



«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 expert commission for the evaluation for compliance with the standards of primary specialized accreditation educational program (Ex-ante)

6B05103 ENGINEERING ECOLOGY

NON-COMMERCIAL JOINT-STOCK COMPANY
«KAZAKH NATIONAL RESEARCH TECHNICAL UNIVERSITY
NAMED AFTER K.I. SATBAYEV»

Date of the visit of the EEC: from "19" to "21" April 2022

INDEPENDENT AGENCY FOR ACCREDITATION AND RATING
External Expert Commission

**Addressed to the
IAAR Accreditation
Council**



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(I) LIST OF DESIGNATIONS AND ABBREVIATIONS

AC - Academic calendar
BD - Basic disciplines
SAC - State Attestation Commission
SOSE - State obligatory standard of education
DET - Distance Educational Technologies
UNT - Unified National Testing
EHEA - European Higher Education Area
ECTS – European Credit Transfer System
ILC - Information and Library Complex
ICT - Information and Communication Technologies
IEP - Individual Curriculum
CCh - Component of choice
CTE - Credit technology of education
CED - Catalog of elective disciplines
MES RK - Ministry of Education and Science of the Republic of Kazakhstan
MEP - Modular Educational Program
R & D - Research work
SRWS - Research work of students
RC - Required component
GED - General Educational Disciplines
EP - Educational programs
MD - Major disciplines
F - Faculty
RIEL - Republican Interuniversity Electronic Library
RK - Republic of Kazakhstan
WC - Working Curriculum
IWS - Independent work of students
SRSP - Independent work of students under the guidance of a teacher
EMCD - Educational and methodological complex of the discipline

(II) INTRODUCTION

In accordance with Order No. 44-22-OD dated February 23, 2022 of the Director General of the Independent Accreditation and Rating Agency, from April 19 to April 21, 2022, an external expert commission assessed the compliance of the educational program 8D07110 Digital Engineering of Machinery and equipment with the standards of primary specialized accreditation of the educational program (Ex-ante) of the organization of higher and postgraduate education (put into effect by Order No. 68-18/1-OD dated May 25, 2018).

The report of the external expert commission (EAC) contains an assessment of the submitted educational programs by the criteria of the IAAR standards, recommendations of the EAC for further improvement of educational programs and parameters of the profile of educational programs.

Composition of the EAC:

The Chairman of the IAAR EEC – Alexander Cheslavovich Luschik, Doctor of Physical and Mathematical Sciences, Professor, Head of the Laboratory of Ion Crystal Physics at the Institute of Physics of the University of Tartu (Tartu, Estonia).

Coordinator of the IAAR EEC – Niyazova Guliyash Balkenovna, project manager for institutional and specialized accreditation of universities (Nur-Sultan, Republic of Kazakhstan).

Cluster 1. Primary specialized accreditation

6B05103
Engineering
ecology

IAAR expert – Berdenov Zharas Galimzhanovich, PhD, Associate Professor of the L.N. Gumilyov Eurasian National University (Nur-Sultan, Republic of Kazakhstan).

IAAR expert, student – Serikkaliev Tasbolat Serikkaliyly, Executive Director of the Branch of the Alliance of Students of the Higher Educational Institution in the West Kazakhstan region (Uralsk, Republic of Kazakhstan).

7M08601 **Water**
resources and water
use

IAAR expert – Mukhamedzhanova Rufina Rinatovna, Director of the Quality Department of the Almaty University of Energy and Communications named after G. Daukeev (Almaty, Republic of Kazakhstan).

8D07104 **Oil and**
gas and ore
geophysics

IAAR expert – Alexey Vladimirovich Lozhnikov, Doctor of Technical Sciences, Professor of the National Technical University "Dnipro Polytechnic" (Dnipro, Ukraine).

Cluster 2. Primary specialized accreditation

6B07305
Transport
construction,
7M07320
Transport
construction

IAAR expert – Rabat Ondabek Zhanakhmetuly, Doctor of Technical Sciences, Professor of the Kazakh Automobile and Road Academy named after L.B.Goncharov (Almaty, Republic of Kazakhstan).

6B07115
Technological
machines **and**
equipment **(by**
industry)

IAAR expert – Sembayev Nurbolat Sakenovich, Candidate of Technical Sciences, Associate Professor Toraigyrov University (Pavlodar, Republic of Kazakhstan).

IAAR expert, student – Bekmyrza Zhumash Aitzhanuly, student of EP 8D07102 Technological machines and equipment (mechanical

engineering) Kostanay Regional University named after A.Baitursynov (Kostanay, Republic of Kazakhstan).

8D07114
Nanomaterials and nanotechnologies
IAAR expert – Nazhipkyzy Meruert, Candidate of Chemical Sciences, Associate Professor of Al-Farabi Kazakh National University (Almaty, Republic of Kazakhstan).

Cluster 3. Primary specialized accreditation

7M11201
Occupational health and safety at work
IAAR expert – Baytelesova Laura Ilyasovna, Candidate of Chemical Sciences, Associate Professor of the West Kazakhstan Innovation and Technology University (Uralsk, Republic of Kazakhstan).

8D07304
Engineering systems and networks
IAAR expert – Kolpakova Valentina Pavlovna, Doctor of Technical Sciences, Associate Professor of D. Serikbayev East Kazakhstan Technical University (Ust-Kamenogorsk, Republic of Kazakhstan).

8D07305
Construction and production of building materials and structures
IAAR expert – Rakhimov Murat Amanzholovich, Candidate of Technical Sciences, Associate Professor of Karaganda Technical University (Republic of Kazakhstan).

8D07303
Construction and production of building materials and structures.
IAAR expert – Saktaganova Nargul Amanovna, PhD, Associate Professor of Korqyt ata Kyzylorda University (Kyzylorda, Republic of Kazakhstan).

IAAR expert, employer – Yuri A. Pilipenko, Chairman of the International Association of Manufacturers of Goods and Services "Expobest" (Almaty, Republic of Kazakhstan).

Cluster 4. Primary specialized accreditation

8D11301
Transportation services
IAAR expert – Pak Yuri Nikolaevich, Doctor of Technical Sciences, Professor of Karaganda Technical University (Karaganda, Republic of Kazakhstan).

7M04104 Executive MBA
IAAR expert – Inna Sidorova, MBA, Master of Economics, Business Manager, BGC Partners, (London, United Kingdom).

8D04102
Management
IAAR expert – Maya Arzayeva, Candidate of Economic Sciences, Associate Professor of the Academy of Logistics and Transport (Almaty, Republic of Kazakhstan).

IAAR expert, student – Kereeva Tansholpan Makhambetkyzy, 2nd year student of EP 7M04106 Aktobe Regional University named after K. Zhubanov (Aktobe, Republic of Kazakhstan).

Cluster 5. Primary specialized accreditation

6B07114
Biomedical engineering
IAAR expert – Oksana Yurikova, PhD, Senior lecturer at Al-Farabi Kazakh National University (Almaty, Republic of Kazakhstan).

6B07112
Electronic and Electrical Engineering
IAAR expert – Serik Karataevich Zhumazhanov, Candidate of Technical Sciences, Senior lecturer at the Kazakh Agrotechnical University named after S.Seifullin (Nur-Sultan, Republic of Kazakhstan).

IAAR expert – Shunkeev Kuanyshbek Shunkeevich, Doctor of Physical and Mathematical Sciences, Professor of Aktobe Regional University named after K.Zhubanov (Aktobe, Republic of Kazakhstan).

8D06105
Information security systems

6B07112
Electronic and
Electrical
Engineering

IAAR expert, student – Talipova Janel Sairanovna, 2nd year student of EP 7M07105 Automation and Management of Kazakh Agrotechnical University named after S.Seifullin (Nur-Sultan, Republic of Kazakhstan).

Cluster 6. Primary specialized accreditation

8D06104
Cybernetics and
artificial
intelligence

IAAR expert – Gnatushenko Vladimir Vladimirovich, Doctor of Technical Sciences, Professor of the National Technical University "Dnipro Polytechnic" (Dnipro, Ukraine).

6B07106
Engineering
mechanics

IAAR expert – Bakhtiyar Balzhan Turepashkyzy, Candidate of Technical Sciences., Associate Professor of the Academy of Logistics and Transport (Almaty, Republic of Kazakhstan).

8D07110
Digital engineering
of machinery and
equipment

IAAR expert – Andrey Kichuk, President of the National Agency for Quality Assurance in Education and Research - ANACEC (Chisinau, Moldova).

8D07109
Innovative
technologies and
new inorganic
materials

IAAR expert – Mashan Togzhan Turgaliyeva, Candidate of Chemical Sciences, Associate Professor of L.N. Gumilyov Eurasian National University (Nur-Sultan, Republic of Kazakhstan).

IAAR expert, student – Asylkhanova Dana Dauletkyzy, studying double-degree EP 7M07121 Nanomaterials and Nanotechnologies in Chemistry of Al-Farabi Kazakh National University – Peoples' Friendship University of Russia (Almaty, Republic of Kazakhstan).

(III) PRESENTATION OF THE EDUCATIONAL ORGANIZATION

The university was founded in 1934 as the Kazakh Mining and Metallurgical Institute. The Institute played an important role in the formation and development of scientific and practical activities in the field of geology, mining, metallurgy of Kazakhstan. The scientific school, formed on the basis of the institute, made a great contribution to the development of the ore resource base of the republic and the organization of new technologies for mining and metallurgical production.

In January 1994, KazPTI named after V.I. Lenin was transformed into the Kazakh National Technical University (KazNTU), which was entrusted with the functions of training personnel for the country according to a multi-level structure adopted in world practice, as well as the development of curricula and training programs in technical specialties.

