EI «Alikhan Bokeikhan University»

Reviewed at the meeting of the Academic Council on Quality of the Faculty No. 1 dated 12.02.2020, reassigned No. 1 dated 21.09.2022

"I approve"
Dean of the Faculty of Information Technologies and Economics
_____ Baldinanova M.A.
"___" _____ 2022 y.

PLAN
DEVELOPMENT OF THE EDUCATIONAL PROGRAM
6B06122 INFORMATICS
for 2020-2025

Considered at an extended meeting of the Department of Information and Technical Sciences
Minutes No. 1 dated 29.08.2022
Head.dep Kazmangalieva N.K.

Semey, 2022

EP development plan"Informatics»
for _2020-2025_

1. General Provisions

Educational program (EP) 6B06122 "Informatics" is compiled in accordance with the requirements of the State Compulsory Standard of Higher Education, approved by Order of the Ministry of Education and Science of the Republic of Kazakhstan dated 20.07.2022. bachelor's degree) (MR. 01.02/2018).

The EP is designed as a set of consecutive training courses for the entire period of study and is aimed at mastering the competencies necessary for conferring the academic degree "B".bachelorin the field of information and communication technologies under the educational program 6B06122 "Informatics".

The training of specialists is carried out on the basis of the State License series AB No. 0064053 dated March 12, 2009, the date of renewal is April 5, 2019, issued by the Committee for Control in the Sphere of Educationresearch and science of the Ministry of Education and Science of the Republic of Kazakhstan (without time limit).

The preparation of the educational program 6B06122 "Informatics" is carried out on the basis of the regulatory documents of the Ministry of Education and Science of the Republic of Kazakhstan, in accordance with the mission and internal regulatory documentation of "Alikhan Boleikhan University".

In February 2015, EP 6B06122 "Informatics" passed specialized accreditation at the Independent Kazakhstan Agency for Quality Assurance in Education (accreditation certificate number SA No.

In 2019, the Educational Program was included in the Register of Educational Programs of the Unified Higher Education Management System of the Ministry of Education and Science of the Republic of Kazakhstan.

The purpose of the development of the educational program 6B06122 "Computer Science" is to prepare graduates with a solid foundation of fundamental education in the field of information technology. This allows them to become in-demand IT specialists in the republican and regional labor market, work as programmers (Software Developer), information system designers (Software Architect), software project managers (Project Manager), IT specialists in the field of science and knowledge. Based on the learning objectives, the educational program is developed taking into account the student-centered learning technology within the framework of a competency-based approach. To form the educational program, external and internal stakeholders, social partners and students of various levels of education, leading scientists of the university, and other interested parties were involved.

The composition of the developers was reviewed and approved at a meeting of the Academic Council for the Quality of the IT&E Faculty (Minutes No. 2 dated February 20, 2020). The compilers were: Head of the Department "Information and Technical Sciences" PhD doctor Kurmangalieva N.K., leading scientists and teachers of the department: candidate of technical sciences, associate professor,Urazbayeva K.T., PhD doctor Karipzhanova A.Zh. Associate Professorsocial partners of the university - Khalilov Shamil Taufikovich - technical director of IMAS GROUP LLP, Stenin Dmitry Vladimirovich, director of the Institute of Information Technologies, Mechanical Engineering and Motor Transport, Kuzbass State Technical University named after T.F. Gorbacheva, representatives of the student contingent - Baktygalieva M. - student of the EP "Informatics".

1. Analysis of the current situation and development trends of the labor market and educational services

Educational activities

Students of the educational program have the opportunity to acquire theoretical knowledge and practical skills, both in the course of lectures, and in practical and laboratory classes. To do this, EP "Informatics" has a classroom fund equipped with modern technical teaching aids; specialized classrooms

equipped with modern equipment, these are classrooms 102, 206, 207, 207b, 207c, 211, 212, 216, 217, 313.

On the basis of the Department of Information and Technical Sciences, IT LAB ACCELERATOR was launched for teaching staff and students in the IT direction. The purpose of the accelerator is to increase the intellectual potential of students and develop skills in the IT field for everyone. The latest equipment is designed for in-depth study of the subjects included in the curriculum, as well as for creative work in the process of creating start-up projects. The used total training area complies with the normative indicators, the norms of the sanitary and fire fighting service.

