



«АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТІҢ
ТӘУЕЛСІЗ АГЕНТТІГІ» КЕМ

НУ «НЕЗАВИСИМОЕ АГЕНТСТВО
АККРЕДИТАЦИИ И РЕЙТИНГА»

INDEPENDENT AGENCY FOR
ACCREDITATION AND RATING

REPORT

on the results of the work of the external review commission for evaluation
for compliance with the requirements of the standards of specialized accreditation
of educational programs

5B070300 «Information systems», 5B070400 «Computer and software», 5B070500
«Mathematical and computer modeling», 5B071900 «Radio engineering,
electronics and telecommunications», 6M070300 «Information systems»,
6M070400 «Computer equipment and software», 6M070500 «Mathematical and
computer modeling », 6M071900« Radio engineering, electronics and
telecommunications »

**Central Asian University
from June 7 to June 9, 2018.**

Almaty 2018

INDEPENDENT AGENCY FOR ACCREDITATION AND RATING
External review commission

*Addressed to
Accreditation
board of the IAAR*



Независимое агентство
аккредитации и рейтинга

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LIST OF SYMBOLS AND ABBREVIATIONS

R K - Republic of Kazakhstan
DB - basic disciplines
BPC - point-rating system
Higher education - higher education
BA - Bachelor's degree
MA – magistracy
PhD - doctoral studies
Higher education institution - higher educational institution
EEC - external review commission
VOUD - external evaluation of educational achievements
SAC - State Attestation Commission
FESCO - Department of Higher and Postgraduate Education
DEP - distance learning technology
ICT - information and communication technologies
IUP - individual curriculum
State Educational Standards - State Compulsory Education Standards
GPR - State Program for the Development of Education
IAAR - Independent Accreditation and Rating Agency
NPA - normative and legal acts
NRC - National Qualifications Framework
NSC - National system of qualifications
EP - educational program
ECTS - European system of credit transfer and accumulation
ESG - standards and recommendations for quality assurance in the European Higher Education Area
EMA REMS - Educational-methodical association of the Republican educational-methodical council

II INTRODUCTION

In accordance with Order No. 60-18-OD of 17.05.2018 of the Independent Agency for Accreditation and Rating, from 07 to 09 June 2018, the external review commission assessed the compliance of the Central Asian University with the standards of IAAR specialized accreditation of the (from February 24, 2017 No. 10-17-OD, fifth edition).

The report of the external review commission (EEC) contains an assessment of the compliance of the activities of the Central Asian University with the criteria of the IAAR, recommendations of the EEC for further improvement and profile parameters of the university.

The composition of the EEC:

1. **Chairman of the commission** - Gulnara G. Turtkaraeva, Candidate of Pedagogical Sciences, Associate Professor, Kokshetau State University. Sh. Ualikhanov (Kokshetau city);
2. **Foreign expert** - Michael Henry (Erik) Martijnse, Director of Higher Education, Inspectorate for Education of the Netherlands, ENQA expert, INQAAHE, APQN (Utrecht, Netherlands);
3. **Foreign expert** - Grakovskis Alexanders, Professor, Transport and Telecommunication Institute (Riga, Latvia);
4. **Expert** - Aldabergenova Saule Salimzhanovna, Kazakh Agrotechnical University. S.Seifullin (Astana city);
5. **Expert** - Khamraev Sheripidin Itakhunovich, candidate of technical sciences, associate professor, Kazakh National Pedagogical University. Abay (Almaty);
6. **Expert** - Lyudmila Polyakova, Kazakhstan University of Engineering and Technology (Almaty);
7. **Expert** - Aldungarova Aliya Kairatovna, PhD, associate professor, Pavlodar State University named after S. Toraigyrov (Pavlodar);
8. **Expert** - Kopishev Eldar Ertaevich, Ph.D., acting. Associate Professor, Eurasian National University. L.N. Gumilev (Astana city);
9. **Expert** - Musabekov Rasulbek Akylbekovich, Candidate of Technical Science, Associate Professor, Almaty University of Energy and Communications (Almaty);
10. **Expert** - Ahmedyanov Abdulla Ugubayevich, Ph.D., Associate Professor, Eurasian National University. L.N. Gumilev (Astana city);
11. **Expert** - Smirnov Mikhail Borisovich, Cand.Tech.Sci., Professor, State University. Shakarim of Semey;
12. **Expert** - Eshzhanov Talgat Eshmahanbetovich, doctor PhD, Suleiman Demirel University (Almaty);
13. **The employer** - Yuri Pilipenko, Chairman of the Board of Directors of the International Association of Producers of Goods and Services "EXPOBEST" (Almaty);
14. **Student** - Amanbek Assem Nurayaliuzi, a student of the Kazakhstan University of Engineering and Technology (Almaty);
15. **Student** - Tokburina Aysulu Kalasovna, student of the Kazakh State Women's Pedagogical University (Almaty);
16. **Student** - Medetov Batyrhan Ergazievich, a student of the Almaty University of Energy and Communications (Almaty);
17. **The observer from the Agency is** Timur Erbolatovich Kanapyanov, the head of international projects and public relations of the IAAR (Astana).

III PRESENTATION OF THE CENTRAL ASIAN UNIVERSITY

Central Asian University was founded in 1997 in Almaty. The structure of the CAU includes 3 faculties, 5 departments, 21 research laboratories and scientific centers.

The University carries out preparation of specialists in 7 areas (Education, Humanities, Social Sciences, Engineering, Economics, Law, Services), 55 baccalaureate specialties, 27 magistracy specialties and 7 doctorate PhD specialties.

The contingent of students of the Central Asian University as of September 1, 2017 was 1984 people.

Contingent of students:

- On the internal form - 1580 students, on the correspondence form - 280 on a contractual basis with full reimbursement of costs, including in the state language - 954 students.

The contingent of undergraduates is 115 people.

The contingent of doctoral students is 9 people.

27 foreign students from China, Mongolia, Tajikistan, Turkmenistan, and Uzbekistan study at the Central Asian University.

The teaching process is serviced by a faculty of 145 people, of which there are 124 employees (more than 85%): doctors of sciences, professors - 26 people; candidates of sciences, assistant professors - 75 people and masters - 23 people.

The graduation rate is 81.4%.

The number of teachers conducting classes in the state language is increasing: in the 2015/2016 academic year 116 people (80%), in 2016/2017 academic year - 119 people (82%), in 2017/2018 academic year - 122 people (84%).

Educational activity is carried out by the University on the basis of state license AB No. 0137420 dated February 03, 2010, issued by the Committee for Control in Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan.

Evaluation of the effectiveness of the University's mission is carried out by comparing the results of work with objectives and is used as a feedback mechanism for making managerial decisions and analyzing the functioning of the quality management system (hereinafter QMS) within the framework of the received Certificate of the Russian Register "ISO 9001: 2015". The infrastructure of the Central Administrative Board includes four academic buildings, a sports hall, a dormitory with an area of 700 square meters, and a dining room with 240 seats.

The University has eighteen training and laboratory classrooms, a total area equipped with modern equipment and measuring facilities.

The educational process uses twenty interactive whiteboards, three hundred and twenty modern computers, of which two hundred and fifty-four have access to the Internet. Library resources of the University are five hundred twenty copies.

Within the framework of targeted training, forty-five alumni and university staff were trained in postgraduate programs at leading universities in Kazakhstan:

The University conducts its activity on the basis of the Charter, approved by the Department of Justice of Almaty on September 3, 1997, No. 3112/1910; Certificate of state registration of a legal entity No. 13112-1910-01-U of 03.09.1997; Statistical card; Certificate of the taxpayer of the Republic of Kazakhstan, BIN 970940001516.

IV. DESCRIPTION OF THE VISIT OF THE EEC

The visit of the external review commission to the CAU was organized in accordance with the program agreed in advance with the chairman of the EEC in the period from 07.06.2018 to 09.06.2018.

In order to coordinate the work of the EEC on June 7, 2013, an installation meeting took place, during which the powers were distributed among the members of the commission, the

schedule of the visit was specified, and agreement was reached on the choice of methods of examination.

In order to obtain objective information on the evaluation of the university's activities, EEC members used such methods as visual inspection, observation, interviewing of employees of various structural divisions, teachers, students, graduates and employers, questioning of faculty and students.

The meetings of the EEC with the target groups were held in accordance with the updated program of the visit, with observance of the established time interval. On the part of the staff of the Central Asian University, the presence of all persons indicated in the visit program was ensured.

**Information about employees and trainees,
who participated in meetings with the EEC of IAAR**

Quality of participants	Quantity
President	1
Vice-Rector	2
Heads of Chairs	5
Directors of departments and heads of departments	19
Teachers	90
Students, undergraduates	283
Graduates	77
Employers	49
Total	109

Experts visited the chair of pedagogy, psychology and social disciplines, computer and multimedia classes, the center of innovative information technologies, the cabinet of the financier, the language laboratory, the video studio, the scientific library, the health center, sports halls, the hostel, the EPen classes in the discipline "Criminalistics", "Workshop of professional communication", "Chair of Fundamental Sciences and Oil and Gas Industry", "Department of International Relations and World Languages", "Department of Pedagogy and Humanities".

The following classes were attended by the EEC members: on the discipline "Technology and technology of oil production" on the theme "Teniz kën oryndarynyn meggerudi kazirgi zhagdayi", prep. Dzheksenbaev EK; on discipline "Professionally-oriented foreign language" on the topic "Public speech", Rev. Sadykova Z.E. ; on discipline "Philosophy" on the theme "Dulat Isabekov shy'armalaryndyy äleimetik taldau", Rev. Baltabayeva G.S.

EEC members visited the practice bases on accredited programs: Migration Police of Medeu District, JSC Kazakhtelecom, Trading Network "White Wind", TOO "Lion Auto Center Almaty" KazRIMEA-Kazakh Research Institute of Mechanization and Electrification of Agriculture, "Sea Kazinkas" LLP, Delphinarium "Nemo", TV channel "Almaty".

In order to confirm the information provided by the external experts in the self-assessment report, the university's working documentation was requested and analyzed. In particular, the Strategic Plan for the development of the Central Asian University for 2017-2021, the plan for educational and methodological work for the last three academic years, the plans for the work of the departments, the work plans of the faculty, the Concept of the educational work of the Central Asian University for the period 2015-2020, disciplines for each academic year, the Regulations on the Department, the RUE of the Master's and Bachelor's Degrees, job descriptions, the minutes of the Academic Council, the Teaching materials, the syllabus, and others.

Along with this, experts have studied the Internet positioning of the university through the official website <http://www.cau.kz>

Within the framework of the planned program, recommendations for improving the University's activities developed by the EEC on the results of the examination were presented at a meeting with the management on June 9, 2018.

V GENERAL ASSESSMENT OF THE CENTRAL ASIAN UNIVERSITY

Central Asian University was founded in 1997 in Almaty. Over the years, much has changed at the University: the number of faculties and specialties has increased, a three-level education system has emerged - bachelor's and master's degrees, PhD-doctoral studies, several times the number of students, and additional educational programs.

Cooperation with Russian universities is carried out on the basis of the Memorandum on cooperation in the field of education, science and culture between higher educational institutions of the Republic of Kazakhstan and higher educational institutions of the Russian Federation. Agreements on joint training of personnel, in particular on economic specialties - Moscow (MPEI), St. Petersburg (IST), have been signed and are being implemented, an agreement has been concluded on the exchange of students between universities under the Mevlana program. There is an agreement with the National Aviation University (NAU, Kiev) on information technology and space research.

