдар / Гидротехнические сооружения / Hydrotechnical structures	7	15	30.0	30		45	90						7.0	
52		Беп / ПД / AS	TK / KB / ES	OSTS / SRG / CORW 4309	Өзен су тораптарын салу / Строительство речных гидрозлов / Construction of river waterworks	5	15		30		30	75						5.0	
53		Беп / ПД / AS		SAT / VG / WIW 4308	Су алу тораптары / Водозаборные гидроузлы / Water intake waterworks														
54	Гидротехникалық құрылыстардың инженерлік конструкциялары мен негіздері / Инженерные конструкции и основания гидротехнических сооружений / Engineering designs Andgroundshydraul ic structures	БП / БД / BS	ЖК /BK /UC	IK / ES 3212	Инженерлік конструкциялар / Инженерные конструкции / Engineering structures	6	15		45		30	90			6.0				
55		БП / БД / BS	TK / KB / ES	TM / MG / SM 3226	Топырақ механикасы / Механика грунтов / Soil mechanics	5	15		30		30	75			5.0				
56		БП / БД / BS		NI / OF / BAF 3225	Негіздер және іргетастар / Основания и фундаменты / Bases and foundations														
57	Гидромелиорация лық құрылыстар мен жүйелерді пайдалану және суды пайдалану	Беп / ПД / AS	TK / KB / ES	GZhAC / ACGS / AADOI	Гидромелиоративтік жүйелерді автоматтандыру және цифрландыру / Автоматизация и	6	15		45		30	90					6.0		



[illegible]

<sup>1</sup>Note:

№	Факультет / Кафедра	
	ҚАЗАҚ ТІЛІНДЕ	IN ENGLISH
<b>I</b>	<b>Агробиология</b>	<b>Agrobiology</b>
1	Агрономия, селекция және биотехнология	Agronomy, breeding and biotechnology
2	Жеміс-көкөніс шаруашылығы, өсімдік қорғау және карантин	Horticulture, plant protection and quarantine
3	Топырақтану, агрохимия және экология	Soil science, agrochemistry and ecology
<b>II</b>	<b>Ветеринария</b>	<b>Veterinary</b>
4	Акушерлік, хирургия және өсіп-өну биотехнологиясы	Obstetrics, Surgery and Reproductive Biotechnology
5	Биологиялық қауіпсіздік	Biosecurity
6	Клиникалық ветеринариялық медицина	Clinical Veterinary Medicine
7	Микробиология, вирусология және иммунология	Microbiology, virology and immunology
8	Ветеринариялық санитариялық сараптау және гигиена	Veterinary sanitary examination and hygiene
9	<u>Н.У.Базанова атындағы «Физиология, морфология және биохимия»</u>	"Physiology, morphology and biochemistry" named after N.U. Bazanova
<b>III</b>	<b>Су, жер және орман ресурстары</b>	<b>Water, land and forest resources</b>
10	Орман ресурстары, аңшылықтану және балық шаруашылығы	Forest resources, hunting and fisheries
11	Жер ресурстары және кадастр	Land resources and cadastre
12	Су ресурстары және мелиорация	Water resources and melioration
<b>IV</b>	<b>«Бизнес және құқық» жоғары мектебі</b>	<b>Higher School "Business and Law"</b>
13	Есеп, аудит және қаржы	Accounting, audit and finance
14	Х.Д.Чурин атындағы «Менеджмент және агробизнесісті ұйымдастыру»	"Management and organization of agribusiness" named after H.D. Churin
15	Құқық	Right
<b>V</b>	<b>Зооинженерия және тағам өндірісінің технологиясы</b>	<b>Zooengineering and food production technology</b>
16	Зооинженерия	Zooengineering
17	Тағам өнімдерінің технологиясы және қауіпсіздігі	Technology and food safety
<b>VI</b>	<b>Инженерлік-техникалық</b>	<b>Engineering</b>
18	Аграрлық техника және механикалық инженерия	Agricultural machinery and mechanical engineering
19	И.В.Сахаров атындағы «Машина пайдалану»	"Machine use" named after I.V. Sakharov
20	Энергия үнемдеу және автоматика	Energy saving and automation
21	<u>IT-технологиялар және автоматтандыру</u>	IT technologies and automation
<b>VII</b>	<b>Басқарма Төрағасы - Ректордың орынбасары</b>	<b>Deputy Chairman of the Board- Rector</b>
22	Жалпы білім беру пәндер	General university department
23	Дене тәрбиесі және спорт	Physical education and sports
24	Әскери кафедра	Military department