The university has become a base for providing engineering personnel to the industry of the republic and one of the main sources of personnel for scientific, state and public figures in Kazakhstan. Its history is connected with the names of such famous scientists and cultural figures as Omirkhan Baikonurov, Kanysh Satbayev, Zhamal Kanlybayeva, Ilyas Yesenberlin, Kazbek Valiev, Shakhmardan Yessenov, Akzhan al-Mashani, Bakhyt Sultanov, Askar Zhumagaliyev, Aikyn Tolepbergen, Beibut Atamkulov.

In 2001, by the Decree of the President of the Republic of Kazakhstan N.A. Nazarbayev University was given a special status, and in 2014 - the category "National Research Technical University". In 2017 KazNRTU named after K.I. Satbayev was renamed Satbayev University.

NJSC "Kazakh National Research Technical University named after K.I. Satbayev" has a license No. KZ56LAA00005304 dated July 11, 2015 for conducting educational activities (higher education, postgraduate education), issued by the state institution "Committee for Control in Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan".

In the field of quality management, the activities of KazNRTU named after K.I. Satbayev meets the requirements of the ISO 9001:2015 standard regarding the conduct of scientific and educational work, the development and provision of educational services for the training of personnel with higher and postgraduate education based on the state compulsory education standards of the Republic of Kazakhstan in accordance with the area of licensing and accreditation, this is evidenced by a certificate, issued by the Russian Register Certification Association.

KazNRTU named after K.I. Satbayev occupies a leading position in domestic and international rankings of universities of the national ranking among technical universities in Kazakhstan.

To date, Satbayev University has: 10 institutes, 6 research institutes, 27 departments, 3 scientific and educational centers, 114 teaching and research laboratories, 11 scientific laboratories, 2 training grounds. Satbayev University occupies a leading position in national and international rankings and is an associate member of 9 associations and consortiums in the field of education, science and technology.

Satbayev University has the following accreditations and certificates:

Perpetual state license No. KZ56LAD00005304

ISO 9001:2015 Quality Management System Certificate

IQAA (Kazakhstan) - institutional accreditation of the university

ASIIN (Germany) — 16 educational programs

IQAA (Kazakhstan) — 47 educational programs

IAAR (Kazakhstan) — 34 educational programs

KAZSEE - 2 educational programs

In 2019, Satbayev University topped the National Ranking of the Best Technical Universities in Kazakhstan and became the leader in the ranking according to the reputational assessment of employers and experts.

The university has an effective system for monitoring the quality of education, as a result of which an internal corporate management environment has been created that allows the teaching staff to be fully involved in the process of achieving goals for the quality of education.

The accredited educational program 6B05103 Engineering Ecology is served by the Department of Chemical Processes and Industrial Ecology (here in after referred to as ChP&IE) of KazNRTU named after K.I. Satbayev. The department was organized in June 2020 as part of the Institute of Chemical and Biological Technologies, and in the summer of 2021, as a result of the liquidation of the institute, the department became part of the Institute of Geology and Oil and Gas of KazNTU named after K.I. Satbayev. The Department of ChP&IE is the assignee of such departments as "Chemical Technology of Inorganic Substances", "Applied Chemistry", "Applied Ecology", "Life Safety".

The need to form this department is due to the relevance of solving the problems of rational use of natural resources, the creation and comprehensive development of innovative technological processes and production of waste-free and low-waste methods; environmentally friendly functioning of the technosphere within the framework of the new industrial and innovative development of the Republic of Kazakhstan.

The requirement of the time is the training of qualified specialists capable of solving problems related to the creation of new chemical processes and technologies that have not only high technical and economic, but also environmental indicators; implementation of processes and productions in accordance with the observance of legislative and regulatory national and international standards; ensuring sustainable development and environmental quality management, including environmental monitoring methods. In this regard, in June 2021, a new educational program "Engineering Ecology" was opened by the teaching staff of the Department of ChP&IE.

(IV) DESCRIPTION OF THE PREVIOUS ACCREDITATION PROCEDURE

Educational program 6B05103 Engineering Ecology, an external assessment for compliance with the standards of primary specialized accreditation of an educational program (Ex-ante) of an organization of higher and postgraduate education (put into effect by order No. 68-18 / 1-OD of May 25, 2018) is being held for the first time.

(V) DESCRIPTION OF THE EEC VISIT

The work of the EEC was carried out on the basis of the approved Program of the visit of the expert commission for quality assessment for compliance with the standards of primary specialized accreditation of educational programs of NJSC “Kazakh National Research Technical University named after K.I. Satbayev” from April 19 to April 21, 2022.

In order to coordinate the work of the EEC, on April 15, 2022, an introductory On-line meeting was held, during which powers were distributed among the members of the commission, the schedule of the visit was specified, and agreement was reached on the choice of assessment methods.

To obtain objective information about the quality of educational programs and the entire infrastructure of the university, to clarify the content of self-assessment reports, on-line / off-line meetings were held with the rector, vice-rectors of the university in areas of activity, heads of structural divisions, directors of institutes, heads of departments, teachers, students. A total of 89 representatives took part in the meetings (Table 1).

Table 1 - Information about the focus groups that took part in the meetings with the EEC IAAR:

Category of participants	Number
Chairman of the Board - Rector	1
Vice-rectors	4
Heads of structural divisions	18
Institute directors	6
Heads of departments	13
Teachers of EP 1.4 cluster	22
Students of EP 1.4 cluster	25
Total	89

During the visual inspection, the members of the EEC got acquainted with the state of the material and technical base through videos, watched the roles of the practice bases, and also looked at the department that implements accredited educational programs.

For the period of accreditation, remote classes were attended: within the framework of EP 6B05103 Engineering Ecology, Discipline - CHE4161 Introduction to the specialty, teacher: Yelikbaev Bakhytzhon Koshkinbaevich.

During the work, members of the EEC conducted a visual inspection of the bases of practices at the link of the videos: “Research laboratory of the Kazfogat air service”, “Research Institute of Ecology in Almaty”, “Nauka Stroy” LLP.

In accordance with the accreditation procedure, a survey of 71 teachers and 41 students was conducted.

In order to confirm the information presented in the Self-Assessment Report, external experts analyzed the documentation of the university. Along with this, the experts studied the Internet positioning of the university through the official website of the university <https://satbayev.university.ru>

(VI) COMPLIANCE WITH THE STANDARTS OF SPECIALIZED ACCREDITATION (EX-ANTE)

6.1. Standard «Management of Educational Programme»

- *The organisation of higher and (or) postgraduate education should have a published quality assurance policy. The quality assurance policy should reflect the link between research, teaching and learning.*
- *The organisation of higher and (or) postgraduate education should demonstrate the culture's development of quality assurance, including in EP context.*
- *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.*
- *EP management demonstrates readiness to ensure transparency of EP development plan based on the analysis of its functioning, EO actual positioning and the focus of its activities on meeting the needs of the state, employers, students and other concerned parties. The plan should contain the timing of the start of the implementation of the educational programme.*
- *EP management demonstrates the existence of mechanisms for the formation and regular revision of EP development plan and monitoring its implementation, assessing the achievement of learning goals, meeting the students' needs, employers and society, making decisions aimed at continuous improvement of EP.*
- *EP management should involve representatives of stakeholder groups, including employers, students and HETP in the formation of EP development plan.*
- *EP management should demonstrate the individuality and uniqueness of EP development plan, its consistency with national priorities and the development strategy of the organisation of higher and (or) postgraduate education.*
- *The organisation of higher and (or) postgraduate education should demonstrate a clear definition of those responsible for business processes within EP framework, an unambiguous distribution of job duties of personnel, delineation of collegial bodies functions.*
- *EP management should provide evidence of the transparency of the educational programme management system.*
- *EP management should demonstrate the existence of EP internal quality assurance system, including its design, management and monitoring, their improvement, decision-making based on facts.*
- *EP management should carry out risk management, including within EP framework, undergoing initial accreditation, as well as demonstrate a system of measures aimed at reducing the risk degree.*
- *EP management should ensure the participation of representatives of employers, HETP, students and other concerned parties in the collegial management bodies of the educational programme, as well as their representativeness in making decisions on the educational programme management.*
- *EO should demonstrate innovation management within EP framework, including the analysis and implementation of innovative proposals.*
- *EP management should demonstrate evidence of readiness for openness and accessibility for students, HETP, employers and other concerned parties.*
- *EP management should be trained in educational management programmes.*

The evidentiary part

The quality policy is closely linked to the strategy of the university. The University in its activities seeks to improve the quality of educational services provided. The activities of the University are carried out on the basis of the strategic development plan of the NJSC "Kazakh National Research Technical University named after K.I. Satbayev" for 2022-2026 in accordance with the stated mission, vision and strategic directions.

Activities for the implementation of the EP "Engineering Ecology" in the direction of preparation 6B052 Environment, consistent with the mission, vision and values, with the strategy of Satbayev University and are carried out on the basis of the laws "On Education", "On Science", "On Languages in the Republic of Kazakhstan", regulatory documents of the Ministry of Education and Science of the Republic of Kazakhstan and internal regulatory documents of Satbayev University.

The management of the accredited EP periodically undergoes training in education management programs as part of advanced training, and also introduces teaching staff to innovations in the field of education and science at university training seminars, which was confirmed by the results of visiting the department.

To maintain the effectiveness of the educational program, permanent activities are carried out to further improve the content of the EP, by involving representatives of employers, representatives of practice bases in determining the directions for the development of educational programs and their management, which is confirmed by the minutes of the meeting of the department. All interested parties take part in the revision of the EP, which makes it possible to identify the real requirements of production formulated by employers and other stakeholders.

Accredited EP 6B05103 Engineering Ecology is published and available to all its users on the tabs of the main website of the University and the department. Stakeholders (trainers, teaching staff, employers) are involved in the development of the EP and the development plan, which is reflected in the protocols of the structural units, and was also confirmed during the interview. The management of the EP also needs to ensure the availability and transparency of the EP development plan.

The university's quality policy reflects the relationship between research, teaching and learning. The research activity of the teaching staff is the basis of the quality of the educational process, which is used in the development of elective disciplines and R&D of the teaching staff.