The University trains specialists in the following areas: Education, Humanities, Social Sciences, Engineering, Economics, Law, Services. At three faculties (5 departments) - Pedagogy and Humanities, Fundamental Sciences and Oil and Gas Industry, International Relations and World Languages, Economics and Finance, Legal Sciences. Since 1997, Central Asian University has produced over 45,000 specialists. Over one hundred and forty-five teachers from them, eighty-one with scientific degrees, are involved in the educational process.

The research work of the CAU is conducted on 12 registered initiative scientific topics in JSC "National Center for State Scientific and Technical Expertise", an agreement was concluded with JSC Science Foundation granting a grant for the commercialization of scientific and technical activities for the amount of 300 million tenge from 21 November 2017 № 428. In the direction of mechanization and electrification of agriculture.

During the reporting period, 3 teachers won the state grant "The Best Teacher" in 2009, Ph.D., Professor Shankibaev B.N., in 2013, Doctor of Philosophy, Professor G. Baltabayeva, in 2015. Professor Nadyrov M.K.

V CONFORMITY TO THE SPECIALIZED ACCREDITATION STANDARDS

5.1. Standard "Management of the educational program"

The Evidence

Training at the university on accredited educational programs is carried out on full-time and correspondence courses on the basis of general secondary, secondary professional and higher professional education. The preparation of master's degree programs is carried out only in the scientific and pedagogical direction. The EP is implemented in accordance with the annexes to the State license for engaging in educational activity No. 0137420 issued by the Education and Science Control Committee of the Ministry of Education and Science of the Republic of Kazakhstan on 03.02.2010. Training of specialists in the CAU is carried out according to the Classifier of Specialties of Higher and Postgraduate Education of the Republic of Kazakhstan.

The University demonstrated the existence of a policy in the field of quality of education, approved by the Academic Council of the University (August 25, 2017). This document is available on the university's website <http://cau.kz> available to interested parties.

The implementation and development of accredited programs is determined, first of all, by the mission, the Strategic Development Plan of the CAU.

The strategic plan for the development of the University for 2017-2021, approved by the Academic Council of the Central Asian University (August 25, 2017) is built taking into account

the requirements of the educational environment. The strategic plan is designed for four years and is aimed at systematically improving the training of specialists taking into account integration into the global educational space.

The strategic plan for the development of the CAU for 2017-2021 was developed in accordance with the Strategic Plan of the Ministry of Education and Science of the Republic of Kazakhstan for 2017-2021 (No. 729 of December 29, 2016) and approved by the Academic Council of the University (August 25, 2017).

To support the main business processes in the university, a set of internal regulatory documents has been developed that regulates the implementation of the EP.

Experts in the course of acquaintance with internal documentation were convinced of the presence of those responsible for business processes within the framework of the EP, unambiguous distribution of the duties of the staff, delineation of the functions of collegial bodies, transparency of the management system of the educational program.

The necessary information, personnel, financial and material resources, as well as regulatory and legal documentation that ensure the implementation of educational programs are available to manage the EP.

Analytical part

At the same time, the following issues concerning this standard are not fully reflected in the self-report and were not confirmed during the visit of the EEC.

EEC notes that the uniqueness and the advantage of each EP submitted for accreditation before similar educational programs of other HEIs is not confirmed enough, this opinion was confirmed during the interview of the managers of the EP and in the analysis of the submitted documentation.

Insufficient attention is paid to ensuring the quality of the activities carried out by partners, in particular, in the implementation of academic mobility. In particular, it was not possible to monitor the monitoring of students leaving for other universities through online consultations, correspondence with host universities, etc.

Experts are not provided with an analysis of the EP development plan for all accredited programs. The presented document as the Plan for the development of educational programs for 2017-2021 does not reflect the activities of the university on the development of the EP.

Experts were not able to verify the availability of records demonstrating how the analysis of the audit fund, the adequacy of computer classes, the necessary software and provision of technical laboratory equipment to ensure a full-fledged educational process on educational programs is carried out.

There are no risk management activities in the implementation of educational programs.

During the writing of the self-assessment report, conversations with the management of the EP and the heads of structural units, familiarity with the internal documents, the management of the EP could not document that the university is analyzing and practical implementation of innovative proposals.

Information on the mechanism for managing the EP, changes in this process is not fully reflected in the official website of the university. The information posted on the website does not sufficiently reveal the activity of the university on the implementation of accredited OPs for all levels of education.

The Commission notes that the accredited specialties of the cluster have done some work to strengthen the documentation of all major business processes that regulate the implementation of the EP. At the same time, the issuing department should more accurately monitor the effectiveness of ongoing processes by applying targeted indicators that allow tracking the effectiveness of the management of the EP.

According to the results of the questionnaire, the level of accessibility and responsiveness of the university administration is "completely satisfied" - 68.9%, "partially satisfied" - 21.5%, "partially dissatisfied" and unsatisfied - 7.4% of students.

Recommendations of EEC

1. By the beginning of the new 2018/19 school year, draw up a plan and organize introductory courses for managers of the EP on planning the results of training, organizing the educational process for educational programs in accordance with the CS and implementing the basic principles of the Bologna process.
2. By the beginning of the new 2018/19 academic year, revised model of the graduate and plan for the development of the EP, shall be developed by the leadership of the EP taking into account the specifics of the specialties in accordance with the NRC, the RCA and the Dublin descriptors, and appoint those responsible for the execution of the plan.
3. To improve the mechanisms of design, management, internal quality assessment, expertise and monitoring of accredited OP taking into account risks. Conduct an assessment of the risks of the development of the educational program in full accordance with the Development Strategy of the Institute and develop a mechanism for their reduction.

Conclusions of the EEC on the criteria for specialties: 5B070300- "Information systems", 5B070400- "Computer equipment and software", 6M070300- "Information systems", 6M070400- "Computer equipment and software", 5B071900- "Radio engineering, electronics and telecommunications", 6M071900- "Radio engineering, electronics and telecommunications": strong - 0, satisfactory - 12, requiring improvement - 5.

Conclusions of the EEC upon the specialties criteria: 5B070500- "Mathematical and Computer Modeling", 6M070500- "Mathematical and Computer Modeling": strong - 0, satisfactory - 9, requiring improvement - 8.

5.2. Standard "Information Management and Reporting"

The Evidence

The University implements information management processes, including the collection and analysis of information: there is a special service that is responsible for the information support of the university and its units and the formation through the media of a positive public opinion about the activities of the CAU.

The general information part of the site contains information about the CAU, its subdivisions, events occurring within its walls.

The following information technologies were introduced in the management activity of the University: an educational portal and an information site (www.portal.cau.kz), an information system for supporting the educational process on AIS "Lotus" credit technology.

As the MAP is being implemented, reports are kept, which are reviewed at the department's meetings and annually reports on the main activities of the Department of Economics and Business to the pro-rectors in the field of activity are submitted.

To monitor the implementation of MAP and implement corrective actions, the reports of heads of structural units, questionnaires are used. Assessment is carried out in all areas of educational, educational, methodical, information, scientific, educational activities and material and technical support of the educational process. Evaluation of activities is a continuous process and is held at the meetings of the departments, is formalized in the form of protocols. In assessing the activities of the EP participate and students as a consumer of educational services.

Control of the effectiveness of the quality assurance system is carried out through examination of methodological support, evaluation of activities and consideration of issues on collegiate bodies. Within the framework of these mechanisms, the effectiveness and effectiveness of the fulfillment of goals, deviations from the set goals are determined.

Feedback is established with the trainees, which makes it possible to reveal their satisfaction with the quality of the implemented EP. During the conversation with the students,

they noted the availability of the opportunity to address management with one or another of the problems.

Analytical part

According to the analysis of compliance with the criteria of the "Information Management and Reporting" standard for accredited areas, the commission notes the following: in CAU there is an information management and reporting system. The data is stored in electronic and paper format in accordance with the nomenclature. Most of the information is stored in paper format, which presents significant risks. In the process of collecting and analyzing information, ICT and software are not enough.

The weak use of ICT does not allow the systematic use of information to improve the internal quality assurance system.

It is not specified whether there is a special information resource of the EP (website, stand, etc.) through which information is distributed. To which scientific databases the university is connected, their list and term of validity of the contract are not given.

It is unclear whether the management of the EP can ensure that trainees, teachers, employers and, in general, interested persons, can receive information, incl. on the processes of formation and implementation of the development plan for the EP.

There are no references to the availability of documented information management processes, and who is responsible for their operation, reliability and systematic use of adequate information to improve the internal quality assurance system.

According to the results of the questionnaire, 54.3% "very good" answered the question of assessing the involvement of Teaching staffs in the process of accepting managerial and strategic decisions, 39.1% "well" and 4.3% "relatively poor".

Conclusions of the EEC on the criteria for specialties: 5B070300- "Information systems", 5B070400- "Computer equipment and software", 6M070300- "Information systems", 6M070400- "Computer equipment and software", 5B071900- "Radio engineering, electronics and telecommunications", 6M071900- "Radio engineering, electronics and telecommunications": strong - 0, satisfactory - 15, requiring improvement - 2.

Conclusions of the EEC on the criteria for specialties: 5B070500- "Mathematical and Computer Modeling", 6M070500- "Mathematical and Computer Modeling": strong - 0, satisfactory - 14, requiring improvement - 3.

5.3. Standard "Development and approval of the educational program"

The Evidence

The development and approval of educational programs at the university is carried out in accordance with the provisions of regulatory and legal acts in the field of higher and postgraduate education, as well as the documentation developed by the university to ensure transparency and clarity in implementing the directions of the development strategy.

The accredited specialties of the University are provided with educational and methodological documentation in accordance with Kazakhstan requirements: state compulsory education standards; typical and working curricula of specialties; typical and working curricula of disciplines.

Assessment of the quality of educational programs is carried out on the basis of the analysis of curricula, the catalog of elective disciplines, schedules, individual plans of trainees, internal normative documents regulating the implementation of educational programs, questioning of students.

The university has the following types of curricula: the standard curriculum (PMU), the curriculum (RUE). Curricula are developed on the basis of standard curricula for specialties for the entire period of study, State compulsory education standards and Rules for the organization of the educational process on credit technology training. In accordance with the State

Educational Establishment of the Republic of Kazakhstan in the curricula, the ratio of the volume of the disciplines of the cycles of the GS, BD, and profiling disciplines is maintained.

The content and structure of accredited PCs are formed in accordance with the requirements of the Standard Rules for the Activities of Organizations of Higher and Post-Graduate Education, approved by the Government of the Republic of Kazakhstan dated May 17, 2013 No. 499, the State Standard of the Republic of Kazakhstan, approved by Decree of the Government of the Republic of Kazakhstan No. 1080 of 23.08.2012 (with amendments and amendments to the state of 15.08.23017 d), the Rules for the organization of the educational process for the credit technology of education, approved by the Order of the Minister of Education and Science No. 152 dated 20.04.2011, with appropriate amendments to them.

Formation of individual educational trajectories of the trainee is carried out with the help of an adviser for each academic year on the basis of GOSO RK, Syllabus, IEP.

On the basis of the EP, working curricula and catalogue of elective disciplines (CED) are compiled and approved annually. The QED contains a brief description of the disciplines with the indication of the prerequisites and the post-requisition of the discipline. QED are available at the departments and on the educational portal.