### Module competency map

General educational competencies Module. Humanitarian and linguistic		Learning Outcomes
QC 1	Aimed at the formation of the worldview, civil and moral positions of the future specialist, competitive on the basis of knowledge of information and communication technologies, building communication programs in the state, Russian and foreign languages, focusing on a healthy lifestyle, self-improvement and professional success;	<ul style="list-style-type: none"> <li>- demonstrate knowledge and understanding of the main stages of development of the history of Kazakhstan;</li> <li>- correlate the phenomena and events of the historical past with the general paradigm of the world-historical development of human society through critical analysis;</li> <li>- possess the skills of analytical and axiological analysis in the study of historical processes and phenomena of modern Kazakhstan;</li> <li>- be able to objectively and comprehensively comprehend the immanent features of the modern Kazakh model of development;</li> <li>- systematize and give a critical assessment of historical phenomena and processes in the history of Kazakhstan.</li> </ul>
KK2	They form a system of general competencies that ensure the socio-cultural development of the personality of a future specialist on the basis of the formation of his worldview, civic and moral positions;	<ul style="list-style-type: none"> <li>- evaluate the surrounding reality on the basis of worldview positions formed by knowledge of the foundations of philosophy, which provide scientific understanding and study of the natural and social world by methods of scientific and philosophical knowledge;</li> <li>- interpret the content and specific features of the mythological, religious and scientific worldview;</li> <li>- to argue their own assessment of everything that happens in the social and industrial spheres;</li> </ul>
QC 3	Develop abilities for interpersonal social and professional communication in the state, Russian and foreign languages;	<ul style="list-style-type: none"> <li>- engage in oral and written communication in Kazakh, Russian and foreign languages to solve problems of interpersonal, intercultural and industrial (professional) communication;</li> <li>- to carry out the use of language and speech means on the basis of a system of grammatical knowledge; analyze information in accordance with the communication situation;</li> </ul>
Module. Professional and communicative		Learning Outcomes
KK4	Promote the development of information literacy through the mastery and use of modern information and communication technologies in all areas of their lives and activities;	<ul style="list-style-type: none"> <li>- evaluate the actions and deeds of communication participants.</li> <li>- use various types of information and communication technologies in personal activities: Internet resources, cloud and mobile services for searching, storing, processing, protecting and disseminating information ;</li> </ul>
QC 5	Have an intolerant attitude towards corrupt behavior, respectful of the law and the law,	<ul style="list-style-type: none"> <li>- analyze events and actions from the point of view of the area of legal regulation and be able to refer to the necessary regulations;</li> <li>- navigate the current legislation;</li> <li>- using the law, to protect their rights and interests ,</li> <li>- carry out professional activities on the basis of a developed sense of justice, legal thinking and legal</li> </ul>

		<p>culture;</p> <ul style="list-style-type: none"> <li>- make decisions and take legal actions in strict accordance with the law.</li> <li>- have a sufficient level of legal awareness;</li> <li>- be able to evaluate the facts and phenomena of professional activity from an ethical point of view;</li> <li>- apply moral rules and norms of behavior in specific life situations.</li> </ul>
QC 6	Be competent in the analysis and perception of information in accordance with the basic knowledge of the economy; in using the basics of economic knowledge in various fields of activity ; in applying the acquired knowledge to solve situational and practical problems, in the application of legal acts, theoretical provisions and rules of law in practice.	<ul style="list-style-type: none"> <li>- s nat fundamental problems of the functioning of the economy, the mechanism of action and manifestation of economic laws, as well as the main features of the leading schools and areas of economic science;</li> <li>- know the current state and trends in the development of the international economy;</li> <li>- own economic terms and categories, use them in their educational activities;</li> <li>- understand and know the main events of world and domestic economic history, the course of ongoing reforms in the light of the implementation of the Strategy "Kazakhstan - 2050", development trends in the field of modern business;</li> <li>- distinguish and compare the behavior of market agents in different types of market structures ;</li> <li>- explain the interaction of economic agents in macroeconomic markets;</li> <li>- compare the performance of macroeconomic policies in different countries;</li> <li>- to argue their own views on modern macroeconomic phenomena;</li> <li>- use in practice the acquired knowledge to evaluate the results of ongoing economic reforms in Kazakhstan.</li> <li>- to know the rights, freedoms, duties of a person and a citizen;</li> <li>- know the main current regulatory legal acts of the Republic of Kazakhstan and be able to interpret them correctly;</li> <li>-know international law;</li> <li>-know the system of government bodies, their terms of reference ;</li> <li>- understand the mechanism of interaction between substantive and procedural law ;</li> <li>- understand the role and importance of law in the life of modern society;</li> <li>- be able to navigate the current legislation</li> <li>- to be able to use the norms of the law, to protect their rights and legitimate interests.</li> </ul>
QC 7	To be competent in the field of application of methods for the implementation of low-waste production and assessment of the environmental efficiency of economic activities.	<ul style="list-style-type: none"> <li>- know the content of the main terms in the field of ecology, rational nature management; modern global and regional environmental problems and ways to solve them;</li> <li>- be able apply environmental knowledge to solve and predict possible environmental problems;</li> </ul>

