



DEVELOPMENT PLAN

EP «6B07310 Land management and cadastre»

1 General information

EP «6B07310 Land management and cadastre» has been developed in accordance with the National Qualifications Framework, corresponds to the Dublin Descriptors and the European Qualifications Framework, and is designed based on a modular system for studying disciplines that form general cultural and professional competencies.

The individuality and uniqueness of the EP "6B07310 Land Management and Cadastre" consists in the formation of students' comprehensive competencies in the field of land and real estate monitoring, cadastral and economic assessment of lands and other real estate objects, and the regulatory framework for the development of projects aimed at ensuring the openness, safety, resilience and environmental sustainability of cities and towns.

The program is aimed at training specialists capable of applying modern geographic information technologies (GIS), digital mapping methods, remote sensing of the Earth and automated cadastral accounting systems. Special attention is paid to the study of legal, economic and environmental aspects of land management, which allows graduates to work effectively in the field of land management, urban planning, agriculture and environmental management. As part of the program, students are trained to organize and carry out cadastral and land management work, including defining land boundaries using modern geodetic equipment, as well as to carry out territorial planning of settlements.

Thanks to a practice-oriented approach and cooperation with public and private structures, students acquire the necessary skills for professional activity, which increases their competitiveness in the labor market.

The development plan of the EP "6B07310 Land Management and Cadastre" is consistent with the key indicators of the development program of the MDIG Department with the specification of indicators of strategic planning, reflecting risk analysis and assessment, implementation of activities depending on the identified risks, guarantees of achieving the planned results (Appendix).

2 Educational program planning

Planning and management of the educational program "6B07310 Land Management and Cadastre" is carried out on the basis of priority areas and strategic goals of KazNTU named after K.I. Satpayev (<https://official.satbayev.university.ru/university/mission-strategy>) and the O.A. Baikonurov Mining and Metallurgical Institute, reflecting the vision, mission, strategic directions and key performance indicators (<https://official.satbayev.university.ru/mining-metallurgy>).

3 Goals for EP's development

The purpose of the educational program is to train graduates as a competitive specialist in the field of land management and cadastre, with critical thinking, able to use theoretical and practical information to perform land management and cadastral work in the field of land and real estate monitoring, cadastral and economic assessment of lands and other real estate, and the regulatory framework for project development.

4 Objective for EP's development

4.1 Preparing graduates for organizational activities that exclude negative phenomena in

their professional activities, the development of spiritual values, moral and ethical norms of a person as a member of society, the implementation of the legal and legislative system of the Republic of Kazakhstan with a high level of professional culture, citizenship;

4.2 Preparing graduates for continuous self-improvement and self-development, mastering new knowledge, skills and abilities in innovative areas of land management and cadastre;

4.3 Graduate training based on the diversity and dynamism of the curriculum's catalog of elective subjects, with a predominance of practical skills in competencies, capable of performing professional functions within one or more types of activities based on the final learning outcomes that consider the specifics of these types of activities, market requirements for organizational, managerial, and professional competencies;

4.4 The training of a graduate as a competitive specialist in land management and cadastral activities involves strengthening the international component in educational and scientific programs, developing competencies in advanced technologies of land management and cadastral activities, and enhancing the skills of professional presentation of research results.

5 Risks of EP implementation (SWOT analysis)

<i>S (strength) – strong features (potentially positive internal factors)</i>	<i>W (weakness) – weak sides (potentially negative internal factors)</i>
1. University's brand awareness; 2. Positive image in the educational services market of the Republic of Kazakhstan; 3. Availability of opportunities and experience of using interactive technologies in the educational process based on modern information technologies; 4. Availability of information systems for determining borrowing in order to implement the principles of academic integrity 5. Availability of partnerships and cooperation agreements with scientific organizations and foreign universities 6. Dynamically developing material and technical base and high level of informatization of the educational process. 7. Increasing the classroom fund and equipping it with modern technical facilities 8. Availability of sufficient book stock in libraries. 9. The provision of the educational and methodical materials of the entire complex of disciplines of the EP department. 10. Stable financial position 11. Teaching staff with experience involved in the scientific and educational field and production 12. Conducting classes on the bases of the department's branche. 13. Increasing the quality of the department staff	1. Insufficient volume of scientific work on a contractual basis; 2. Unmet need for a dormitor. 3. The lack of licenses to carry out a number of specialized works, which narrows the university's ability to participate in tenders. 4. Low commercialization rate.
<i>O (opportunity) – favorable opportunities (potentially positive external factors)</i>	<i>T (threat) – threats (potentially negative external factors)</i>
1. High demand for highly qualified scientific and Teaching staff; 2. Introduction of new courses and disciplines in accordance with the requirements of the labor market; 3. Conducting PR events, career guidance among applicants (bachelor's degree graduates).	1. Increase in the cost of equipment due to inflationary costs; 2. Reducing the financial capacity of enterprises to allocate funds for research and development and conclude business contracts. 3. Unstable level of automation of business