The University develops curricula that provide a modular study of disciplines with observance of the logical sequence of studying disciplines, on the basis of typical curricula of the specialty, models of graduates. The syllabus, modular academic programs (MAP) are developed for the entire term of the education, they contain a complete list of the academic disciplines, grouped into cycles of general education (GE), basic (DB) and profiling disciplines (PD) as well obligatory as elective components, specifying the labor intensity of each academic discipline in credits and academic hours; and in the proportions established by the State Obligatory Standard of Higher Education.

MAP displays the logical sequence of mastering cycles, disciplines, practices, final certification, the protection of the thesis, providing the formation of general and special competencies. The complexity of the disciplines of cycles in Kazakhstan and ECTS credits, as well as in hours, with the allocation of lectures, practical (seminar) occupations, independent work of students under the guidance of the teacher and independent work of the student, all kinds of professional practice, intermediate certification are indicated.

Employers, Teaching staffs are involved in the development of the graduate model.

An important role in the training of specialists, namely in the development of their professional competencies, is played by various types of practices provided for by the PMU. In the university after the end of practice students present to the chair a report and a diary, signed by the head of the practice base.

The graduating department has developed programs of all kinds of practices. For the practical training, the university concluded contracts with institutions and organizations, such as: Post Office of Communications No. 48 in Almaty, Migration Police Medeuuskogo District G.Almaty, JSC Kazaktelecom, Trading Network "White Wind", LLP Eurasia TSC, IP "CMSTech", etc.

Development of models of graduates, UPs and MOPs for accredited specialties is carried out with the participation of employers, in particular, employers have been involved in the formation of the EP, represented by the director of Eurasia TSC LLP, the director of IP CMSTech.

Analytical part

According to the accredited EP, there is no joint EP actually implemented with foreign universities. However, the university is negotiating with the universities of Great Britain and India in this direction.

Questioning of trainees, conducted during the visit of the EEC of IAAR, showed that:

- the level of responsiveness to feedback from teachers regarding the learning process is fully satisfied - 71.1%; in part - 20%; are satisfied with the quality of teaching completely - 66.7%, in part - 20.0, difficult to answer - 1.5%.

EEC recommendations:

1. Ensure the practice-orientedness of accredited educational programs taking into account the requirements of the labor market and the professional association of employers, including by increasing the time devoted to industrial practice on the basis of enterprises with the acquisition of related professions.

2. Conclude agreements on cooperation with domestic and foreign universities that implement similar educational programs, in order to harmonize and implement joint OP.

Conclusions of the EEC on the criteria for specialties: 5B070300- "Information systems", 5B070400- "Computer equipment and software", 6M070300- "Information systems", 6M070400- "Computer equipment and software", 5B071900- "Radio engineering, electronics and telecommunications", 6M071900- "Radio engineering, electronics and telecommunications": strong - 0, satisfactory - 9, requiring improvement - 3.

Conclusions of the EEC on the criteria for specialties: 5B070500- "Mathematical and Computer Modeling", 6M070500- "Mathematical and Computer Modeling": strong - 0, satisfactory - 5, requiring improvement - 7.

5.4. Standard "Continuous monitoring and periodic evaluation of educational programs"

The Evidence

The necessary information on the issues of ongoing monitoring and periodic evaluation of the educational programs of the accredited cluster is available and was confirmed during the visit of the EEC.

Feedback is provided in the form of questionnaires of students, graduates, employers to determine the expectations, needs and satisfaction of students and market requirements.

The management of the EP provides an annual review of the content and structure of the EP in the framework of modular training, taking into account changes in the labor market, the requirements of employers and the social demand of the society.

Constant monitoring and periodic evaluation of accredited OPs is carried out taking into account the suggestions of students participating in the process of selecting and forming a list of elective disciplines, developing the subject of final works, as well as opinions and suggestions of students on the basis of professional practices, suggestions of SAC chairmen.

The EP is updated in connection with the change in state compulsory standards of higher education, the introduction of new directions and elective courses. Renewal of the EP is carried out in accordance with the requests of employers, which is reflected in the catalog of elective disciplines for the relevant academic year and approved by the Academic Council of the university.

The leadership of the university demonstrated its openness and accessibility for students, teachers, employers: there is access to the management of any level of management on personal issues, meetings with the rector are systematically held.

Analytical part

The EEC confirms that the leadership of the university has demonstrated its openness and accessibility for students, teaching staff, employers: hours of reception on personal issues are determined, meetings with the rector are systematically held. As a channel of communication for innovative proposals, traditional forms of feedback are used: meetings with management and the rector's blog.

The Commission notes that the university systematically provides a review of the content and structure of educational programs with the participation of employers. The Commission draws attention to the tools used to identify changes in the labor market and the composition of

the employers involved and recommends that labor market analysis using SWEP analysis methods be used to take into account the expected learning outcomes in the content of the EP, and for each OP it would be logical to include in the development OP representatives of various industries.

Employers take part in the development of the EP by making their proposals for new elective disciplines. The university has feedback from employers about individual graduates, but there is no procedure for regular monitoring of employers on the satisfaction of graduates, which would help to determine the strengths and weaknesses of the learning outcomes and the content of the EP.

Participation of students in the revision of the EP by the university is limited to monitoring their satisfaction with the quality of the educational process, therefore the commission recommends taking more into account the EPinions of the students at the design and discussion stage of the EP by including them in the development team or other collegial bodies.

Informing students, employers about actualization, making changes and other actions with regard to the OS are not carried out in full, as was revealed by interviewing students who answered ambiguously about the permissible level of plagiarism on the results of the examination of the thesis on the uniqueness of the program "Antiplagiat" which is held at the graduating department, on the ongoing scientific research at the department, on the ongoing SRSP. In this connection, the commission recommends timely informing trainees, employers through different channels of communication about all the changes made in the EP

When studying the state of affairs on taking into account the results of the analysis of changes in the labor market, the requirements of employers and social demands of the society, letters were received from employers on the inclusion of new elective disciplines, but monitoring of the labor market on an ongoing basis is not carried out. Therefore, the commission recommended that the monitoring of the labor market on an ongoing basis, the impact of environmental factors (competitors, the state of the economy of the country, the solvency of consumers, etc.), employers, should be conducted on an ongoing basis to identify and take into account the expected learning outcomes in developing and updating the content and structure of the EP.

Based on the results of the questionnaire, 68.9% of students are fully satisfied with the level of accessibility and responsiveness of the university administration. The accessibility of the management to the teachers was rated at "very good" by 63.0%, "well" by 32.6% of the teaching staff.

Conclusions of the EEC on the criteria for specialties: 5B070300- "Information systems", 5B070400- "Computer equipment and software", 6M070300- "Information systems", 6M070400- "Computer equipment and software", 5B071900- "Radio engineering, electronics and telecommunications" , 6M071900- "Radio engineering, electronics and telecommunications": strong - 0, satisfactory - 7, requiring improvement - 3.

Conclusions of the EEC on the criteria for specialties: 5B070500- "Mathematical and Computer Modeling", 6M070500- "Mathematical and Computer Modeling": strong - 0, satisfactory - 7, requiring improvement - 3.

5.5. Standard "Student-centered learning, teaching and assessment of progress"

The Evidence

The management of the EP provides equal opportunities for students regardless of the language of instruction in the formation of an individual educational program aimed at the formation of professional competence. According to the accredited educational program, the educational process is realized in the context of the languages of instruction (state language and Russian).

As the trainees noted during the conversation, the management of the EP treats with respect and attention various groups of students.

Teaching staff OP is carried out a certain work aimed at studying and improving the methodology of teaching the academic disciplines of the EP.

As noted by the students during the interview, they have the EPportunity to address their complaints to the Rector by referring to the rector's blog or meeting with the head of the department, other representatives of the administration.

The EP management seeks to ensure attention to different groups of learners and their needs, providing them with flexible learning paths and using various forms and methods of teaching and learning.

To monitor the effectiveness and effectiveness of innovation and the use of various teaching methods, a survey is conducted among the students "Teacher with the eyes of students". As the results of this questionnaire show, the students are satisfied with the quality of education in the university.

Operating within the credit system of training, the department creates favorable conditions for students to master the disciplines of the specialty. For this purpose, the following are being developed:

- working curricula on discipline;
- Syllabus discipline programs for students and undergraduates;
- methodical instructions for the independent work of the undergraduate;
- maps of educational and methodological provision of discipline;
- lecture complexes.

Students receive information about the possibilities of forming an individual educational trajectory, as well as assistance with its implementation with the help of an adviser.

Monitoring of progress of trainees on the educational trajectory is carried out on the basis of the system of evaluating the results of trainees. Monitoring is carried out on the basis of Teaching staff department reports.

Monitoring and evaluation of their implementation and learning outcomes, in general, is provided by the following procedures:

- independent computer testing in the disciplines of the EP: provides an objective evaluation of knowledge and shows the dynamics of their level;
- questioning of employers on the quality of training graduates of the EP;
- the use of educational methods in the educational process, close to the content of the sphere of work of graduates of the EP (cases, game situations, practical tasks on the topics of the course), etc.

Assessment of knowledge, skills and professional competencies, trained by credit technology training is carried out on a 100-point scale with the conversion of the final result into alphabetic and digital equivalent. When making an assessment, attendance, activity level in the class, systematic fulfillment and level of independence of all types of tasks, the ability to correctly formulate the problem, and to find answers are taken into account. All the students' academic achievements are reflected in the transcript.

Appeal of the results of academic achievement of students is carried out through the work of the Appeals Committee, whose work is regulated by the Regulations on the Appeals Commission.

During the interview with the students, they expressed the EPinion that the leadership of the EP should place emphasis on conducting practice-oriented classes.

A classical feedback tool on the study of the quality of teaching (content, forms, methods) is the questioning of students.

Forms of feedback are also the rector's blog and accounts in social networks, as well as meetings with the heads of departments, the management of the university.

Analytical part

During the visit, experts of the EEC on this standard came to the following conclusions.

There is not enough work to monitor the CDS: the department does not have a schedule for the CDS, the students who were trained during the interview could not give a concise answer to the questions connected with the organization of the SRSP.

In the educational process, various forms and methods of teaching are not actively used: in the disciplines of disciplines, on average more than 70% fall on classes in the traditional oral form. Classes attended by experts also took the form of a traditional lecture and a traditional oral response. The actual technical support of multimedia equipment was not tracked.

There is a low share of own research in the field of teaching the academic disciplines of the EP. There is no own bank of training cases.

The Commission notes that some work has been done on the accredited specialties of the cluster to create conditions for inclusive education.

The students express complete satisfaction with the level of quality of teaching (66.7%); fairness of examinations and attestation (74.1%); conducted tests and exams (77%).

Conclusions of the EEC on the criteria for specialties: 5B070300- "Information systems", 5B070400- "Computer equipment and software", 6M070300- "Information systems", 6M070400- "Computer equipment and software", 5B071900- "Radio engineering, electronics and telecommunications", 6M071900- "Radio engineering, electronics and telecommunications": strong - 0, satisfactory - 7, requiring improvement - 3.

Conclusions of the EEC on the criteria for specialties: 5B070500- "Mathematical and Computer Modeling", 6M070500- "Mathematical and Computer Modeling": strong - 0, satisfactory - 6, requiring improvement - 4.

5.6. Standard "Learners"

The Evidence

The management of the EP demonstrates the policy of forming a contingent of trainees from receiving up to graduation and ensures the transparency of its procedures.

At the moment, foreigners who are accredited by the EP are not trained.

