

MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF
KAZAKHSTAN

SOUTH KAZAKHSTAN UNIVERSITY named after M. Auezov

« APPROVED BY »
Chairman of the board
directors-rector
d.h.s., academician Kozhamzharova D.P.
« 25 » 02 - 2021y.

EDUCATION PROGRAMME

6B07360- Cadastre

Registration number	6B07300003
Code and classification of the field of education	6B07-Engineering, manufacturing and construction industries
Code and classification of training areas	6B073 – « Architecture and construction »
Group of educational programs	B075- Cadastre and land management
Type of EP	active
ISCE level	6
NQF level	6
SQF of education level	6
Language of learning	Kazakh, Russian
Typical duration of study	4 years
Form of study	Full time
The complexity of the EP	240 credits
Distinctive features of the EP	-
Distinctive features of EP	-
University Partner (JEP)	-
University Partner (TDEP)	-

Shymkent - 2021.

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EP was considered by the Academic Commission «Engineering and engineering», Minutes № 1. "18" 01. 2021

Chairman of the Academic Commission Korganbayev B.N.

It was considered recommended for approval at the meeting of the Educational and Methodological Council of the M.Auezov.SKU, Minutes

№ 5. "30" 02. 2021

It was approved by the decision of the Academic Council of the University Minutes

№ 11. "25" 02. 2021

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Introduction

1. Scope

Designed for the implementation of bachelors training by educational program (hereinafter - EP) code «6B07360- Cadastre» protection in RSE on right of economic management "M.Auezov South Kazakhstan University" of RK MES.

2. Regulatory documents

Education Act of the Republic of Kazakhstan (as amended and supplemented on 07/04/2018);

Standard rules for the operation of educational organizations implementing educational programs of higher and (or) postgraduate education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan from October 30, 2018 No. 595 (registered with the Ministry of Justice of the Republic of Kazakhstan on October 31, 2018 No. 17657);

State obligatory standards of higher and postgraduate education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan, October 31, 2018 No. 604;

The rules for the organization of educational process on credit technology education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan on April 20, 2011 No. 152 as amended and supplemented of October 12, 2018 No. 563

Professional standard: "Development of geoinformation systems", approved by Order No. 259 of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" dated 24.12.2019

3. Educational programs concept

The purpose of the educational program is consistent with the mission of the university and is aimed at training the intellectual elite of the country with advanced knowledge and entrepreneurial skills, fluent in three languages, demonstrating the skills of conceptual, analytical and logical thinking, creative approach in professional activities, able to work in a national and international team, assimilating the strategy of learning throughout life.

The educational program is harmonized with the 6th level of the National Qualifications Framework of the Republic of Kazakhstan, with the Dublin Descriptors, and with the 1st cycle of the Qualification Framework of the European Higher Education Area. ((A Framework for Qualification of the European Higher Education Area), also with a 6-level European Qualification Framework for Lifelong Learning.

The educational program is focused on the professional and social order through the formation of professional competencies related to the necessary types of research, practical and entrepreneurial activities, adjusted to meet the requirements of stakeholders.

The uniqueness of the educational program 6B07360 - "Cadastre" consists in achieving the expected result, the content, conditions and technologies for implementing the educational process, assessing the quality of graduate training in this area and includes: the curriculum, work programs of academic disciplines and other materials that ensure the quality of training of students, as well as programs of educational and industrial practice, a calendar training schedule and methodological materials that ensure the implementation of the relevant educational program.

The educational program is aimed at achieving learning outcomes through the organization of the educational process using the principles of the Bologna Process, student-centered learning, accessibility and inclusiveness.

The results of the training program are achieved through the following training activities:
- classroom classes: lectures, seminars, practical and laboratory classes-are conducted taking into account innovative teaching technologies, the use of the latest achievements of science, technology and information systems;

- extracurricular activities: independent work of the student, including under the guidance of a teacher, individual consultations;

- conducting professional practices, completing term papers and theses (projects).

The University has taken measures to maintain academic integrity and academic freedom, and to protect students from any kind of intolerance and discrimination.

The quality of the OP is ensured by the involvement of stakeholders in its development and evaluation, systematic monitoring and review of its content.

4.Requirements for applicants

Established in accordance with the Standard Rules for Admission to Training in Educational organizations that implement educational programs of higher and Postgraduate Education Order of the Ministry of Education and Science of the Republic of Kazakhstan No. 600 of 31.10.2018

1. PASSPORT OF THE EDUCATIONAL PROGRAM

1.1 The purpose and objectives of the educational program in the specialty

The purpose of the EP: Training of high-demand personnel in the field of modern technologies for creating land cadastre works for the evaluation of land and other real estate objects.