4. Almaty is the largest financial, industrial, and socio-cultural center of the Republic of Kazakhstan, generating steady demand in the labor market. 5. Openness of mining and metallurgical and other manufacturing enterprises to cooperate with technical universities and provide internship opportunities. 6. The demand for graduates of accredited educational institutions in the labor market.	processes during the UNT 4. Insufficient quality of information services provided by Internet providers in rural districts 5. Insufficient fundamental training of applicants entering the university and poor knowledge of foreign languages by applicants
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Long-term action plan for the development and improvement of the educational program

	Event content	Responsible performers	Deadlines for execution
1	Study and analysis of the competitive environment, disclosure of the department's capabilities to enhance the image and attractiveness of the educational institution for consumers (applicants, students, parents, business partners) of educational services	Head of the Department, teaching staff	2023-2027
2	The use of progressive marketing and digital technologies to promote distance education services	Head of the Department, teaching staff	2023-2027
3	Strengthening career guidance, attracting applicants through tripartite agreements	Directorate, Head of the Department, teaching staff	2023-2027
4	Involvement of teaching staff from among stakeholders in the educational process	Head of the Department, teaching staff	2023-2027
5	Development and implementation of digital interactive forms of learning, a combination of theoretical and practical methods and forms of learning	Head of the Department, teaching staff	2023-2027
6	Preparation of the educational program for specialized accreditation for compliance with the quality standards of education and the agency	Head of the Department, teaching staff	2023-2027
7	Provision of all types of disciplines with textbooks, teaching aids, educational and methodical complexes with digital remote support, electronic educational materials, multimedia educational resources	Head of Security, Head of the Department, Teaching staff	2023-2027
8	Development and use of case databases, training thematic computer programs in the field of computer science	Head of the Department, teaching staff	2023-2027
9	Conducting seminars and master classes and mastering digital forms of teaching with the participation of IT specialists	Head of the Department, teaching staff	2023-2027
10	Development of new forms of students' independent work, as well as electronic control	Head of the Department, teaching staff	2023-2027

11	Conducting seminars using students' volunteer activities, seminars and master classes to improve knowledge and teaching methods in collaboration with stakeholders, public foundations, non-governmental organizations, research institutes and other universities	Head of the Department, teaching staff	2023-2027
12	Development of a digital rating system for verifying students' knowledge, ensuring the accessibility of assessments	RO, DAA, Head of the Department, teaching staff	2023-2027
13	Ensuring the participation of teachers and students in interuniversity and international conferences, as well as in competitions held by the Ministry of Education and Science of the Republic of Kazakhstan	Head of the Department, teaching staff	2023-2027
14	Development of scientific schools, introduction of teaching staff's own research into the educational process in the field of teaching methods of academic	Head of the Department, teaching staff	2023-2027
15	Conducting effective positioning of scientific research in the intellectual property market	Head of the Department, teaching staff	2023-2027
16	Attracting foreign scientists with a high h-index	Head of the Department, teaching	2023-2027
17	Development of educational programs of the department	DAA, Head of the Department	2023-2027
18	Regular professional development of teaching staff and students	HR, Head of the Department, teaching staff	2023-2027
19	Strengthening the material and technical base	Directorate, Head of the Department	2023-2027
20	Internal and external academic mobility of teaching staff and students	Directorate, Head of the Department	2023-2027
21	Expanding multilingual education	Directorate, Head of the Department	2023-2027
22	Development of the MOE in the disciplines of the OP and for additional training	Directorate, Head of the Department	2023-2027
23	Submission of an application for a grant financing competition for scientific and scientific-technical projects	Directorate, Head of the Department, teaching staff	2023-2027
24	Ensuring safe and comfortable working conditions, education and extracurricular activities for students	Directorate, Head of the Department	2023-2027
25	Разработка плана мероприятий с Ассоциациями и предприятиями в области ЗУиК	Directorate, Head of the Department	2023-2027
26	Development of an action plan for the expansion of external and internal mobility of students of the faculty and faculty of the department, using modern distance learning technologies	Head of the Department, teaching staff	2023-2027

27	Organization of work on effective employment of graduates. Creation and development of an alumni community.	Head of the Department, responsible for employment and career guidance	2023-2027
28	Formation of the fund of educational and scientific literature in the framework of the training area	Deputy Dean for Scientific Work, Head of Department, teaching staff	2023-2027
29	Equipping classrooms with new computer equipment and other equipment, software	Head of the Department, teaching staff	2023-2027

Reviewed at the meeting of the Department of Surveying and Geodesy, protocol №4 from «12» of December 2024

Head of the Department of Surveying and Geodesy



Meyrambek G.

