REPORT

on the results of the work of the external expert evaluation committee for compliance with the requirements of the standards of primary specialized accreditation of the educational program
"8D06102 - Systems Engineering"
**S. Seifullin Kazakh Agro Technical University
from October 06 to 08, 2020**

INDEPENDENT ACCREDITATION AND RATING AGENCY

External expert commission

REPORT

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Nur-Sultan city   **October 08, 2020**

(I) LIST OF SYMBOLS AND ABBREVIATIONS

EP   - educational program
GED   - general education disciplines
RO   - registrar's office
TC   - typical curriculum
CSIT   - center of scientific and information technologies
RW   - research work
QMS   - Quality Management System
RSE   - Republican state enterprise
BEM   - on the basis of economic management
ATS   - academic teaching staff
EDMS   - electronic document management system
MM   - mass media
NAS RK   - National Academy of Sciences of the Republic of Kazakhstan
RSM   - registration of student movement
EMCD   - educational and methodological complex of the discipline
SSWT   - student's self-study with a teacher
UNT   - unified national testing
CT   - complex testing
LLP   - limited liability partnership
JSC   - joint-stock company
SME   - state municipal enterprise
HE   - higher education
WI   - working instructions
SRW   - student's research work
SSC   - student scientific circles
SAC   - State Attestation Commission
WC   - working curriculum
RL   - research laboratory
RI   - Research Institute
RC   - research Center
ES   - emergency situation
SCT   - student construction team
HL   - healthy lifestyle
EMCS   - educational and methodical complex of specialties
SMCU   - scientific and methodological council of the university
SMBF   - scientific and methodological bureau of faculties
IC   - individual curriculum
CED   - catalog of elective disciplines
SIC   - student'sindividual code

(II) INTRODUCTION

In accordance with order No. 71-20-OD of 07.09.2020 from October 06 to October 08, 2020, an external expert Commission assessed the compliance of "S. Seifullin KATU" JSC with the standards of primary specialized accreditation of the IAAR (dated February 24, 2017, No. 10-17-OD, fifth edition).

The report of the external expert Commission (EEC) contains an assessment of the compliance of the activities of "S. Seifullin KATU" JSC within the framework of primary specialized accreditation with the IAAR criteria, and recommendations of the EEC on further improvement of the parameters of specialized profile.

Composition of the EEC:

Chairman of the Commission-Andrey A. Bratsikhin, Doctor of Technical Sciences, Head of the Department "Food technologies and engineering" Of the Institute of living systems of the North Caucasus Federal University;

Foreign expert-Sergey Konstantinovich Filipov Dr. sc. ing., Professor, Abo Akademi University, Finland;

Foreign expert-Levykh Alyona Yurievna, Candidate of Biological Sciences, Associate Professor of the Ishim pedagogical Institute n.a.P. P. Yershov (branch) of the "Tyumen state University";

National Expert-Rustem Tukenovich Omarov PhD, Head of the Department of Biology and biotechnology of L. N. Gumilyov Eurasian national University;

National Expert - Nurgazezova Alma Nurgazezovna, Candidate of Technical Sciences, Associate Professor of the Department of "Technology of food and processing industries" of Semipalatinsk state University n.a. Shakarim;

National Expert - Bakhytzhan Akhmetov, Doctor of Technical Sciences, Professor, Abay Kazakh national pedagogical University;

National Expert - Saule Sagnayeva, Candidate of Physical and Mathematical Sciences, Professor of the Department of Information systems of L. N. Gumilyov Eurasian National University;

National Expert - Mustafin Marat Askarovich, Doctor of Technical Sciences, Professor of Almaty University of energy and communications;

National Expert - Elibek Atrauovich Asangaliev, Candidate of Agricultural Sciences, Associate Professor of the Department "School of earth and environmental sciences"of the East Kazakhstan state technical University n.a. Serikbayev;

National Expert - Gabdulov Madi Assetovich, Candidate of Agricultural Sciences, Associate Professor of the Department of "Crop production and agriculture" of the West Kazakhstan agrarian and technical University n.a. Zhangir Khan;

Employer - Leyla Zhanaspayeva, Department of human capital development of the Chamber of entrepreneurs of Akmola region;

Employer - Zhantleuov Daniyar Amangeldinovich, Candidate of Agricultural Sciences, employee of the North Kazakhstan research Institute of animal husbandry and crop production;

Student - Mukash Nazgul, 2nd year master student of the specialty "MCM" of the Kazakh-British University;

Student - Aisulu Tolegenova, 4th year student of the specialty "Biology" of L. N. Gumilyov Eurasian national University;

Student - Tengebayev Askar, 1st year student of the L. N. Gumilyov Eurasian national University;

Observer from the Agency-Gulfiya Nazyrova, PhD in Economics, project Manager of the Agency.

(III) PRESENTATION OF THE ORGANIZATIONOFEDUCATIONAL

"Kazakh agrotechnical University named after S. Seifullin" JSC (hereinafter S. Seifullin KATU) operates under the Charter approved by decision of sole shareholder – nonprofit joint-stock company "National agrarian scientific-educational center" No.2 of 05.02.2018, certificate of state registration of legal entity No. 27738-1901-AK 10.07.2007 city, state licensed to provide educational services No. 0062189 AB Series of 02.07.02008, issued by CCES MES RK, and annexes to carry out educational activity on educational programs (hereinafter – EP), directions and specialties in the field of higher professional education.

Currently, S. Seifullin KATU provides personnel trainingin 133 educational programs: 47 bachelor's EP, 53 master's EP, and 33 PhD doctoral EP. Trilingual education was introduced within the framework of 66 EP. In 2019, S. Seifullin KATU developed 5 new programs for the implementation of two-degree education together with the leading agricultural University of Europe AgroParisTech (France).

The structure of S. Seifullin KATU includes 8 faculties: agronomy; veterinary medicine and animal husbandry technology; technical; land management, architecture and design; computer systems and professional education; energy; and economics. There are 42 departments in 8 faculties, including the military department, and 27 research institutes and centers.

The total number of students studying at S. Seifullin KATU is 13077, including 1266 postgraduates and doctoral students. 54% of students are enrolled on state educational grants.

The academicteaching staff of the university includes 795 full-time teachers (excluding the teaching staff of the military department), including 81 doctors, 340 candidates of science, 63 PhD doctors. Training is conducted at 8 faculties, 42 departments, 12673 students are trained. There are 18 bachelor's degree courses, 16 master's degree courses and 12 PhD doctoral courses.

Since 2004, the department ofComputer Engineering and Software successfully passed the accreditation on educational programs that enabled a group of educational programs "Information communication technologies" to admit to doctoral studies in education program "Systems engineering".

(IV)DESCRIPTION OF THE PREVIOUS ACCREDITATION PROCEDURE

Accreditation of this EP is carried out for the first time

(V) DESCRIPTION OF THE EEC VISIT

The work of EEC was carried out on the basis of the Program of on-line visit of the expert commission on primary specialized accreditation of the S. Seifullin Kazakh agrotechnical university during the period from 06 to 08 October, 2020.

In order to coordinate the work of the EEC, on 05.10.2020, an introductory meeting was held, during which powers were allocated among the members of the commission, the schedule of the visit was clarified, and an agreement was reached on the choice of examination methods.

In accordance with the standards the Program of the visit included the meeting with the Chairman of the Board, the Vice Chairman of the Board, heads of structural subdivisions, deans, heads of departments of the University, teachers and students as well as staff of different departments, interviewing, and questionnaires for teachers and students. A total of 125 people took part in the meetings (Table 1).

Information about the employees and students who took part in the meetings with the EEC of the IAAR:

Participant category	Number
Chairman of the Board	1
Vice Chairmen of the Board	5
Heads of structural subdivisions,	15

Deans of faculties	5
Heads of departments	8
Teachers	53
Students, postgraduates,doctoral students	38
Total	125

During the virtual tour, the members of the EEC got acquainted with the state of the material and technical base of the Department Computer Engineering and Software attended the class "Theory of complex systems", (Professor V. V. Gruzin).

In accordance with the accreditation procedure, a questionnaire survey of teachers and students was carried out.

In order to confirm the information provided in the self-assessment report of the EP, external experts requested and analyzed the working documentation of the university. Along with this, the experts studied the Internet positioning of the university through the official website of the university https://kazatu.kz/ru/

All conditions were created for the work of the EEC, access to all necessary information resources was organized. The staff of S. Seifullin KATU ensured the presence of all persons specified in the visit program, in compliance with the established time interval.

Within the framework of the planned program, recommendations for improving the activities of S. Seifullin KATU, developed by the EEC based on the results of the examination, were presented at the meeting with theUniversity management on 08.10.2020.