In the classroom, innovative and interactive forms of education are widely used, student participation in research work and creative competitions in the specialty is achieved. Practitioners and foreign qualified lecturers are invited to give lectures and conduct seminars. Every year, on an ongoing basis, the content of educational programs and the catalog of elective disciplines are reviewed by social partners and potential employers.

Students get the opportunity to obtain additional competencies in the Minor programs for university students as part of the development of the main educational program Major;

Strengths:

- continuous use of innovative teaching methods;
- attracting employees of enterprises to give lectures and conduct practical and laboratory classes;
- the demand for graduates of the educational program in the labor market both at the regional level and at the republican level;
- the opportunity to continue education in foreign partner universities under joint programs;
- ample opportunities to support talented young people at various levels.

For the strategic development of educational activities in the EP "Computer Engineering and Software" it is necessary to strengthen the following aspects:

- increase the number of foreign students attracted to the educational program;
- increase the level of teaching staff foreign languages;
- to intensify the work of scientific circles, workshops, laboratories for instilling SoftSkills and WorldSkills skills in children with further involvement of students of secondary general educational and secondary vocational institutions in various university events and further admission to the EP;
- open new classrooms, including with the involvement of social partners and other stakeholders.

Scientific research activity.

Research work is reflected: in the implementation of research projects carried out by the university and its scientific and structural divisions; in organizing and conducting scientific and practical events that bring together famous scientists and practitioners, young scientists and students within the walls of the university; in published scientific papers, results of conferences and round tables. The scientific work of students is a continuation and deepening of the educational process and is organized directly at the departments, in student scientific and technical associations (scientific circles, centers, etc.). EP "Computer Science" is provided with a scientific infrastructure, within the framework of the department there are three scientific circles, including the circle "Programmer" with a quantitative composition of more than 30 students annually.

Circles are held according to the plan, taking into account the interests of students, individual abilities and inclinations. The purpose of the circles is to improve the quality of training of highly qualified specialists and the formation of scientific research skills in students. The result of the work of the circle is active participation in student scientific and practical conferences, according to the results of which the participants take prizes.

The forms of involving students in research activities is expressed in the form of participation of students in the implementation of research projects.

On the basis of the Department of Information and Technical Sciences in IT LAB ACCELERATOR for the teaching staff of the faculty, advanced training courses are held in two areas: “Practical Web Programming: Modern Standards and Trends”, “Practical Java Programming”.

At the department "ITN" is an active research work of teachers and students. Research work is a mandatory, integral part of the training of qualified specialists at the university, as an inseparable component of a single process: educational and scientific and innovative.

Work is underway on the initiative topics of the department, registered in the National Center for NTI RK:

- "Research of algorithms for the development of a smart mobile application for testing based on the Kotlin programming language" scientific adviser PhD Karipzhanova A.Zh. (Department of Information and Technical Sciences);
- Development and implementation of an innovative component model of a digital medical textbook (0119RKI0173) - scientific adviser, candidate of physical and mathematical sciences Kurmanbaev E.A. (Department of Information and Technical Sciences);
- Modern problems and prospects for the development of digital technologies (0119RKI0174) - scientific adviser, candidate of physical and mathematical sciences Kurmanbaev E.A. (Department of Information and Technical Sciences);

For the period 2017-2020 The teaching staff of the department published 39 articles in journals recommended by the KKSON MES RK - 2, articles in international rating journals - 2, 2 textbooks with a volume of 18.25 p.l.

In the department of "Information and technical sciences" 15.02. 2020 at the Eurasian National University named after Gumilyov, Nur-Sultan, a doctoral dissertation was defended by Karipzhanova A.Zh. in the direction "6D070300-Information technologies" on the topic "Methods and algorithms for creating distributed databases of an information system" .

At the Department of Information and Technical Sciences, 3 copyright certificates were received: Marat M.A., Karipzhanova A.Zh., Nauryzbaev B.A. - photographic work: "3Dtour IE «Alikhan Boleikhan University» (No. 7626 dated January 20, 2020); Omarbekov E.D., Nauryzbaev B.A. - computer program: “Crowdsourcing platform “MY BIG IDEA”” (No. 9276 dated April 15, 2020); Malikov N.T., Nauryzbaev B.A., Kudaibergenova B.S. - computer program: "Vi 2019-nCoV" (No. 8090 of February 11, 2020)

In December 2020, IT LAB ACCELERATOR was launched on the basis of the Department of Information and Technical Sciences for teaching staff and students in the IT direction. The purpose of the accelerator is to increase the intellectual potential of students and develop skills in the IT field for everyone. The latest equipment is designed for an in-depth study of the subjects included in the curriculum, as well as for creative work in the process of creating start-up projects.