The development plan of the EP with the specification of indicators of strategic planning, reflecting the analysis and assessment of risks, the implementation of activities depending on the identified risks, guarantees for achieving the planned results

№	Target indicators	Unit of measurement	Risks					
			2024-2025	2025-2026	2026-2027	Analysis and evaluation	Strategies	Guarantees
1	Percentage of employed graduates in the first year after graduation	%	-	-	80	Loss of connection with a graduate	Cooperation with stakeholders and business partners. Feedback from graduates.	Contact information with graduates, business partners, and stakeholders. Employment of graduates. Internal audit
2	Number of joint educational programs	Quantity	0	0	0	Organization analysis The educational process in foreign universities and the assessment of the possibility of creating a SOP.	Collaboration with national and international research centers, institutes, and universities. Involvement of highly qualified faculty in departmental activities. Development and implementation of additional assessment methods to evaluate key indicators of learning effectiveness. Development of an action plan for internal and external mobility of students and faculty.	Risk-oriented analysis (SWOT) of the implemented educational programs. Concluding agreements, approval and launch of educational programs, and admission of students to new programs. Internal audit.

3	Number of educational programs in English	Quantity	0	0	0	Insufficient English proficiency among faculty	Organization and delivery of English language courses for faculty at the university	Availability of international certificates assessing English language proficiency among faculty and students. Internal audit. Semi-annual and annual departmental reports.
4	Increase in student enrollment in distance education programs	Quantity	-	-	-	Poor awareness of applicants	To activate career guidance work. To intensify work on external and internal academic mobility of teaching staff using modern distance learning technologies	Digital resources of the university. Internal audit.
5	Development and implementation of educational, teaching materials reflecting the results of our	Quantity	4	6	8	Insufficient implementation of the results of research and development of teaching staff in the development of educational and teaching materials	To consider at the meeting of the department issues related to the development and implementation of teaching staff's own research in the field of teaching methods and to develop methodological guidelines for teaching	Teaching staff with high qualifications and extensive experience in scientific and pedagogical activities. F KazNITU 703-06. The annual plan of educational and methodical publications. Internal audit

6	The share of updating the scientific equipment fleet from the total number of scientific equipment, %*	Quantity	15	20	25	Increased cost of equipment due to inflationary costs	Opening and equipping of the scientific and educational laboratory in Geo-Information Engineering (GIE)	Conducting laboratory sessions in accordance with the curriculum of the educational program
7	Increase in protection documents and copyright certificates	Quantity	13	15	20	Insufficient patenting of faculty research results	Participation of faculty and students in grant competitions organized by the Ministry of Science and Higher Education of the Republic of Kazakhstan (MSHE RK)	Patenting of scientific developments. Patent Department
8	Number of faculty with sufficient English proficiency for conducting research and educational	Quantity	3	3	5	Low English proficiency among senior faculty members	Organization and delivery of English language courses for senior faculty members at the university	Availability of international English language proficiency certificates among faculty and students
9	Share of degree-holding faculty involved in research and experimental design work, %	Quantity	76	78	80	The percentage of science funding in Kazakhstan is among the lowest in the world (0.13% of GDP).	Increase faculty participation in grant competitions organized by the Ministry of Science and Higher Education of the Republic of Kazakhstan (MSHE RK).	Highly qualified faculty with substantial research experience.

10	Number of publications in scientific journals of the Republic of Kazakhstan recommended by COCSON,	Quantity	9	12	14	Lack of and insufficient funding for scientific research	Increase faculty and student participation in research and student research activities (R&D and SRA).	Faculty with high qualifications and extensive experience in conducting research. Published scientific articles.
11	Number of ongoing research projects	Quantity	4	5	6	The percentage of science funding in Kazakhstan is among the lowest in the world (0.13% of GDP).	Increase faculty participation in grant competitions organized by the Ministry of Science and Higher Education of the Republic of Kazakhstan (MSHE RK).	Faculty with high qualifications and extensive experience in conducting research.
12	Number of research outcomes implemented in the educational process	Quantity	4	5	6	Insufficient funding for scientific research	Development and integration of research results into the core disciplines of the curriculum.	Implementation report of research results in the educational process. Open classes.
13	Number of publications in international journals indexed in Scopus / WoS	Quantity	12	16	18	Insufficient funding for scientific research	Increase faculty participation in grant competitions organized by the Ministry of Science and Higher Education of the Republic of Kazakhstan (MSHE RK).	Faculty with high qualifications and extensive experience in conducting research.

14	Percentage of faculty holding academic degrees (%)	%	71,5	73	75	Insufficient number of grants for the training of master's and doctoral students	Recruitment and employment of new staff who have successfully defended their master's and doctoral theses	Awarding of academic and scientific degrees to graduates. Internal audit.
15	Increase in the proportion of faculty and research staff who have undergone professional development	%	90	95	98	Insufficient funding	Participation of faculty in the "Bolashak" competition, organization of professional development courses for faculty. Within the framework of the Industrial Advisory Board for the educational program, sign a	Certificate of professional development. Internal audit.

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