OP tasks:

- formation of socially responsible behavior in society, understanding the importance of professional ethical standards and following these standards;
- providing them with lifelong learning skills that will enable them to successfully adapt to changing conditions throughout their professional careers;
- providing conditions for the acquisition of a high general intellectual level of development, mastering competent and developed speech, culture of thinking and skills of scientific organization of work in the field of professional activity.
- formation of the competitiveness of graduates in the field of land management, nature management to ensure the possibility of their fastest possible employment in their specialty or continuing their studies at subsequent stages of training.

1.2 List of qualifications and positions

The graduate of this OP is awarded the degree-Bachelor of Engineering and Technology in the educational program 6B07360 - "Cadastre". Bachelors in OP 6B07360 - "Cadastre" can hold primary positions of land resources specialist, cadastral engineer, appraiser, land management under akimats, city architecture, engineer surveyor, other professional activities urban planning, not included in other categories without presenting requirements for work experience in accordance with the qualification requirements. The qualification directory of positions of managers, specialists and other employees, approved by the order of the Minister of Labor and Social Protection of the Population of the Republic of Kazakhstan dated May 21, 2012 No. 201-o-m.

1.3 Qualification characteristics of the graduate of the educational program

1.3.1 Field of professional activity

The field of professional activity is the construction of the land cadastre, land relations for the rational use and protection of cadastral resources of the Republic of Kazakhstan and the maintenance of the state land cadastre.

1.3.2 Objects of professional activity

The objects of professional activity of graduates are the land resources of the Republic of all categories, types and forms of ownership and use. Objects and types of real estate located within the borders of cities, towns and rural localities, regardless of their distribution by category, purpose and form of ownership.

1.3.3 Subjects of professional activity

The subjects of the bachelor's professional activity in the field of geodesic and topographic land surveys; photogrammetric work and mapping of land using GIS and digital technologies; maintaining the state land cadastre and AISZK, conducting monitoring, state control of land use and protection, conducting land assessment works.

1.3.4 Types of professional activity

A bachelor in the Educational program 6B07360 - "Cadastre" can perform the following types of professional activities:

- organizational and technological support;
- production and management – calculation and design;
- experimental – research;
- educational;

2. Results of training on EP

PO1 Communicate freely in the professional environment and society in Kazakh, Russian and English.

PO2 Demonstrate scientific, mathematical, social, socio-economic and engineering knowledge in professional activities, methods of mathematical data processing, theoretical and experimental research, regulatory documents and elements of economic analysis.

PO3 Possess information and computational literacy, the ability to generalize, analyze and perceive information, set goals and choose ways to achieve it.

PO4 Possess the basic methods of geodesic, land management and cartographic work;

PO5 Possess knowledge of the structure and classification of data sources, types of geoinformation systems, technical and software tools for converting cartographic information into digital form and processing it;

PO6 Justify and use organizational and technological training in the preparation of land balances, land cadastre documents and maps, land reclamation projects and land improvement

PO7 Know the conduct of state control over the use and protection of land;

PO8 Know how to maintain the state land cadastre monitor all land categories

PO9 Participate in the assessment of the state of land resources and objects (including cross-border ones), using the principles and management of land resources

PO10 Readiness to conduct photogrammetric work and land mapping using GIS and digital technologies;

PO11 The ability to calculate and complete the effective use of land resources, plan and organize the work of land management enterprises, taking into account the necessary economic costs;

PO12 Effectively work individually and as a team member, correctly defend your point of view, adjust your actions and use different methods.

3. COMPETENCIES OF THE GRADUATE OF THE EP

3.1 Successful completion of the training contributes to the formation of the following competencies in the graduate: OP

Key competencies (QC)

Professional competencies (PC).

Key competencies:

in the field of the *native language* (KK1)

в области иностранных языков (KK2)

- the ability to express and understand concepts, thoughts, feelings, facts and opinions in the field of music education in written and oral forms (listening, speaking, reading and writing), as well as to interact linguistically appropriately and creatively in a variety of social and cultural contexts: during school, at work, at home and at leisure;

basic mathematical, natural science and technical training (KK3)

- the ability and willingness to apply the educational potential, experience and personal qualities acquired during the study of mathematical, natural science, and technical disciplines at the university, to determine ways to control and evaluate the solution of professional problems, the development of mathematical and natural science thinking;

computer system (KK4)

- the ability to confidently and critically use modern information and digital technologies for work, leisure and communication, the ability to use, restore, evaluate, store, produce, present and exchange information through a computer, communicate and participate in collaborating networks using the Internet in the field of professional activity;

social(KK5)