(VI) CONFORMITY TO SPECIALIZED ACCREDITATION STANDARDS

6.1. "Educational Program Management" standard

The evidence-based part

S. Seifullin KATU has a published academic policy (https://kazatu.kz/ru/education/akademicheskaya-politika/), which characterizes the policy of forming a high-quality contingent of students; HR policy for the formation of high-quality academic teaching staff, administrative and management personnel and employees; policy of development and formation of educational programs and electronic educational resources; the policy of selection and registration of students for academic disciplines; planning policy and organization of the educational process; a policy of academic integrity and internal quality assurance; the policy of transfer, reinstatement, expulsion, granting academic leave to students, including the establishment of GPA; the policy of evaluating the educational achievements of students; policy of organization of final certification; policy of internationalization and academic mobility. All points of the published OO academic policy are based on certain provisions of the quality management system ("Regulations for academic quality" (PAK QMS 02.2064-2020); https://kazatu.kz/ru/ob-universitete/sistema-menedjmenta-kachestva/). In its published form, the academic policy of educational institutions is a system of rules and procedures for the organization of educational activities aimed at the implementation of student-centered learning and improving the quality of education. However, it does not fully reflect the priorities and principles in the development of the university; strategic goals, the achievement of which will ensure that the university reaches a higher quality level; the relationship between research, teaching and learning; mechanism for developing a culture of quality assurance, as well as quality assurance in outsourcing.

At the same time, the management of the OEand EP demonstrate the existence of transparent mechanisms for the formation (development and regular revision) of the EP and its development plan with the participation of different groups of stakeholders. The development plan of the educational program is periodically monitored (protocol No. 11 of February 14, 2019).

The accredited EP "8D06102-Systems Engineering" is undergoing initial accreditation, so the participation of students in the development of the EP was formal. The EP management demonstrated the individuality and uniqueness of the EP development plan, its consistency with the national development priorities and the OEdevelopment strategy. The educational program has an approved development plan posted on the university website (http://kazatu.kz/ru/obrazovanie/fakulteti/ksipo/kafedra-vichislitelnaya-tehnika-i-programmnEO-obespechenie/).

To improve the quality of educational services, the EP leadership proposes the following: ensuring internal and external academic mobility of doctoral students, attracting teachers from near and far abroad, introducing a double-diploma education program, etc.

The relationship between teaching, science and learning can be traced in the EP Quality Assurance Policy posted on the website.

(http://kazatu.kz/ru/obrazovanie/fakulteti/ksipo/kafedra-vichislitelnaya-tehnika-i-programmnEO-obespechenie/)

The management of the EP is trained in educational management programs. There is a regulation on the procedure for improving the qualifications of employees of S. Seifullin KATU. (On advanced training of personnel of "S. Seifullin KATU" JSC RPIQE QMS 10010. 346).

The Public Organization has developed and approved a risk management procedure (Regulation on the procedure for determining and managing risks in JSC " S. Seifullin Kazakh Agrotechnical University "(RPDMR QMS 11010-2016)). The management of the EP assesses the main risks of the EP and includes in the development plan of the EP activities aimed at their management.

One of the challenges of high-quality implementation of the EP was the forced transition of the university to a distance learning format. In this regard, the department held a methodological seminar on distance learning technologies.

The quality management system has been implemented in the EO, which was certified according to international standards ISO 9001-2015in 2005. Maintaining the quality management system in working order is carried out through the improvement of the internal regulatory framework, which includes more than 300 documents, by systematic internal audit, as well as inspection control by the certification body.

The analytical part

The OEhas a published academic policy, which is a system of rules and procedures for organizing educational activities aimed at implementing student-oriented learning and improving the quality of education. All points of the academic policy are based on separate provisions of the quality management system. However, it does not fully reflect the priorities and principles in the development of the university; strategic goals, the achievement of which will ensure the university's access to a higher quality level; the relationship between research, teaching and learning; a mechanism for developing a culture of quality assurance, as well as quality assurance guarantees in outsourcing.

The management of the EP is trained in educational management programs.

The management of the OEand the EP demonstrate a clear definition of those responsible for business processes within the EP, an unambiguous distribution of job responsibilities of personnel, and the differentiation of functions of collegial bodies.

The OEhas a certified quality management system managed by systematic internal audit and inspection control procedures by the certification body.

Strengths/best practices

1) The OEdemonstrates a clear definition of those responsible for business processes within the framework of the EP, an unambiguous distribution of job responsibilities of personnel, and the differentiation of functions of collegial bodies.

2) The management of the EP is trained in educational management programs.

Weakness:

The OEdid not demonstrate the relationship between research, teaching and learning; the mechanism for developing a quality assurance culture, as well as quality assurance guarantees in outsourcing.

The recommendations of the EEC

To conduct an assessment of the risks of the development of the educational program in full compliance with the university's Development Strategy and develop a mechanism to reduce them;

The EP management should carry out systematic work to determine, update and formulate the individuality and uniqueness of the educational program.

To organize the functioning of a communication channel through which any interested person can make innovative proposals to improve the activities of the EP management, as well as demonstrate examples of the analysis of these proposals and their implementation.

EEC notes that according to 3 criteria of this standard, EP "8d06102-system engineering" has 4 strong positions, according to 5 criteria it has satisfactory positions, according to 6 criteria, improvement is required.

6.2. "Information Management and Reporting" standard

The evidence-based part

Interaction between the subjects of the internal and external environment is carried out through a system of information collection, analysis and management, based on the use of modern information and communication technologies and software. The main information flows are implemented through the web resources of the official website of S. Seifullin KATU (https://kazatu.kz/ru/), automated information system "Platonus", information system "Moodle" (https://moodle.kazatu.kz/login/index.php). The automated system "Unihub" functions for checking written works (https://unihub.kazatu.kz/).

In addition, the university uses the following for effective work: educational portal (http://portal.kazatu.kz/), corporate email kazatu.kz, MOOC - national open education platform of Kazakhstan (http://moocs.kz/), electronic library (http://portal.kazatu.kz/e-books/), social networks Facebook, Instagram, Vkontakte, WhatsApp messenger, etc. The library plays an important role in the information infrastructure of the university (https://library.kazatu.kz/o-biblioteke/informatsiya-o-biblioteke).

For information management at the university, the "Regulations on the informatization council of "S. Seifullin KATU JSC" (RIC QMS 09.9017-2017) and "Regulations on the information technology Department "(RITD QMS 12030-2014), created by order of the Chairman of the BoardNo. 551 of 01.10.2013 on the basis of the recommendation of the University Board were developed and implemented.

The official website of the university operates in three languages (Kazakh, English, Russian.) The website contains basic information about the university and the implemented EP, including the academic policy that reflects the mission, goal, objectives, and strategic directions of the university's development. The university's website contains basic information about structural divisions and ATS. Information about the ATS of the accredited EP is given in the section "Faculties and Departments", in the tab "Department of Computer Engineering and Software" (https://kazatu.kz/ru/obrazovanie/fakulteti/ksipo/kafedra-vichislitelnaya-tehnika-i-programmnEO-obespechenie/).

The same page contains the following information:
- History of the department
- Academic teaching staff
-International cooperation
- Student life

- Information on the subject Olympiads in the Department of Computer engineering and Software

- Contacts.

Through the Platonus AIS, the internal management of the educational process is carried out ("Regulations on the management of the educational process in the Platonus AIS of S. Seifullin KATU", RMEP QMS 11010.107-2015). In this web resource, unified databases on students and graduates are formed, which are the basis for monitoring the results of training, subsequent employment and career advancement of graduates.

The activities and events of the university and the department are also reflected in the social networks Facebook, Instagram, Vkontakte and in the media.

The university conductssystematic anonymous surveys of students to assess satisfaction with the quality of educational services, the educational environment and support systems of students, a survey of ATS and employees on satisfaction with working conditions, management activities, EPimplementation.

The university has established an order and ensured the protection of information, including the designated persons responsible for the accuracy and timeliness of the analysis of information and data provision. Information in the AIS "Platonus" is available only to employees and students of the university who have logins and passwords (Regulation "On password protection" MI QMS 110.27-2016). The university ensures the protection of information about the contingent, which is stored in a specialized database.

In addition, in order to prevent conflict situations, the university approved and put into effect the documents "Regulations on the internal regulations of "S. Seifullin Kazakh Agrotechnical University"JSC (RIR QMS 11010.125-2015), "Regulations on the anti-corruption, disciplinary commission of "S. Seifullin KATU" (RACDC QMS 11010.127-2015), "Regulations on the procedure for consideration of student complaints by the university administration" (RPCSCUA QMS 04.4005- 2019), "Regulation on the procedure for handling complaints from employees" (RPHCE QMS 11010.85-2014).

The collection and processing of personal data of academic teaching staff and students at the university is carried out with the receipt of their written consent (PD 04.01-2014 "Regulations on the storage of personal data of university employees").