Based on the development program of Satbayev University for 2022-2026. at the department "Department of Chemical Processes and Industrial Ecology" serving the accredited educational program 6B05103 Engineering Ecology - the quality policy of the department for 2021-2023 was developed and approved.

(<https://official.satbayev.university/download/document/24367/%D0%9F%D0%BE%D0%BB%D0%B8%D1%82%D0%B8%D0%BA%D0%B0%20%D0%B2%20%D0%BE%D0%B1%D0%BB%D0%B0%D1%81%D1%82%D0%B8%20%D0%BA%D0%B0%D1%87%D0%B5%D1%81%D1%82%D0%B2%D0%B0.pdf>).

During the visit of the EEC of the Department of "Chemical Processes and Industrial Ecology", the commission for the accredited educational program was presented with: The development plan of the EP, educational documents of the EMCS, EMCD, MEP, Syllabuses of disciplines for the current year, educational and methodological support of the EP (textbooks, monographs). Found confirmation, in the form of protocols of structural divisions - implementation, monitoring, control and examination of the accredited EP.

The management of the University has demonstrated accessibility in cooperation with students, there is information and contact details on the university website of the Rector, vice-rectors. It is necessary to place such information of the heads of structural divisions (directors of the institute, heads of departments) to provide feedback with stakeholders.

Analytical part

The data of the analysis by experts of the EEC IAAR allow us to conclude that the assessment of the effectiveness of the measures taken to improve the accredited EP is carried out through a constant analysis of the adopted plans for the development of departments, the results of certification of teaching staff and students (sessions), at the level of each teacher, department, institute. The Commission notes the unavailability of the EP development plans on the website of the University, as well as the WC on the website in an unreadable form (very small).

The implemented EP 6B05103 Engineering Ecology is new and unique, which was dictated by the new reality of industrial and innovative development of environmental science, with the introduction of a new Environmental Code in the Republic of Kazakhstan, the possibility of training environmental engineers in industries. The strengths of the EP are: multidisciplinary, uniting the natural sciences, the sciences of production (mining, mineral processing; oil and oil refining industry; ferrous and non-ferrous metallurgy; energy; mechanical engineering); study of

environmental problems on the scale of an enterprise, industry, city, region, world; opportunities for scientific research in the field of protection of environmental components.

According to the accredited EP 6B05103 Engineering Ecology, the EEC notes a high level of cooperation and exchange of experience with industrial enterprises, as part of the invitation of specialists from the production part-time for teaching. Also, there is a clear work on comparing KEDs and EPs with the leading universities of the Republic of Kazakhstan, as part of the implementation of the uniqueness of their own EP. The commission also notes the weak participation in scientific projects of the teaching staff of the department. The last project ended in 2020, after that there are no implementing projects and the participation of the teaching staff of the department in projects.

The EEC Commission notes the absence of contact details for the heads of structural divisions (directors of the institute, heads of departments).

Questioning of teaching staff given during the visit of the EEC IAAR showed that involvement in the process of making managerial and strategic decisions is good - 59.2%, very good - 28.2%, relative to 11.3%, poor 1.4%.

Strengths/Best practices

- The management of the EP each semester involves representatives of stakeholder groups, namely practitioners from production, students and teaching staff in the formation of a development plan for the EP, which is confirmed by the protocols;

- The management of the EP ensures the participation of representatives of employers, teaching staff, students and other interested parties in the collegiate management bodies of the educational program, as well as their representativeness in making decisions on the management of the educational program;

- The management of the EP annually undergoes training in education management programs, which is confirmed by certificates;

Recommendations of the EEC

- The management of the EP, by September 2022 (new academic year), to ensure the availability of the EP Development Plan on external resources (Internet resources, the website of the University, department) to ensure transparency and timely decision-making based on facts;

- The management of the University, before the new academic year (September 2022), to ensure the availability of WCs on the university website in a readable form, with the proposed model of the graduate;

- As part of the proof of readiness for openness and accessibility of interested parties, the management of structural divisions, in particular the directors of institutes and heads of departments, ensure the availability of contact details of the heads of divisions and teaching staff until July 2022;

- As part of the introduction of innovative proposals in the educational process, the leadership of the EP to motivate the teaching staff to actively participate in competitions for grants for research projects.

The conclusions of the EEC according to the criteria::

According to the standard "Management of the educational program", the educational program 6B05103 Engineering Ecology has 3 strong positions and 12 satisfactory positions.

6.2. Standart «Information Management and Rerorting»

- *EO should demonstrate the existence of 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 EP context.*

- *EP management should demonstrate the existence of a mechanism for the systematic use of processed, adequate information to improve the internal quality assurance system.*
- *EP management should demonstrate decision-making based on facts.*
- *Within EP framework, a system of regular reporting should be provided reflecting all levels of the structure, including an assessment of the performance and efficiency of the unit activities and departments, scientific research.*
- *EO should establish the frequency, forms and methods of assessing EP management, activities of collegial bodies and structural units, top management, the implementation of scientific projects.*
- *EO should 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 data provision.*
- *An important factor is the availability of mechanisms for involving students, employees and HETP in the processes of collecting and analyzing information, as well as making decisions based on them.*
- *EP management should demonstrate the existence of a communication mechanism with students, employees and other concerned parties, as well as mechanisms for resolving conflicts.*
- *EO should demonstrate the existence of mechanisms for measuring the degree of satisfaction of the HETP needs, personnel and students within EP framework.*
- *EO should provide for the assessment of the performance and efficiency of activities, including in EP context.*
- *The information intended for collection and analysis within EP framework should take into account:*
 - key performance indicators;*
 - the dynamics of the students' contingent in the context of forms and types; the level of academic achievement, student achievement and expulsion;*
 - students' satisfaction with EP implementation and the quality of education at the HEI; availability of educational resources and support systems for students.*
- *EO should confirm the implementation of procedures for processing personal data of students, employees and HETP upon their documentary consent.*

The evidentiary part

NJSC “Kazakh National Research Technical University named after K.I. Satbayev” ensures the functioning of the system for collecting, analyzing and managing information based on the use of modern information and communication technologies and software. The following main information technologies have been introduced in the management activities of Satbayev University: the information website of the university (satbayev.university), the automated information system for managing the educational process "SSOSatbayev", the distance learning system, the university's electronic library, information systems and resources of the library complex. Information is protected using differentiation in the SSOSatbayev system, according to functional duties, as well as the use of logins and passwords.

The university has implemented information management processes, including collection and analysis to evaluate performance, determine the degree of implementation of the mission, goals, objectives and opportunities for continuous improvement of the services provided. Information management processes are enshrined in documents regulating the life cycle of the university and are reflected in the Regulations of the QMS. Systems for collecting, analyzing and managing information at the University are an integral part of the planning system, quality system, process approach, university management.

The SSOSatbayev system used does not fully provide information intended for the operational and strategic management of the university. By means of the SSOSatbayev system, it is not possible to collect information on science, the educational process and personal achievements of students and teaching staff (for example, the formation of a report on the science

of the department, an adviser report, a report on the formation of EMCD, syllabuses, etc.). Subsections of the University website do not fully provide interaction between students and teaching staff, there is no contact information for teaching staff.

Within the framework of the accredited EP, there is a regular reporting system that reflects all levels of the structure, including an assessment of the effectiveness and efficiency of the departments, according to the QMS (report of the department, institute). The departments serving the evaluated EP have all the necessary tools for the effective management of training programs and other activities: regulatory documentation (logs of mutual visits to classes, open classes, etc.); questionnaires; annual monitoring in the main areas of education; information and analytical materials; reports of the department on scientific, educational and methodological and educational work.

Interviews of the EEC members with the teaching staff, as well as the submitted documents at the department showed that in all departments of the university, office work is carried out in accordance with the approved nomenclature of cases, the safety and archiving of documents is ensured, work is underway to switch to electronic document management and improve the SSOSatbayev system.

The visit of the EEC confirmed that the scientific library of Satbayev University has access to foreign databases Clarivate Analytics, Springer Link, Science, near abroad polpred.com (free), Lan, to domestic databases with the Republican Interuniversity Electronic Library.

The official site operates in three languages: Kazakh, Russian and English, there is also a version of the site for the visually impaired.

The degree of satisfaction of students and teaching staff of the EP is carried out by the university by monitoring the opinions of staff studying through direct and anonymous questionnaires through an electronic resource. The University has a Student and Advisor Support Center where students and teachers can seek advice.

Material and technical resources and infrastructure of NJSC KazNRTU named after. K.I. Satbayev are quite sufficient to ensure the necessary quality of education. According to the results of the survey of the teaching staff, the commission of the EEC revealed an insufficient number of modern computers serving the accredited educational program. Also, by interviewing the heads of departments, it was found out about the incomplete implementation of applications for the purchase of equipment.

Analytical part

The main mission of NJSC KazNRTU named after K.I. Satbayev: "Science and education for the benefit of man", which implies the training of highly professional competitive personnel of the new generation, in demand in the domestic and international labor market. The university strives to become a leading research, technical and educational center for the backbone sectors of the country's economy, and to be in the TOP 300 universities in the world by 2026. The quality policy is published on the main website of the university.

Based on the results of the online visit, the EEC notes that the implementation of the strategic goals of the department serving accredited EPs is carried out gradually through the planning system. The members of the EEC confirm that the department serving the evaluated EP has annual and long-term development plans, which are annually adjusted and supplemented according to the proposals of the stakeholders.

Based on the results of studying the EP development plan, the commission of the EEC for the accredited program came to the conclusion that the management of the accredited EP is working to identify and assess risks in accordance with the strategic development plan of the university.

The interview showed that as part of the implementation of the plan to improve the educational, educational, scientific and methodological activities of students and teaching staff, the university management holds regular meetings to exchange views. The implementation of the

decisions taken is considered at the meetings of the departments at the end of the academic year (minutes of the meeting of the department).