		<ul style="list-style-type: none"> <li>- apply methods for the implementation of low-waste production and assessment of the environmental efficiency of economic activity.</li> <li>- establish causal relationships between phenomena that occur in nature and society,</li> <li>- apply environmental knowledge to solve and predict possible environmental problems.</li> </ul>
QC 8	Promote the ability to apply the acquired knowledge to address issues of safety and reliability of operation of machinery and equipment and knowledge of issues of social protection of workers	<ul style="list-style-type: none"> <li>- know the main legislative acts on industrial safety, labor protection, environmental protection and civil protection;</li> <li>- apply the acquired knowledge to address issues of safety and reliability of operation of machinery and equipment;</li> <li>- the ability to evaluate machinery and process equipment in terms of susceptibility to emergency situations.</li> </ul>
<b>Module. Socio-political knowledge and a healthy lifestyle</b>		<b>Learning Outcomes</b>
QC 9	form the skills of self-development and education throughout life;	<ul style="list-style-type: none"> <li>- assess situations in various areas of interpersonal, social and professional communication, taking into account the basic knowledge of sociology, political science, cultural studies and psychology;</li> <li>- synthesize knowledge of these sciences as a modern product of integrative processes;</li> <li>- use scientific methods and techniques for researching a specific science, as well as the entire socio-political cluster;</li> <li>- develop their own moral and civic position;</li> <li>- to operate with social, business, cultural, legal and ethical norms of Kazakhstani society;</li> <li>- demonstrate personal and professional competitiveness;</li> <li>- apply in practice knowledge in the field of social sciences and humanities, which has worldwide recognition;</li> <li>- to carry out the choice of methodology and analysis;</li> <li>- summarize the results of the study;</li> <li>- synthesize new knowledge and present it in the form of socially significant humanitarian products;</li> </ul>
QC10	form a personality capable of mobility in the modern world, critical thinking and physical self-improvement.	<ul style="list-style-type: none"> <li>- build a personal educational trajectory throughout life for self-development and career growth, focus on a healthy lifestyle to ensure full-fledged social and professional activities through the methods and means of physical culture.</li> </ul>
<b>Basic competencies</b>		<b>Learning Outcomes</b>
KK11	<b>Module 1 - General technical basis of hydraulic engineering</b> Forms fundamental knowledge of technical sciences	<ul style="list-style-type: none"> <li>- learn the fundamentals of technical sciences: mathematics, physics, chemistry, technical mechanics, hydrometry, engineering and computer graphics,</li> <li>- possess the skills and methodology for conducting geodetic, hydrometric measurements and meteorological observations</li> <li>- be able to take measurements on water sources using innovative measuring instruments,</li> </ul>

		- have the skills of engineering calculations and graphic work for the design of hydraulic structures .
KK12	<b>2 module. Fundamentals of water science</b> Forms knowledge on forecasting the surface and underground runoff of the river basin	- know the basic laws of fluid movement, the principles of formation of surface and underground runoff - have the skills to calculate the main parameters of water flow in the calculation of hydraulic structures - be able to carry out hydrological calculations to predict the volume of water runoff
KK13	<b>3 Module. Normative-technical and legal bases in water management</b> Be competent in the legal framework of water relations	- know the regulatory, technical and legal framework for the design of hydraulic structures - be able to apply modern methods and systems of computer-aided design of elements of hydraulic structures to solve problems in the field of water management
KK14	<b>4 Module. Engineering designs And grounds hydraulic structures</b> Aimed at the ability to solve design issues during the construction and reconstruction of water facilities	- know the basics of soil mechanics, the principles of operation of foundations and foundations, modern building materials and engineering structures - have the skills to carry out calculations of elements of foundations and structures in the design of hydraulic structures
KK15	<b>5 Module. Water use and management</b> Be competent in analysis and decision making in integrated water resources management	- know the basic principles of rational use and integrated management of water resources, the use of water by various sectors of the economy - be able to analyze and link water management balances, dispatch schedules for effective water management - own methods of management and regulation of the supply of water resources by various water-lifting devices for the purposes of water supply and irrigation.
<b>Professional competencies</b>		<b>Learning Outcomes</b>
KK16	<b>6 Module. Irrigation and land reclamation , hydraulic structures and land reclamation machines</b> Forms the ability to master advanced methods and irrigation and reclamation with the use of modern machines	- know the basic principles of agriculture using advanced methods of irrigation and melioration, modern machines and mechanisms - be able to carry out calculations of reclamation systems, hydraulic structures - possess the skills of organizing construction work in the construction of hydroelectric facilities using modern technologies
KK17	<b>7 Module. Operation of irrigation and drainage facilities and systems and technologies for water use and land leaching, and water resources management</b> Be competent in the efficient operation and automation of gyromeliorative systems	- know the methods of reliable operation of water facilities and systems to ensure long-term and safe operation, - be able to apply modern technologies for automation of water management systems - possess skills and technologies for efficient water use - to know the advanced methods of flushing saline lands when designing new and reconstructing existing reclamation systems