Analytical part

For adequate information management, the university and EP management use modern information systems, information and communication technologies and software, the functioning of which is regulated by the university's regulatory documents:

The university has mechanisms for resolving and preventing conflicts, protecting the personal information of students, ATS and employees.

Strengths / Best Practice

1) OEconfirms the implementation of procedures for processing personal data of students, employees and teaching staff on the basis of their documentary consent.

EEC recommendations

To pay constant attention to updating information on the EP on the University website and bringing it to students and all interested parties.

To ensure the involvement of doctoral students and ATS in the processes of collecting and analyzing information using ICT for the development and further management of EP development, making decisions based on them.

EEC notes that according to 4 criteria of this standard, EP "8D06102-Systems Engineering" has strong positions, according to 6 criteria it has satisfactory positions, according to 6 criteria improvement is required.

The evidence-based part

The educational program "8D06102-Systems Engineering" was developed in accordance with the Dublin descriptors and the European Qualifications Framework, on the basis of the State Educational Standard of Higher Education, approved by order of the Ministry of Education and Science of the Republic of Kazakhstan No. 604 dated 31.10. 2018), and in accordance with the classifier of areas for training personnel with higher and postgraduate education (approved by Order of the Ministry of Education and Science of the Republic of Kazakhstan No. 569 dated October 13, 2018), is implemented through curricula (standard, individual and work) and programs (standard and syllabi). Based on these documents, the university developed the standard SEQMS 4.3.01-2014 "Design and development of educational services", which regulates the rules for the development and approval of educational programs.

The procedure for discussing the EP is reflected in the minutes of the meeting of the department, the educational and methodological council of the faculty, the educational and methodological council and the Academic Council of the University. The EP of the specialty is approved by the Academic Council of the University. The accessibility of the EP for all interested parties is ensured through the website: https://kazatu.kz/ruand the electronic document management system.

EP in the specialty "8D06102-System Engineering" is developed on the basis of the TC specialty, taking into account the needs of potential employers. The EP developers are the academic teaching staff of the department - leading specialists in the fields of science and education in the EP profile. The discussion of the EP is carried out at the meeting of the department with the participation of employers and students (Minutes of the meeting of the department of Computer engineering and softwareNo. 7 dated February 13, 2019).

To assess the quality of EP, the university has proven mechanisms of internal quality assessment and expertise, documented within the QMS.

The labor intensity of the EP is clearly defined in Kazakhstani credits and ECTS.

The list of disciplines of the optional component was formed with the participation of the Kazakhstan Association of IT Companies.

The content of the EP and the organization of the entire educational process are aimed at preparing students for professional activities.

The development and evaluation of the effectiveness of the EP development plan is carried out on the basis of the "Regulations on the procedure for developing a development plan for the educational program and monitoring its implementation" (RPDDPEPMII QMS 02.2034-2018).

In order to ensure the quality of the provision of educational services in a modern labor market characterized by high speed and unpredictability of changes, the EP management plans to regularly revise and adjust the list and content of EP disciplines. It is planned to discuss and amend the EP at least once at the end of the academic year with the involvement of employers and students.

Analytical part

The accredited EP meets the established goals and planned learning outcomes.

Procedures for the development, approval of the EP at the institutional level, procedures for the development of the EP development plan and monitoring its implementation are defined and documented bythe OE.

The labor intensity of the EP is clearly defined in Kazakhstani credits and ECTS. The qualifications obtained upon completion of the EP are clearly defined, explained and correspond to a certain level of the NQF.

Strengths / Best Practice

1) Procedures for the development of EP and their approval at the institutional level are defined and documented by EO.

2) The qualification awarded upon completion of the EP is clearly defined and corresponds

to a certain level of the NQF.

3) The labor intensity of the EP is clearly defined in Kazakhstani credits and ECTS.

EEC recommendations

To expand cooperation with leading foreign universities in order to develop joint educational programs.

To engage employers and stakeholders to conduct external expertise of the EP and create a decision-making mechanism based on its results.

The EP management should create a bank of scientific research topics in accordance with the current areas of science in the field of Computer Science and Technology.

EEC notes that according to 3 criteria of this standard, EP ''8D06102-Systems Engineering'' has strong positions, according to 7 criteria it has satisfactory positions, according to 2 criteria improvement is required.

6.4. "Continuous monitoring and periodic evaluation of educational programs" standard

The evidence-based part

The educational program "8D06102-Systems Engineering" undergoes the procedures of regular monitoring and periodic assessment and updating of the EP. Monitoring and periodic assessment should include an analysis of projections of the demographic situation and the need for specialists. The procedure for monitoring, evaluating and updating the EP provides for: 1) a survey of students, teachers, employers; 2) analysis of students' progress; 3) analysis and improvement of the educational environment, including the content of educational and methodological complexes of disciplines, assessment tools for current and intermediate certification, programs and results of final certification; 4) analysis of the results of demo lessons and the results of reciprocal visiting of classes; 5) analysis of material support; 6) analysis of the electronic educational environment; 7) analysis of the employment of graduates

Monitoring of educational achievements of students and their progress is carried out twice a year at the end of the semester. The frequency of other types of monitoring is once a year.

External control of the effectiveness of the EP implementation will be carried out in the process of defending dissertations, during attestation and accreditation of the university.

Analytical part

In S. Seifullin KATU a mechanism for continuous monitoring and periodic assessment of the quality of EPisdeveloped and operates, which is carried out by the structural divisions of the university: departments, dean's offices, department for academic affairs, educational and methodological council, quality service. This process includes: a survey of students, graduates, teachers, employing organizations; analysis of the assessment system and student performance; analysis of the resource and information support of the EP; assessment of the level of competence of teaching staff; the degree of compliance of the EP with the established requirements.The EP is revised once a year, taking into account changes in the labor market, the needs and proposals of different groups of stakeholders, the latest scientific achievements in specific disciplines. Participation in the development of the processes of assessment, analysis and continuous improvement of EP is regulated in the job descriptions of teachers and employees.

Strengths / Best Practice

The OEhas created a system for monitoring and periodic evaluation of the EP, which provides for: changes in the needs of society and the professional environment; expectations, needs and satisfaction of students with EP training; educational environment and support services, and their relevance to the objectives of the EP.

Weak sides

EP management has not demonstrated the effectiveness of student assessment procedures.

EEC recommendations

To ensure the publication of the results of the revision of the content and structure of educational programs in the context of market changes, employers' requirements, social needs of society on an ongoing basis.

To provide activities for the regular discussion and amendments to the EP of the latest achievements of science and industry (for example, once a year at the scientific and methodological council or a scientific seminar of the department).

It is recommended to plan work on your own research in the field of teaching methods for special disciplines of EP.

EEC notes that according to 8 criteria of this standard, OP "8D06102-Systems Engineering" has 2 strong positions, according to 4criteria it hassatisfactory positions, according to 3 criteria improvement is required.

6.5. "Student-centered learning, teaching and assessment of progress" standard

The evidence-based part

In the educational process, the principles of student-centered learning are implemented through changes in the role of the student - an increase in the role of independent classroom and extracurricular work of doctoral students, the use of modern teaching methods and technologies by teachers: information and communication technologies, modular learning technology, distance educational technologies ("Regulation on the organization of the educational process in distance learning educational technologies at S. Seifullin KATU "(REOPDLET QMS 02.2024-2019); "Regulations on content, tests for distance learning" RCTDL QMS 02.2026-2019), dual learning technology ("Regulations on the procedure for organizing and conducting dual training in S. Seifullin KATU" (RPOCDT QMS 11010.132-2016)).

During meetings with the heads of the EP, teachers and students, evidence was obtained of the implementation of the principle of student-centered learning in the educational activities of the university.

Student-centered learning is manifested in taking into account the interests of different groups of students in the development of EP, first of all, the university provides the opportunity to study in different languages (Russian, Kazakh) ("Regulations on the organization of multilingual education at the S. Seifullin Kazakh Agro Technical University" (ROME QMS 05.5001- 2020)).

The EP's leadership has demonstrated support for the autonomy of students, while providing guidance and assistance from the teacher. The latter is carried out during extracurricular activities in the form of individual counseling.

Teachers of the Department of Computer engineering and Software work in the direction of preparing educational and educational-methodical publications accompanying the educational process. According to the "Report on self-assessment of the educational program of doctoral studies "8D06102-System Engineering" within the framework of the primary specialized accreditation of the IAAR" (p. 93), the teachers of the department prepared 11 textbooks and teaching guides.

The EP management and students during meetings with members of the commission demonstrated the existence of a procedure for responding to student complaints "Regulations on the procedure for considering student complaints by the university administration" (RPCSCUA QMS 04.4005-2019), including the availability of the possibility and a clearly regulated procedure for students to submit appeals.