The department serving the evaluated EP has plans and reports for 5 years, the protocols are maintained in accordance with the established requirements of the QMS office work. Department reports on science and reports of advisors in an unreadable form, the results of publications of each teacher are not shown, there is no plan for science on the implementation of scientific achievements.

The Commission notes that the University has a system of informing all employees, faculty, students and undergraduates through both paper and electronic distribution of internal and external documents to structural divisions via mail.

The official website of the university and sections of the website of the department are used as sources of informing students. The Commission of the EEC notes the absence of reference wall stands and information boards on which it is possible to place the schedule of training sessions, schedules of the educational process and other important information.

The EEC Commission notes the lack of involvement of teaching staff and students in the process of collecting relevant information.

Questioning of teaching staff given during the visit of the EEC IAAR showed involvement in the process of making managerial decisions: Fully satisfied - 53.5%, partially satisfied - 33.8%, not satisfied. - 5.6%.

Strengths/Best practices

Not Identified.

Recommendations of the EEC

- The university management should systematize the reporting of structural units (departments and institutes) on assessing the effectiveness and efficiency of scientific achievements and research of teaching staff and students (readable report forms on the science of the department and institute with scientometric indicators of each teacher, including data on the conduct of a scientific project at the department).

- To the management of the EP, before the new academic year (September 2022), ensure the availability of information stands in the buildings for students and stakeholders (information about the department and educational programs, schedule, information about teaching staff, etc.).

- The management of the university should improve the SSO Satbayev system to ensure the collection, analysis and management of objective information (ensure the ability of students and teaching staff to enter data on science, on personal achievements into the system, which will allow the scientific divisions of the university (department of science, department of science) to independently form reports by structural divisions), until September 2022.

- Using modern ICT capabilities, the management of the EP, before the new academic year, develop a mechanism for involving students, employees and teaching staff in the process of collecting and analyzing information (introducing published articles, personal achievements (participation in the project, advanced courses, editing, etc.) achievements to the SSO Satbayev system.

Conclusions of the EEC according to the criteria:

According to the standard "Information Management and Reporting", the educational program 6B05103 Engineering Ecology has 15 positions of satisfactory and 1 position suggesting improvements.

6.3. Standard «Development and Approval of the Educational Programme»

• *EO should define and document the procedures for EP development and its approval at the institutional level.*

- *EP management should ensure that the developed EP meets the established objectives, including the expected learning outcomes.*
- *EP management should ensure the availability of developed models of EP graduate, describing the learning outcomes and personal qualities.*
- *EP management should demonstrate the performance of external examinations of EP content and the planned results of its implementation.*
- *The qualification awarded upon EP completion should be clearly defined and correspond to a certain NQS level.*
- *EP management should determine the influence of disciplines and professional practices on the formation of learning outcomes.*
- *An important factor is the ability to prepare students for professional certification.*
- *EP management should provide evidence of the participation of students, HETP and other stakeholders in EP development, ensuring their quality.*
- *EP complexity should be clearly defined in Kazakhstani credits and ECTS.*
- *EP management should ensure that the content of academic disciplines and planned results are consistent with the level of education (bachelor's, master's, doctoral studies).*
- *EP structure should provide for various types of activities to ensure that students achieve the planned learning outcomes.*
- *An important factor is the correspondence between EP content and EP learning outcomes, implemented by institutions of higher and (or) postgraduate education in the EHEA.*

The evidentiary part

The University has defined and documented the procedures for the development of EPs and their approval at the institutional level in accordance with the Rules for the Development of Educational Programs at Satbayev University (P 029-04-01.1.01-2020). The development and approval of educational programs at the university is carried out in accordance with the provisions of regulatory legal acts in the field of higher and postgraduate education. At the same time, all relevant subjects of the University, teaching staff, departments, institutes are involved. Implementation mechanisms, open and public, decision-making is collegial. The scientific level and goals of educational programs meet the requirements, are consistent with the mission of the university and meet the needs of potential employers.

EP "6B05103-Engineering Ecology" is being implemented by KazNRTU named after. K.I. Satbayev in the direction of preparation 6B052 Environment, GEP B051 Environment and represents a system of documentation that regulates the goals, establishes the necessary conditions, technologies and content of the educational process, which determines the quality of bachelor's training.

The content of the accredited EP is developed in accordance with the requirements of the scientific, theoretical and practical direction of professional and social competence. The management of the EP creates a mechanism for monitoring the satisfaction of students with the activities of the university in general and individual services in particular, and the functioning of the feedback system, which includes the prompt presentation of information on the results of assessing students' knowledge.

The quality assessment of the educational program was carried out on the basis of the analysis of curricula, a catalog of elective disciplines, a working curriculum for the academic year, a survey of teaching staff and students. The content of the disciplines of the accredited EP corresponds to the level of education. The goals of the educational program are reflected in the educational and methodological complexes of the discipline, taking into account the logic of the academic interconnection of disciplines, their sequence and continuity, and a clear focus on the future. The structure of the EP includes two types of practice (educational and industrial) after each semester of study. All of the above is reflected in the MEP for accredited EPs. For each discipline of the EP, key competencies are identified.

The results of interviewing the teaching staff and students showed their involvement in the development of the EP and the EP development plan (protocols of the meeting of the departments with the participation of stakeholders are presented).

EEC during the interview, as well as through the presented video clips, the conditions for passing and conducting the practice were demonstrated. There is a connection between disciplines and different types of professional practices on the formation of competencies of learning outcomes, taking into account the specifics of the EP and the practical base. Bases of practices of the accredited EP "6B05103-Engineering Ecology": Air Service Research Laboratory Kazphosphate, Research Institute of Ecology in Turkestan, Nauka Stroy LLP.

Analytical part

The University has determined the procedure for developing and approving the educational program, including the procedures for reviewing and monitoring the quality of the educational program by interested parties (reviews and minutes of discussion were presented to the EEC commission during the visit). The procedure for assessing the quality of the educational program is carried out every semester, according to the development plan of the EP, which makes it possible to constantly update the component of choice based on consumer requirements.

When implementing the educational program, the necessary integrity is ensured, combining the required ratio between the theoretical and practical components of the educational process. The content of the modules, all types of practice and final work are aimed at achieving the goals of the EP and the acquisition by students of professional and general cultural competencies.

The structure and content of the WC, CED, syllabuses, EMCD are formed in accordance with the internal regulatory documents of the university.

Strengths/Best practices

- Revision every six months of the content and structure of the EP, taking into account changes in the labor market, the requirements of employers and the social demand of society.
- The management of the EP demonstrated the harmonization of professional practices with the educational process, after each semester, students undergo internships at enterprises, directly on the basis of the theoretical material they have studied.
- Teaching and teaching staff are directly involved in the development of the EP and ensuring its quality.

Recommendations of the EEC

- Ensure the availability of the graduate model of the accredited study program on the university website until 2023.

Conclusions of the EEC according to the criteria:

According to the standard "Development and approval of the educational program", the educational program 6B05103-Engineering Ecology has 3 strong positions and 9 satisfactory positions.

6.4. Standard «On-Going Monitoring and Periodic Review of Educational Programme».

- *EO should define mechanisms for monitoring and EP periodic evaluation 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 EP continuous improvement.*
- *Monitoring and EP periodic evaluation should provide for:*
 - *the content of the programmes in the light of the latest scientific achievements in a specific discipline to ensure the relevance of the taught discipline;*

- *changes in the needs of society and the professional environment; workload, the level of academic achievement and students' graduation; the effectiveness of student assessment procedures;*

- *expectations, needs and satisfaction of students with EP training;*

- *educational environment and support services and their compliance with the objectives of EP.*

- *EO, EP management should define a mechanism for informing all concerned parties about any planned or taken actions in relation to EP.*

- *All changes made to EP should be published.*

- *EP management should develop a mechanism for revising EP content and structure, considering changes in the labor market, employers' requirements and social demands of society.*

The evidentiary part

The university has defined the procedure for monitoring, analysis and revision of educational programs. Based on the results of the visit and the meetings held, the Commission notes that the monitoring uses a feedback mechanism (survey, interviews, questioning of teaching staff, students). Monitoring and periodic evaluation of the educational programs being evaluated are aimed at achieving its goals, the full formation of the planned learning outcomes. EP improvement planning is implemented using quality management tools. Measures are being developed to improve processes, which are reflected in the documentation of the quality assurance system on the website of the university

Monitoring of the implementation of the EP and the educational achievements of students is carried out twice a year. Analysis of the correspondence of the name and content of disciplines to current directions in the development of science is carried out by reviewing educational programs and catalogs of elective disciplines by employers. In addition, any interested person can submit their proposals to the university website, where these documents are posted.

To control the quality of teaching and the level of knowledge of students, departmental and university control is regularly carried out. The departments monitor the quality of conducting teaching staff classes (a journal of mutual visits, a schedule for conducting open classes, minutes of meetings of the department). At the meetings of the departments, the results of the results of midterm controls and examination sessions are discussed. Questioning of students, teaching staff and employers on satisfaction with the quality of the educational process is regularly conducted.

The interview showed that the university has a system of motivation for scientific achievements, expenses for articles in rating journals are paid 100%. In the university there is a distribution of the teaching load according to the positions, which is confirmed by the ISP staffing table.

Analytical part

Based on the results of the analysis in the context of the standard "Continuous monitoring and periodic evaluation of educational programs", the commission came to the conclusion that NJSC "KazNRTU named after. K.I. Satbayev" carries out constant monitoring and periodic evaluation of educational programs. The commission found that the university regularly surveys the satisfaction of students of the EP.

The EEC members reviewed the SSOSU system, made sure that the monitoring of students' progress, the availability of teaching materials, syllabuses is provided by the SSOSU system. The purpose of the SSO SU system in the organization of educational activities is not defined (there is no possibility of generating an adviser report, determining the quality of academic performance. Also, the issue related to the accessibility of EMCD for students remained unresolved, in particular, the EEC commission did not see the accessibility of EMCD and syllabuses through the login and password of students, and the mechanism for collecting information by students is not clear.