5. A summary table reflecting the volume of disbursed loans in the context of the modules of the educational program:  
Number of modules - 7

Course of Study	Semester	Number of disciplines studied			Amount of credits							Total hours	Military training	Quantity	
		OK	VC	HF	Theoretical training	Educational practice	Internship	Undergraduate practice	final examination	Total	Exam			Differential standings	
1	1	5	1	-	30	-				30	900		6		
	2	3	3	-	28	2				30	900		6	1	
2	3	3	-	4	30					30	900		7		
	4	1	3	1	22		8			30	900		5	1	
3	5	-	2	3	30					30	900		5		
	6	-	1	3	22		8			30	900		4	1	
4	7	-	2	3	26		4			30	900		5	1	
	8	-	2	1	18			4	8	30	900		3	2	
Total		12	14	15	206	2	20	4	8	240	7200	588	41	6	

Information about disciplines

No.	Name of the discipline	Brief description of the discipline (30-50 words)	Number of credits	Formed competencies
<b>Cycle of general education disciplines / Mandatory component</b>				
1.	History of Kazakhstan (SEC)	The study of the course is aimed at developing the concept of the history of Kazakhstan among students , based on a holistic and objective coverage of the problems of the ethnogenesis of the Kazakh people, the evolution of forms of statehood and civilization on the territory of Kazakhstan and the totality of the most significant historical facts and events.	5	KK1
2.	Philosophy	The course is aimed at developing students' understanding of philosophy as a special form of understanding the world, its main sections, problems and methods, as well as the skills of introspection and moral self-regulation, the development of research abilities and the formation of intellectual and creative potential.	5	KK2
3.	Foreign language	Teaching a foreign language sets tasks for the development of foreign language communicative competence in the aggregate of its components	10	KK3
4.	Kazakh (Russian) language	The discipline is designed to develop the linguistic personality of a student who is able to carry out cognitive and communicative activities in Russian in the areas of interpersonal, social, professional, меVcultural communication in the context of the implementation of state trilingual programs and the spiritual modernization of national consciousness.	10	KK3
5.	Information and Communication Technologies	To form the skills of methods for searching, storing and processing information, ways of collecting and transmitting information through digital technologies and the ability to analyze processes, critically evaluate the results.	5	KK4
<b>Module of socio-political knowledge (sociology, political science, cultural studies, psychology)</b>				
6.	Social studies	studies society, revealing the internal mechanisms of its structure and the development of its structures (structural elements: social communities, institutions, organizations and groups )	2	KK9
	Political studies	Political science as a science about politics: subject, method, history of formation. Power, domination, legality, Political elites and political leadership. The political system of society. Political regime. Civil society. The political culture of society. Political development in the context of modernization theory. political ideologies. Political problems of sovereign	2	

		Kazakhstan. World politics and international relations.		
	Cultural studies	Theoretical and conceptual foundations of cultural studies. Object and subject of cultural studies. The main stages in the development of culture. Primitive culture is the cradle of culture. Antique culture is the beginning of classical culture. Middle Ages - features of Western European culture and the culture of the Arab Caliphate. The era of the Italian Renaissance. Humanism and the Age of Enlightenment.	2	
	Psychology	And the history of the emergence and development of psychological science. Branches of psychology. General concept of the psyche. Psychology research methods. Personality and activity. Cognitive mental processes. Individual-psychological and emotional-volitional characteristics of the personality. Temperament. Character. Capabilities. Emotions and feelings. Will.	2	
7.	Physical Culture	The discipline covers a range of issues related to physical culture as part of human culture, a healthy lifestyle, its main components, the socio-biological foundations of the adaptation of the human body to physical and mental activity, preparation for independent physical education and sports, age physiology.	8	QC10
<b>Cycle of general education disciplines / Optional component</b>				
8.	Law and anti - corruption culture	The course will allow you to learn the concepts and content of law and professional ethics in legal activities, possible ways to resolve moral conflict situations in the professional activities of a lawyer; be able to evaluate the facts and phenomena of professional activity from an ethical point of view, apply moral rules and norms of behavior in specific life situations	5	QC 6 RO-1.4
9.	Ecology	The course provides theoretical knowledge in the field of ecology, helps to improve the environmental awareness of students, forms environmental thinking, as well as the ability to apply this knowledge in professional and other activities.	5	
10.	Life safety	The discipline is aimed at obtaining knowledge about dangerous and emergency situations of natural, man-made and social origin; organizations for the protection of the population and territories; legal normative-technical and organizational bases of life safety.	5	
11.	Economy	The content of the discipline "Economics" is aimed at mastering the basic knowledge about the economic life of the society in which the economic activities of individuals, individual enterprises and the state are carried out. The subject contributes to the development of	5	