The EP managers demonstrated the existence of a system of consistent, transparent, objective assessment of students' educational achievements developed according to the QMS criteria, which provides for various forms and methods of control (control questions, test tasks, situational tasks, etc.), as well as feedback from students. Requirements for the monitoring system of educational achievements of students are enshrined in the document "Control of knowledge and final

certification of students" approved by the university (SE QMS 02.2007-2020). Actual criteria and methods for assessing learning outcomes are communicated to students through the teaching materials of disciplines, incl. work program (syllabus) ("The structure, content, procedure for the development and approval of the educational and methodological complex of the educational program and the educational and methodological complex of the discipline" (SE QMS 02.2008-2019)), as well as through the normative document "Methodology for conducting SSW and SSWT inS. Seifullin KazakhAgrotechnical University" (MI QMS 02.2011-2019). The assessment tools presented by the department correspond to the goals and objectives of both individual academic disciplines and the EP as a whole.

By questioning students, the EP management monitors their satisfaction using various teaching methods and evaluating learning outcomes.

To ensure the development of each EP graduate of the learning outcomes at the university, a feedback system has been built with students: the student - the curator - the head of the department - the dean - the department for academic affairs - the representative of the quality management.

Analytical part

Within the framework of the accredited EP, conditions have been created to meet the educational needs of various groups of students and implement flexible learning paths. The EP management demonstrates the introduction of the principle of student-centered learning into the educational activities of the university, support of the autonomy of students, while providing guidance and assistance from the teacher.

The procedures for assessing learning outcomes are documented. KATU clearly defines the mechanisms for ensuring the development of learning outcomes by each EP graduate, as well as documented procedures for responding to student complaints.

The EP management provides feedback on the use of various teaching methods and assessment of learning outcomes through questionnaires of students.

Strengths / Best Practice

EP management demonstrates respect and attention to various groups of students and their needs, provides the possibility of flexible learning paths; demonstrates the existence of mechanisms to support the autonomy of learners, while providing guidance and assistance from the teacher.

Weak sides

The EP management did not demonstrate the presence of their own research ATS in the field of teaching methods of academic disciplines of EP.

EEC recommendations

To include in the Development Plans for educational programs the introduction of new forms and methods of teaching and learning, provide feedback on the effectiveness of their use.

To organize own research in the field of teaching methods and assessment of learning outcomes.

To activate the academic mobility of both students and ATS by expanding international contacts of the university and educational structures.

EEC notes that according to 4 criteria of this standard, EP "8D06102-Systems Engineering" has strong positions, according to 4 criteria it has satisfactory positions, according to 2 criteria improvement is required.

6.6. "Students"standard

The evidence-based part

The policy of forming a contingent of students at S. Seifullin KATU is aimed at admitting to the number of students who are most prepared for studying at the university, taking into account the specifics of the direction. The recruitment of applicants is regulated by the "Regulations on the admission committee" (RAC QMS 02.2058-2019), Model rules for admission to training in educational organizations that implement professional higher education

programs (Approved by the Government of the Republic of Kazakhstan No. 600 dated 31.10.2018; http://adilet.zan.kz/rus/docs/V1800017650), etc. To attract foreign applicants, preparatory courses are held ("Regulations on the organization of preparatory courses for foreign citizens to enter universities in Kazakhstan, including the "S. Seifullin KATU" NJSC (ROPCFCEUK QMS 05.5006-2020)).

In the 2019-2020 academic year 5 doctoral students were enrolledin the EP "8D06102-Systems Engineering" at S. Seifullin KATU.

There is a hostel for nonresident students at the university. Their provision is 85%. To ensure responsiveness to the needs of students at S. Seifullin KATU, the Student Service Center (SSC) has been operating since March 1, 2018 (https://kazatu.kz/ru/coo/osnovnie-funkcii-centra-obslujivaniya-obuchayushchihsya-coo/), operating on the principle of one window, where students receive high-quality and fast service on all social and academic issues.

The university ensures recognition of qualifications obtained in other countries. In accordance with the Lisbon Recognition Convention, training is conducted according to the credit system with translation into ECTS values. The learning outcomes are represented by the issued transcripts. When transferring and restoring the achieved learning outcomes, positive assessments of the student are recognized with the transfer of academic credits from one EP to another, from one educational organization to another.

Persons who have received education in other states, in international or foreign educational institutions (their branches) must go through the procedure of nostrification of documents on higher education in accordance with the "Rules for the recognition and nostrification of documents on education" (Approved by Order of the Ministry of Education and Science of the Republic of Kazakhstan No. 8 dated 10.01.2008 (edition No. 125 of March 16, 2017) On the website of S. Seifullin KATU (kazatu.kz), an applicant can familiarize himself with the conditions and documents for nostrification of the educational document at S. Seifullin KATU.

The university and the EP management demonstrate the possibilities for external and internal mobility (https://kazatu.kz/ru/education/studentam/organizaciya-vnutrenney-akademicheskoy-mobilnosti/) of the EP students and assistance in obtaining external grants for training (https://kazatu.kz/ru/education/studentam/obrazovatelnie-krediti-pod-garantiyu-ao-finansoviy-centr-on-rk/; https://kazatu.kz/ru/education/studentam/informaciya-o-vakantnih-obrazovatelnih-grantah/). The conditions for organizing academic mobility and recognition of learning outcomes in foreign universities are described on the university website in the "Academic Policy" section (https://kazatu.kz/ru/education/akademicheskaya-politika/).

There is a department for work with graduates at the Kazakh Agro Technical University. The document SE QMS 4.12.01-2019 "Managing the Alumni Distribution Process"was developed. The University Career and Business Center oversees the employment of graduates.

The university has an Alumni Association, which sponsors low-income students and assists in finding employment. Through the website of the university, the extension office "Extension-KATU" provides assistance to novice farmers and young specialists. (http://extension.kazatu.kz/)

Analytical part

S. Seifullin KATU has a transparent policy of forming a contingent of students, approved procedures regulating the life cycle of students from admission to graduation and further employment.

EP management demonstrates its full compliance with the criteria of the "Students" standard.

Strengths / Best Practice

1) The OEdemonstrates the existence of a policy for the formation of a contingent of students in the context of EP from admission to graduation and ensuring the transparency of its procedures. The procedures governing the life cycle of students (from admission to completion) are clearly defined, approved, published.

2) The EP management demonstrates its readiness to conduct special adaptation and

support programs for newly admitted and foreign students.

EEC recommendations

The EP management should involve the students of the EP in research and creative work with participation in grant funding, social projects, Erasmus + programs, as well as various creative competitions.

To continue work on the development of external and internal academic mobility of students.

To involve students in research publications in collaboration with the ATS;

To consider the possibility of attracting funds from the University and employers in facilitating the participation of doctoral students in international projects, conferences, international internships, as well as in obtaining international grants.

EEC notes that according to 8 criteria of this standard, EP "8D06102-Systems Engineering" has strong positions in 6 criteria, according to 7 criteria it has satisfactory positions, 1 position requires improvement.

6.7. "Academic teaching staff"standard

The evidence-based part

The staff of the EP is staffed in accordance with the legislation of the Republic of Kazakhstan and the "Rules for the competitive replacement of positions of the teaching staff and scientific workers of higher educational institutions" (Approved by the Order of the Minister of Education and Science of the Republic of Kazakhstan No. 230 dated 23.04.2015), "Regulations on the rules of competitive filling vacant positions of ATS and scientific workers of " S. Seifullin Kazakh Agrotechnical University"JSC (RRCFVP QMS 11010.131-2016;

https://kazatu.kz/assets/i/deps/klassifikator-2019.pdf), "Regulations by invitation and remuneration of specialists with experience in production for teaching at S. Seifullin KATU"(RIRSEPT QMS 07.7024-2018)" Regulations on the procedure for advanced training of employees of S. Seifullin KATU"(RPATE QMS 10010. 346-2012).

Admission to positions is carried out in accordance with the "Regulations on the certification of ATS at "S. Seifullin KATU"JSC (RCATS QMS 11010.99 - 2015)," Regulations on the procedure for assigning the academic titles of associate professor (associate professor), professor and honorary professor of JSC "Kazakh Agro-Technical University named after S. S. Seifullin "(RPAATAPPHP QMS11010.103 - 2014). The reason for the dismissal of the ATS may be non-observance of the internal regulations enshrined in the "Regulations on the internal regulations of "S. Seifullin Kazakh Agro Technical University"JSC" (RIR QMS 11010.52 - 2018), "Regulations on the ethical rules of service behavior of employees of "S. Seifullin KATU" JSC "(RERSBE QMS 11010.125-2015),"Regulations on the anti-corruption, disciplinary commission of S. Seifullin KATU"" (RACDC QMS 11010.127-2015).