- the ability to possess social and ethical values based on public opinion, traditions, customs, norms and be guided by them in their professional activities; to know the cultures of the peoples of Kazakhstan and observe their traditions; to observe the basics of the legal system and legislation of Kazakhstan, including in the field of education; to know the trends of social development of society; to be able to adequately navigate in various social situations; to be able to find compromises, to correlate their opinion with the opinion of the team; to possess the norms of business ethics, ethical and legal norms of behavior; strive for professional and personal growth; work in a team, correctly defend their point of view, offer new solutions; demonstrate tolerance towards other individuals;

economic, managerial and entrepreneurial activities (KK6)

- ability to know and understand the goals and methods of state regulation of the economy, the role of the public sector in the economy; possess the basics of economic knowledge; possess the skills of critical thinking, interpretation, creative analysis, drawing conclusions, evaluation; manage projects to achieve professional goals, manage personnel, demonstrate entrepreneurial skills.

cultural training (KK7)

- the ability to know and understand the traditions and culture of the peoples of Kazakhstan, is tolerant to the traditions and culture of other peoples of the world, is aware of the attitudes of tolerant behavior; is not subject to prejudice, has high spiritual qualities, is formed as an intelligent person

additional competencies (KK8)

- the ability to possess the skills of critical thinking, interpretation, creativity of analysis, drawing conclusions, evaluation; to have creativity and an active life position; to make professional decisions in conditions of uncertainty and risk.

PC1 - Master the basic methods of performing geodetic, land management and cadastral works;

PC2 - Use the main advanced geoinformation technologies for modeling theoretical and experimental research in agriculture;

PC3 - Know the objects and types of real estate that are located within the borders of cities, towns and rural localities, regardless of their distribution by category, purpose and form of ownership;

PC4 – Have a holistic understanding of the theoretical and methodological foundations of the development of land relations, their state regulation

PC5 – Ability to develop cadastral zoning of settlements and lands, cadastral assessment using legislative and regulatory documentation of land and real estate taxation;

PC6- Justify and use organizational and technological training in the preparation of land balances, land cadastre documents and maps, land reclamation projects and land improvement;

3.2 Matrix of correlation of the results of training in the OP as a whole with the formed competencies of the modules

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
KK1	+	+					+					
KK2	+	+	+									
KK3		+	+				+		+		+	
KK4			+							+	+	
KK5					+			+				+
KK6					+		+		+			+
KK7					+	+	+		+			
KK8							+	+	+		+	
PK1				+								
PK2	+			+					+			
PK3					+	+				+		+
PK4		+	+				+	+				
PK5			+		+	+	+			+		+
PK6					+		+		+		+	

4.SUMMARY TABLE SHOWING THE AMOUNT OF LOANS DISBURSED BY MODULES OF THE EDUCATIONAL PROGRAM

courseofstudy	Semester	The number of mastered modules	The number of studied disciplines			Numberof KZ credits				Totalhou rs	Total KZ credits	Thenumber of	
			OC	BK	EC	Theoretic altraining	Educatio nalpractic e	Industrial practice	Finalex aminati on			exa m	differe ntoffs et
1	1	4	4		2	30				900	30	5	2
	2	3	3	2	2	29	1			900	30	6	2
2	2	3	6	2	3	3	30				900	30	6
	4	6	1	1	2	25		5		900	30	5	2
3	5	5	1	1	5	30				900	30	6	-
	6	4		2	1	24		6		900	30	3	1
4	7	5	2		5	20				600	20	5	-
	8	5			5	20				600	20	5	-
	9	1		1					20	600	20	-	1
Subtotal			13	10	26	211	2	11	20	7200	240	41	9

5. Information about disciplines

Module name	Cycle	BK/ EC	Component Name	Brief course description (in 30-50 words)	Number of credits	Formed PO (codes)
Module of the social science	GED	OC	ContemporaryHistoryof Kazakhstan	It allows us to classify the conceptual foundations of the National History, interpret the origins, continuity of the Kazakh statehood and current problems of the history of modern Kazakhstan. Analysis of the activities of the national intelligentsia in the formation of the ideology of the liberation movement and the stages of socio-economic modernization of Kazakhstan. Describe the creation of a democratic state governed by the rule of law.	5	PO2, PO1
	GED	OC	Philosophy	Knowledge about the place and role of philosophy in the life of society and man, the main stages of the development of world and Kazakh philosophical thought, the positions and categories of philosophy for evaluating and analyzing various social trends and facts. Analyze the features of the genesis and development of philosophical knowledge.	5	PO1, PO2
Module of socio- political knowledge	GED	OC	SocialandPoliticalStudi es	It studies the theories of sociology, the social structure and stratification of society, explains the role and place of politics in society, examines the main stages of the formation and development of political science, including youth policy, the role of politics in the system of public life, reveals the essence of the state, reveals the relationship between the state and civil society.	4	PO2, PO3
	GED	OC	Culturalstudiesandpsyc hology	The basics of the morphology of culture are studied, the anatomy of culture is characterized and its semiotic character is revealed, ideas about	4	PO7, PO2