Also, the issue of the content of the programs in the light of the latest achievements of science in specific disciplines to ensure the relevance of the taught discipline remained unresolved, since the structures of the syllabuses and EMCD contain an outdated list of references.

Questioning of the teaching staff given during the visit of the EEC IAAR showed the imbalance of the teaching load by semesters: often - 12.7%, sometimes - 54.9%, never - 32.4%.

Strengths/Best practices

Not Identified.

Recommendations of the EEC

- Modernize the mechanism for informing all interested parties about any planned or undertaken actions in relation to the EP, not limited to sending by E-mail.

- Update the content of the syllabuses according to the latest achievements of science, also update the lists of references in the syllabuses for more recent sources (not older than 5 years).

Conclusions of the EEC according to the criteria:

According to the standard "Continuous monitoring and periodic evaluation of educational programs", the educational program 6B05103 Engineering Ecology has 10 satisfactory positions.

6.5. Standard «Student-Centred Learning, Teaching and Performance Evaluation»

- *EP management should ensure respect and attention to different groups of students and their needs providing them with flexible learning trajectory.*
- *EP management should provide for the use of various forms and methods of teaching and learning.*
- *An important factor is the availability of own research in the field of teaching methods of EP academic disciplines.*
- *EP management should demonstrate the existence of feedback mechanisms on the use of various teaching methods and assessment of learning outcomes.*
- *EP management should demonstrate the existence of mechanisms to support the students' autonomy with simultaneous guidance and assistance from the teacher.*
- *EP management should demonstrate the existence of a procedure for responding to student complaints.*
- *EO should ensure consistency, transparency and objectivity of the mechanism for assessing learning outcomes for each EP, including appeal.*
- *EP should ensure that the procedures for assessing the learning outcomes of EP students are consistent with the planned results and programme objectives. Criteria and methods of assessment within EP framework should be published in advance.*
- *EO should determine the mechanisms for ensuring the achievement of learning outcomes by each EP graduate and ensure the completeness of their formation.*
- *Evaluators should be proficient in modern methods of assessing learning outcomes and regularly improve their qualifications in this area.*

The evidentiary part

The evidentiary part is formed based on the results of assessing the quality of the OE and/or EP in accordance with the criteria of the Standard. This part provides evidence of the implementation of the criteria of the standard in the form of references to written documents (normative and analytical documents, self-assessment report, questionnaire results, etc.), and oral evidence (interview results) and any other available evidence.

At the University, the student is an active "subject" of the educational process. Implementation of student-centered learning processes in NJSC "KazNRTU named after K.I.

Satbayev” is provided by developing flexible learning paths; as well as conditions for increasing the motivation and involvement of students in the educational process. The university provides equal access to educational, research, educational activities. Ensuring equal opportunities for students is also ensured by conducting the educational process in three languages of instruction: state, Russian and English (IKT). Accounting for the needs of various categories of students is based on a systematic study of their educational needs and satisfaction with the quality of educational services provided. When implementing student-centered learning, the university ensures respect and attention in relation to different groups of students and their needs. Thus, in the department of work with youth organizations, a student dean's office and the Council of Young Scientists at the Geology and Oil-Gas Business Institute were created, whose representatives, at regular meetings with the directorate and senior management, always come up with proposals for improving the conditions of the scientific, educational and educational process. Public, scientific, creative and sports associations, clubs and teams work at the university, bright student holidays, meaningful forums and conferences are constantly held. The university has formed a system for handling complaints from students by the leadership of the university (rector's blog), and a disciplinary council is functioning. During the visit, the Commission of the EEC notes the absence of “mail boxes, trust boxes” in the University buildings.

The University has a service of advisors, which is designed to assist in the development of the educational program. The help of advisers is expressed in the provision of advisory assistance during the adaptation period of students in accredited EPs, in working with foreign students, in choosing disciplines, teachers, research topics, in social and educational aspects. An individual curriculum is drawn up together with an advisor, based on work with the Catalog of elective disciplines.

The leadership of the EP needs to intensify work on the harmonization of educational trajectories in the leading universities of the country and abroad for the possibility of students participating in the academic mobility program. Conduct explanatory work and periodically inform students about the possibilities of academic mobility.

It should also be noted that the department implementing the accredited study program does not have approved, actually developed methodological recommendations for conducting laboratory, course and final work. At the same time, the teaching staff of the department has significant potential in the implementation of their own methodological developments, which is confirmed by published works in domestic and foreign indexed publications, the presence of the Hirsch index of the teaching staff, the systematic conduct of methodological round tables and seminars. An example of the successful implementation of new developments in the field of teaching methods within the framework of the accredited EP 6B05103 - "Engineering Ecology" is the development of a MOOC in the form of a video lecture recording in the disciplines "Industrial Ecology and Industrial Safety", "Mining Ecology", "Technological Monitoring".

Analytical part

Student-centered learning allows you to create unique conditions for each student that contribute to effective progress along the chosen educational trajectory. Students, regardless of the language of instruction, are given the opportunity to choose a specific educational trajectory, in accordance with their life attitudes, abilities and capabilities. Professional and academic orientation is carried out with students, IEPs are developed taking into account the sequence of studying disciplines. Students have academic freedom in choosing a discipline and a teacher online.

For the purpose of student-centered learning, the department uses various teaching methods and technologies that take into account the variety of forms of information assimilation. The site on the page "Online education" provides detailed information about the online education system of the university and provides additional links to the platform <https://polytechonline.kz/>.

The university presents all the possibilities for the implementation of student-centered learning. The teaching staff of the department has a significant potential in the implementation of

its own methodological developments, which is confirmed by the holding of methodological round tables and seminars, reflected in the protocols of the department.

The presence of a feedback system on the use of various teaching methods and knowledge control between the teacher and the student is provided by the Personal pages of teachers and students on the University's Educational Portal and the SU Solution mobile application

The analysis of the reporting documentation showed the weaknesses of the SSO SU system, when the reports of advisers, in particular, the absolute and qualitative progress of students are calculated manually, the examination sheets are filled in manually.

Strengths/Best practices

Not Identified.

Recommendations of the EEC

- Within the framework of the accredited EP, develop and introduce into the educational process our own methods of teaching academic disciplines and guidelines for the implementation of laboratory, term papers and final works until 2023.

- Consider setting up complaint boxes in each academic building, by 2023, to enable anonymous appeal. Consider the possibility of creating blogs for the heads of structural divisions (director of the institute, head of the department).

- The management of the University, before the new academic year (September 2022), to upgrade the SSO SU system, for the possibility of automated reporting of structural divisions.

Conclusions of the EEC according to the criteria:

According to the standard "Student-centered learning, teaching and assessment of progress", the educational program 6B05103 Engineering Ecology has 9 satisfactory positions and 1 position suggesting improvement.

6.6. Standard «Students»

• *EO should demonstrate the existence of a policy for the formation of the students' contingent in EP context from admission to graduation and ensure the transparency of its procedures. The procedures governing the students' life cycle (from admission to completion) should be defined, approved, published.*

• *EP management should determine the procedure for the formation of the students' contingent based on:*

- *minimum requirements for applicants;*
- *maximum group size when conducting seminars, practical, laboratory and studio classes;*
- *forecasting the number of government grants;*
- *analysis of available material and technical, information resources, human resources;*
- *analysis of potential social conditions for students, including providing places in the hostel.*
- *EP management is obliged to demonstrate readiness to conduct special adaptation and support programmes for newly entered and foreign students.*

• *EO should demonstrate that its actions are consistent with the Lisbon Recognition Convention.*

• *EO should cooperate with other educational institutions 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.*

• *EP management should demonstrate the existence of a mechanism for the recognition of the students' results of academic mobility, as well as the results of additional, formal and non-formal education.*

• *EO should provide an opportunity for external and internal mobility of EP students, as well as a willingness to assist them in obtaining external grants for training.*

- *EP management should demonstrate its readiness to provide students with places of practice, to promote the graduates' employment, to maintain communication with them.*
- *EO should provide for the possibility of providing EP graduates with documents confirming the received qualifications, including the achieved learning outcomes, as well as the context, content and status of the education received and evidence of its completion.*
- *An important factor is the availability of mechanisms for monitoring the employment and professional activity of EP graduates.*

The evidentiary part

Satbayev University widely uses modern means of communication, the Internet and the media to ensure the transparency of university processes and inform the public about the activities and educational programs of the university. The University has a complete system of information support for students and teachers based on a Web site for all educational programs. In addition to the satbayev.university website, this system includes the Polytech Online distance learning portal integrated with the university's educational portal.

The formation of a contingent of students is carried out by placing a state educational order for the training of specialists with higher and postgraduate education, as well as paying for education at the expense of citizens' own funds and other sources. The rules for admission to study at KazNRTU are reflected in the document Rules for admission to study under the undergraduate programs of the KazNRTU named after K.I. Satbayev for the 2021-2022 academic year ([Правила приема на обучение по программам бакалавриата НАО КазННТУ им. К.И.Сатпаева на 2021-2022 уч.год. и расположена на сайте Университета.](#)), and is located on the University website.

The university has a model for the formation of a contingent of students, based on the principle of electiveness by applicants and students of the specialty and form of education.

The university has a system of student adaptation support, a registrar's office, an advisory service and the first adaptation week for freshmen and foreign students. All related information is reflected on the university website (<https://satbayev.university.ru/freshman-guide>).

Students are informed in a timely manner about the prospects for future professional activities, with the help of the advisory service, they are forming an individual educational trajectory. During the adaptation period, curators conduct study tours around the university. All procedures governing the life cycle of students, including transferable GPA points, are approved by the academic council and published on the university website (<https://satbayev.university.ru/student-life>). Orders for the movement of students are created and registered by the office registrar, permanently introduced fixation and analysis of the reasons for the movement of the contingent of students by education levels and forms of education.