There are 20 teachers at the Department of Computer Engineering and Software (https://kazatu.edu.kz/ru/obrazovanie/fakulteti/ksipo/kafedra-vichislitelnaya-tehnika-i-programmnEO-obespechenie/stranica-pps-vtipo/) Unfortunately, it was not possible to find exact information on the number of full-time ATS. According to the State Educational Standard of the Republic of Kazakhstan 5.04.034-2008, paragraph 9 "Requirements for the educational environment of doctoral studies", training should be carried out by doctors and candidates of sciences, doctors of philosophy (PhD), doctors in the field, including at least three doctors of sciences. At the department of Computer Engineering and Software EP is served by 2 Doctors, 6 Candidates of sciences, 8 Masters. The share of teachers with advanced degrees, if approached formally, is 25%. Out of 4 people Gruzin V.V. does not correspond to the specialty, Abdildayeva A.A., and Zhukabayeva T.K. are part-time employees. Information about education, academic degrees and titles of ATS is presented on page "Department of CES in the tab "Academic teaching staff" (https://kazatu.edu.kz/ru/obrazovanie/fakulteti/ksipo/kafedra-vichislitelnaya-tehnika-i_-programmnEO-obespechenie / stranica-pps-vtipo /) on the official website of the

university.

The teachers of the department are involved in the international scientific educational space, improve their qualifications. So, the head of the department - Adamova A.D. attended the course "Institutional research and data visualization: theory and applications" at Nazarbayev University, S.Kh. Toleuova attended the course "Жаңартылғанбілімберумазмұныаясындағыжоғарыоқуорындарындағызаманауипедагогика лықтехнологиялар" ("Modern pedagogical technologies in higher educational institutions in the context of updated educational content"), etc.

Kezhebayeva Zh.E. completed training on the subject: "Digitalization of enterprises digital technologies and management models" (Bulgaria, 2019). Teachers Zhantlesov Zh.Kh., Gruzin V.V. participated in the project Grant financing of scientific research of the Ministry of Education and Science of the Republic of Kazakhstan for 2015-2017 on the theme "Development of systems for detecting hidden metal objects based on microwave holography".

The entire academic teaching staff of the department of Computer Engineering and Software, which implements the accredited EP, improves their qualifications through training in the advanced training course programs, through participation in visiting republican and international, as well as intra-university scientific and methodological events.

The university has a system of rating assessment of scientific, innovative, educational, methodological, educational activities of the ATS, according to the results of which teachers receive incentive salary increments ("Regulation on the establishment of a bonus for teaching staff" REBATS QMS 02.2052-2020). This was confirmed by the teachers during a meeting with the members of the EEC, which took place on 06.10.2020. A separate rating scale was developed for young teachers. The teachers who participated in the meeting with the members of the EEC on October 6, 2020, reported that, in accordance with the order for the university, the planning of the teaching load is carried out differentially - for the teachers performing the targeted research.

The satisfaction of the ATS with the course of implementation of the EP and the educational environment of the university, incl. working conditions are assessed by regular anonymous questionnaires.

Analytical part

The materials presented by the OEand the EP management demonstrate that the university regulates the organizational and functional structure of personnel management and its development, including the personnel selection system.

The staff of the ATS of the department of Computer Engineering and Softwaremeets the development strategy of the university.

The ATS, implementing the accredited EP, take an active part in the formation of the scientific, educational and socio-cultural environment of the region.

Strengths / Best Practice

1) the OEhas an objective and transparent personnel policy, including in the context of EP, including recruitment, professional growth and development of personnel, ensuring the professional competence of the entire staff.

2) the OEdemonstrates motivation for the professional and personal development of EP teachers, including encouragement for the integration of scientific activity and education, the use of innovative teaching methods.

Weak sides

The EP management did not demonstrate readiness to organize internal and external academic mobility of ATS within the EP.

EEC recommendations

To intensify work to attract the best foreign and domestic teachers.

To strengthen the provision of human resources with teachers with appropriate basic education.

To organize on an ongoing basis the passing of advanced training courses for the ATS in the profile of accredited EP.

To intensify the participation of the ATS in economic contractual research, fundamental and applied projects of the Ministry of Education and Science and international projects;

To strengthen the publication activity of the ATS and students in journals recommended by CCES and in journals with a non-zero impact factor;

To stimulate the participation of teachers in academic mobility programs, in joint scientific research with foreign partners and international projects.

EEC notes that according to 4 criteria of this standard, EP "8D06102-Systems Engineering" has strong positions, according to 5 criteria it has satisfactory positions.

6.8. "Educational resources and student support systems" standard

The evidence-based part

The university and the department have at their disposal specialized educational laboratories, equipped in accordance with up-to-date requirements. There are three research laboratories at the department of CES:

1. System research.
2. Non-destructive testing.
3. Information technology.

In the classrooms of the Department of Computer engineering and Software there are 41 computers, 3 laptops, printers, in all classrooms there are multimedia projectors (EP self-assessment report, p. 104).

The university has created and operates an automated library and information system with access to full-text remote resources of international databases (Scopus, Web of Science, SpringerOpen, IPR BOOKS, Wiley Open Access, Oxford University Press Open, Open Culture, Open SUNY Textbooks, ArXiv.org and many others), a number of Kazakhstani (KazNEB, RMEB), Russian (EBS "Lan Publishing House", RuNEB "elibrary") and intra-university (Electronic library of the ATS) electronic bibliographic databases (https://direkt-kaz.libguides.com/az.php), as well as access to personalized interactive resources on the university website in the automated information system "Platonus" (http://platonus.kazatu.kz/).

The library of the university, in order to provide information support for the educational and research process, offers the services of a faculty subject librarian, who not only helps in finding the necessary resources, but also conducts training seminars on the use of electronic bibliographic resources. The quantity and quality of the library fund allow us to provide modern educational literature in Russian, Kazakh and English for all students of the accredited EP.

The staff of the department actively publishes its own educational and teaching aids in Russian, Kazakh and English.

In accordance with the "Regulations on the verification of written works for borrowing from "S. Seifullin KATU" JSC (RVWWB 02.2063-2019) approved the procedure for mandatory verification of term papers, graduation, research papers of students for borrowing in the program" ANTIPLAGIAT.VUZ ". The head of the department has access to the specified program.

Reports and conversations during the meetings of EEC members with different groups of stakeholders (6.10.2020 - 7.10.2020) reflect the existence and implementation of the system and services of academic and social support for students at the university, incl. individual support of students on the educational process and psychological counseling.

EP management notes compliance with safety requirements in the learning process.

Analytical part

The university has developed a modern educational environment that includes a sufficient number of materials, technical and information resources available and corresponding to the objectives of the EP, sufficient for the implementation of the accredited EP. The management of the university and the management of the EP provides for a mechanism for assessing and

developing material and technical resources and information support through scheduled reports at meetings of various structural divisions, starting with the department.

The material and technical base of the university meets the sanitary and technical requirements.

Strengths / Best Practice

1) OEdemonstrates the sufficiency of material and technical resources and infrastructure, taking into account the needs of various groups of students in the context of EP.

2) EP management demonstrates the existence of procedures for supporting various groups of students, including information and counseling; technological support for students and ATS in accordance with educational programs

Weak sides

EP management did not demonstrate the sufficiency of material and technical resources and infrastructure for students with disabilities.

EEC recommendations

It is recommended that educational equipment and software used for mastering should be brought in line with similar ones used in modern practice.

To provide for the possibility of developing the ATS of the university of interactive training courses, such as MOOC (Module-Oriented Open Courses), etc.

To explore the possibility of providing free WiFi access in the hostel.

EEC notes that according to 8 criteria of this standard, EP "8D06102-Systems Engineering" has 6 strong positions, 2 criteria has satisfactory positions.

6.9. "Public Information" standard

The evidence-based part

The university demonstrates the presence of a developed information system that uses a variety of means and methods of disseminating information about the activities of the OEin general and about individual EP. The official website of the university (https://kazatu.kz/ru/) in three languages (Kazakh, Russian, English) provides a variety of and close to exhaustive information about the university and the EP, starting with the vision of the mission of the university in the national and international scientific educational space, the development strategy of the university, and ending with the full cycle of implementation of individual EP from the development of EP and vocational guidance of applicants to the employment of graduates. The official website of the university has services for online counseling for applicants (http://portal.kazatu.kz/reg_abit/?language=ru), parents

(http://portal.kazatu.kz/reg_abit/?language=ru), for remote support of students (tabs "Students" (https://kazatu.kz/ru/education/studentam/); "Student Service Center" (https://kazatu.kz/ru/coo/grafik-raboti-centra- obslujivaniya-obuchayushchihsya/); "Educational portal" (http://portal.kazatu.kz/); "Platonus", "Moodle", etc.), to provide consulting services and interact with practicing specialists (section "Farmer" (http://extension.kazatu.kz/)).