				archaic culture in the territory of ancient Kazakhstan are given, the main stages of the formation of Kazakh culture are considered, the essence of Kazakh culture in the context of modern world processes is revealed.		
Socio-ethnic development module	GED	BK	Ecosystemandrights	To provide students with knowledge of the most important sphere of life-the branch of law regulating public relations in the field of nature protection, to reveal the role of environmental law in solving the problems of social and economic development of society, to determine the directions of using the knowledge of this branch of law in the activities of environmental and judicial authorities and to show the importance of ensuring the rule of law in environmental and other related relations to prevent a number of offenses	5	PO5,PO2
	BD	EC	Current problems and modernization of public consciousness	Understanding of the history of the formation and development of sociology and political science. Modern sociological and political theories. Problems of applied sociology, the structure of the political sphere of society. Methodology and methodology of sociological research. Sociology of personality and deviant behavior. Sociology of Labor and Economics.	3	PO2, PO3
	BD	EC	MukhtarStudies	The study of current problems about the sciences, the definition of a modern approach to the work of a writer, literary criticism of Soviet ideology in yesterday's Soviet society.consider it as plentiful and develop a broader science.Knowledge and taste in heritage knowledge must be accompanied by today's freedom and independence.		PO2, PO3
	BD	EC	AbayStudies	Know the main processes of studying the		PO2, PO3

				historical, cultural and literary context of the Abai era, studying Abai's works in Kazakh and Russian languages, educating aesthetic taste by studying the artistic originality of literary texts of our time, fostering a sense of patriotism, and the uniqueness of the works of modern patronymic writers and poets.		
Communication and Physical Education module	GED	OC	Kazakh (Russian) language	Development of cognitive and communicative activities in the Russian (Kazakh) language in the areas of interpersonal, social, and intercultural communication. Instilling the skills of discussing ethical, cultural, and socially significant norms in discussions, the ability to work in a team, interaction in a team, flexibility, and creativity.	10	PO1, PO2
	GED	OC	Foreign language	In teaching a foreign language is the formation of cross-cultural and communicative competence of students in the process of foreign language education at a sufficient level (A2), the level of basic sufficiency (B1), basic standard (B2). Depending on the level of preparation of the student at the time of admission, he can reach the C1 level if the language level of the student at the start is higher than the B1 level.	10	PO1, PO3
	GED	OC	Physical Culture	Knowledge of the totality of values, norms and knowledge created and used by society for the physical and intellectual development of human abilities, improving their motor activity and forming a healthy lifestyle, social adaptation through physical education, physical training and physical development.	8	PO2, PO3
	BD	BK	Professional Kazakh (Russian) language	Development of the skills of extracting the necessary information from the text, its interpretation in educational and professional	3	PO1

				communication. - Development of the ability to establish contacts at a professional level, competently build communication based on the goals and situation of communication.		
	BD	BK	Professionally-oriented foreign language	Know the main provisions of clearly pronounced statements within the literary norm on well-known topics related to personal interests (the speech of the speakers should be clear and relatively slow); talk about their dreams; write simple coherent texts on familiar or interesting topics	3	PO1, PO3
	BD	EC	Culture of speech and communication in the Kazakh language	Culture of speech and communication in the Kazakh language – the main provisions of the theory and practice of speech culture. The ability to correctly use and use the accumulated language material. Language means depending on the goals, scope and conditions of communication; use the stylistic possibilities of Kazakh phonetics, vocabulary.	3	PO1, PO3
	GED	OC	Information and communication technologies (in English)	Use information resources to search and store information; know what economic and political factors contributed to the development of information and communication technologies; features of information systems	5	PO3, PO1
	BD	EC	Introduction to the specialty	Considers the concept of the distribution of land management on the globe; on the main environmental aspects of the use of surface and underground land resources; on the use of land relations; on irrigation and irrigation of rural areas; on the protection and rational use of surface and underground land resources.	4	PO6, PO7, PO11
	BD	EC	Fundamentals of Academic Writing	To master the basic concepts of the formation and development of competencies related to the understanding of the functioning of the	4	PO1, PO3