Based on the results of the EEC visit, it was found that student life at Satbayev University is very rich and interesting. The university provides students with all the opportunities for professional growth, self-realization in social activities, creativity and sports. The University has a "Committee for Youth Affairs" - the highest body of student and youth self-government of the university in the field of implementing state youth policy. The main goal of the Committee is to ensure the rights of students, create conditions for personal and physical development, unlock creative potential, implement socially significant youth initiatives, as well as develop student and youth self-government at the university. There are two debate clubs at Satbayev University: Intellectual Debate Club Technokrat (Kazakh league) and Intellectual Debate Club "Satbayev" (Russian league). There is a "League of Volunteers" at the university - an organization of like-minded people united by the desire to help and make this world kinder: it disseminates information about social problems, conducts public events, organizes seminars and master classes, initiates youth projects and events for the development of the volunteer movement. An important factor is the presence on the website of the university of the subsection "STUDENT LIFE", which includes: the successes and achievements of students, provisions for social support of students, youth policy and educational work (<https://satbayev.university.ru/student-life>).

The University has a Department of International Cooperation, which provides advice to students on the possibilities of external and internal academic mobility, assists in filling out questionnaires on the portal of the host university, assists in choosing a suitable partner university, announces current grant / paid programs, negotiates with potential partners, draws up documents on the departure or acceptance of the student.

Currently, 23 students study under the accredited EP 6B05103-Engineering Ecology, including 16 students on a state educational grant, 7 on a contractual basis. There are no foreign students. 100% first-year dormitory provision. At the moment, 14 students of the accredited EP live in a hostel, 9 students do not need it.

The university has a system for providing discounts for educational services and material incentives for students. All information is located on the website of the University (<https://official.satbayev.university/ru/department-for-student-affairs/skidki-na-obuchenie>).

The management of the EP has demonstrated its readiness to provide students with places of practice, maintaining contact with production. The department implementing the accredited EP has more than 10 agreements with enterprises and 15 agreements with the country's universities. So part-time teachers from production work at the department (Kargaliev Arman Meyrkulovich, chief ecologist of Kazphosphate LLP). Planning and internships are carried out in accordance with the EP, SES for internships, work programs and guidelines.

A survey of EEC students showed that 73.2% of students were completely satisfied with the support of educational materials in the learning process, 75.6% of students were satisfied with the existing educational resources of the university, 78% of students were completely satisfied with teaching and the relevance of teaching academic disciplines.

Analytical part

Based on the results of the analysis of the “Students” standard, the commission came to the conclusion that the university has a clear policy for the formation of a contingent of students from admission to graduation. The university has a career center that deals with all types of internships and employment. The center holds a job fair twice a year.

The meeting of the members of the expert group with students of the university showed that student self-government is successfully functioning at the university. The University has created the necessary conditions for the creative development and participation of students / undergraduates / doctoral students in scientific research. Interviewing students of an accredited EP showed a lack of awareness of the possibility of academic mobility.

Walking around classrooms and laboratories showed the use of outdated computers in computer classes, and the location of computer classes is also not convenient. Students have to constantly go from building to building to study disciplines using ICT.

The Commission notes the weak activity of harmonizing the content of the accredited educational program with the EP by the leading universities of the country in order to organize the internal mobility of students.

The meeting of the members of the expert commission with employers and visits to the internship bases confirmed the excellent opportunities of the university to provide students with internship places, promote the employment of graduates, and maintain contact with them.

Strengths/Best practices

- The management of the EP is ready to provide students with places of practice, to promote the employment of graduates. The department has contracts with large enterprises of the city and region.

Recommendations of the EEC

- The management of the university should consider the possibility of updating computers in computer classes.

- To intensify the work of the Department of International Cooperation to inform students about the requirements and possibilities of academic mobility.

Conclusions of the EEC according to the criteria:

According to the “Students” standard, the educational program 6B05103 Engineering Ecology has 1 strong, 10 satisfactory and 1 position suggesting improvement.

6.7. Standard «Teaching Staff»

• *EO should have an objective and transparent personnel policy, including in EP context, including recruitment, professional growth and development of personnel, ensuring the professional competence of the entire staff.*

• *EO should demonstrate the compliance of the HETP staff potential with EO development strategy and EP specifics.*

• *EP management should demonstrate awareness of responsibility for their employees and providing them with favorable working conditions.*

• *EP management should demonstrate the change in the role of the teacher in connection with the transition to student-centered learning.*

• *EO should determine the contribution of EPHETP to the implementation of EO development strategy, and other strategic documents.*

• *EO should provide opportunities for career growth and professional development of EP HETP.*

• *EP management is obliged to demonstrate readiness to involve practitioners of the relevant industries in teaching.*

• *EO should 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.*

• *An important factor is the readiness to develop academic mobility within EP framework, to attract the best foreign and national teachers.*

The evidentiary part

Personnel policy of NJSC "KazNRTU named after K.I. Satbayev" is an integral part of the strategic policy of the university, designed to bring personnel potential in line with the mission and goals of the university. The main human resource of the university associated with the implementation of the educational and scientific process is the personnel potential as an integration of the personal resources of the teaching staff of the university and management personnel. Ways and methods of formation and development of personnel potential are determined by the personnel policy of the university. The competitive selection of candidates for filling vacant positions is carried out in accordance with the qualification characteristics of the positions of scientific and pedagogical workers, as well as by placing advertisements in republican newspapers and the University website.

The visit of the EEC established that the implementation of the accredited educational program is provided by teaching staff with basic education corresponding to the profile of the discipline being taught. The quality of the teaching staff corresponds to the qualification requirements, specifics and level of the accredited EP. The degree of teaching staff of the Department of ChP&IE, leading classes in undergraduate disciplines in the current year is 70%. The graduating department has a three-level training of personnel, which makes it possible to nurture their own personnel in order to develop scientific schools and professional development of teaching staff. Recruitment and distribution of responsibilities is carried out in accordance with clearly defined qualification requirements of the University.

The university has a system of advanced training and professional development of teaching staff and university staff. For the teaching staff, plans for advanced training are developed for each year. The training and advanced training of the teaching staff is mainly carried out through short-

term seminars, short-term courses and internships at leading universities and enterprises in Kazakhstan, as well as abroad. EEC presented plans for advanced training and certificates of teaching staff for the last 5 years.

At the university, the teaching staff undergoes an annual certification in order to ensure a high-quality staff, which does not meet the latest requirements of the Ministry of Education and Science of the Republic of Kazakhstan for optimizing reporting and combating bureaucracy, which the Minister of Education and Science A. Aimagambetov spoke about more than once after the speech of the President of Kazakhstan Kassym-Jomart Tokayev at a meeting of the Majilis of the Parliament: “Bureaucracy is one of the reasons for poor implementation of reforms. We all need to heal from this disease. The priority should be the content, not the form. Reporting for the sake of reporting and control for the sake of control should be a thing of the past.” Thus, the annual conclusion of employment contracts for teaching staff involves a formal race for personal indicators, which overshadows the improvement of teaching and the systematic development of the department and the university as a whole. So over the past two years, the department has not submitted more than one application for participation in competitions for the GF, PCF. The university offers differentiated remuneration, which is also confirmed in the Individual plan of the teaching staff and the staffing table. The Commission of the EEC, through interviews with the teaching staff, notes the lack of a motivation system for teaching staff at the university (for example, by providing service housing, the KPI system of "Key Performance Indicators", sending for internships to Top foreign universities).

In order to prepare competitive professionals, close contacts are established with specialists in the field of practice. Currently, practitioners participate in the development and examination of the EP, are the leaders of production practices, and part-time for 0.5 rates at the department. In particular, on March 15, 2022, the Chief Ecologist of Kazphosphate JSC Karagaliev Arman held a guest lecture for students of the Engineering Ecology program.

The teaching staff of the department takes an active part in the life of the region, and is also engaged in research activities. The results of the survey of teaching staff showed that the university very well (33.8%) and well (57.7%) provides an opportunity for continuous development of the potential of teaching staff. On all questions of the questionnaire, the teaching staff gave a positive assessment of the university.

Analytical part

According to the results of the analysis in the context of the standard "Teaching staff", the commission came to the conclusion that NJSC "KazNRTU named after K.I. Satbayev" has an objective and transparent personnel policy. The personnel potential of accredited EPs corresponds to the strategy of the university, qualification requirements, level and specifics of educational programs.

The Commission of the EEC, having studied the internal documentation of the department of Ch&IE, serving EP 6B05103-Engineering Ecology, notes that having scientific potential, the faculty of the department has a relatively low publication activity. Also, over the past two years, the department has not been conducting scientific projects on fundamental and applied scientific research; in 2020, the last project on the GF and PCF was completed.

The study of the site by the EEC commission revealed the lack of contact information about the teaching staff serving the accredited EP.

The graduating department has a three-level training, but the department does not teach its own graduates, obviously the annual certification leads to staff turnover.

Strengths/Best practices

- The management of the EP attracts practitioners from the relevant sectors of the economy to teaching.

Recommendations of the EEC

- The management of the University to provide information about the contact details of the teaching staff and heads of structural divisions to ensure communication of students and interested persons with the employees of the University.
- Until 2023, the leadership of the EP to ensure the participation of teaching staff in competitions for grants for research projects.
- The leadership of the EP to consider the possibility of introducing the results of scientific research of teachers into the educational process using the CED.
- The management of the University, before the new academic year, consider the possibility of concluding employment contracts (contracts) for a longer period (more than 1 year), which will reduce staff turnover and ensure professional growth and development of staff.
- The leadership of the EP, to find an opportunity to nurture their own personnel, in order to develop scientific schools and professional development of teaching staff.
- The management of the university should consider the possibility of introducing a system of encouragement for the integration of scientific activity and education.
- The leadership of the University to develop a mechanism for promoting, motivating teaching staff for the development of external and internal academic mobility.

