

APPROVED

Dean of the Faculty of Land
Management, Architecture and
Design

Zh.Z. Foleubekova
" 2023

EDUCATIONAL PROGRAM "Cadastre"

Code and classification field of education:

8D07 Engineering, Manufacturing and Civil engineering:

Code and direction of personnel training

8D073 Architecture and Civil engineering

Qualification: **Doctor of Philosophy PhD in the educational program "Cadastre"**

Period of study: **3 years (scientific and pedagogical)**

Astana, 2023

Authors:

1. Full name - academic degree, title, position, place of work

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Author's collective order for NJSC " S.Seifullin KATRU"

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Dean of the Faculty _____ Toleubekova Zh.Z.

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1 Educational program passport

1.1 The purpose of the educational program is to train competitive scientific and teaching personnel under the educational program “Cadastre”, who have professional and scientific competencies and skills for their implementation in the system of higher and postgraduate education and the scientific field.

1.2 learning outcomes

PO1. Integrate techniques for searching information in scientific databases, master various genres of academic writing

PO2. Use new methods and carry out scientific research in order to find solutions to problematic problems in cadastral activities

PO3. Apply methods of territorial planning and forecasting; draw up project plans at different territorial levels

PO4. Own modern technologies in order to provide new methodological approaches to involve unused lands in agricultural circulation

PO5. Solve cadastre problems in market conditions, have skills in working in the e-government system

2. General characteristics of the educational program

The educational doctoral program “Cadastre” is aimed at:

- study and research of problems in the field of development of the land cadastre and the formation of a real estate cadastre in the Republic of Kazakhstan;
- determination of the effectiveness of the land cadastre and real estate cadastre at the level of administrative-territorial entities, socio-economic studies of modern management processes in the region based on the formation of a unified information space;
- formation and development of a unified information system of the real estate cadastre in Kazakhstan,
- formation of a data bank of the real estate cadastre at various administrative and territorial levels;
- development of a methodology for the management of the land and property complex, models and methods for optimizing information support for the management of territories and EGKN objects in a real-time system,
- development of methods for technical and technological support for informatization of the real estate cadastre and land monitoring.

3 Competency model (portrait) of a graduate

After completing the EP “Cadastre” the student will:

- a qualified researcher who can independently conduct scientific research in the field of cadastre and regulation of land relations, master the methodology of scientific analysis and thinking, scientific and methodological approaches and methods of decision-making and their implementation in practice;
- be able to identify and skillfully solve practical and professional problems in the field of cadastre and land management;

- know and understand the basic approaches to the formation of spatial data; main functions, structure, technologies for creating and developing spatial data infrastructure, taking into account the features of informatization and digitalization in the Republic of Kazakhstan in order to improve land relations;
- is able to make a contribution based on scientific research that expands the scope of existing knowledge by developing schemes for planning the development and construction of territories of settlements, improving the organization of land cadastral work based on geoinformation technologies;
- have knowledge, skills and abilities in the field of economic and legal regulation of land relations, management of land resources and real estate, taking into account the characteristics of a market economy and its capabilities;
- know and understand current trends in the land policy of the Republic of Kazakhstan, be able to assess current problems and prospects for the socio-economic development of Kazakhstan and develop proposals for finding solutions based on scientific research.

3.1 Areas of professional activity

Areas of professional activity are:

- scientific and educational activities in higher educational institutions in the field;
- scientific and managerial activities in research and production centers, research institutes, divisions of State government bodies and the non-state sector;
- management activities in the structural divisions of the Committee for Land Resources Management of the Ministry of Agriculture of the Republic of Kazakhstan, NJSC "Government for Citizens" and its branches, departments of architecture, urban planning and land relations under akimats of the district, city and regional level, in structural divisions of the general plan and other organizations, related to the regulation of land relations.

3.2 Types of professional activities

Doctoral students in the educational program "Cadastré" can perform the following types of professional activities:

- in the field of scientific and scientific-pedagogical activities;
- carrying out theoretical and experimental research;
- theoretical and applied tasks in research on cadastre problems and the search for their solutions;
- problems of pedagogical training of students at the university;
- professional and comprehensive analysis of problems in the field of cadastre.

3.3 Basic competencies

- demonstrate a systematic understanding of the field of study, mastery of skills and research methods used in the field of cadastre;
- plan, develop, implement and adjust the complex process of scientific research;
- contribute with their own original research to expanding the boundaries of the scientific field, which may merit publication at the national or international level;

- critically analyze, evaluate and synthesize new and complex ideas;
- communicate your knowledge and achievements to colleagues, the scientific community and the general public;
- promote the development of a knowledge-based society.