Social networks and popular messengers Facebook, WhatsApp, Instagram, Vkontakte, Twitter, You Tube, etc. are widely used to inform the public and various groups of interested persons by the university and the management of the EP. The information posted on the site is structured and relevant in terms of its content, is published at regular intervals. The university press center is responsible for informing the general public. All structural divisions of the university are participants in the processes of collecting information and informing the public.

On the official website of the OEin the sections "Media about us" (https://kazatu.kz/ru/ob-universitete/smi-o-nas/), "Reviews about KATU" (https://kazatu.kz/ru/review/) external reviews on the activities of the university as a whole and on individual EPs are published. Only for 2020, more than 50 external publications about the university were presented in the media. The "About us" section, the "Facts and Figures" tab (https://kazatu.kz/ru/ob-universitete/fakti-i-cifri/) reflects

the position of the university and individual EPs in a number of international and national rankings of universities (QS World University Rankings EECA, "Kazakhstan-2050 - National Ranking for Innovation and Academic Excellence", "National Rating of the Demand for RK universities").

In the "About us" section, the "Financial statements" tab (https://kazatu.kz/ru/ob-universitete/finansovaya-otchetnost/), separate and consolidated financial statements of the OEfor 2012-2019 are presented. with audit reports of independent auditors.

Extracurricular student life is covered in a periodical - the student newspaper "Менің Унивеситетім" ("My University"), which has been published since 1967.

The official website contains an electronic archive of issues from 2011 to 2020. university scientific periodical "Bulletin of Science of S. Seifullin KATU", highlighting the main results of scientific research conducted by the university teachers (http://bulletinofscience.kazatu.kz/ru/).

Each teacher, including the heads of the OEand EP, has a personal page on the university website. (https://kazatu.edu.kz/ru/obrazovanie/fakulteti/ksipo/kafedra-vichislitelnaya-tehnika-i-programmnEO-obespechenie/stranica-pps-vtipo/) Information about the teaching staff is presented in three languages (Kazakh, Russian, English).

In the context of the EP "Systems Engineering" on the site of the OE(https://kazatu.edu.kz/assets/i/ked/op-vtpo3-ru.pdf) actual information is presented containing information about the relevance, uniqueness, goals and objectives of the EP , the field of professional activity of graduates, the competence model and qualifications of the graduate, practice bases and partner organizations.

Analytical part

EEC confirms that the university has a system of timely informing the public and all interested parties about the various areas of the university's activities, about the implemented EP, about cooperation and interaction with the university's partners.

Strengths / Best Practice

1) OE demonstrates the reflection on the web resource of information that characterizes it in general and in the context of educational programs.

2) The EP management provides for a variety of ways to disseminate information, including the media, information networks to inform the general public and stakeholders.

EEC recommendations

To pay close attention to the regular updating and upgrading on an ongoing basis of all the necessary information on the university website in the public domain, including, first of all, detailing information about implemented EP and awarded qualifications, about cooperation and interaction with partners in the field of business and education, opportunities employment of graduates.

EEC notes that according to 10 criteria of this standard, EP "8D06102-Systems Engineering" has 6 strong positions, according to 4 criteria it has satisfactory positions.

6.10. "Standards in the context of individual specialties" standard

The evidence-based part

In accordance with the classifier of areas for training personnel with higher and postgraduate education of the Republic of Kazakhstan (approved by Order of the Ministry of Education and Science of the Republic of Kazakhstan No. 569 dated October 13, 2018), the specialty "Systems Engineering" belongs to the group "Technical Sciences and Technologies".

The content of all disciplines of the educational program is based on and has a clear relationship with the content of fundamental general education and natural sciences. Fundamental natural science training of doctoral students is designed to contribute to the formation of one of the key groups of competencies - research and self-education.

The basis for the research practice of doctoral students can be: Laboratory of Information Technologies; Systems Research Laboratory; Artificial Intelligence Laboratory; Non-destructive

testing laboratory; Laboratory of Robotics and Mechatronics; Laboratories of the University of Milan (Italy);

Analytical part

The EP management demonstrated the practical orientation of the educational program of doctoral studies "System Engineering", its meaningful connection with technical sciences, and in general its compliance with the requirements of standards in the context of individual specialties.

EEC recommendations

To discuss regularly the latest teaching methods and technologies based on modern achievements of world science and practice in the field of specialization.

EEC notes that according to 5 criteria of this standard, EP "8D06102-Systems Engineering" has 4 strong positions, 1 criterium has a satisfactory position.

(VII) OVERVIEW OF STRENGTHS / BEST PRACTICES FOR EACH STANDARD

"Educational program management" standard:

- EP management demonstrates its readiness to ensure transparency of the EP development plan based on the analysis of its functioning, the actual positioning of the OEand the focus of its activities on meeting the needs of the state, employers, students and other interested persons;

- the OEdemonstrates a clear definition of those responsible for business processes within the EP, an unambiguous distribution of job duties of personnel, delineation of the functions of collegial bodies;

- EP management demonstrates evidence of readiness for openness and accessibility for students, teaching staff, employers and other stakeholders.

- EP management is trained in educational management programs.

"Information Management and Reporting" Standard:

- the OEdemonstrates the existence of a system for collecting, analyzing and managing information based on the use of modern information and communication technologies and software and uses a variety of methods to collect and analyze information in the context of the EP;

- the OEestablished the frequency, forms and methods of assessing the management of the EP, the activities of collegial bodies and structural units, top management, the implementation of scientific projects;

- EP management demonstrates the existence of a communication mechanism with students, employees and other stakeholders, as well as mechanisms for resolving conflicts;

- the OEconfirms the implementation of procedures for processing personal data of students, employees and teaching staff on the basis of their documentary consent.

"Development and approval of educational programs" Standard:

- the OEdefined and documented procedures for the development of EP and their approval at the institutional level;

- the qualification awarded upon completion of the EP is clearly defined and corresponds to a certain level of the NQF;

- the labor intensity of the OP is clearly defined in Kazakhstani credits and ECTS.

"Continuous monitoring and periodic evaluation of educational programs" Standard:

- the OEhas created a system for monitoring and periodic evaluation of the EP, which provides for: changes in the needs of society and professional environment; expectations, needs and satisfaction of students with EP training; educational environment and support services and their compliance with the objectives of the EP.

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

- EP management demonstrates respect and attention to various groups of students and their needs, provides the opportunity for flexible learning paths; demonstrates the existence of mechanisms to support the autonomy of learners while providing guidance and assistance from the teacher.

"Students" Standard:

- The OEdemonstrates the existence of a policy for the formation of the contingent of students in the context of EP from admission to graduation and ensuring the transparency of its procedures. The procedures governing the life cycle of students (from admission to completion) are clearly defined, approved, published.

- EP management determines the procedure for the formation of the contingent of students, based on: minimum requirements for applicants; the maximum size of the group when conducting seminars, practical, laboratory and studio classes; analysis of available material and technical, information resources, human resources; analysis of potential social conditions for students, incl. providing places in the hostel.

- EP management demonstrates readiness to conduct special adaptation and support programs for newly admitted and foreign students;

- OEprovides for the possibility of providing EP graduates with documents confirming the acquired qualifications, including the achieved learning outcomes, as well as the context, content and status of the received education and evidence of its completion.

"Educational resources and student support systems" Standard:

- The OEdemonstrates the sufficiency of material and technical resources and infrastructure, taking into account the needs of various groups of students in the context of EP;

- EP management demonstrates the existence of support procedures for various groups of students, including information and counseling; technological support for students and teaching staff in accordance with the accredited educational program.

"Public Information" Standard:

- The OEdemonstrates the reflection on the web resource of information that characterizes it in general and in the context of the educational program;

- on the website of the EO, relevant information about the EP is published, including the expected learning outcomes; the qualification to be awarded upon completion of the EP; information about passing scores and learning opportunities provided to students; information about the employment opportunities of graduates;

- The EP management provides for a variety of ways to disseminate information, including the media, information networks to inform the general public and stakeholders.

(VIII) OVERVIEW OF RECOMMENDATIONS FOR IMPROVEMENT OF QUALITY

"Educational program management" standard

To assess the risks of the development of the educational program in full accordance with the University Development Strategy and develop a mechanism to reduce them;

The EP management should carry out systematic work to define, update and formulate the individuality and uniqueness of the educational program.

To organize the functioning of a communication channel through which any interested person can make innovative proposals to improve the activities of the EP to the management, as well as demonstrate examples of the analysis of these proposals and their implementation.

"Information Management and Reporting" standard

To pay constant attention to updating information on the EP on the University website and bringing it to students and all interested parties.

To ensure the involvement of doctoral students and teaching staff in the processes of collecting and analyzing information using ICT for the development and further management of EP development, making decisions based on them.