Fundamentals of the specialty				technology of subject-language learning; to know the basic terms necessary for the implementation of scientific and professional activities by bachelors in accordance with their specialization.		
	BD	EC	Regional features of the cadastre	It examines the principles of land management design, the basic principles and methodological features of the regional cadastre, the methodology of working design and its features depending on the design objects. Draw up schemes of irrigation fields, central farms, and crop rotations.	4	PO4, PO 7, PO8
	BD	EC	Cadastral works in new conditions	Demonstrate the basic concepts, structures and tasks of the state land cadastre-the technology of collecting, systematizing and processing information - the organization of the activities of state authorities and local self-government in the field of cadastre - information support of the land cadastre.	4	PO4, PO 7, PO8
	BD	EC	Theoretical foundations of land management	Considers the concept of distribution the theoretical foundations of land management design, the organization of land use of agricultural enterprises, formations of land use for non-agricultural purposes, the methodology for designing land use for non-agricultural purposes.	4	PO2, PO3, PO4
	BD	EC	Fundamentals of land cadastre works	The study of the discipline is the study of the land as a natural object, the legal and organizational regulation of land relations and the development of the land cadastre, the definition of the role of the state land cadastre in the management of the country's economy, the formation of land turnover; the study of cartographic and textual land cadastre	4	PO2, PO3, PO4

				documents.		
	BD	BK	Landcadastre	Understand the general concept of the land cadastre; methods, principles and components of the land cadastre; the land fund of the Republic of Kazakhstan as an object of the state land cadastre; the composition of the land cadastre; the concept of land management, land reform carried out in the Republic of Kazakhstan. Land resources of the Republic of Kazakhstan. The concept of land relations.	4	PO4, PO 5, PO6
			Educationalpractice	Consolidation of theoretical knowledge and acquisition of practical skills by students in the production of land management works, formation and practical consolidation of knowledge in the field of rational use and protection of land resources, development of the land economy of the country on the basis of environmental understanding of professional activities.	1	PO4, PO2
General Engineering and Technical Sciences	BD	BK	Developmentoflandrelations	Knowledge and understanding of the basic concepts of land relations (land legal relations, land system). The place of land relations in the general system of industrial and economic relations. Forms of land ownership, land ownership and land use, their economic and legal nature.	4	PO6, PO8, PO9, PO 12
	BD	BK	Geodesy	General information on geodesy, cartography and topography, as well as methods for determining the geodetic coordinates of individual points on the earth's surface are considered. Performing topographic surveys, leveling and splitting the axes of hydraulic structures.	6	PO4, PO5, PO9
	BD	EC	Topography	Study of the main provisions of the use of	4	PO4, PO6, PO10

				ground-based and satellite images for creating cartographic materials, obtaining operational information from space sensing data, processing methods for use for land management, cadastre, land monitoring, and ecology.		
	BD	EC	Topographic works in the cadastre	Modern methods of creating and editing graphic images, starting with the simplest and ending with quite complex topographic documents, which are used in the conduct of land cadastral works.	4	PO4, PO6, PO10
	BD	EC	Graphic design of projects and maps	Knowledge and understanding of the main elements of the graphics of plans and maps in land management, techniques for drawing them. Drawing tools, materials and accessories The device of basic drawing tools, their verification, sharpening, simple corrections and care for them. Requirements for drawing tools and accessories.	5	PO3, PO5, PO6
	BD	EC	Production of projects and maps	The main methods of creating and updating maps and plans, the features of the image of the spherical surface of the Earth on a plane, are well developed. Be able to "read" the map, including the determination of coordinates and the restoration of spatial information from conventional signs, measure on a topographic map; use the methodology of field and office mapping.	5	PO3, PO5, PO6
	BD	EC	Computer graphics of cadastral works	Methods of formation of spatial representations and improvement of graphic skills of display of objects on working drawings, formation of quality of drawing literacy, methods and methods of construction of shadows, perspectives, plans, facades, sections, drawings in projections with numerical marks, simple	4	PO5, PO6, PO10

				architectural and construction drawings are considered.		
	BD	EC	Engineering schedule of cadastral works	Design the Compass user interface, coordinate systems, properties of primitives, screen management, object construction, drawing design commands, drawing editing, drawing design and layout, basic principles of three-dimensional modeling in the COMPASS 3D system, managing projections of three-dimensional models, managing visual styles of the model, editing commands.	4	PO5,PO6, PO10
Land quality assessment and use	BD	EC	Landmonitoring	The concept, tasks and content of land monitoring, its place and significance in the system of information on the state of the land fund of the Republic of Kazakhstan; the principles of its management, the structure of land monitoring; the main sources and types of land pollution; the concept, types and classification of pollutants.	5	PO3,PO5, PO7, PO9
	BD	EC	Landconditionforecasting	The concept, content and tasks of land protection. Forms and methods of land protection: legal, economic, land management, engineering and others, control over the use of land and its condition.	5	PO3,PO5, PO7, PO9
	BD	BK	State control over the use and protection of land	General concept of the land cadastre; methods, principles and components of the land cadastre;the land fund of the Republic of Kazakhstan as an object of the state land cadastre; the composition of the land cadastre; the concept of land management, land reform carried out in the Republic of Kazakhstan. Land resources of the Republic of Kazakhstan. The concept of land relations.	4	PO7, PO8, PO11
	BD	EC	Landimprovementandin	State control, depending on the bodies that	4	PO7, PO8,