3.4 Professional competencies

1) master the methodology of a systematic approach to the organization, modern approaches to management and analytical methods of management, methods of diagnosis, analysis and problem solving, as well as methods of decision-making and their implementation in practice;

2) skillfully solve practical management problems and implement these decisions, be prepared to perform management functions and be able to solve professional problems in the interests of the organization as a whole;

3) have the knowledge, skills and abilities necessary to occupy the relevant managerial position and based on a deep understanding of the characteristics of a market economy and its capabilities, functions and economic role of the state, understanding of environmental problems, awareness of the social responsibility of business and adherence to civilized ethical standards of its conduct:

4) be able to assess current problems and prospects for the socio-economic development of Kazakhstan, understand current trends in the development of the world economy and globalization, and navigate issues of international competition.

4 Base for research and teaching practices (internships) (all types of practices).

The base for research practice is the NJSC “Government for Citizens” and its branches, the RSE “Gosgradkadastr”.

The basis for teaching practice is the Department of Cadastre of the Kazakh Agrotechnical University named after. S. Seifullina.

Much attention is paid to concluding agreements and memorandums with foreign partner universities for the purpose of cooperation in the development of joint EP, attracting foreign scientists to scientific supervision in writing doctoral dissertations, doctoral students undergoing scientific internships, performing joint research, writing scientific articles, etc.

To date, agreements have been concluded with the State University of Health (Russian Federation, Moscow), the University named after. Alexandras Stuglinkis (Lithuania, Kaunas), Latvian Agricultural University (Latvia, Riga), Putra University (Malaysia, Kuala Lumpur), Warsaw Polytechnic University (Poland, Warsaw), Omsk State Agrarian University (Russia, Omsk); Siberian State University of Geosystems and Technologies (Russia, Novosibirsk), etc.

5 Structure of the doctoral educational program in the scientific and pedagogical direction

No	Name of cycles and disciplines	Total labor intensity	
		in academic hours	in academic credits
1	2	3	4
1.	Educational component (DB+PD)	1350	45
1.1	Cycle of basic disciplines (BD)	600	20
1)	University component		
	Academic writing	150	5
	Teaching practice	300	10
	Scientific Research Methods	150	5
1.2	Cycle of major disciplines (PD)	750	25
1)	University component:		
	Cadastral provision of unused lands	150	5
	Territorial planning and forecasting	150	5
	Scientific and methodological problems of the cadastre	150	5
	Research practice	300	10
2	Research work		
1)	Research work of a doctoral student, including internship and completion of a doctoral dissertation	3690	123
3	Additional types of training	-	-
4	Final certification, including writing and defending a doctoral dissertation	360	12
	Total	5400	180

The matrix of achievability of the formed learning outcomes according to the educational program with the help of academic disciplines

No.	Name of discipline	Short description of discipline	Credits	Formed learning outcomes				
				ON 1	ON 2	ON 3	ON 4	ON 5
Cycle of basic disciplines University component								
1	Academic writing	The course aims to equip doctoral students with concepts and models of academic writing. Doctoral students will develop the skills and abilities of writing academic, scientific text, and various written scientific discourses. Doctoral students will be able to analyze and evaluate written works of various levels, be able to work with authentic sources, and also justify their own point of view	5	+				
2	Scientific Research Methods	Studies methods for posing a scientific problem based on revealing the contradictions between currently available knowledge about the object of research and the knowledge necessary for the practical solution of a problem demanded by society. Forms the skills of choosing a topic and scientific substantiation of its relevance for practical application, organizing and conducting research work, and documenting scientific results.	5		+			
3	Cadastral provision of unused lands	Planning and organization of cadastral support for work on unused lands. Theoretical and methodological foundations and justification of measures to bring unused lands into circulation. Stock data, land remote sensing data, information obtained from government information systems and electronic information resources. Valuation of unused land. Economic efficiency of land management support for the involvement of unused lands in agricultural circulation	5				+	
4	Scientific and methodological problems of the cadastre	Cadastre as the basis of the system of agrarian relations. Scientific and methodological approaches in the development of cadastre. Current state, cadastre problems in market conditions and ways to solve them. The role of the cadastre in the system of e-government and land management.						+
5	Territorial planning and forecasting	Fundamentals of territorial planning. Design objects. Contents of territorial planning schemes and projects. Urban zoning.	5			+		