"Development and approval of educational programs" standard

To expand cooperation with leading foreign universities in order to develop joint educational programs.

To engage employers and stakeholders to conduct external expertise of the EP and create a decision-making mechanism based on its results.

The EP management should create a bank of scientific research topics in accordance with the current areas of science in the field of Computer Science and Technology.

"Continuous monitoring and periodic evaluation of educational programs" standard

To ensure the publication of the results of the revision of the content and structure of educational programs in the context of market changes, employers' requirements, social needs of society on an ongoing basis.

To provide activities for the regular discussion and amendments to the EP of the latest achievements of science and industry (for example, once a year at the scientific and methodological council or a scientific seminar of the department).

It is recommended to plan work on own research in the field of teaching methods for special disciplines of EP.

"Student-centered learning, teaching and assessment of progress" standard

To include in the Development Plans for educational programs the introduction of new forms and methods of teaching and learning, provide feedback on the effectiveness of their use.

To organize your own research in the field of teaching methods and assessment of learning outcomes.

To activate the academic mobility of both students and teaching staff by expanding international contacts of the university and educational structures.

"Students" standard

The EP management should involve the students of the EP in research and creative work with participation in grant funding, social projects, Erasmus + programs, as well as various creative competitions.

To continue work on the development of external and internal academic mobility of students.

To involve students in research publications in collaboration with the teaching staff;

To consider the possibility of attracting funds from the University and employers in facilitating the participation of doctoral students in international projects, conferences, international internships, as well as in obtaining international grants.

"Academic teaching staff" standard

To intensify work to attract the best foreign and domestic teachers.

To strengthen the provision of human resources with teachers with appropriate basic education.

To organize on an ongoing basis the passing of advanced training courses for teaching staff in the profile of accredited EP.

To intensify the participation of the teaching staff in economic contractual research, fundamental and applied projects of the Ministry of Education and Science and international projects;

To strengthen the publication activity of teaching staff and students in journals recommended by CCES and in journals with a non-zero impact factor;

To stimulate the participation of teachers in academic mobility programs, in joint scientific research with foreign partners and international projects.

"Educational resources and student support systems" standard

It is recommended that educational equipment and software used for mastering should be brought in line with similar ones used in modern practice.

To provide for the possibility of developing the teaching staff of the university of interactive training courses, such as MOOCs (Module-Oriented Open Courses), etc.

To explore the possibility of providing free WiFi access in the hostel.

"Public Information" standard

To pay close attention to the regular updating and updating on an ongoing basis of all the necessary information on the university website in the public domain, including, first of all, detailing information about implemented EP and awarded qualifications, about cooperation and interaction with partners in the field of business and education, opportunities employment of graduates.

"Standards in the context of individual specialties" standard

To discuss regularly the latest teaching methods and technologies based on modern achievements of world science and practice in the field of specialization.

No.	No.	Criteria for evaluation	Position of the educational organization			
			Strong	**Satisfactory**	**Suggests improvement**	**Unsatisfactory**
		"Educational program management" standard				
1	1.	The organization of higher and / or postgraduate education must have a published quality assurance policy. The quality assurance policy should reflect the link between research, teaching and learning.	+			
2	2.	The organization of higher and (or) postgraduate education must demonstrate the development of a culture of quality assurance, including in the context of EP.	+			
3	3.	Commitment to quality assurance should apply to any activity performed by contractors and partners (outsourcing), including the implementation of joint / double degree education and academic mobility.		+		
4	4.	The EP management demonstrates its readiness to ensure transparency in the development of the EP development plan based on an analysis of its functioning, the actual positioning of the OEand the focus of its activities on meeting the needs of the state, employers, students and other stakeholders. The plan must contain the timing of the start of the implementation of the educational program.	+			
5	5.	The EP management demonstrates the existence of mechanisms for the formation and regular revision of the EP development plan and monitoring its implementation, assessing the achievement of learning goals, meeting the needs of students, employers and society, making decisions aimed at continuous improvement of the EP.		+		
6	6.	EP management should involve representatives of stakeholder groups, including employers, students and teaching staff, in the formation of the EP development plan.			+	
7	7.	The EP management must demonstrate the individuality and uniqueness of the EP development plan, its consistency with national priorities and the development strategy of the organization of higher and (or) postgraduate education.			+	
8	8.	The organization of higher and (or) postgraduate education must demonstrate a clear definition of those responsible for business processes within the EP, an unambiguous distribution of staff duties, and the delineation of functions of collegial bodies.	+			
9	9.	EP management must provide evidence of the transparency of the educational program management system.			+	
10	10.	EP management must demonstrate the existence of an internal EP quality assurance system, including its design, management and monitoring, their improvement, decision making based on facts.		+		
11	11.	The EP's management must carry out risk management, including within the framework of the EP undergoing primary accreditation, as well as demonstrate a system of measures aimed at reducing the degree of risk.			+	
12	12.	The EP management must ensure the participation of representatives of employers, teaching staff, students and other interested parties in		+		

		the collegial management bodies of the educational program, as well as their representativeness in making decisions on the management of the educational program.				
13	13.	The OEmust demonstrate innovation management within the EP, including the analysis and implementation of innovative proposals.			+	
14	14.	EP management must demonstrate evidence of readiness for openness and accessibility for students, teaching staff, employers and other interested parties.		+		
15	15.	EP management should be trained in educational management programs.			+	
		Total by standard	**4**	**5**	**6**	
"Information Management and Reporting" standard						
16	1.	The OEmust demonstrate that it has a system for collecting, analyzing and managing information based on the use of modern information and communication technologies and software and that it uses a variety of methods to collect and analyze information in the context of the EP.	+			
17	2.	EP management must demonstrate the existence of a mechanism for the systematic use of processed, adequate information to improve the internal quality assurance system.			+	
18	3.	EP management must demonstrate fact-based decision making.		+		
19	4.	Within the EP, a system of regular reporting should be provided that reflects all levels of the structure, including an assessment of the effectiveness and efficiency of the activities of departments and departments, scientific research.		+		
20	5.	The OEshould establish the frequency, forms and methods for assessing the EP management, the activities of collegial bodies and structural units, top management, and the implementation of scientific projects.			+	
21	6.	TheOEmust demonstrate the determination of the order and ensuring the protection of information, including the identification of persons responsible for the accuracy and timeliness of the analysis of information and the provision of data.			+	
22	7.	An important factor is the availability of mechanisms for involving students, employees and teaching staff in the processes of collecting and analyzing information, as well as making decisions based on them.		+		
23	8.	EP management must demonstrate the existence of a communication mechanism with students, employees and other stakeholders, as well as mechanisms for resolving conflicts.	+			
24	9.	The OEmust demonstrate the existence of mechanisms for measuring the degree of satisfaction of the needs of teaching staff, personnel and students within the EP.		+		
25	10.	The OEshould provide for an assessment of the effectiveness and efficiency of activities, including in the context of EP.			+	
		The information intended for collection and analysis within the EP should take into account:				
26	11.	key performance indicators;			+	
27	12.	dynamics of the contingent of students in the context of forms and types;	+			
28	13.	academic performance, student achievement and expulsion;		+		

29	14.	satisfaction of students with the implementation of the EP and the quality of education at the university;		+		
30	15.	availability of educational resources and support systems for students.	+			
31	16.	The OEmust confirm the implementation of procedures for processing personal data of students, employees and teaching staff on the basis of their documentary consent.			+	
		Total by standard	**4**	**6**	**6**	
"Development and approval of basic educational programs" standard						
32	1.	The OEshould define and document procedures for the development of the EP and their approval at the institutional level.	+			
33	2.	EP management must ensure that the developed EP meets the established goals, including the expected learning outcomes.		+		
34	3.	EP management must ensure the availability of developed models of the EP graduate, describing the learning outcomes and personal qualities.		+		
35	4.	EP management must demonstrate the conduct of external examinations of the EP content and the planned results of its implementation.		+		
36	5.	The qualification awarded upon completion of the EP must be clearly defined and correspond to a certain level of the NQF.	+			
37	6.	EP management must determine the impact of disciplines and professional practices on the formation of learning outcomes.			+	
38	7.	An important factor is the ability to prepare students for professional certification.		+		
30	8.	EP management must provide evidence of the participation of students, teaching staff and other stakeholders in the development of the EP, ensuring their quality.			+	
40	9.	The complexity of the EP should be clearly defined in Kazakhstani credits and ECTS.	+			
41	10.	EP management must ensure that the content of academic disciplines and the planned results are consistent with the level of education (bachelor's, master's, doctoral studies).		+		
42	11.	The structure of the EP should provide for various activities that ensure the achievement of the planned learning outcomes by students.		+		
43	12.	An important factor is the correspondence between the content of the EP and the learning outcomes of the EP, implemented by organizations of higher and (or) postgraduate education in the EHEA.		+		
		Total by standard	**3**	**7**	**2**	
"Continuous monitoring and periodic evaluation of basic educational programs" standard						
44	1.	The OEshould determine the mechanisms for monitoring and periodic evaluation of the EP in order to ensure the achievement of the goal and meet the needs of students and society. The results of these processes should be aimed at continuous improvement of the EP.		+		