Conclusions of the EEC according to the criteria:

According to the "Teaching Staff" standard, the educational program 6B05103 Engineering Ecology has 1 strong, 7 satisfactory and 1 position suggesting improvement.

6.8. Standard «Educational Resources and Student Support Systems»

- *EO should ensure a sufficient number of training resources and student support services that meet EP objectives.*
- *EO should demonstrate the sufficiency of material and technical resources and infrastructure, considering the needs of students' various groups in EP context of (adults, working, foreign students, as well as students with disabilities).*
- *EP management is obliged to demonstrate the existence of procedures for supporting various groups of students, including informing and consulting. EP management should demonstrate the compliance of information resources with EP specifics, including:*
 - *technological support for students and HETP in accordance with educational programmes (for example, online training, modeling, databases, data analysis programmes);*
 - *library resources, including the fund of educational, methodological and scientific literature on compulsory education, basic and major disciplines on paper and electronic media, periodicals, access to scientific databases;*
 - *examination of research results, graduation works, dissertations for plagiarism;*
 - *access to educational Internet resources;*
 - *functioning of WI-FI on the territory of the educational organisation.*
- *EO should strive to ensure that the educational equipment and software intended for use in the development of educational programmes are similar to those used in the relevant industries.*

The evidentiary part

To ensure the educational process of the accredited educational program of NJSC "KazNRTU named after K.I. Satbayev" has all the necessary educational and material assets. The main website of the university operates in three languages, there is also a version for the visually impaired.

For the implementation of the EP, there is the necessary classroom fund, computer classes, gyms, a book fund, 5 hostels that comply with the established norms and rules. The visit of the EEC to the students' houses showed an acceptable condition for the students to live, in compliance with all sanitary standards.

The department that implements the accredited EP has a sufficient amount of the classroom fund, in addition to the existing classrooms, the heat engineering building, which involves 5 large

laboratories, has been renovated at the expense of investors and partners of the department. In total, the classroom fund of Ch&IE has 11 educational laboratories, 3 scientific laboratories, 2 large lecture stream audiences. Classes for the accredited EP are held in classrooms equipped with an interactive whiteboard and projectors. In all specialized classrooms, classrooms, safety precautions for students during classes are observed, there are information stands that regulate the rules of behavior for students, there are passports for classrooms and appropriate equipment. Also, at the request of the teaching staff of the department, members of the EEC recommend that the management of the university find the opportunity to update the computer equipment of the department's employees.

The library service system at KazNRTU is focused on providing full access for students and teaching staff to information resources in the online environment and in the stationary mode. The infrastructure of the Scientific Library consists of 7 subscriptions and 8 reading rooms equipped with 140 computers connected to the Internet to work with electronic educational resources. The total fund of the library is 1747475 copies, including 364368 copies in the state language. At the service of readers 508150 copies. textbooks on OOD, including in the state language - 158,552 copies. The fund contains 1190114 copies. textbooks on basic and specialized disciplines, in the Kazakh language - 372,432 copies. The library has 687461 copies. scientific literature, Kazakh. language - 46064 copies. The university has access to resources remotely through the Electronic Catalog. The electronic catalog (EC) of the library operates on the basis of AIBS "MegaPRO" and is available at <http://e-lib.satbayev.university/MegaPro/Web>, around the clock. The university has an anti-plagiarism system. All qualifying papers, as well as scientific articles, are checked for plagiarism through the Strike Plagiarism system.

The electronic catalog (EC) of the library operates on the basis of AIBS "MegaPRO" and is available at <http://e-lib.satbayev.university/MegaPro/Web>, around the clock. The university has an anti-plagiarism system. All qualifying papers, as well as scientific articles, are checked for plagiarism through the Strike Plagiarism system.

Currently, Satbayev University operates a platform that provides educational services in a remote format - Polytechonline. (<https://polytechonline.kz/>). The system contains a database of 1254 video courses, has an interactive progress tracking interface. There are 18,810 video files in total to date.

The university systematically conducts an automated, by means of "SSOSU", questioning of students and teaching staff: "Satisfaction of the teaching staff with the university", "Satisfaction of university students with the provision of support", "Student satisfaction with learning outcomes", "Satisfaction of students and undergraduates with the quality of the implementation of the educational program".

Analytical part

In the implementation of educational activities of the NJSC "KazNRTU named after K.I Satbayev" is guided by regulatory documents regulating the mandatory regulatory requirements for the material, technical, educational and laboratory base of educational organizations.

The buildings and facilities of the university comply with the current sanitary standards and fire safety requirements.

All theses, master's theses, educational and methodical works of the teaching staff, subject to publication or publication, are tested to prevent plagiarism "Anti-plagiarism".

During the visit, the EEC commission notes the lack of free WI-FI access in some educational buildings, especially on the 10th floor, where there is also no Internet access point in the teaching staff's office. The commission also notes the inaccessibility of such sites mail.ru, yandex.kz, which does not allow using the most common mailboxes.

According to the results of the survey of the teaching staff, given during the visit of the EEC IAAR, showed the absence of technical means in the audience: often - 9.9%, sometimes - 56.3%, never - 33.8%.

According to the results of a student survey of the availability of library resources, 83% are completely satisfied and 14.6% are partially satisfied; classrooms, classrooms for large groups - 58.5% are completely satisfied and 31.7% are partially satisfied. In general, 75.6% of the respondents are fully satisfied with the existing educational resources of the university and 22% of the students surveyed are partially satisfied.

Strengths/Best practices

Not Identified.

Recommendations of the EEC

- Ensure uninterrupted access to Internet resources in all educational buildings with increased access to websites. Increase the coverage of the Wi-fi network with open access.
- The leadership of the University, in the period up to 2023, to find an opportunity to update the computer equipment of the teaching staff of the department serving the accredited EP, and the computer classes of students (taking into account the needs of the teaching staff and students).

Conclusions of the EEC according to the criteria:

According to the standard "Educational Resources and Student Support Systems", the educational program 6B05103 Engineering Ecology has 7 satisfactory and 2 positions suggesting improvement.

6.9. Standard «Public Information»

- *EO should publish reliable, objective, relevant information about the educational programme and its specifics, which should include:*
 - *expected learning outcomes of EP implemented;*
 - *qualifications and (or) qualifications that will be awarded upon EP completion;*
 - *approaches of teaching, learning, as well as the system (procedures, methods and forms) of assessment;*
 - *information about passing scores and learning opportunities provided to students;*
 - *information about the possibilities of employment of graduates.*
- *EP management should provide for various ways of disseminating information, including mass media, information networks to inform the general public and concerned parties.*
- *Public awareness should include support and explanation of the country's national development programmes and the system of higher and postgraduate education.*
- *EO should demonstrate the reflection on the web resource of information characterizing it in general and in EP context.*
- *An important factor is the availability of adequate and objective information about EP HETP.*
- *An important factor is informing the public about cooperation and interaction with partners within EP framework.*

The evidentiary part

NJSC "KazNRTU named after. K.I Satbayev" is one of the well-known universities in Kazakhstan and abroad. The University operates on the basis of the principles of transparency, openness, involvement and awareness of all stakeholders in its activities, initiative, continuous development and adaptation to changing conditions in the modern world.

Information about the activities of the university and the implementation of educational programs is available on the official website. The official website of the university (<https://satbayev.university.ru>) is presented in 3 languages and provides access to internal and

external electronic resources. The structure of the site is focused on all categories of stakeholders (it has a version for the visually impaired): applicants, students, teaching staff, employers, graduates and other categories of visitors. To ensure public awareness, the university consistently implements a public information strategy through a website, social networks, PR materials, and also uses social media accounts: Instagram page, Facebook, Twitter, VKontakte. (https://www.instagram.com/satbayev_university, <https://vk.com/satbayevuniversity>, <https://www.facebook.com/satbayevuniversity>).

There is a museum at the University, there is a system of traditional events both inside the university and in the external environment (Open Day, Student Community Fair, Job Fair), the student magazine UNIQUUM is published every two months, there is a public information system on the Internet, consisting of publications on the university website and social networks; there is a pr-program of the university aimed at working with traditional and electronic media. On the website of the university there is a "Rector's Blog", in which everyone can ask a question to the first head of the university and get an answer. Frequently asked questions are highlighted in a separate section.

Information about the activities of the university is presented on the pages "About the University" and "Basic Provisions". The page "Guarantees for the quality of education" indicates the priority areas of the university's activities, as well as its achievements in the field of providing students with quality education and scientific work. platform Polytech-online.

The university website contains information on all departments, educational programs, teaching staff, including personal pages, scientific projects, international cooperation and industrial projects. Materials for the official website of the university are translated into Kazakh and English.

Analytical part

NJSC "KazNRTU named after K.I Satbayev" widely uses modern means of communication, the Internet and the media to ensure the transparency of university processes and inform the public about the activities and educational programs of the university.

Information about the activities of the university is disseminated through a variety of information channels, including electronic media and social networks. The dissemination of information is carried out by the Center for Public Relations on the basis of the internal standards of the university.

Adequate, objective and accessible to the public information about the teaching staff of the EP, in the context of personalities, can be obtained on the University website. But there is no contact information in the personalities, which makes it difficult to contact the necessary person.

The EEC confirms the availability of information resources: booklets, newspapers, as well as social networks. Information about the activities of the university is reflected in three languages. Also, while studying the sections of the site, the EEC did not find information on interaction with partners within the framework of certain educational programs. Information about cooperation is of a more general nature, which does not reflect the specifics of the list of practice bases for certain EPs.

The University is constantly working to inform applicants and students about employment opportunities after graduation in social networks and on the website. Basic information about Student Communities and self-government can be found on the Student Life page.

Strengths/Best practices

Not Identified.

Recommendations of the EEC

- The management of the EP to place objective information about the teaching staff implementing the accredited EP, in particular contacts for communication, scientific direction, taught disciplines.