			ventory	control the use and protection of land. State control over the content and specifics of the work. State control depending on the scope of work and special elements. Control over the use and protection of land by the nature of loan relations by objects, subjects and control bodies.		PO11
	БП	ТК	Improving the quality of land	Ability to improve the quality of land, use the basic rules for land monitoring and use methods for obtaining and processing land monitoring data.	4	PO3,PO5,PO7, PO9
	BD	BK	Fundamentals of land taxation in the Republic of Kazakhstan	Understand the main normative legal acts in the field of regulation of activities for the legal support of land management and cadastre. Analysis of the features of this activity in relation to different land plots, as well as the legal regime of different categories of land.	5	PO2,PO3, PO9
			ProductionPractice I	Consolidation and deepening of theoretical knowledge in general professional disciplines, acquisition of practical skills in the field of land management, with the structures of land resources, forms of land ownership, as well as the production and compilation of land cadastre records. Know the land legislation of the Republic of Kazakhstan To be able to use the normative legal acts of land management.	3	PO1, PO2, PO3, PO4
Management of cadastral and geodetic works	BD	EC	Automated technologies for conducting cadastral works	Design the content and methodology of land accounting, basics development of a database for land accounting, design of a normalized database structure for the land cadastre, production of acts for the right to own and use land, organization of search in the database, design of forms and tables.	4	PO4, PO5, PO10
	BD	EC	Automatedlandmanagementsystems	Study of theoretical provisions on information as the main component of the management system; - study of modern methods and techniques for	4	PO4, PO5, PO10

				creating information systems of the land cadastre; - conducting seminars and practical classes on specific materials that ensure the adaptation of knowledge on the creation and maintenance of information technologies of the land cadastre.		
	BD	BK	Landadministration	Obtaining theoretical knowledge and practical skills in performing land assessment works and actions to implement state control over the use of land resources, studying the features of land management at various administrative and territorial levels, as well as determining the effectiveness of the land management system.	4	PO3,PO5, PO7, PO9
	BD	EC	Rational placement of agricultural enterprises of the Republic of Kazakhstan	Understanding and knowledge of the main issues of land relations "Rational placement of agricultural enterprises in the Republic of Kazakhstan" The place and economic relations of land relations in the general production system.	4	PO6, PO10, PO9
	BD	EC	State registration and registration of land	Study of the principles of operation and the legislative framework in the field of registration of land rights and the system of bodies that carry out state registration and accounting of land, the technology of implementing quantitative and qualitative land accounting, perform work on assigning cadastral numbers to land plots, fill in the unified state register of land.	5	PO2, PO3, PO9, PO11
	BD	EC	Landaccountingandregi stration	To understand the issues of the doctrine of land as a natural resource and means of production, forms of land ownership, land ownership and land use, development of land relations and land management in the Republic of Kazakhstan, goals, objectives, essence, legal bases, content and technology of land management, structure	5	PO2, PO3, PO9, PO11

				and principles of land management.		
			Production Practice II	Obtaining professional skills in the field of research work obtained in the study of land management works: filling in land cadastral documentation; registration of land uses and land holdings; land assessment work and the application of their results; distribution of land by category.	6	PO2, PO4, PO5, PO10, PO 11
Topographic surveys and management of land cadastre works	BD	EC	Organization and planning of land cadastre works	Study of planning and organization of land management and cadastral works, legislative acts in the field of land management; structure of land management and land cadastral services; land cadastral works on linear and areal structures.	5	PO6,PO8, PO9
	BD	EC	Organization and planning of land management works	The study of the discipline is the study of the land as a natural object, the legal and organizational regulation of land relations and the development of the land cadastre, the definition of the role of the state land cadastre in the management of the economy of the country, regions and municipalities on the basis of the regulation of land relations and land management.	5	PO6,PO8, PO9
	BD	EC	Fundamentals of entrepreneurship	Knowledge of legislative and regulatory acts regulating entrepreneurial activity in the territory of the Republic of Kazakhstan; classification of risks in entrepreneurship and methods of their assessment; the ability to analyze entrepreneurial activity and evaluate its effectiveness, correctly make decisions on the organization and functioning of entrepreneurial activity.	4	PO1,PO2, PO3, PO11
	BD	EC	Commercialization and business planning	Develops skills for evaluating the effectiveness of business ideas, commercial use of the results of R & D and development, contributes to the	3	PO1,PO2, PO3, PO11