		economic thinking among students and the ability to make rational decisions with limited natural resources. The discipline contributes to the formation of a willingness to use the acquired knowledge about the functioning of the economy for orientation in choosing a profession and further education. After mastering the course, students will be able to navigate current economic events, understand the features of the modern economy.		
12.	Entrepreneurship	The Entrepreneurship course will teach you how to develop the right competencies that will be useful in the life of any entrepreneur, understand how to create a team for your project, learn how to choose the right business idea based on market needs, develop a business model and write a business plan to start your business.	5	
13.	Fundamentals of Scientific Research	The course reveals the basics of the methodology of scientific research, considers various levels of scientific knowledge. The stages of research work are highlighted, including the choice of the research direction, the formulation of a scientific and technical problem, the conduct of theoretical and experimental research, and recommendations for formalizing the results of scientific work.	5	
<b>Cycle of basic disciplines / University component</b>				
14.	Mathematics	The study of fundamental concepts, laws and theory of classical mathematics. Ability to build mathematical models, set mathematical problems and select appropriate mathematical methods and algorithms for solving problems. Formation of scientific outlook and logical thinking. Carrying out qualitative mathematical research, on the basis of the conducted mathematical analysis, to develop practical recommendations .	5	QC 11 RO-2,4
15.	Engineering geodesy	A science that studies the shape and dimensions of the Earth's surface or its individual sections by measuring and computing them, building plans, maps and profiles that are used in solving engineering, economic and other problems, as well as using geodetic tools, methods of conducting geodetic work, conducting cameral data processing, filling measurement logs.	5	KK11 RO-2,10
16.	Engineering hydrometry	The discipline describes modern instruments and hydrometric installations. New aspects of river hydrometry and hydrology related to the ongoing system of state water accounting and water cadaster are outlined. Various options for flow regulation and its economic efficiency are highlighted. A complex of scientific, methodological and technical measures for the hydro metrological support of the hydrological network is considered .	6	KK11 RO-2,10

17.	Computer graphics with engineering basics	The discipline provides knowledge on the formation of drawings, on the practical application of geometric constructions, such as: rectangular and axonometric projection; sections and cuts; working drawings of parts; assembly drawings; construction and architectural drawings.	5	KK11 RO-2,4
18.	Agrarian Economy	The course of agricultural economics is aimed at a general understanding of the specifics of the functioning of agricultural production, the forms and consequences of state regulation in the agri-food sector, as well as familiarity with the global agrarian system, the practice of agrarian reforms in Kazakhstan .	5	KK11 RO-12
19.	Chemistry	The discipline studies the basic laws of water chemistry, the concepts of composition, factors, classification of natural waters, patterns of formation of their chemical composition, provides information on the processes of metamorphization of waters, sources of formation of organic matter, biogenic and microelements in them, the main components of pollution of natural waters and methods of combating water pollution.	5	KK11 RO-2
20.	Hydraulics	The discipline studies the physical properties of liquids and includes sections of hydrostatics; fundamentals of hydrodynamics; laws of conservation of fluid energy; hydraulic resistance and pressure loss in pipelines; outflow of liquids from holes; patterns of water movement in pipelines; uniform movement of fluid in artificial channels; considers the phenomenon - hydraulic jump; conjugation of pools; water hammer; groundwater movement. The course covers the issues of the practical application of the laws of hydraulics, the performance of hydraulic calculations to substantiate the adopted design decisions of hydraulic structures , in addition, laboratory classes are provided for the successful study of the discipline, during which the student gets the opportunity to observe all the occurring phenomena	6	KK12 RO-3
21.	Land hydrology	The discipline studies the basic concepts of the water cycle and water balance in nature, the river system, nutritional factors and the river flow regime, provides information on water erosion, flow forecasts, principles and methods of hydrological calculations when designing irrigation and drainage systems.	6	KK12 RO-3
22.	Geology and hydrogeology	The discipline studies the structure and state of the composition and properties of the earth's crust, endogenous and exogenous geological processes, types of minerals and rocks, types of water in them, provides information on the laws of motion, origin, regime and balance of groundwater,	6	KK12 RO-3