On February 28-29, 2020, IT&EF students Sorinkin E., VT-902, Duisek B., I-417, Telagisov D., VT - 214, Marat M.A., MI-221 were awarded letters of thanks forparticipation inHackathon "Yassawi SmartTech" on IT-technologies, organized by the International Kazakh-Turkish University. A. Yassaui.

With the positive dynamics of improving the quality of scientific research, conducting work to find opportunities for commercializing the results of scientific activities, increasing the scientific activity of teaching staff and students, the following points remained relevant:

- a decrease in the proportion of teachers who have undergone scientific internships, advanced training in research centers, near and far abroad, at enterprises
- there is a lack of involvement in research work of students;
- weak participation in the republican student subject Olympiads and NIRS competitions;
- insufficient connection between science, education and production, low level of implementation of research results into production;
- insufficient level of effectiveness of scientific research and citation of scientists and the university.

Educational and social activities.

The priority task of the state and the university is to create conditions for the intellectual, spiritual, moral and physical development of students.

Educational work at the Department of Information and Technical Sciences is carried out in

accordance with the approved plans for educational work. The goal-setting basis of educational work at the department is the creation of conditions for the active life of students, for civic self-determination and self-realization, for maximum satisfaction of the needs of students in intellectual, cultural and moral development.

Patriotic education, its urgent need is recognized in any state and is one of the main directions of education in "Alikhan Boleikhan University". The curators of the groups held curatorial hours in the following areas: ideological-political and civil-patriotic education; ideological and moral education, measures to promote a healthy lifestyle. The students of the department participated in city (intrauniversity) subbotniks, landscaping, in the actions "Students against AIDS", "Youth without drugs".

Assessment of the level of involvement of students in creative activities is a priority indicator for assessing the effectiveness of the organization of educational work. The main indicator of involvement is the growth of students involved in the organization of educational activities in the EP "Computer Engineering and Software".

The system for assessing the level of involvement is built on the mechanisms of monitoring and reporting of faculties. The main performance indicators are: information about the achievements of students who are participants in city, regional, republican and international competitions, competitions, festivals; information about the involvement of students in the work of the committee on youth affairs. Monitoring of the level of involvement is carried out at the end of each semester and the final report is submitted to the educational department of the university at the end of each academic year. So, an example of indicators of involvement that take an active part in the implementation of activities in the field of creative and personal development of students: for 2018 - 81%, for 2019 - 84%. In 2020, due to the pandemic, the number of participants decreased and amounted to 72%.

The university has an incentive system, expressed in the approval of the annual budget for the conduct of educational work by students.

But at the same time, some issues need further improvement:

- weak participation in regional, republican student competitions and sports events;
- a decrease in the proportion of students employed in youth organizations and creative associations associated with restrictive measures;
- reduction in the number of students participating in city, regional, republican and international creative competitions.

International activity.

The results of international cooperation in the field of scientific research of the department and the international department of "Alikhan Boleikhan University" with partner universities are reflected in signed cooperation agreements with other educational organizations.

The Department of Information and Technical Sciences cooperates with the following universities of near and far abroad:

1. University of Economics and Management (CR, Prague)
2. Irkutsk State Agricultural Academy
3. University of Nebraska at Omaha
4. FSBI VPO Kuzbass State Technical University named after V.I. T.F. Gorbachev"
5. NOU HPE "Siberian Academy of Finance and Banking", Novosibirsk, RF
6. Novosibirsk State Technical University
7. FGBOU VPO "Financial University under the Government of the Russian Federation", Barnaul branch
8. Novosibirsk State University of Economics and Management
9. Kharkiv National University
10. Pamukkale University
11. Non-state educational institution "Moscow Technological Institute" (Moscow, Russia)
12. FGBOU VPO "Tomsk State University of Control Systems and Radioelectronics" (Tomsk, RF)

13. Sofia University Clement of Orchid

14. Novosibirsk State University of Architecture and Civil Engineering (Sibstrin), Novosibirsk, RF

15. Technical University of Sofia (Bulgaria, Sofia)

16. International University of Kyrgyzstan

17. New Bulgarian University (Bulgaria, Sofia)

18. International University Final (Turkish Republic of Northern Cyprus)

19. Moscow City Pedagogical University (Russian Federation, Moscow)

20. Varna Free University (Bulgaria, Varna)

Within the framework of academic mobility, the department "ITN" cooperates with three universities of near and far abroad: the Technical University of Sofia (Bulgaria, Sofia), FGBU VPO "Kuzbass State Technical University named after. T.F. Gorbachev", Novosibirsk State University of Architecture and Civil Engineering (Sibstrin) (Novosibirsk, Russia).