**Table - Admission data for applicants for the EP
Bacalaurian**

Academic year	Form of training	Total students	Grant-trained students		Trained on a fee basis	
			rus	kaz	rus	kaz
5B070300 - "Information systems"						
2015-2016	full-time	5			5	
2016-2017	full-time	18			8	10
2017-2018	full-time	11			11	
5B070400 - "Computers and software"						
2015-2016	full-time	6			6	
2016-2017	full-time	15			9	6
2017-2018	full-time	10			10	
5B070500 - "Mathematical and computer modeling"						
2015-2016	full-time					
2016-2017	full-time	7			7	
2017-2018	full-time				3	
5B071900 - «Radio engineering, electronics and telecommunications»						
2015-2016	full-time	9			9	
2016-2017	full-time	9			9	
2017-2018	full-time	20			10	10

**Table - Formed contingent of students in the context of accredited specialties
Bachelor's program**

Academic year	Form of training	Total students	Grant-trained students		Trained on a fee basis	
			rus	kaz	rus	kaz
5B070300 - "Information systems"						
2015-2016	full-time	35			15	20
2016-2017	full-time	36			13	23
2017-2018	full-time	47			35	25
5B070400 - "Computers and software"						
2015-2016	full-time	20			8	12
2016-2017	full-time	46			20	26
2017-2018	full-time	40			40	0
5B070500 - "Mathematical and computer modeling"						
2015-2016	full-time	10	4		6	
2016-2017	full-time	93	3		6	
2017-2018	full-time	3			3	
5B071900 - «Radio engineering, electronics and telecommunications»						
2015-2016	full-time	35			12	23
2016-2017	full-time	44	1		22	21
2017-2018	full-time	77			28	49

Master's Courses

Academic year	Form of training	Total students	Grant-trained students		Trained on a fee basis	
			rus	kaz	rus	kaz
6M070300 - "Information systems"						
2015-2016	full-time	2				2
2016-2017	full-time	2			1	1
2017-2018	full-time	2				2
6M 070400 - "Computers and software"						
2015-2016	full-time	2				2
2016-2017	full-time	3				3
2017-2018	full-time	2			1	1
6M 070500 - "Mathematical and computer modeling"						
2015-2016	full-time					
2016-2017	full-time					
2017-2018	full-time					
6M 071900 - «Radio engineering, electronics and telecommunications»						
2015-2016	full-time	5			2	3
2016-2017	full-time	4			1	3
2017-2018	full-time	2			1	1

The University carries out certain work to provide the possibility of academic mobility of students. ECTS credit repayment is a tool to ensure national and international recognition of the CAU, as well as to ensure student mobility.

Students and undergraduates are the main consumers of educational services, therefore at the head of the implementation of educational programs are their interests. The educational environment models the following characteristics of students: individuality, the desire for greater freedom, the process of achieving integrity, personal and professional growth, self-reliance and self-esteem.

From the first day of stay at the University, to meet the students of the first year, meetings with the dean of the faculty, advisors are held. In addition to advisors and tutors, individual assistance and counseling for students in the educational process is provided by teachers.

The University's management ensures the representation of students in collegiate management bodies, such as the Academic Council; bodies of student self-government: Committee on Youth Affairs.

Issues of social security of students are successfully solved. Those who are trained on a contractual basis have the opportunity to receive discounts on the results of examination sessions and in connection with the material and family situation.

At the University in order to ensure the employment of graduates the following activities are carried out: a job fair for graduates with employer involvement; the invitation of heads of the leading enterprises and organizations of the region.

Educational and educational work is carried out in the following main areas: civil-patriotic education; traditional events; the prevention of offenses, the fight against drug addiction, smoking and alcoholism, a healthy lifestyle (HLS); spiritual and moral education; ecological education; aesthetic education; the development of intellectual culture; professional and creative development.

Analytical part

During the visit, experts of the EEC on this standard came to the following conclusions.

The University does not cooperate with the national centers of the European network of national information centers for academic recognition and mobility in order to ensure comparable recognition of qualifications.

A low proportion of students enrolled in bachelor's and master's programs - participants in the program of academic mobility requires attention from the leadership of the EP.

The students express full satisfaction with the availability of academic counseling (59.3%); availability of health services (68.1%); availability of library resources (85.2%); existing educational resources (60.7%); the overall quality of training programs (62.2%); the ratio between the student and the teacher (82.2%).

EEC recommendations

1. Consider the possibility of training accredited EP students for professional certification.
2. During the 2018/19 academic year, the graduating department to conclude additional contracts for the practical training of students of the EP, where students will be given all the opportunities to obtain the necessary practical skills in their specialization.

Conclusions of the EEC on the criteria for specialties: 5B070300- "Information systems", 5B070400- "Computer equipment and software", 6M070300- "Information systems", 6M070400- "Computer equipment and software", 5B071900- "Radio engineering, electronics and telecommunications", 6M071900- "Radio engineering, electronics and telecommunications": strong - 0, satisfactory - 10, requiring improvement - 2.

Conclusions of the EEC on the criteria for specialties: 5B070500- "Mathematical and Computer Modeling", 6M070500- "Mathematical and Computer Modeling": strong - 0, satisfactory - 9, requiring improvement - 3.

5.7. Standard "Teaching staff"

The Evidence

The Department of "Fundamental Sciences and the Oil and Gas Industry" provides the implementation of the EP.

The staff of the department includes 40 people, including 11 doctors of science (9.52%), 15 candidates of science (47.62%) and 5 PhD (28.57%). On average, the rate of development is 77.5%. The degree of attainment of the Teaching staff of the accredited OPs is 65%.

The management of the EP demonstrates the application of the HR policy of the HEI for the Teaching staffs involved in the implementation of the EP. Personnel selection is carried out on the basis of the analysis of the needs of the educational program, which results in the announcement of a competition for filling vacancies. The competition for the filling of vacant posts of teaching staff and researchers at the university is conducted in accordance with the current legislation.

The main provisions of the University's personnel policy are compliance with standard

qualification characteristics for employees of educational institutions, approved by the order of the Ministry of Education and Science; availability of higher and postgraduate education in relevant specialties, productive scientific activity, as well as competence and competitiveness. Indicators on the qualitative and quantitative composition of Teaching staffs confirm the availability of the human resources necessary for the implementation of the entire spectrum of educational programs and corresponding to the qualification requirements for licensing educational activities.

The Personnel Department is engaged in selection of personnel, registration of their reception, transfer and dismissal, preparation of documents for approval in the positions of employees. The document circulation associated with the Teaching staff (personal files, workbooks, orders, regulations, etc.) is systematically updated as necessary.

Assessment of the competence of teachers in the CAU to determine the suitability of the position is carried out by passing staff members competitive selection of faculty positions and attestation, according to the requirements of the competitive commission developed by the University - Regulations on competitive substitution of Teaching staff and MES RK - Regulations for the certification of Teaching staffs "developed based on the requirements of regulatory and legislative acts of the Republic of Kazakhstan.

Confirmation of the level of competence of teachers is the effectiveness and quality of teaching, assessed at the university by conducting open training sessions, mutual visits of classes, as well as conducting a questionnaire "Teacher with the eyes of a student." The results of these activities are the basis for the extension of labor contracts for Teaching staff, promotion.

The management of the EP demonstrates the awareness of responsibility for their employees and the provision of favorable working conditions for them and the changing role of the teacher in connection with the transition to student-centered learning.

As part of the teaching staff there are experienced teachers who have certain achievements in the field of science and education, practical experience in production.

The TS carries out scientific work on the priority direction of the research work of the Department of "Fundamental Sciences and the Oil and Gas Industry": "Research of the principles of the construction of the information and telecommunications system taking into account the peculiarities of the communication enterprises" - reg.0117RKi 0017 National Center of the STI RK, "Research and development of the electronic training manual on the processes and apparatuses ", " Research and development of methodological support for the course "Introduction to the specialty" for bachelors of IT specialties in the light of innovative and information technology ", " Issl and modeling of the data processor for the application layer data transfer protocol ". Priority directions of research carried out by the Department of "Fundamental Sciences and the Oil and Gas Industry": Grant for the commercialization of scientific (or) scientific and technical activities from November 21, 2017 No. 428: "Organization of production of machines for resource-saving technologies for tillage and fodder harvesting" 240 000000-Science Foundation 60,000,000 at the expense of CAU funds.

In the process of implementing accredited EP, teachers with practical experience of work also participate.

The EP management monitors Teaching staff activities, systematically assesses the competence of teachers, assesses the overall quality of teaching, including the assessment of the satisfaction of teachers and students. A Teaching staff survey is systematically conducted on the question of satisfaction.

A systematic assessment of the competence of teachers, an assessment of the effectiveness of the quality of teaching at the department to disclose the content of training courses and the formation of students' knowledge, skills and competences necessary to achieve learning outcomes as envisaged by the program objectives is realized through internal evaluation (open classes, mutual visits, chair, speeches at the educational-methodical section of the department).

The EP management ensures completeness and adequacy of individual planning of the work of the Teaching staff for all types of activities, monitoring the effectiveness and

effectiveness of individual plans, demonstrating the evidence of the teachers performing all types of planned workload.

The workload of the teaching staff includes teaching, educational, methodological, scientific, organizational and methodological work, and increasing professional competence.

- Educational disciplines have been developed for all disciplines of the departments.

- Increasing the level of professional competence of young specialists at the department is realized through differentiation and optimal combination of types and forms of work, stimulation of professional creative activity and aspiration for professional growth. For the young teacher at the department a mentor from among more experienced teachers is assigned.

- The Teaching staff questionnaire, conducted during the visit of the NAEC EEC, showed that:

- the university provides opportunities for Teaching staff in using innovations in training - very good and good - 100%;

- Teaching staff satisfies the content of the educational program - very good and good – 100%;

- 97.2% of the teaching staff highly appreciate the support of the university and its leadership in the research initiatives of the teaching staff;

- the level of feedback of Teaching staffs with management meets by 97.9%;

- 91.4% of the teaching staff are satisfied with the organization of academic mobility, and the plan of work to upgrade the qualifications of the teaching staff;

- 95.7% of Teaching staffs find it difficult to combine teaching with scientific research.

Analytical part

The EEC Commission notes that the university does not pay sufficient attention to the following points for providing the relevant personnel with the EP:

- Lack of development of academic mobility of Teaching staff within the framework of accredited EP.

- due to attention is paid to the planning of continuing education in the specialty and the methodology of teaching special disciplines.

REC recommendations

1. To provide wider accessibility to the public of information about Teaching staff (personal pages of management, Teaching staff, lists of scientific papers, contact details).

2. To work out the mechanisms for organizing seminars on topical issues of the disciplines of educational programs with the involvement of specialists from corporate partners.

3. By the beginning of the new 2018/19 academic year, to develop a long-term plan for upgrading the qualifications of the PPS of the department in the field of information security systems for the military and defense business.

4. Strengthen the work on the development of academic mobility, upgrading the qualifications of the teaching staff, attracting the best foreign and domestic teachers, and conducting joint studies on the profile of the EP in the implementation of accredited educational programs.

5. It is necessary to develop programs for the development of educational and scientific laboratories and create conditions for the development of research teams, attracting students to research activities on the profile of the EP.

6. To take measures to encourage young teachers to participate in academic mobility programs, conferences of all levels, competitions, research projects on the profile of the EP, development of mentoring.

In addition, for educational programs 5B070500 "Mathematical and Computer Modeling" and 6M070500 "Mathematical and Computer Modeling"

1. Graduating chair to strengthen the work on the participation of teaching staff in scientific research, projects on the profile of "Mathematical and Computer Modeling", and have scientific publications in this field.