		introduces the methods of hydrogeological observations and research for purposes of hydraulic engineering.		
23.	Engineering structures	The discipline gives general information about engineering structures, structures and their parts (movable or fixed; a method is given for carrying out calculations to determine the dimensions of engineering structures; calculating them for strength, stability, endurance, crack resistance and deformation, for the perception of various loads and effects; information is given about engineering structures made of steel, aluminium, concrete, reinforced concrete, stone, plastics, about concrete, reinforced concrete and metal structures used in hydraulic engineering and reclamation construction, about wooden structures.	6	KK14 RO-5
24.	Integrated use of water resources	The discipline teaches about water resources and their use . Renewable water resources. Modern problems of water supply and compensation for the harmful effects of water; water management programs based on forecasts of regional socio-economic development. A systematic approach to the integrated use of water resources. Classification of water management systems.	7	KK15 RO-6
25.	Pumps and pumping stations	The design, principle of operation and scope of pumps of various types are given. Their technical characteristics and operating modes are considered. Recommendations are given for determining the operating parameters of pumps for general use, as well as pumps used in production.	7	KK15 RO-7
26.	Agricultural water supply and pasture watering	The discipline provides information about the basics of agricultural water supply and watering of pastures; about the system and schemes of agricultural water supply; about water-lifting equipment; on structures and external water supply networks; on the most efficient pasture irrigation systems; on measures to prevent water shortages and the current state of the use of water resources.	7	KK15 RO-6,9
<b>Cycle of basic disciplines / Optional component</b>				
27.	Technical mechanics	The discipline studies the basics: statics. basic concepts and axioms of statics ; information about active forces and reactions of supports ; system of converging forces ; moment of force relative to the point ; point kinematics ; translational motion of a rigid body ; rotation of a rigid body around a fixed axis ; uniform rotation of a rigid body ; plane motion of a rigid body ; theorem on projections of velocities of two points of a body ; instantaneous center of speeds ; complex motion of a point velocity addition theorem ; laws of dynamics differential equations of motion of a material	5	KK11 RO-2,5

		point ; moments of inertia of bodies ; the simplest geometric form work force ; power ; the work of forces applied to a material point and a solid body theorem on the change in the kinetic energy of a material point ; kinetic energy of the material system ; hook's law ; the principle of independence of the action of forces, types of loading, etc.		
28.	Physics	The discipline gives general information about the laws of kinematics and dynamics of a material point and a solid body, molecular physics and thermodynamics, energy conservation, provides information about mechanical vibrations and waves, electrostatics, magnetism, electromagnetic induction, direct and alternating current, the basics of atomic and nuclear physics.	5	KK11 RO-2.5
29.	Climatology and meteorology	The discipline studies the concept of climate ; climatic zones and ; climate classification of Kazakhstan ; composition and structure of the atmosphere ; solar radiation ; soil temperature, air temperature, water vapor in the atmosphere, evaporation, precipitation, air pressure, air masses, fronts, formation of cyclones, weather in a cyclone, weather in an anticyclone, scheme of the general circulation of the atmosphere, special natural phenomena , etc.	5	KK11 RO-3
30.	Hydrometeorology	The subject of hydrometeorology is the study of the atmosphere , land waters and the World Ocean in their relationship , water resources , snow avalanches and mudflows.	5	KK11 RO-3
31.	Water law	The discipline gives the concepts of the fundamentals of the legal norms governing public relations for the use, protection and restoration of water resources, water bodies, design and construction of hydraulic structures	5	KK13 RO-1.12
32.	Environmental law	The discipline gives the concept of a set of legal norms that regulate social relations in the field of interaction between society and nature , environmental issues in the construction of hydraulic structures	5	KK13 RO-1.12
33.	Computer-Aided Design System for Elements of hydrotechnical structures	Acquaintance with the basics of software for automation of the design of hydraulic structures, the main ideas and principles of their use, the performance of technical calculations, graphic and computational work.	5	KK13 RO-2,4
34.	Computer modeling in hydraulic engineering	The discipline introduces students to the basics of Corel Draw and Photo Shop programs for computer modeling in hydraulic engineering and instills work skills for creating drawings, images, lines, creating, formatting and editing text. Working with a layer. Loading colors and line types.	5	KK13 RO-2,4
35.	Bases and foundations	The discipline provides information about the formation of soils, about their physical and	5	KK14 RO-5