				planning of the main stages of the production of a new product. Studies the types of intellectual property, strategies for the commercialization of technologies, contributes to the formation of experience in managing the process of developing and promoting a new product when choosing sources of financing.		
	BD	BK	Photogrammetry and remote sensing	Knowledge and understanding of the basics of working with geodetic and photogrammetric instruments, equipment and tools, metric and decoding properties of aerial and space images obtained by various survey systems; study of technologies for decoding images for the purpose of creating cadastral plans; digital photogrammetric image processing technologies for creating plans and maps for the purposes of urban cadastre.	4	PO4, PO5, PO9, PO11
	BD	EC	Cartography	Design and use of plans and maps of natural (land) resources and is aimed at cartographic training of specialists who must know the input and output planning and cartographic documentation necessary for conducting work on land management, land and urban cadastre, the basics of organizing cartographic production.	5	PO4, PO6, PO10,
	BD	EC	Creating maps and atlases	Design modern methods of creating and editing graphic images, starting with the simplest and ending with quite complex topographic documents that are used in the conduct of land cadastral works.	5	PO4, PO6, PO10,
Accounting of land management and cadastral works	CHD	EC	Rational use and protection of land	Rational use of land for industrial and social purposes, while respecting the priority of environmental requirements for its protection, are components of the project of inter-farm land management.	4	PO4, PO6, PO10,

	CHD	EC	Protection and efficient use of land from erosion	Knowledge of standards and criteria for drawing up schemes and forecasts of land use, design inter-farm, intra-farm and district land management, taking into account land reclamation and improvement, develop anti-erosion measures.	4	PO3,PO4,PO9, PO 11
	BD	BK	Planning, arrangement of territories and cadastre of populated places	Study of the basic concepts, terms, definitions used in urban planning and planning of settlements; study the principles of settlement planning; learn to model possible lines of behavior in the exercise of professional functions in the process of monitoring the use of the land fund within the boundaries of settlements.	4	PO6, PO8, PO9
	BD	BK	Organization and Planning of Cadastral Works	Formation of a certain set of knowledge, skills and competencies necessary for the rational use of land resources using land cadastral information. Understanding of the methodological basis of the land cadastre, development models, various principles, principles of cadastral zoning, price zoning of land, cadastral valuation of various categories of land, filling and using land cadastral documents, creating cadastral information for land management.	4	PO6, PO8, PO9
Cadastral valuation and real estate	CHD	EC	Application of satellite technologies in land management and cadastre	The ability to understand the process of obtaining aerial photographs via satellite; the device of aerial photography equipment and aerial photography equipment; the classification of remote sensing methods; to assess the quality of aerial photography material.	5	PO10, PO12, PO9
	CHD	EC	Modern use of satellite technologies in the cadastre of the Republic of Kazakhstan	Demonstrate direct and indirect signs of decoding; basic photogrammetric devices and technologies for decoding video information, methods for drawing up plans, maps, and the	5	PO10, PO12, PO9

				graphic part of design and forecast materials; technology for creating original maps of various subjects for the needs of land management and land cadastre.		
	CHD	EC	Land management and planning of rural localities	To develop a methodology for drawing up and justifying projects of inter-farm land management on the basis of land-cadastral documentation, taking into account modern land-legal relations. Give practical skills in the preparation of land management documentation and the organization of the territory in the inter-farm land management. social and economic structure and layout of rural localities	4	PO10, PO12, PO9
	CHD	EC	Creation of peasant (farm) farms in rural localities	Knowledge of the classification and content of projects of on-farm land management of agricultural formations, determination of the economic efficiency of design solutions, the composition of land management documentation, the methodology for drawing up projects of on-farm land management of agricultural formations, the main directions of transformation and improvement of land, methods of organizing the territory of agricultural land.	4	PO6, PO10, PO9
Landplanning and management	CHD	EC	Geoinformation technologies in land management	Teach how to create and understand the use of GIS technologies and cadastral database management systems used in the land cadastre. Determine the specifics of the implementation of automated technology for conducting GZK, own the methods of quantitative and qualitative land accounting, work management and methodology.	4	PO4, PO5, PO10, PO11
	CHD	EC	Management of geoinformation systems	Consideration of the main issues of the organization of interaction and functionality of	4	PO4, PO5, PO10, PO11