Despite advances in this area, some issues need to be addressed urgently, in particular:

- insufficient knowledge of a foreign language by students of the EP, as well as teaching staff, for the implementation of academic mobility;
- insufficient funding for the development of academic mobility programs for students.
- low motivation of teaching staff to improve language skills.
- low share of attracting foreign students to study within the framework of the EP;

Resource support of the educational program.

The difference and uniqueness of the EP lies in the fact that there is a good material and technical base that meets modern requirements. This is the availability of specialized classrooms and laboratories, further work is underway to purchase modern computers and special equipment for laboratories.

All buildings are equipped with the necessary number of lecture halls, many of which are equipped with projectors and interactive whiteboards, which gives teachers ample opportunities for high-quality classes. Practical and seminar classes are also held in specialized rooms. There are educational and scientific laboratories, the equipment of which is annually reviewed and improved. So, for the qualitative provision of the educational process within the framework of the EP "Informatics" in building No. 2, rooms 212, 102 are equipped with multimedia projectors.

Operating within the framework of the credit system of education, favorable conditions were created for students to master all the disciplines of the educational program and obtain an academic degree in accordance with the requirements of the State Educational Standards Standards and has modern information and communication bases (AIS university, broadband Internet access, electronic library), which contribute to the intensification of educational process and conducting the educational process and scientific research.

The teaching staff of the department "ITN" use innovative educational technologies and modern teaching technologies. To apply these technologies in the educational process for EP, specialized classrooms are used, such as 102, 212, 210a, 210b. For information and technical support of the main production processes (educational, scientific, managerial, etc.), the university has a sufficient fleet of computers located in structural divisions, in computer classes, in laboratories and classrooms.

At annual meetings with employers and social partners, questions are raised about the use of various software products that are used in practice, as well as graduates in their questionnaires indicated the need to use various software in the educational process.

Strengths:

- good material and technical base used in the educational process;
- availability of specialized classrooms and laboratories for the formation of additional competencies in the EP;
- modern information and communication bases that contribute to the educational process.

But at the same time, it is necessary to supplement the educational process with software products, similar to those used in production.

3. Directions of the EP development plan, goal, objectives, expected results, target indicators, implementation measures

- Strategic directions of the EP development plan:

Strategic direction 1. Improving the quality of educational activities. The direction corresponds to the adopted "State Program for the Development of Education and Science of the Republic of Kazakhstan for 2020-2025".

Strategic direction 2. Development and improvement of the quality of research and innovation activities. This direction affects the main goals of the state program "Digital Kazakhstan", as amended by the Decree of the Government of the Republic of Kazakhstan dated December 20, 2019 No. 949.

Strategic direction 3. Improvement of educational and social work of students. The principles and main provisions in this area are being implemented within the framework of the National Program "Rukhani Zhangyru" - a look into the future.

Strategic direction 4. Expansion of international cooperation.

The purpose of the development plan EP 6B06122 "Informatics" is the training of specialists who are competitive in the labor market, who have the skills to install, configure and maintain system, instrumental and applied software, computer technology and computer systems, who have programming languages such as PHP, MATLAB, C ++, Java, JavaScript, Python.

The main objectives of the implementation of the development plan of the EP "Informatics":

- training of demanded personnel with higher education that meets the needs of the modern labor market;
- providing practice-oriented learning and the end result;
- involvement of students in research activities with subsequent publication of research results in scientific journals, development of a software product that is in demand in various areas of society;
- increasing the publication activity of teaching staffin order to focus scientific research on the actual needs of the economy and society, increase the potential for the commercialization of scientific results;
- increasing the share of students participating in regional, republican and international scientific and creative competitions;
- release of competitive specialists with knowledge of a professional foreign language and software products used in practice.