Conclusions of the EEC on the criteria for specialties: 5B070300- "Information systems", 5B070400- "Computer equipment and software", 6M070300- "Information systems", 6M070400- "Computer equipment and software", 5B071900- "Radio engineering, electronics and telecommunications", 6M071900- "Radio engineering, electronics and telecommunications": strong - 0, satisfactory - 7, requiring improvement - 5.

Conclusions of the EEC on the criteria for the specialties: 5B070500- "Mathematical and Computer Modeling", 6M070500- "Mathematical and Computer Modeling": strong - 0, satisfactory - 6, requiring improvement - 6.

5.8. Standard "Educational resources and student support systems"

The Evidence

During the EEC work, the experts made sure that the university has the material, technical, information and library resources used to organize the process of training and educating students and implementing the mission, goals and tasks of the CAU.

An important factor in ensuring the quality of education and guaranteeing the sustainable development of the university is the continuous improvement of material, technical and human resources. The university created the conditions for teaching students, carrying out scientific research, publishing the results of research work, staff and students.

There is a system of support for students, a medical office, a food zone, a gym, a library, a hostel.

The needs for the support of various groups and categories of students are identified through personal meetings of students with the leadership of the EP, questioning of students, and also through the blog of the rector of the university.

The material, technical and social base, located in the Operational management of the Central Administrative Office, is located in Almaty, consists of 6 buildings, with a total area of 27508m². per one student of the reduced contingent, the useful educational area is 11.4 square meters.

The CAU is a sufficient sports base, which consists of a set of various sports facilities of a closed and open type. The university has 1 indoor sports hall, equipped with appropriate sports equipment, a total area of 700 square meters. At present, the university has a hostel, 250 beds.

For the organization of student meals in the university, there is a dining room "CAU" with a total area of 300 sq.m. for 250 seats, as well as a cafe "Skif" in the 3rd building for 60 seats, 1 buffet - a dining room for 50 seats.

For the organization of the educational process, research work on the Department of Fundamentals of the "Fundamental Sciences and the Oil and Gas Industry" and the creation of proper conditions in the areas of training bachelors and postgraduate professional education (magistracy), the teaching staff use:

- specialized streaming audiences, where interactive multimedia complexes are installed;
- Language laboratories (foreign languages, Kazakh);
- training computer classes for training using ICT, equipped with computers connected to the Internet;
- specialized offices (Informatics, chemistry, mathematics, research of undergraduates, methods of teaching introduction to the specialty);
- educational audiences where portable multimedia systems can be used, including a portable computer (laptop), a multimedia projector, a portable screen, video equipment;
- specialized laboratories (the center of physical and chemical research, botany and physiology of plants, etc.);
- experimental bases (UPC "Miras", agrobiostation, production laboratories of practice

bases).

In CAU there are 5 computer classes, where 250 personal computers are located. In 60 lecture rooms and computer classes interactive equipment is installed. There are 18 laboratories, specialized auditoriums, offices, workshops with a total area of 1752.3 m², equipped with all necessary equipment and measuring facilities for organizing and conducting laboratory and practical classes.

Book availability of accredited educational programs is presented in the table.

№	Educational program	Number of students	Book fund					Availability of educational literature	Book-security
			Total	Educational literature	Educational-methodical literature	Scientific Foundation	Own editions		
1	5B070400 "Computers and software"	36	5386	3393	241	1524	228	63%	149,6
2	5B070300 «Information systems»,	48	7192	4717	140	2175	160	65,5%	149,83
3	5B070500 "Mathematical and computer modeling"	15	2226	1004	102	180	40	66,9%	148,46
4	5B071900 «Radio engineering, electronics and telecommunications»	2	295	183	42	35	35	62,03%	147,5
5	6M070400 "Computers and software"	5	765	495	40	30	50	60,7%	153,0
	6M070300 Information Systems,	3	425	266	30	45	33	62,5%	141,6
6	6M070500 "Mathematical and computer modeling"	2	284	176	30	45	33	61,97%	142
7	6M071900 «Radio engineering, electronics and telecommunications	2	288	175	30	45	33	60,7%	144

The university's territory is partially equipped with free WI-FI. In general, the university has the minimum training equipment and software required to organize the educational process.

A unified system of library and information services has been created. The procurement of educational and methodological literature on the applications of the department is carried out in sufficient volume. Information support of the university meets the requirements of the program; the library contains certain materials necessary for teaching: educational, technical, reference and general literature, various periodicals.

Formation of the library fund of the University is made in accordance with the profile of training specialists. To provide administrative, educational and methodological tasks, the University created an information and educational portal <http://portal.cau.kz>.

There is technological support for students and teaching staff in accordance with educational programs (online library, presentations, information on academic achievement, social networks), access to the Internet and WiFi.

In general, the material, technical, information and library resources used to organize the process of education and upbringing are sufficient to fulfill the mission statement, goals and objectives and meet the requirements of the educational program being implemented. To assess the quality of material and technical and information resources used in the implementation of the EP, interviews and questionnaires of students are conducted.

Analytical part

As a result of a visual inspection by the EEC members of the facilities of the material base, we note that to ensure the educational process of accredited educational programs, the CAU has all the necessary educational and material assets. The buildings and facilities of the university correspond to the current sanitary standards and fire safety requirements.

At the same time, audiences that do not have TSOs predominate in the auditorial fund of the EP. Laboratories of technical profile are not equipped with the necessary educational devices and installations, if equipped, they are obsolete and not in sufficient quantity.

In the fund of educational, educational and methodical literature on accredited EP there is a morally outdated literature. In this regard, it is recommended that attention be paid to the constant updating of the literature fund.

Information on material and technical and information resources have a generalized nature and partially reflect the status of resource support for the implementation of the EP on specialties 5B070500 "Mathematical and Computer Modeling" and 6M070500 "Mathematical and Computer Modeling" as necessary, including access to electronic databases and modern English-language scientific literature and periodicals.

There is no full information on the availability of support procedures for different groups of students, including information and counseling.

The computer room has no equipment, except PCs and interactive whiteboards does not contain, the composition used in the programs specific for OP is not disclosed.

In the list of laboratory equipment for educational programs 5B070500 "Mathematical and Computer Modeling" and 6M070500 "Mathematical and Computer Modeling" does not reflect the specifics of peer-reviewed programs.

The list of licensed software used is not listed and is not tied to the content of the EP. All profiling disciplines of accredited EPs require appropriate technological support and an approximation to the practical operating conditions.

The technical capabilities of laboratories for providing scientific research and performing graduate work, as well as adults, working, foreign students, students with disabilities are not indicated.

According to the results of the questionnaire, the availability of library resources was fully satisfied - 85.2%; educational rooms, audiences for large groups - 77.8%; offices for small groups - 75.6%; rest rooms for students - 48.1%; computer classes and Internet resources are fully satisfied -56.3% of trainees; available computer classes - 58.5%; scientific laboratories - 51.1%. Full satisfaction with the students providing the hostel is 64.4%.

EEC recommendations

1. The university library together with the graduating department envisage 100% provision of profiling disciplines with textbooks and teaching aids, especially in Kazakh, by the end of 2018/19 academic year in accordance with licensing requirements.

2. To create by the end of 2018/19 academic year the educational and methodological base on electronic media in accordance with the qualification requirements for the organization of educational activities in universities.
3. The university's management to consider the possibility of updating the material and technical base of the EP, so today the training laboratories of a technical profile require a capital investment to provide the educational process with modern equipment and software.
4. It is necessary to develop programs for the development of educational and scientific laboratories and to create conditions for the development of scientific teams with the involvement of various enterprises financed by economic contracts.

In addition, for educational programs 5B070500 "Mathematical and Computer Modeling" and 6M070500 "Mathematical and Computer Modeling": OP 5B070500 and 6M070500 "Mathematical and Computer Modeling" do not touch upon the important and actual modern themes of simulation modeling, and the software of specialized laboratories does not have widely used systems for modeling various processes (Matlab, Simulink, AnyLogic, VISSIM / VISSUM, etc.) or their analogs. For a complete and professional mastery of the skills of modeling the use of 30-day Trial-versions of programs seems clearly insufficient. This issue requires a rigorous decision.

Conclusions of the EEC on the criteria for specialties: 5B070300- "Information systems", 5B070400- "Computer equipment and software", 6M070300- "Information systems", 6M070400- "Computer equipment and software", 5B071900- "Radio engineering, electronics and telecommunications", 6M071900- "Radio engineering, electronics and telecommunications": strong - 0, satisfactory - 5, requiring improvement - 4.

Conclusions of the EEC on the criteria for specialties: 5B070500- "Mathematical and computer modeling", 6M070500- "Mathematical and computer modeling": strong - 0, satisfactory - 5, requiring improvement - 4

5.9. Standard "Public Awareness"

The Evidence

The feedback of the university's management with the public is carried out with the help of a functioning blog of the rector.

The main channel for informing the public (future students, their parents, students, graduates and employers) is the official website of the university. Also actively used social networks (Instagram, Vkontakte, Facebook).

The information provided in the Report on the standard shows that the management of the CAU, the faculty and the issuing department pay attention to informing the public about its activities, conditions and features of implementing all the EPs, including those considered, using various media resources and publications for newspapers, magazines, radio, television. Annually an advertising and information booklet is republished, the university newspaper "Vestnik TSU" is published.

The mass media for publication have been determined - these are regional newspapers and television and radio. All publications are informational, image, explanatory characters. To inform applicants in the foyer of the university information boards, posters, stands, banners, as well as nameplates of faculties and specialties are placed. Also, presentations and videos containing the above information were developed for recruitment activities in secondary general and private schools in cities and regions of Kazakhstan.

The University annually holds job fairs, which allows graduates and employers to establish contacts for the selection of necessary personnel.

Analytical part

The analysis of the information presented on the website showed that the results of the activity of the university are not reflected in full. There is insufficient information on cooperation and interaction with partners within the framework of the EP, including with scientific / consulting organizations, business partners, social partners and educational organizations. Information on the expected results of training in vocational training, on teaching, evaluation procedures, and on the educational opportunities provided to trainees is poorly reflected. There is no information on the participation of the university and implemented EP in various external evaluation procedures and the placement of information and links to external resources based on the results of external evaluation procedures.

Questioning of students, conducted during the visit of the NAEC of the NAEC, showed that the satisfaction with the students' knowledge of the courses, OPs, and academic degrees was completely met - 68.9%, partially satisfied - 20.7%, it is difficult to answer - 1.5% of the students.

Conclusions of the EEC on the criteria for specialties: 5B070300 - "Information systems", 5B070400 - "Computer equipment and software", 6M070300 - "Information systems", 6M070400 - "Computer equipment and software", 5B071900 - "Radio engineering, electronics and telecommunications", 6M071900 - "Radio engineering, electronics and telecommunications": strong - 0, satisfactory - 7, requiring improvement - 6. Conclusions of the EEC on the criteria for specialties: 5B070500 - "Mathematical and Computer Modeling", 6M070500 - "Mathematical and Computer Modeling": strong - 0, satisfactory - 7, requiring improvement - 6.

5.10. Standard "Standards in the context of individual specialties"

The Evidence

From the presented material it follows that the peer-reviewed EP includes: educational, industrial, for undergraduates - research practice. Information on this standard has not been fully disclosed, documents, methodological instructions, a system for monitoring, monitoring and reporting practices, activities related to the vocational guidance of students in educational programs are not mentioned.