			of land management	geographical information systems and their use in cartography when creating and using cartographic works, solving problems of the land cadastre on the basis of geoinformation technologies, as well as training in methods and methods of GIS design and operation.		
	CHD	EC	Comprehensivelandcadastreservices	Ability to study the basic concepts and principles of inventory of real estate objects, including retrospective analysis; - study of methods of organizing and conducting works on technical inventory of real estate objects; - study of methods of external and internal measurements of real estate objects.	5	PO11, PO10, PO5
	CHD	EC	Comprehensive services for inclusion in the database of cadastral works	The ability to study the principles of determining the volume of buildings, premises; the study of methods for determining the technical condition and physical wear of the object, including its structural elements; the study of methods for determining the inventory, restoration and actual values of the property; the study of the rules for registration of inventory documentation, including cadastral passports.	5	PO11, PO10, PO5
	CHD	EC	Cadastrer of natural resourcescadastric passports.	Knowledge of the main provisions of maintaining the state cadastre, maintaining the cadastre of forest and water resources, atmospheric air, flora and fauna, regulating land relations, studying the composition, content and procedure for maintaining and developing the automated system of the State Cadastre of Natural resources; the procedure for geodesic and cartographic support.	5	PO11, PO10, PO5
	CHD	EC	Cadastrer of localities	The State Cadastre and planning of settlements is a single technological, interdepartmental system of accounting, registration and evaluation of real	5	PO11, PO10, PO5

				estate, as well as a specialized information and cadastral system of ordered information about the legal, economic, economic, spatial-territorial and other status of real estate objects.		
Landcadastreandvaluation	CHD	EC	Land cadastre and real estate valuation	The ability to maintain real estate of the state cadastre; the main provisions of the state cadastre of real estate; the methodology for obtaining, processing and using cadastral information; the procedure for carrying out cadastral activities; The formation of ideas about the use of modern software and technical means of information technology to solve the problems of maintaining the state cadastre of real estate.	5	PO3, PO4, PO8, PO11
	CHD	EC	Evaluation of land plots and objects of the Republic of Kazakhstan	Formation of ideas about the use of modern software and technical means of information technologies to solve the problems of the state real estate cadastre and land monitoring; ideas about the use of real estate cadastre data and land monitoring for effective land management.	4	PO3, PO4, PO8, PO11
	CHD	EC	Quantitative and qualitative accounting of land and real estate	Study of the main provisions of the state real estate cadastre and the main provisions of land monitoring; methods of obtaining, processing and using cadastral information and the basics of obtaining land monitoring data; methodology, methods.	4	PO10,PO7, PO11
	CHD	EC	Quantitative and qualitative accounting of common land plots of the Republic of Kazakhstan	The procedure for maintaining the state real estate cadastre and land monitoring; technologies for collecting, systematizing and processing information, the procedure for carrying out cadastral activities; the study of technical documentation, as well as ways to use the information base of the real estate cadastre and land monitoring in the system of land management and control.	4	PO10,PO7, PO11

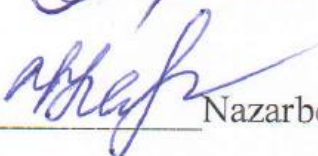
Valuation and land use	CHD	EC	Land management of administrative districts	Design the theoretical foundations, methods and techniques for drawing up land management plans and planning projects for rural localities, a set of rules and regulations for drawing up projects and plans. Use the general plan of the administrative district for various types of land management works, make plans for land and economic land management.	4	PO6, PO8, PO9, PO11
	CHD	EC	Centralization of administrative districts	Obtaining information in the implementation of land management actions can be a direct basis for the development of proposals for the establishment of a special regime and conditions for the use of land.	4	PO6, PO8, PO9, PO11
Final certification module	BD	EC	Minor program	Be able to carry out geodetic works on hydraulic structures. Organize the execution of works calculate and complete the effective use of land resources, plan and organize the work of land management enterprises.	12	PO6, PO7, PO9, PO11, PO12
			Pre-graduate practice	To collect actual material on production activities and practical material on the topic of the thesis; geographical location and detailed characteristics of the location of production; to get acquainted with the purpose of the object, its working, optimal parameters, as well as the equipment used (power, performance of equipment; principle of operation; advantages of this type of equipment.	8	PO4, PO7, PO10, PO11

			Writing and defending a thesis (project) and passing a comprehensive exam	Demonstrate the skills of introducing research work to their path tasks and performing their achievements. Conduct organizational training in the preparation of land cadastre documents obtained in the course of studying at the university and in previous types of professional practice in the specialty and for the implementation of the diploma project (work).	12	PO4,PO7, PO10, PO11
Total 240 cr						

APPROVAL SHEET

by Educational Program code 6B07360 –«Cadastre»

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Director of ASD  Nazarbek U.B.

Head of DEK  Bazhirov T.S.