Expected results for EP 6B06122 "Informatics"

- increasing the satisfaction of internal and external stakeholders with the quality of professional training of graduates;
-increasing the share of the dual training system (up to 2-3 disciplines) at the leading enterprises and organizations of the region;
- successful employment of at least 80% of graduates during the first year after graduation;
- an increase in the number of students participating in various competitions and publishing scientific results up to 60% of the total number of students in EP 6B06122 "Informatics";
- increase in the publication of the teaching staff of EP 6B06122 "Informatics" in rating publications (based on information resources on the Web of Science platform (Clarivate Analytics) and Scopus (Elsevier), etc.);
- an increase in the proportion of teaching staff who have completed courses to improve their language competence (from regular teaching staff);
- participation in scientific projects and programs focused on the needs of the real market.

- Target indicators and activities for their implementation within the framework of EP 6B06122 "Informatics"

Target indicators	unit measurements	in the planning period					
		2021	2022	2023	2024	2025	2026

one	2	3	4	five	6	7	8
Increase in the proportion of graduates studying under the university's undergraduate program who are employed in the first year after graduation	%	fifty	55	60	65	70	80
Number of dual programs under memorandums of cooperation with external stakeholders	Qty	-	one	one	2	2	3
The share of teaching staff who completed advanced training courses on new teaching methods to improve and master new competencies in accordance with the EP.	%	twenty	40	fifty	60	70	one hundred
Coverage of students participating in R&D from the total contingent of full-time students (without distance learning)	%	thirty	thirty	40	fifty	fifty	60
Growth of university publications in rating publications (based on information resources on the Web of Science platform (ClarivateAnalytics) and Scopus (Elsevier), JSTORE, etc.)	%	five	10	10	15	twenty	twenty
The proportion of teaching staff who have completed courses to improve language competence (from full-time teaching staff);	%	-	five	10	15	15	twenty
Number of joint educational programs with partner universities	Qty	-	one	one	2	2	3
The share of students covered by participation in public organizations of the university and the region	%	-	five	five	10	10	15
Activities to achieve target indicators		2020	2021	2022	2023	2024	2025
Implementation of dual education			X	X	X	X	X

programs for students						
Conclusion of agreements and memorandums on creative cooperation within the framework of the EP	X	X	X	X	X	X
Allocation of funds for the passage of teaching staff of the university refresher courses on new digital technologies to improve and master new knowledge	X	X	X	X	X	X
Attracting students, undergraduates and doctoral students to ongoing research	X	X	X	X	X	X
Participation of scientists in joint research projects with universities in Kazakhstan and abroad		X	X	X	X	X
Conclusion of agreements and memorandums on joint programs	-	X	X	X	X	X
Participation of students and young personnel in various events of the university, city and region		X	X	X	X	X
Improving the EP based on a competent approach and introducing modern educational technologies and methods into the educational process. Harmonization and development of educational standards in accordance with the needs of employers and social partners. Creation of new EPs adapted to modern conditions, taking into account new achievements in science, technology and industry, as well as the requirements of employers.						
Raising the rating of the department and establishing contacts with employers. Conclusion of agreements on interaction and cooperation with leading IT companies. Annual participation in the job fair with the invitation of business representatives for the employment of graduates in the priority sectors of the economy of the Republic of Kazakhstan						
Monitoring customer satisfaction with the quality of educational services provided. Annual survey: former graduates, final year students who have completed work experience. Monitoring the satisfaction of employers with the quality of training of specialists of the faculty with positive feedback on the quality of training of specialists						

Development of lifelong education at the university. Carrying out activities aimed at the continuity of education levels in the context of continuity: bachelor's degree - master's degree. Orientation of students to the values of continuous education: personal meanings, readiness, interests, etc. Formation of a high-quality contingent of students at the department						
Activation of scientific activity of trainees. Involving students in research projects Participation in student conferences, competitions of creative works, in the presentation of the results of their own research at interuniversity conferences. Involvement of students in the implementation of departmental scientific research. Organization of annual student conferences, competitions, competitions, round tables, business and role-playing games.						
Strengthening and expanding the interaction of the department with external organizations. Support for business contacts with scientists from other cities of the Republic of Kazakhstan in the following areas: reviewing and opposing dissertations, scientific articles, methodological manuals. preparation and publication of articles, joint textbooks, collective monographic publications, joint scientific research and scientific events, examination of documents, projects, problem situations, participation in the work of editorial boards of scientific publications, participation in conferences, olympiads, round tables, congresses						
Quality restructuring teaching staff of the department. Development and approval of a plan for advanced training of the teaching staff of the department. Participation of teaching staff in international summer schools and seminars on IT technologies						
Updating the personnel potential of the department. Conducting competitions for filling the vacant positions of the department on the basis of competitive selection and an objective approach to assessing the activities of employees.						