Analytical part

Based on the results of the analysis, the members of the EEC concluded that the following criteria are not met by this standard:

- Organization of excursions, conducting separate classes on disciplines at the enterprise of specialization.
- The presence of full-time faculty members who have a long working experience as a staff member at enterprises in the field of specialization of the EP.
- Information is not provided on measures to strengthen practical training in the field of specialization of vocational training and to provide training for students in the field of application of modern information technologies.
- In the course of the interview, it turned out that there are no internships for faculty at the enterprise's bases.

Conclusions of the EEC on the criteria for specialties: 5B070300- "Information systems", 5B070400- "Computer equipment and software", 6M070300- "Information systems", 6M070400- "Computer equipment and software", 5B071900- "Radio engineering, electronics and telecommunications", 6M071900- "Radio engineering, electronics and telecommunications": strong - 0, satisfactory - 3, requiring improvement - 2.

Conclusions of the EEC on the criteria for the specialties: 5B070500- "Mathematical and computer modeling", 6M070500- "Mathematical and computer modeling": strong - 0, satisfactory - 3, requiring improvement - 2.

VI REVIEW OF RECOMMENDATIONS FOR IMPROVING QUALITY

In order to further develop and improve the University's activities in the implementation of accredited PAs based on the findings of the Report on the results of the VEC, IAAR recommends:

By the beginning of the new academic year 2018/19, draw up a plan and organize introductory courses for managers of the EP on planning the results of training, organizing the educational process for educational programs according to the CTO and implementing the basic principles of the Bologna process.

1. By the beginning of the new 2018/19 school year, make a plan and organize introductory courses for EP managers on planning learning outcomes, organizing the educational process on educational programs in accordance with the KTO and implementing the basic principles of the Bologna process.

2. By the beginning of the new 2018/19 academic year, the leadership of the EP will develop a revised graduate model and a development plan for the UE, taking into account the specifics of the specialties in accordance with the NRC, the URC and the Dublin descriptors, and appoint those responsible for the execution of the plan.

3. To improve the mechanisms of design, management, internal quality assessment, examination and monitoring of accredited OP taking into account risks. Conduct an assessment of the risks of the development of the educational program in full accordance with the Development Strategy of the Institute and develop a mechanism for their reduction.

4. Ensure the practical orientation of accredited educational programs taking into account the requirements of the labor market and the professional association of employers, including by increasing the time allocated for industrial practice on the basis of enterprises with the acquisition of related professions.

5. Conclude agreements on cooperation with domestic and foreign universities that implement similar educational programs, in order to harmonize and implement joint OP.

6. To consider the possibility of training accredited EP students for professional certification.

7. During the 2018/19 academic year, the graduating department to conclude additional contracts for the practical training of students of the EP, where students will be given all the EP opportunities to obtain the necessary practical skills in their specialization.

8. To provide wider accessibility to the public of information about Teaching staff (personal pages of management, Teaching staff, lists of scientific works, contact details).

9. To work out the mechanisms for organizing seminars on topical issues of the disciplines of educational programs with the involvement of specialists from corporate partners. By the beginning of the new 2018/19 academic year, to develop a long-term plan to upgrade the qualifications of the PPS department in the field of information security systems of the military and defense business.

10. Strengthen the work on the development of academic mobility, upgrading the qualifications of the teaching staff, attracting the best foreign and domestic teachers and conducting joint research on the profile of the EP in the implementation of accredited educational programs.

11. It is necessary to develop programs for the development of educational and scientific laboratories and create conditions for the development of research teams, attracting students to research activities in the profile of the EP.

12. Take measures to encourage young teachers to participate in academic mobility programs, conferences of all levels, competitions, research projects on the profile of the EP, the development of mentoring.

13. The university library together with the graduating department envisage 100% provision of profiling disciplines with textbooks and teaching aids, especially in Kazakh, by the end of 2018/19 academic year in accordance with licensing requirements.

14. To create by the end of 2018/19 academic year the educational and methodological base on electronic media in accordance with the qualification requirements for the organization of educational activities in universities.

15. The university's management to consider the possibility of updating the material and technical base of the EP, so today the training laboratories of a technical profile require a capital investment to provide the educational process with modern equipment and software.

16. It is necessary to develop programs for the development of educational and scientific laboratories and to create conditions for the development of scientific teams with the involvement of various enterprises financed by economic contracts.

In addition, for educational programs 5B070500 "Mathematical and Computer Modeling" and 6M070500 "Mathematical and Computer Modeling":

1. Graduating chair to strengthen the work on the participation of teaching staff in scientific research, projects on the profile of "Mathematical and Computer Modeling", to have scientific publications in this field.

2. OP 5B070500 and 6M070500 "Mathematical and Computer Modeling" do not touch upon the important and actual modern themes of simulation modeling, and the software of specialized laboratories does not have widely used systems for modeling various processes (Matlab, Simulink, AnyLogic, VISSIM / VISSUM, etc.) or their analogs. For a complete and professional mastery of the skills of modeling the use of 30-day Trial-versions of programs seems clearly insufficient. This issue requires a rigorous decision.



IEdAR

Appendix 1. The evaluation table "SPECIFICATIONS OF THE SPECIALIZED PROFILE" (5B070400-Computing equipment and software, 6M070400-Computer equipment and software, 5B070300-Information systems, 6M070300-Information systems, 5B071900-Radio engineering, Electronics and Telecommunications, 6M071900-Radio engineering, electronics and telecommunications)

№	№	Criteria for evaluation	Position of the organization of education			
			Strong	Satisfactory	Assumes improvement	Unsatisfactory
Standard "Management of the educational program"						
1		The institution should have a published quality policy.		+		
2		The quality assurance policy should reflect the relationship between research, teaching and learning.		+		
3		The university should demonstrate the development of a culture of quality assurance, including in the context of the EP.			+	
4		Commitment to quality assurance should apply to any activities performed by contractors and partners (outsourcing), including in the implementation of joint / two-degree education and academic mobility.		+		
5		The management of the EP provides transparency in the development of an OP development plan based on an analysis of its functioning, the actual positioning of the institution and the focus of its activities on meeting the needs of the state, employers, stakeholders and trainees.		+		
6		The management of the EP demonstrates the functioning of the mechanisms for the formation and regular revision of the EP development plan and monitoring of its implementation, assessing the achievement of the training objectives, meeting the needs of students, employers and society, and making decisions aimed at the continuous improvement of the OS.		+		
7		The management of the EP should involve representatives of stakeholder groups, including employers, trainees and Teaching staffs, in forming an OP development plan.		+		
8		The management of the EP should demonstrate the individuality			+	

		and uniqueness of the development plan for the EP, its coherence with national development priorities and the development strategy of the education organization.				
9		The university should demonstrate a clear definition of those responsible for business processes within the framework of the EP, unambiguous distribution of the duties of personnel, delineation of the functions of collegial bodies.		+		
10		The management should provide evidence of transparency in the management of the educational program.		+		
11		The management should demonstrate the successful functioning of the internal quality assurance system of the EP, including its design, management and monitoring, their improvement, decision-making on the basis of facts.		+		
12		The management of the EP shall implement risk management.			+	
13		The management of the EP should ensure the participation of representatives of interested persons (employers, teaching staff, students) in the collegial bodies of management of the educational program, as well as their representativeness in making decisions on the management of the educational program.			+	
14		The university should demonstrate the management of innovation within the framework of the EP, including the analysis and implementation of innovative proposals.		+		
15		The management of the EP should demonstrate evidence of openness and accessibility for trainees, Teaching staff, employers and other stakeholders.		+		
16		The management of the EP must receive training in educational management programs.			+	
17		The management of the EP should strive to ensure that the progress achieved since the last external quality assurance procedure is taken into account when preparing for the next procedure.		+		
Total by standard				12	5	
Standard "Information Management and Reporting"						
18		The university should ensure the functioning of a system for collecting, analyzing and managing information based on the use of modern information and communication technologies and software.		+		
19		The EP management should demonstrate the systematic use of processed, adequate information to improve the internal quality		+		

		assurance system.				
20		Within the framework of the EP there should be a system of regular reporting, reflecting all levels of the structure, including an assessment of the effectiveness and effectiveness of the departments and departments, scientific research.			+	
21		The university should establish periodicity, forms and methods for evaluating the management of the EP, the activities of collegial bodies and structural units, senior management, the implementation of scientific projects.		+		
22		The university should demonstrate the definition of order and ensure the protection of information, including the identification of responsible persons for the reliability and timeliness of analyzing information and providing data.		+		
23		An important factor is the involvement of trainees, workers and Teaching staff in the processes of information gathering and analysis, as well as decision-making on their basis.		+		
24		The management of the EP should demonstrate the existence of a mechanism of communication with trainees, employees and other stakeholders, including the presence of conflict resolution mechanisms.		+		
25		The institution should provide a measure of the degree of satisfaction of the needs of the teaching staff, staff and trainees within the EP and demonstrate evidence of addressing the deficiencies found.		+		
26		The university should evaluate the effectiveness and effectiveness of activities, including in the context of the EP.		+		
		The information collected and analyzed by the university should take into account:				
27		key performance indicators;		+		
28		dynamics of the contingent of students in the context of forms and species;		+		
29		level of academic achievement, student achievement and deduction;		+		
30		satisfaction of students with the implementation of the EP and the quality of education in the university;		+		
31		accessibility of educational resources and support systems for students;		+		
32		employment and career growth of graduates.		+		

33		Trainees, employees and Teaching staff must confirm documentary consent to the processing of personal data.			+	
34		The management of the EP should facilitate the provision of all the necessary information in the relevant fields of science.			+	
Total by standard				15	2	
Standard "Development and approval of educational programs"						
35		The university should define and document the procedures for the development of the EP and their approval at the institutional level.			+	
36		The management of the EP should ensure that the developed EP meets the set goals, including the expected learning outcomes.			+	
37		The EP management should ensure that there are developed models of the graduate student who describe the results of training and personal qualities.			+	
38		The management of the EP should demonstrate the conduct of external assessments of the EP.			+	
39		The qualification obtained at the conclusion of the EP shall be clearly defined, clarified and consistent with a certain level of the NQF.			+	
40		The management should determine the impact of disciplines and professional practices on the formation of learning outcomes.				+
41		An important factor is the possibility of training students for professional certification.			+	
42		The management of the EP should provide evidence of the participation of trainees, Teaching staffs and other stakeholders in the development of the EP, ensuring their quality.			+	
43		The complexity of EP should be clearly defined in Kazakhstan credits and ECTS.			+	
44		The management should ensure that the contents of the academic disciplines and the results of the training are provided to the level of study (bachelor's, master's, doctoral).			+	
45		The structure of the EP should provide for various activities corresponding to the learning outcomes.				+
46		An important factor is the existence of joint OP with foreign educational organizations.				+
Total by standard				9	3	

Standard "Continuous monitoring and periodic evaluation of educational programs"					
47		The institution should monitor and periodically evaluate the OD in order to achieve the goal and meet the needs of students and society. The results of these processes are aimed at the continuous improvement of the EP.		+	
		Monitoring and periodic evaluation of EP should consider:			
48		the content of the programs in the light of the latest achievements of science in a specific discipline to ensure the relevance of the discipline being taught;			+
49		changes in the needs of society and the professional environment;			+
50		load, academic performance and graduation;		+	
51		the effectiveness of evaluation procedures for students;		+	
52		expectations, needs and satisfaction of students learning by the EP;		+	
53		educational environment and support services and their compliance with the objectives of the EP.		+	
54		The university and the management of the EP must provide evidence of the participation of trainees, employers and other stakeholders in the revision of the EP.		+	
55		All interested persons should be informed of any planned or undertaken actions in relation to the EP. All changes made to the EP shall be published.			+
56		The management of the EP should ensure that the content and structure of the EP are reviewed, taking into account changes in the labor market, the requirements of employers and the social demand of the society.		+	
Total by standard				7	3
Standard "Student-centered learning, teaching and assessment of progress"					
57		The EP management should ensure respect and attention to different groups of learners and their needs, providing them with flexible learning paths.			+
58		The RP management should ensure the use of various forms and methods of teaching and learning.		+	
59		An important factor is the availability of our own research in the field of methods of teaching the academic disciplines of the EP.			+