		mechanical properties; on the stress-strain state of the soil stratum of the foundations of structures; on the main provisions for the design of bases and foundations; on the appointment of the depth of laying and constructive forms of foundations; on the calculation and design of foundations; on the basics of designing bases and foundations for limiting states, on foundations erected in open pits, on the methodology for calculating the settlement of foundations.		
36.	Soil mechanics	The discipline provides information about the types of soil, the origin, composition and structure of soils; on the properties of solid particles of soil; about the liquid component of soils; about the gaseous component of the soil; on the structure of soils. The classification of soils and their characteristics are given; information about natural rocky soils; about natural dispersed soils; the main characteristics of the soil and its defining properties; determination of soil properties in laboratory and field conditions; on the strength and stability of foundations	5	KK14 RO-5
37.	Management of water resources	The discipline considers the current state of water resources management in the context of sustainable development, the concept of integrated water resources management, the legislative framework for water resources management, national water policy and national strategy for water resources management, the main strategic principle of integrated water resources management, the functioning of basin councils , information support of the IWRM process, international cooperation and improvement of the management of transboundary water bodies.	6	KK15 RO-9,12
38.	Water cadastre	discipline __ is intended for a systematized set of documented information about water bodies owned by the state, the property of the subjects of the Republic of Kazakhstan, municipalities, individuals and legal entities and individual entrepreneurs, about the use of water bodies, about river basins and basin districts	6	KK15 RO-6
<b>Cycle of major disciplines / University component</b>				
39.	Irrigation and melioration	The discipline studies the main methods of supplying water to lands with a shortage of natural water by carrying out various engineering and technical measures, provides information on ways to radically improve lands by carrying out hydrotechnical, chemical, agroforestry and agrotechnical measures.	7	KK16 RO-8,9
40.	Design of reclamation systems	The discipline provides theoretical and practical knowledge on the regulatory framework, design stages and methods, on the structure, structural elements and parameters of reclamation systems,	7	KK16 RO-6,9,10

		and on making professional decisions in the construction and operation of such systems.		
41.	Soil science and agriculture	The discipline considers aspects of soil formation, the formation of the basic properties of soils and their distribution on the territory of Kazakhstan, ways to increase the productive capacity of soils, the composition of agrotechnological methods and the system of methods of cultivating crops, plant growing technology, the tasks of improving the use of land and water resources in conditions of scarce water use.	5	KK16 RO-8,11
42.	Recultivation and land protection	The discipline provides information on operational planning and management of technological processes for land reclamation, restoration of disturbed agroecosystems and the creation of cultural landscapes; organization of work on land protection; analysis and assessment of the state of disturbed lands; determination of the reasons for the violation of agroecosystems and a complex of anti-erosion and soil protection measures, measures to protect territories from floods and flooding.	6	KK16 RO-5,8,11
43.	Hydrotechnical structures	The discipline gives general information about hydraulic structures, about water filtration under hydraulic structures; about the method of carrying out filtration calculations; on general issues of calculating the stability of structures; loads and impacts on concrete hydraulic structures; on the design of dams from soil and other local materials; on the design of culverts for hydroelectric facilities.	7	KK16 RO-4,5
44.	Reclamation and construction machines	The discipline studies the main functions and conditions for the use of construction and reclamation machines, the specifics of the work of the working bodies of these mechanisms, considers the issues of stable and reliable operation of construction and reclamation machines when they are used in water management construction.	6	KK16 RO-8
<b>Cycle of profiling disciplines / Optional component</b>				
45.	Water intake waterworks	The discipline gives general information about water intake hydroelectric facilities; on the classification of water intake hydroelectric facilities; on the requirements for water intake hydroelectric facilities; on the design of river dam less water intakes; about river dam water intakes; on the designs of lateral water intakes; about frontal water intakes; on bottom-lattice water intakes, designing water intake hydroelectric facilities on rivers	5	KK16 RO-5,9,10
46.	Construction of river waterworks	The discipline provides information about the technology of production of works of head water intake structures ; on the arrangement of closed	5	KK16 RO-5,9

		pipelines ; channels-trays ; information about hydrometric devices ; about the road network ; about the reservoir, about regulating and protective structures ; information about the quarries of soil materials, about the warehouses of aggregates and cement.		
47.	Operation of irrigation and drainage structures and systems	The discipline provides information about the basic technical conditions for the correct operation of water management systems; on the operation of head water intake facilities; about pumping stations; about linear structures: canals, flume structures, hydrometric devices; information about the operation of the reservoir, protective and regulating structures, the organization and production of repair work, the organization of the operational service.	6	KK17 RO-9,10,11
48.	Automation and digitalization of irrigation and drainage systems	The discipline studies the issues of automation of hydraulic structures; information about the main elements and devices of automation; on technical means of automation and dispatching of controlled hydraulic structures; on the automation of water intake units, pumping stations and water distribution units; on automation of water measurement and accounting at hydraulic structures.	6	KK17 RO-10
49.	Technologies for efficient water use in agriculture	The discipline studies the issues of improving the water accounting system, the use of collector and drainage water for irrigation, the introduction of advanced irrigation techniques and technologies, the use of agricultural practices that increase soil fertility , the improvement of the organization and technology of water allocation, the introduction of advanced irrigation technologies, the use of discharges, differentiated water supply	5	KK17 RO-10
50.	Technologies for flushing saline lands	The discipline studies the characteristics of saline soils, the basic techniques of their reclamation, methods for analyzing saline and saline soils, water extracts of soils to determine the supply of water-soluble salts in soils, to establish the degree and chemistry of their salinity, recommendations for washing saline lands.	5	KK17 RO-9,11