Renewal of the staff of the teaching staff of the department on the basis of continuity: involvement in teaching and research activities of the most competent university graduates, as well as specialists in the practical field of activity						
Development of infrastructure and material and technical base: expansion of the classroom fund of the department for educational and scientific activities. Carrying out activities to form a modern educational and laboratory base: creation of the IT infrastructure of the department; acquisition of modern software; updating the computer park by acquiring new generation computers of the type; acquisition of modern multimedia equipment.						
Improve dual training to create additional opportunities to increase the effectiveness of training in the field of engineering and technology. Organization of internships and research practices for students in the magistracy in advanced IT universities and research institutes near and far abroad						

4. Mechanisms for implementing the EP development plan

The development of the EP development plan provides an integrated approach to the implementation of activities focused on achieving the set goal through the solution of the formulated specific tasks, contributes to the full implementation of planned activities

At the end of the academic year, at a meeting of the department, monitoring of EP 6B06122 "Computer Science" is carried out, with the participation of all interested parties, the results achieved, the effectiveness and efficiency of the implementation of the EP are discussed. Analysis of the achievement of target indicators are considered at a meeting of the department with the participation of leading teaching staff and other interested parties.

The monitoring results are submitted for discussion to the Academic Council on the quality of the faculty. Based on the analysis of monitoring results, adjustments are made to the EP development plan, but not more than 2 times a year.

Monitoring of the implementation of the Development Plan is carried out by analyzing and summarizing information on the implementation of development indicators in areas. Based on the results of the monitoring, the management of EP 6B06122 "Informatics" prepares a conclusion on the implementation of the Development Plan.

The conclusion is drawn up in any form and sent to the Dean of the faculty and is the basis for the annual report of the faculty within the framework of strategic indicators and results for evaluating the University Development Strategy as a whole.

The processes of formation, monitoring and implementation of the EP development plan should be based on the principles of openness and transparency. The EP development plan is posted on the official website of the university.

5. Risk management arising in the process of implementation of EP 6B06122 "Informatics"

Name of a possible risk	Possible consequences if risk management measures are not taken	Risk Management Measures
one	2	3
Reducing the contingent of students in the EP	Decrease in the number of students, reduction in teaching staff	It is necessary to carry out active work on the attractiveness of this specialty in order to attract a new contingent of students on the basis of attracting grants and scholarships to students
Decrease in the release of educational and methodological literature in the state language in specialized disciplines	Possible decrease in the quality of graduates and the comprehensibility of students in the state language.	Increasing the release of own publications of the UMR teaching staff of the department according to the content of the EP courses and their acquisition from outside
The outflow of personnel from the system of education and science, caused by the discrepancy between the level of remuneration in the industry and the average level of wages in the country	Reducing the scientific potential of teaching staff	Training of scientific personnel through master's and doctoral studies (PhD) based on the attraction of grants and other sources of funding. Involvement of programmers-practitioners, heads of leading organizations, large companies, etc. in the educational process.
Weak motivation of teaching staff to publish scientific papers in journals with a high citation index	Decrease in the share of teaching staff who have the opportunity to manage scientific projects and graduate theses for EPs	Make a plan for the publication of teaching staff in foreign publications with a non-zero impact factor with the search for funds at the expense of grant projects from the state budget, obtaining scholarships for scientific research (the best teacher of the university)
Reducing the share of students covered by external academic mobility	Decrease in the attractiveness of the EP, failure to develop target indicators	Ensuring on an ongoing basis the academic mobility of students and teaching staff, through joint educational programs with partner universities
Insufficient volume of orders for research work from enterprises in the region	Decrease in the level of commercialization of research work at the university	Expand the search for potential customers for research and development, expand the range of research areas offered by the university

6. Financial support of the EP development plan

Financial support for the implementation of the Development Plan for EP 6B06122 "Informatics" for 2020-2025 will be carried out from the university's funds, as well as by attracting funds from state and other sources of funding.

Capital and operating costs are assumed.