60		The EP management should demonstrate the availability of a feedback system on the use of different teaching methods and evaluation of learning outcomes.		+		
61		The EP management should demonstrate support for the autonomy of trainees with simultaneous guidance and assistance from the teacher.		+		
62		The management should demonstrate the existence of a procedure for responding to complaints from students.		+		
63		The institution should ensure the consistency, transparency and objectivity of the evaluation mechanism for each training program, including an appeal.		+		
64		The university should ensure that the procedures for assessing the learning outcomes of the students of the EP are consistent with the planned learning outcomes and program objectives. Criteria and methods of evaluation within the framework of the EP should be published in advance.			+	
65		In the institution, the mechanisms for ensuring the learning outcomes of each graduate should be determined and the completeness of their formation ensured.		+		
66		Evaluators should possess modern methods for evaluating learning outcomes and regularly improve their qualifications in this field.		+		
Total by standard				7	3	
Standard "Learners"						
67		The university should demonstrate the policy of forming a contingent of students from admission to release and ensure the transparency of its procedures. Procedures regulating the life cycle of trainees (from admission to completion) should be identified, approved, published.		+		
68		The management of the EP should demonstrate special adaptation and support programs for newly enrolled and foreign students.		+		
69		The university should demonstrate the conformity of its actions to the Lisbon Recognition Convention.		+		
70		The university should cooperate with other educational organizations and national centers of the "European Network of National Information Centers for Academic Recognition and Mobility / National Academic Recognition Information Centers" ENIC / NARIC in order to ensure comparable recognition of qualifications.		+		

71		The management should demonstrate the availability and application of a mechanism to recognize the results of academic mobility of students, as well as the results of additional, formal and informal training.		+		
72		The university should provide an opportunity for external and internal mobility of trainees, and also assist them in obtaining external grants for training.			+	
73		The management of the EP should make the maximum amount of efforts to provide practice-based practices, facilitate the employment of graduates, and maintain communication with them.		+		
74		The institution should provide the graduates with documents confirming the received qualification, including the results of the training achieved, as well as the context, content and status of the education received and evidence of its completion.		+		
75		An important factor is the monitoring of the employment and professional activities of the graduates of the EP.		+		
76		The EP leadership should actively encourage students to self-education and development outside the main program (extracurricular activities).		+		
77		An important factor is the existence of an active association / association of graduates.			+	
78		An important factor is the availability of a support mechanism for gifted students.		+		
Total by standard				10	2	
Standard "Teaching staff"						
79		The university should have an objective and transparent personnel policy, which includes hiring, professional growth and development of personnel, which ensures the professional competence of the whole state.		+		
80		The university should demonstrate the conformity of the personnel potential of the Teaching staff with the development strategy of the university and the specifics of the EP.			+	
81		The management of the EP should demonstrate awareness of responsibility for its employees and providing them with favorable working conditions.		+		
82		The management of the EP should demonstrate the changing role of the teacher in connection with the transition to student-centered learning.		+		

83		The university should determine the contribution of the Teaching staff of the EP to the implementation of the development strategy of the university, and other strategic documents.			+	
84		The university should provide opportunities for career development and professional development of the teaching staff of EP.		+		
85		The management of the EP should involve practitioners in the relevant sectors in the teaching.		+		
86		The management of the EP should provide targeted actions for the development of young teachers.		+		
87		The university should demonstrate the motivation for the professional and personal development of the teachers of the EP, including the promotion of both the integration of research and education, and the use of innovative teaching methods.			+	
88		An important factor is the active use of Teaching staff information and communication technologies in the educational process (for example, on-line training, e-portfolio, MEP, etc.).			+	
89		An important factor is the development of academic mobility within the framework of the EP, attracting the best foreign and domestic teachers.			+	
90		An important factor is the involvement of the Teaching staff of the EP in the life of society (the role of teaching staff in the education system, the development of science, the region, the creation of a cultural environment, participation in exhibitions, creative competitions, charity programs, etc.).		+		
Total by standard				7	5	
Standard "Educational resources and student support systems"						
91	1.	The management should demonstrate the adequacy of the material and technical resources and infrastructure.			+	
92	2.	The EP management should demonstrate the existence of support procedures for different groups of learners, including information and counseling.		+		
		The management of the EP should demonstrate the correspondence of information resources to the specifics of the EP, including compliance:				
93	3.	technological support of students and teaching staff in accordance with educational programs (for example, online training, modeling, databases, data analysis programs);			+	

94	4.	library resources, including the fund of educational, methodological and scientific literature on general educational, basic and profiling disciplines on paper and electronic media, periodicals, access to scientific databases;		+		
95	5.	examination of the results of research, final works, dissertations on plagiarism;			+	
96	6.	functioning WI-FI in the territory of the organization of education.		+		
97	7.	The university should strive to ensure that the training equipment and software used to develop the EP are similar to those used in the relevant industries.			+	
98	8.	The institution must ensure that it meets safety requirements in the learning process.		+		
99	9.	The university should strive to take into account the needs of different groups of students in the context of the EP (adults, working, foreign students, as well as students with disabilities).		+		
Total by standard				5	4	
Standard "Public Awareness"						
		The information published by the university within the framework of the EP should be accurate, objective, relevant and should include:				
100	1.	Implemented programs, indicating the expected learning outcomes;		+		
101	2.	information on the possibility of assigning qualifications at the end of the EP;		+		
102	3.	information on teaching, training, evaluation procedures;		+		
103	4.	information on passing scores and educational opportunities provided to students;		+		
104	5.	information on job opportunities for graduates.			+	
105	6.	The management should use a variety of ways to disseminate information (including media, web resources, information networks etc.) to inform the general public and interested parties.		+		
106	7.	Informing the public should provide support and explanation of national development programs of the country and the system of higher and postgraduate education.		+		
107	8.	The university should publish audited financial statements on its own web resource.		+		

108	9.	The university should demonstrate the reflection on the web resource of information characterizing the university in general and in the context of the EP.			+	
109	10.	An important factor is the availability of adequate and objective information about the Teaching staff EP, in the context of personalities.			+	
110	11.	An important factor is informing the public about cooperation and interaction with partners within the framework of the EP, including with scientific / consulting organizations, business partners, social partners and educational organizations.			+	
111	12.	The university should post information and links to external resources based on the results of external evaluation procedures.			+	
112	13.	An important factor is the participation of the university and implemented EP in various external evaluation procedures.			+	
Total by standard				7	6	
Standards in the context of individual specialties						
TECHNICAL SCIENCES AND TECHNOLOGIES						
		Educational programs in the fields of "Engineering sciences and technologies", such as "Information systems", "Computer technology and software", "Radio engineering, electronics and telecommunications", etc., should meet the following requirements:				
113	1.	In order to familiarize students with the professional environment and relevant issues in the field of specialization, as well as to acquire skills on the basis of theoretical training, the education program should include disciplines and activities aimed at obtaining practical experience and skills in the specialty in general and in the relevant disciplines in particular, including: - excursions to enterprises in the field of specialization (factories, workshops, research institutes, laboratories, training facilities, etc.), - holding separate classes or whole disciplines at the enterprise of specialization, - Conducting seminars to solve practical problems relevant to enterprises in the field of specialization, etc.		+		
114	2.	Teaching staff involved in the education program should include full-time teachers who have a long-term experience of working as a staff member at enterprises in the field of specialization of the education program.			+	
115	3.	The content of all disciplines should be based in one way or another and include a clear relationship with the content of the fundamental natural sciences, such as mathematics, chemistry,		+		

		physics.				
116	4.	The EP management should provide measures to strengthen practical training in the field of specialization.			+	
117	5.	The management of the EP should ensure the training of students in the field of application of modern information technologies.		+		
Total upon standard				3	2	
TOTAL				82	35	



Appendix 2. The evaluation table "PARAMETERS OF THE SPECIALIZED PROFILE" (5B070500-Mathematical and Computer Modeling, 6M070500-Mathematical and Computer Modeling)

№	№	Criteria for evaluation	Position of the organization of education			
			Strong	Satisfactory	Assumes improvement	Unsatisfactory
Standard "Management of the educational program"						
1		The institution should have a published quality policy.		+		
2		The quality assurance policy should reflect the relationship between research, teaching and learning.		+		
3		The university should demonstrate the development of a culture of quality assurance, including in the context of the EP.			+	
4		Commitment to quality assurance should apply to any activities performed by contractors and partners (outsourcing), including in the implementation of joint / two-degree education and academic mobility.		+		
5		The management of the EP provides transparency in the development of an EP development plan based on an analysis of its functioning, the actual positioning of the institution and the focus of its activities on meeting the needs of the state, employers, stakeholders and trainees.			+	
6		The management of the EP demonstrates the functioning of the mechanisms for the formation and regular revision of the EP development plan and monitoring of its implementation, assessing the achievement of the training objectives, meeting the needs of students, employers and society, and making decisions aimed at the continuous improvement of the ES.			+	
7		The management of the EP should involve representatives of stakeholder groups, including employers, trainees and Teaching staffs, in forming an EP development plan.		+		
8		The management of the EP should demonstrate the individuality and uniqueness of the development plan for the EP, its coherence with national development priorities and the development strategy			+	

		of the education organization.				
9		The university should demonstrate a clear definition of those responsible for business processes within the framework of the EP, unambiguous distribution of the duties of personnel, delineation of the functions of collegial bodies.		+		
10		The management should provide evidence of transparency in the management of the educational program.		+		
11		The management should demonstrate the successful functioning of the internal quality assurance system of the EP, including its design, management and monitoring, their improvement, decision-making on the basis of facts.		+		
12		The management of the EP shall implement risk management.			+	
13		The management of the EP should ensure the participation of representatives of interested persons (employers, teaching staff, students) in the collegial bodies of management of the educational program, as well as their representativeness in making decisions on the management of the educational program.			+	
14		The university should demonstrate the management of innovation within the framework of the EP, including the analysis and implementation of innovative proposals.			+	
15		The management of the EP should demonstrate evidence of openness and accessibility for trainees, Teaching staff, employers and other stakeholders.		+		
16		The management of the EP must receive training in educational management programs.			+	
17		The management of the EP should strive to ensure that the progress achieved since the last external quality assurance procedure is taken into account when preparing for the next procedure.		+		
Total by standard				9	8	
Standard "Information Management and Reporting"						
18		The university should ensure the functioning of a system for collecting, analyzing and managing information based on the use of modern information and communication technologies and software.		+		
19		The EP management should demonstrate the systematic use of processed, adequate information to improve the internal quality assurance system.			+	