## Bases of practice

No.	Name of companies, enterprises, organizations	Contacts Tel, e - mail
1	LLP "Institute of Geography"	Almaty, Kabanbay batyr/Pushkin 67/99
2	GU "Kazselezashchita" of the Ministry of Emergency Situations of the Republic of Kazakhstan	Almaty, st. Kaldayakova, 70, + 7(727) 2912755
3	BAC named of D. Kunaev RSE "Kazvodkhoz"	Almaty region, st. Melioratornaya, 1A 8 (72737) 1 80 00
4	Institute PC "Kazgiprovodhoz"	Almaty, 434 Seifullin Ave., 8 (727) 2793522
5	SUC " Almaty Su"	Almaty, st. Zharokova 196, 8 (727) 2276001
6	Branch of the Republican State Enterprise on PVC "Kazgidromet" Ministry of Energy of the Republic of Kazakhstan	Almaty, ave . Abay, 32 8 (727) 2676464
7	East Kazakhstan branch of RSE "Kazvodkhoz"	Ust-Kamenogorsk, Kazakhstan street, 99/1
8	Kyzylorda branch of RSE "Kazvodkhoz" CWR MEGiPR RK	Kyzylorda, Tole bi street, 66, 8 (7242) 233250
9	Zhambyl branch of the Republican State Enterprise "Kazvodkhoz" CWR of the Ministry of Agriculture of the Republic of Kazakhstan	Zhambyl region, Taraz city, Zhaugash batyr street, 1a, 8 (7262) 425490
10	Turkestan branch of RSE "Kazvodkhoz" CWR MEGiPR RK	Shymkent, st. Mukhamed Khaidar Dulati, 5 8 (7252) 54 87 37
eleven	RSU Aral-Syrdarya BVI CWR MEGiPR RK	Kyzylorda city, Amangeldy street 107, 8(7242)235607
12	Balkhash-Alakol BVI CWR MEGiPR RK	Almaty, Abylai Khan Ave., 2, 8 (7272)453253
13	MAEKKazatomprom LLP	WKO, Mangistau region, Aktau 8(7292)564208
14	"Zonal hydrogeological and reclamation center"	Almaty, Zhetysu district, st. Baisheva, 113 8 (727) 264 26 29
15	SUC "Kostanay Su"	Kostanay region, Kostanay, st. Abaya 19 8 (7142) 22 25 00
16	LLP "Design Institute named after Dzhanekenov Zh.R."	Almaty region, Tal dykorgan, st. D.Konaev, 20
17	Water Resources - Marketing LLP	Shymkent, st. G.Ormanova 17, 8 (7252) 321 195
18	Panfilov production site of the Almaty branch of RSE "Kazvodkhoz" KVR MEGiPR RK	Almaty region, Zharkent, st. Holovatsky, 290, 8 (72831) 9 40 12
19	RSE " Kazvodkhoz" KVR MEGiPR RK	Nur-Sultan, st. Pushkina, 25, 8 (7172) 24 85 26
20	GKK "Taza Su-2014"	Zhambyl region, T.Ryskulov district, with. Kulan, st. K.Asylova, 54
21	SUC "Alakolirrigatsiya"	Almaty region, Alakol district, Usharal, st. V. Toshchenko, 19, 8 (72833) 3 52 71
22	SUC "Turkestan-Su"	Turkestan region, Turkestan, st. S. Erubaeva, 255, 8 (72533) 4 21 92
23	Kegen district "Department of WSS and Housing Inspection"	Almaty region, Kegen region, with. Kegen, st. B. Momyshtuly, 9, 8 (7277) 721475
24	MSE "Ayagoz Su"	East Kazakhstan region, Ayagoz, Barak Batyr st., 61 , 8(7223)730301
25	Uralvodproekt LLP	WKO, Uralsk, st. Hamid Churina, 119 8 (7252) 535057
26	Kyzylorda branch of RSE "Kazalysuhar"	Kyzylorda region, Kazalinsky district, st. Aiteke bi, 1, 8 (724) 3851687
27	SUC "Kapshagai Su Arnasy"	Almaty region, Kapchagay, st. Koichumanova, 4, 8 (72772) 4 19 48
28	MSE "Balkhash Su"	Karaganda region, Balkhash city, microdistrict Sabitova, 18b, 8 (71036) 65490