		Monitoring and periodic evaluation of the EP should include:				
45	2.	the content of the programs in the light of the latest achievements of science in a particular discipline to ensure the relevance of the taught discipline;		+		
46	3.	changes in the needs of society and professional environment;		+		
47	4.	workload and performance of students;	+			
48	5.	effectiveness of student assessment procedures;		+		
49	6.	expectations, needs and satisfaction of students with EP training;			+	
50	7.	educational environment and support services and their compliance with the objectives of the EP.	+			
51	8.	The OE, EP management must define a mechanism for informing all interested parties about any planned or taken actions in relation to the EP.			+	
52	9.	All changes made to the OP must be published.EP management must develop a mechanism for revising the content and structure of the EP, taking into account changes in the labor market, employers' requirements and the social demand of society.			+	
		Total by standard	**2**	**4**	**3**	
"Student-centered learning, teaching and assessment of progress" standard						
53	1.	EP management must ensure respect and attention to various groups of students and their needs, provide them with flexible learning paths.			+	
54	2.	EP management should provide for the use of various forms and methods of teaching and learning.		+		
55	3.	An important factor is the presence of our own research in the field of teaching methods of educational disciplines EP.			+	
56	4.	EP management must demonstrate the existence of feedback mechanisms on the use of various teaching methods and assessment of learning outcomes.		+		
57	5.	EP management must demonstrate the existence of mechanisms to support the autonomy of students with simultaneous guidance and assistance from the teacher.	+			
58	6.	EP management must demonstrate the existence of a procedure for responding to student complaints.	+			
59	7.	The OEmust ensure consistency, transparency and objectivity of the mechanism for assessing learning outcomes for each EP, including appeal.	+			
60	8.	The TOE must ensure that the procedures for assessing the learning outcomes of EP students are consistent with the planned results and program objectives. Criteria and assessment methods within the EP must be published in advance.		+		
61	9.	In the OE, mechanisms must be determined to ensure the achievement of learning outcomes by each EP graduate and the completeness of their formation must be ensured.		+		
62	10.	Evaluators should be familiar with modern methods of assessing learning outcomes and regularly improve their qualifications in this area.	+			
		Total by standard	**4**	**4**	**2**	
"Students" standard						

63	1.	The OE must demonstrate the existence of a policy for the formation of the contingent of students in the context of EP from admission to graduation and ensure the transparency of its procedures. The procedures governing the life cycle of students (from admission to completion) must be defined, approved, published.	+			
		EP management should determine the procedure for the formation of the contingent of students based on:				
64	2.	minimum requirements for applicants;		+		
65	3.	maximum group size for seminars, workshops, laboratory and studio sessions;		+		
66	4.	forecasting the number of government grants;		+		
67	5.	analysis of available material and technical, information resources, human resources;	+			
68	6.	analysis of potential social conditions for students, incl. providing places in a hostel.	+			
69	7.	EP management must demonstrate a readiness to conduct special adaptation and support programs for newly admitted and foreign students.		+		
70	8.	The OE must demonstrate that its actions are in accordance with the Lisbon Recognition Convention.	+			
71	9.	The OE 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.	+			
72	10.	EP management must demonstrate the existence of a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and non-formal education.		+		
73	11.	The OE should provide an opportunity for external and internal mobility of students of EP, as well as a willingness to assist them in obtaining external grants for training.			+	
74	12.	EP management must demonstrate a readiness to provide students with places of practice, to facilitate the employment of graduates, to maintain communication with them.		+		
75	13.	The OE should provide for the possibility of providing EP graduates with documents confirming the acquired qualifications, including the achieved learning outcomes, as well as the context, content and status of the education received and evidence of its completion.		+		
76	14.	An important factor is the availability of mechanisms for monitoring the employment and professional activity of EP graduates.	+			
		Total by standard	**6**	**7**	**1**	
"Academic teaching staff" standard						
77	1.	The OE must have an objective and transparent personnel policy, including in the context of EP, including recruitment, professional growth and development of personnel, ensuring the professional competence of the entire staff.	+			
78	2.	The OE must demonstrate the compliance of the staff potential of the teaching staff with the development strategy of the OE and the specifics of the EP.		+		
79	3.	EP management must demonstrate awareness of responsibility for their employees and provide them with favorable working conditions.	+			
80	4.	EP management must demonstrate the change in the role of the teacher in connection with the transition to student-centered learning.	+			

81	5.	The OEshould determine the contribution of the teaching staff of the EP to the implementation of the development strategy of the PA, and other strategic documents.	+			
82	6.	The OEshould provide opportunities for career growth and professional development of the teaching staff of the EP.		+		
83	7.	EP management must demonstrate a willingness to involve practitioners from relevant industries in teaching.		+		
84	8.	The OEmust demonstrate motivation for the professional and personal development of EP teachers, including encouragement for the integration of scientific activity and education, the use of innovative teaching methods.		+		
85	9.	An important factor is the readiness to develop academic mobility within the EP, to attract the best foreign and domestic teachers.		+		
		Total by standard	**4**	**5**		
		"Educational resources and student support systems" standard				
86	1.	The OEmust ensure a sufficient number of training resources and student support services that meet the goals of the EP.	+			
87	2.	The OEmust demonstrate the sufficiency of material and technical resources and infrastructure, taking into account the needs of various groups of students in the context of EP (adults, working people, foreign students, as well as students with disabilities).	+			
		EP management must demonstrate the existence of procedures for supporting various groups of students, including information and counseling. EP management must demonstrate the compliance of information resources with the EP specifics, including:	+			
88	3.	technological support for students and teaching staff in accordance with educational programs (for example, online training, modeling, databases, data analysis programs);	+			
89	4.	library resources, including the fund of educational, methodological and scientific literature on general education, basic and profiling disciplines on paper and electronic media, periodicals, access to scientific databases;	+			
90	5.	examination of research results, graduation theses, dissertations for plagiarism;		+		
91	6.	access to educational Internet resources;	+			
92	7.	functioning of WI-FI on the territory of the educational organization.		+		
93	8.	The OEshould strive to ensure that the educational equipment and software intended for use in the development of educational programs are similar to those used in the relevant industries.	+			
		Total by standard	**6**	**2**		
		"Public Information" standard				
		The OEmust publish reliable, objective, relevant information about the educational program and its specifics, which must include:				
94	1.	expected learning outcomes of the implemented educational program;	+			
95	2.	qualifications and (or) qualifications that will be awarded upon completion of the educational program;	+			
96	3.	approaches of teaching, learning, as well as the system (procedures, methods and forms) of assessment;		+		
97	4.	information about passing scores and learning opportunities	+			

		provided to students;				
98	5.	information on employment opportunities for graduates.	+			
99	6.	EP management should provide for a variety of ways to disseminate information, including the media, information networks to inform the general public and stakeholders.	+			
100	7.	Public awareness should include support and explanation of national development programs for the country and the system of higher and postgraduate education.	+			
101	8.	The OEmust demonstrate the reflection on the web resource of information characterizing it in general and in the context of educational programs.	+			
102	9.	An important factor is the availability of adequate and objective information about the ATS of the EP.		+		
103	10.	An important factor is informing the public about cooperation and interaction with partners within the EP.		+		
		Total by standard	**6**	**4**		
Standards in the context of individual specialties						
NATURAL SCIENCES, AGRICULTURAL SCIENCES, TECHNICAL SCIENCES, AND TECHNOLOGIES						
		The educational program of the directions "Natural Sciences", "Technical Sciences and Technologies" must meet the following requirements:				
104	1.	EP should include disciplines and activities aimed at gaining practical experience and skills in the specialty in general and major disciplines in particular, including: - excursions to enterprises for specialization (factories, workshops, research institutes, laboratories, training and experimental farms, etc.), - conducting individual classes or entire disciplines at the enterprise of specialization; - holding seminars to solve practical problems relevant for enterprises in the field of specialization, etc.	+			
105	2.	The Academic teaching staff involved in the education program should include, as full-time teachers, practitioners with long-term experience as full-time employees in enterprises in the area of specialization of the education program.	+			
106	3.	The content of all disciplines of the EP should be based and include a clear relationship with the content of fundamental natural sciences.		+		
107	4.	EP management should provide for measures to enhance practical training in the field of specialization.	+			
108	5.	EP management should provide for measures to enhance practical training in the field of specialization.	+			
		Total by standard	4	1		
		TOTAL	**43**	**45**	**20**	