20		Within the framework of the EP there should be a system of regular reporting, reflecting all levels of the structure, including an assessment of the effectiveness and effectiveness of the departments and departments, scientific research.			+	
21		The university should establish periodicity, forms and methods for evaluating the management of the EP, the activities of collegial bodies and structural units, senior management, the implementation of scientific projects.			+	
22		The university should demonstrate the definition of order and ensure the protection of information, including the identification of responsible persons for the reliability and timeliness of analyzing information and providing data.			+	
23		An important factor is the involvement of trainees, workers and Teaching staff in the processes of information gathering and analysis, as well as decision-making on their basis.			+	
24		The management of the EP should demonstrate the existence of a mechanism of communication with trainees, employees and other stakeholders, including the presence of conflict resolution mechanisms.			+	
25		The institution should provide a measure of the degree of satisfaction of the needs of the teaching staff, staff and trainees within the EP and demonstrate evidence of addressing the deficiencies found.			+	
26		The university should evaluate the effectiveness and effectiveness of activities, including in the context of the EP.			+	
		The information collected and analyzed by the university should take into account:				
27		key performance indicators;			+	
28		dynamics of the contingent of students in the context of forms and species;			+	
29		level of academic achievement, student achievement and deduction;			+	
30		satisfaction of students with the implementation of the EP and the quality of education in the university;			+	
31		accessibility of educational resources and support systems for students;			+	
32		employment and career growth of graduates.			+	
33		Trainees, employees and Teaching staff must confirm documentary consent to the processing of personal data.				+

34		The management of the EP should facilitate the provision of all the necessary information in the relevant fields of science.		+		
Total by standard				14	3	
Standard "Development and approval of educational programs"						
35		The university should define and document the procedures for the development of the EP and their approval at the institutional level.		+		
36		The management of the EP should ensure that the developed EP meets the set goals, including the expected learning outcomes.		+		
37		The EP management should ensure that there are developed models of the graduate student who describe the results of training and personal qualities.		+		
38		The management of the EP should demonstrate the conduct of external assessments of the EP.		+		
39		The qualification obtained at the conclusion of the EP shall be clearly defined, clarified and consistent with a certain level of the NQF.		+		
40		The management should determine the impact of disciplines and professional practices on the formation of learning outcomes.			+	
41		An important factor is the possibility of training students for professional certification.			+	
42		The management of the EP should provide evidence of the participation of trainees, staff and other stakeholders in the development of the EP, ensuring their quality.		+		
43		The complexity of OP should be clearly defined in Kazakhstan credits and ECTS.		+		
44		The management should ensure that the contents of the academic disciplines and the results of the training are provided to the level of study (bachelor's, master's, doctoral).			+	
45		In the structure of the EP, various activities corresponding to the learning outcomes should be envisaged.			+	
46		An important factor is the existence of joint OP with foreign educational organizations.			+	
Total upon standard				7	5	
Standard "Continuous monitoring and periodic evaluation of educational programs"						

47		The institution should monitor and periodically evaluate the EP in order to achieve the goal and meet the needs of students and society. The results of these processes are aimed at the continuous improvement of the EP.		+		
		Monitoring and periodic evaluation of EP should consider:				
48		the content of the programs in the light of the latest achievements of science in a specific discipline to ensure the relevance of the discipline being taught;			+	
49		changes in the needs of society and the professional environment;			+	
50		load, academic performance and graduation;		+		
51		the effectiveness of evaluation procedures for students;		+		
52		expectations, needs and satisfaction of students learning by the EP;		+		
53		educational environment and support services and their compliance with the objectives of the EP.		+		
54		The university and the management of the EP must provide evidence of the participation of trainees, employers and other stakeholders in the revision of the EP.		+		
55		All interested persons should be informed of any planned or undertaken actions in relation to the EP. All changes made to the EP shall be published.			+	
56		The management of the EP should ensure that the content and structure of the EP are reviewed, taking into account changes in the labor market, the requirements of employers and the social demand of the society.		+		
Total by standard				7	3	
Standard "Student-centered learning, teaching and assessment of progress"						
57		The EP management should ensure respect and attention to different groups of learners and their needs, providing them with flexible learning paths.			+	
58		The RP management should ensure the use of various forms and methods of teaching and learning.		+		
59		An important factor is the availability of our own research in the field of methods of teaching the academic disciplines of the EP.			+	
60		The EP management should demonstrate the availability of a feedback system on the use of different teaching methods and		+		

		evaluation of learning outcomes.				
61		The EP management should demonstrate support for the autonomy of trainees with simultaneous guidance and assistance from the teacher.		+		
62		The management should demonstrate the existence of a procedure for responding to complaints from students.		+		
63		The institution should ensure the consistency, transparency and objectivity of the evaluation mechanism for each training program, including an appeal.		+		
64		The university should ensure that the procedures for assessing the learning outcomes of the students of the EP are consistent with the planned learning outcomes and program objectives. Criteria and methods of evaluation within the framework of the EP should be published in advance.			+	
65		In the institution, the mechanisms for ensuring the learning outcomes of each graduate should be determined and the completeness of their formation ensured.		+		
66		Evaluators should possess modern methods for evaluating learning outcomes and regularly improve their qualifications in this field.			+	
Total by standard				6	4	
Standard "Learners"						
67		The university should demonstrate the policy of forming a contingent of students from admission to release and ensure the transparency of its procedures. Procedures regulating the life cycle of trainees (from admission to completion) should be identified, approved, published.		+		
68		The EP management should demonstrate special adaptation and support programs for newly enrolled and foreign students.		+		
69		The university should demonstrate the conformity of its actions to the Lisbon Recognition Convention.		+		
70		The university should cooperate with other educational organizations and national centers of the "European Network of National Information Centers for Academic Recognition and Mobility / National Academic Recognition Information Centers" ENIC / NARIC in order to ensure comparable recognition of qualifications.		+		
71		The management should demonstrate the availability and application of a mechanism to recognize the results of academic mobility of students, as well as the results of additional, formal		+		

		and informal training.				
72		The university should provide an opportunity for external and internal mobility of trainees, and also assist them in obtaining external grants for training.			+	
73		The management of the EP should make the maximum amount of efforts to provide practice-based practices, facilitate the employment of graduates, and maintain communication with them.		+		
74		The management of the EP should make the maximum amount of efforts to provide practice-based practices, facilitate the employment of graduates, and maintain communication with them.		+		
75		An important factor is the monitoring of the employment and professional activities of the graduates of the EP.		+		
76		The EP leadership should actively encourage students to self-education and development outside the main program (extracurricular activities).			+	
77		An important factor is the existence of an active association / association of graduates.			+	
78		An important factor is the availability of a support mechanism for gifted students.		+		
Total by standard				9	3	
Standard "Teaching staff"						
79		The university should have an objective and transparent personnel policy, which includes hiring, professional growth and development of personnel, which ensures the professional competence of the whole state.		+		
80		The university should demonstrate the conformity of the personnel potential of the Teaching staff with the development strategy of the university and the specifics of the EP.			+	
81		The management of the EP should demonstrate awareness of responsibility for its employees and providing them with favorable working conditions.		+		
82		The management of the EP should demonstrate the changing role of the teacher in connection with the transition to student-centered learning.			+	
83		The university should determine the contribution of the Teaching staff of the EP to the implementation of the development strategy of the university, and other strategic documents.			+	

84		The university should provide opportunities for career development and professional development of the Teaching staff of the EP.		+		
85		The management of the EP should involve practitioners in the relevant sectors in the teaching.		+		
86		The management of the EP should provide targeted actions for the development of young teachers.		+		
87		The university should demonstrate the motivation for the professional and personal development of the teachers of the EP, including the promotion of both the integration of research and education, and the use of innovative teaching methods.			+	
88		An important factor is the active use of Teaching staff information and communication technologies in the educational process (for example, on-line training, e-portfolio, MEP, etc.).			+	
89		An important factor is the development of academic mobility within the framework of the EP, attracting the best foreign and domestic teachers.			+	
90		An important factor is the involvement of the Teaching staff of the EP in the life of society (the role of teaching staff in the education system, the development of science, the region, the creation of a cultural environment, participation in exhibitions, creative competitions, charity programs, etc.).		+		
Total by standard				6	6	
Standard "Educational resources and student support systems"						
91	1.	The management should demonstrate the adequacy of the material and technical resources and infrastructure.			+	
92	2.	The EP management should demonstrate the existence of support procedures for different groups of learners, including information and counseling.		+		
		The management of the EP should demonstrate the correspondence of information resources to the specifics of the EP, including compliance:				
93	3.	technological support of students and teaching staff in accordance with educational programs (for example, online training, modeling, databases, data analysis programs);			+	
94	4.	library resources, including the fund of educational, methodological and scientific literature on general educational, basic and profiling disciplines on paper and electronic media, periodicals, access to scientific databases;		+		

95	5.	examination of the results of research, final works, dissertations on plagiarism;			+	
96	6.	functioning WI-FI in the territory of the organization of education.			+	
97	7.	The university should strive to ensure that the training equipment and software used to develop the EP are similar to those used in the relevant industries.			+	
98	8.	The institution must ensure that it meets safety requirements in the learning process.			+	
99	9.	The university should strive to take into account the needs of different groups of students in the context of the EP (adults, working, foreign students, as well as students with disabilities).			+	
Total by standard					5	4
Standard "Public Awareness"						
		The information published by the university within the framework of the EP should be accurate, objective, relevant and should include:				
100	1.	Implemented programs, indicating the expected learning outcomes;			+	
101	2.	information on the possibility of assigning qualifications at the end of the EP;			+	
102	3.	information on teaching, training, evaluation procedures;			+	
103	4.	information on passing scores and educational opportunities provided to students;			+	
104	5.	information on job opportunities for graduates.				+
105	6.	The management should use a variety of ways to disseminate information (including media, web resources, information networks etc.) to inform the general public and interested parties.			+	
106	7.	Informing the public should provide support and explanation of national development programs of the country and the system of higher and postgraduate education.			+	
107	8.	The university should publish audited financial statements on its own web resource.			+	
108	9.	The university should demonstrate the reflection on the web resource of information characterizing the university in general and in the context of the EP.				+
109	10.	An important factor is the availability of adequate and objective information about the Teaching staff of EP, in the context of				+

		personalities.				
110	11.	An important factor is informing the public about cooperation and interaction with partners within the framework of the EP, including with scientific / consulting organizations, business partners, social partners and educational organizations.			+	
111	12.	The university should post information and links to external resources based on the results of external evaluation procedures.			+	
112	13.	An important factor is the participation of the university and implemented EP in various external evaluation procedures.			+	
Total by standard				7	6	
Standards in the context of individual specialties						
TECHNICAL SCIENCES AND TECHNOLOGIES						
		Educational programs in the areas of "Engineering science and technology", such as "Mathematical and computer modeling," etc., should meet the following requirements:				
113	1.	In order to familiarize students with the professional environment and relevant issues in the field of specialization, as well as to acquire skills on the basis of theoretical training, the education program should include disciplines and activities aimed at obtaining practical experience and skills in the specialty in general and in the relevant disciplines in particular, in t .ch: - excursions to enterprises in the field of specialization (factories, workshops, research institutes, laboratories, training facilities, etc.), - holding separate classes or whole disciplines at the enterprise of specialization, - Conducting seminars to solve practical problems relevant to enterprises in the field of specialization, etc.			+	
114	2.	Teaching staff involved in the education program should include full-time teachers who have a long-term experience of working as a staff member at enterprises in the field of specialization of the education program.			+	
115	3.	The content of all disciplines should be based in one way or another and include a clear relationship with the content of the fundamental natural sciences, such as mathematics, chemistry, physics.			+	
116	4.	The EP management should provide measures to strengthen practical training in the field of specialization.			+	
117	5.	The management of the EP should ensure the training of students in the field of application of modern information technologies.			+	

Total by standard		3	2	
TOTAL		73	44	