- The management of the EP to place on the website of the department information about interactions with partners within the framework of the EP (a list of practice bases, a list of agreements with partner universities)

Conclusions of the EEC according to the criteria:

According to the standard "Informing the public", the educational program 6B05103 Engineering Ecology has 10 satisfactory positions.

VII) OVERVIEW OF STRENGTHS/ BEST PRACTICES FOR EACH STANDARD

According to the standard "Management of the educational program"

- The management of the EP each semester involves representatives of stakeholder groups, namely practitioners from production, students and teaching staff in the formation of a development plan for the EP, which is confirmed by the protocols;
- The management of the EP ensures the participation of representatives of employers, teaching staff, students and other interested parties in the collegiate management bodies of the educational program, as well as their representativeness in making decisions on the management of the educational program;
- The management of the EP annually undergoes training in education management programs, which is confirmed by certificates;

According to the standard "Information Management and Reporting"

Not Identified.

According to the standard "Development and approval of the educational program"

- Revision every six months of the content and structure of the EP, taking into account changes in the labor market, the requirements of employers and the social demand of society.
- The management of the EP demonstrated the harmonization of professional practices with the educational process, after each semester, students undergo internships at enterprises, directly on the basis of the theoretical material they have studied.
- Teaching and teaching staff are directly involved in the development of the EP and ensuring its quality.

According to the standard "Continuous monitoring and periodic evaluation of educational programs"

Not Identified.

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

Not Identified.

According to the standard "Students"

- The management of the EP is ready to provide students with places of practice, to promote the employment of graduates. The department has contracts with large enterprises of the city and region.

According to the standard "Teaching Staff"

- The management of the EP attracts practitioners from the relevant sectors of the economy to teaching.

According to the standard "Educational Resources and Student Support Systems"

Not Identified.

According to the standard "Informing the public"

Not Identified.

VIII OVERVIEW RECOMMENDATIONS FOR QUALITY IMPROVEMENT

According to the standard "Management of the educational program"

- The management of the EP, by September 2022 (new academic year), to ensure the availability of the EP Development Plan on external resources (Internet resources, the website of the University, department) to ensure transparency and timely decision-making based on facts;
- The management of the University, before the new academic year (September 2022), to ensure the availability of WCs on the university website in a readable form, with the proposed model of the graduate;
- As part of the proof of readiness for openness and accessibility of interested parties, the management of structural divisions, in particular the directors of institutes and heads of departments, ensure the availability of contact details of the heads of divisions and teaching staff until July 2022;
- As part of the introduction of innovative proposals in the educational process, the leadership of the EP to motivate the teaching staff to actively participate in competitions for grants for research projects.

According to the standard "Information Management and Reporting"

- The university management should systematize the reporting of structural units (departments and institutes) on assessing the effectiveness and efficiency of scientific achievements and research of teaching staff and students (readable report forms on the science of the department and institute with scientometric indicators of each teacher, including data on the conduct of a scientific project at the department).
- To the management of the EP, before the new academic year (September 2022), ensure the availability of information stands in the buildings for students and stakeholders (information about the department and educational programs, schedule, information about teaching staff, etc.).
- The management of the university should improve the SSO Satbayev system to ensure the collection, analysis and management of objective information (ensure the ability of students and teaching staff to enter data on science, on personal achievements into the system, which will allow the scientific divisions of the university (department of science, department of science) to independently form reports by structural divisions), until September 2022.
- Using modern ICT capabilities, the management of the EP, before the new academic year, develop a mechanism for involving students, employees and teaching staff in the process of collecting and analyzing information (introducing published articles, personal achievements (participation in the project, advanced courses, editing, etc.) achievements to the SSO Satbayev system.

According to the standard "Development and approval of the educational program"

- Ensure the availability of the graduate model of the accredited study program on the university website until 2023.

According to the standard "Continuous monitoring and periodic evaluation of educational programs"

- Modernize the mechanism for informing all interested parties about any planned or undertaken actions in relation to the EP, not limited to sending by E-mail.

- Update the content of the syllabuses according to the latest achievements of science, also update the lists of references in the syllabuses for more recent sources (not older than 5 years).

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

- Within the framework of the accredited EP, develop and introduce into the educational process our own methods of teaching academic disciplines and guidelines for the implementation of laboratory, term papers and final works until 2023.
- Consider setting up complaint boxes in each academic building, by 2023, to enable anonymous appeal. Consider the possibility of creating blogs for the heads of structural divisions (director of the institute, head of the department).
- The management of the University, before the new academic year (September 2022), to upgrade the SSO SU system, for the possibility of automated reporting of structural divisions.

According to the standard "Students"

- The management of the university should consider the possibility of updating computers in computer classes.
- To intensify the work of the Department of International Cooperation to inform students about the requirements and possibilities of academic mobility.

According to the standard "Teaching Staff"

- The management of the University to provide information about the contact details of the teaching staff and heads of structural divisions to ensure communication of students and interested persons with the employees of the University.
- Until 2023, the leadership of the EP to ensure the participation of teaching staff in competitions for grants for research projects.
- The leadership of the EP to consider the possibility of introducing the results of scientific research of teachers into the educational process using the CED.
- The management of the University, before the new academic year, consider the possibility of concluding employment contracts (contracts) for a longer period (more than 1 year), which will reduce staff turnover and ensure professional growth and development of staff.
- The leadership of the EP, to find an opportunity to nurture their own personnel, in order to develop scientific schools and professional development of teaching staff.
- The management of the university should consider the possibility of introducing a system of encouragement for the integration of scientific activity and education.
- The leadership of the University to develop a mechanism for promoting, motivating teaching staff for the development of external and internal academic mobility.

According to the standard "Educational Resources and Student Support Systems"

- Ensure uninterrupted access to Internet resources in all educational buildings with increased access to websites. Increase the coverage of the Wi-fi network with open access.
- The leadership of the University, in the period up to 2023, to find an opportunity to update the computer equipment of the teaching staff of the department serving the accredited EP, and the computer classes of students (taking into account the needs of the teaching staff and students).

According to the standard "Informing the public"

- The management of the EP to place objective information about the teaching staff implementing the accredited EP, in particular contacts for communication, scientific direction, taught disciplines.
- The management of the EP to place on the website of the department information about interactions with partners within the framework of the EP (a list of practice bases, a list of agreements with partner universities)

IX OVERVIEW RECOMMENDATIONS FOR THE DEVELOPMENT OF THE ORGANIZATION OF EDUCATION

Not Identified.

X RECOMMENDATION TO THE ACCREDITATION COUNCIL

The external expert commission made a unanimous decision to recommend to the Accreditation Council the educational program 6B05103 Engineering Ecology of NJSC “Kazakh National Research Technical University named after K.I. Satbayev” to accredit for a period of 5 (five) years.



Appendix 1. Evaluation table «PARAMETERS OF A SPECIALIZED PROFILE» (EX-ANTE)

Conclusion of the External Expert Commission on the evaluation of the quality of the EP 6B05103 Engineering Ecology of the Noncommercial Joint Stock Company "Kazakh National Research Technical University named after K.I. Satbayev"

№ i/o	№ i/o	Evaluation criteria	The position of the organization of education			
			<i>strong</i>	<i>satisfactory</i>	<i>suggest improvements</i>	<i>unsatisfactory</i>
Standard "Educational Program Management"						
1	1.	The organization of higher and (or) postgraduate education should have a published quality assurance policy that reflects the relationship between scientific research, teaching and learning		+		
2	2.	The organization of higher and (or) postgraduate education should 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 management of the EP demonstrates transparency in the development of the EP development plan containing the start dates of implementation, based on an analysis of its functioning, the real positioning of the OE and the orientation of its activities to meet the needs of the state, employers, students and other interested parties		+		
5	5.	The management of the EP demonstrates the existence of mechanisms for the formation and regular revision of the development plan of the EP and monitoring its implementation, assessing the achievement of training goals, meeting the needs of students, employers and society, making decisions aimed at continuous improvement of the EP		+		
6	6.	The management of the EP should involve representatives of groups of interested persons, including employers, students and teaching staff in the formation of the development plan of the EP	+			
7	7.	The management of the EP must demonstrate the individuality and uniqueness of the development plan of the EP, 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 should demonstrate a clear definition of those responsible for business processes within the framework of the EP, an unambiguous distribution of staff responsibilities, and the differentiation of functions of collegial bodies		+		
9	9.	The management of the EP must provide evidence of the transparency of the educational program management system		+		
10	10.	The management of the EP must demonstrate the existence of an internal quality assurance system of the EP, including its design, management and monitoring, their improvement, and fact-based decision-making		+		
11	11.	The management of the EP should 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 management of the EP should ensure the participation of representatives of employers, teaching staff, students and other interested persons 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 OE should demonstrate innovation management within the framework of the EP, including the analysis and implementation of innovative proposals		+		
14	14.	The management of the EP must demonstrate evidence of readiness for openness and accessibility for students, teaching staff, employers and other interested persons		+		
15	15.	The management of the EP should be trained in educational management programs	+			
Total according to the standard			3	12	0	0
Standard "Information management and reporting"						
16	1.	The OE should demonstrate the existence of a system for collecting, analyzing and managing information based on the use of modern information and communication technologies and software tools and that it uses a variety of methods for collecting and analyzing information in the context of the EP		+		
17	2.	The management of the EP should demonstrate the existence of a mechanism for the systematic use of processed, adequate information to improve the internal quality assurance system		+		
18	3.	The management of the EP should demonstrate fact-based decision-making		+		
19	4.	A system of regular reporting reflecting all levels of the structure, including an assessment of the effectiveness and efficiency of the activities of departments and departments, scientific research, should be provided within the framework of the EP		+		
20	5.	The OE should establish the frequency, forms and methods of assessing the management of the EP, the activities of collegial bodies and structural units, senior management, and the implementation of scientific projects		+		
21	6.	The OE must demonstrate the definition of the procedure and ensuring the protection of information, including the identification of responsible persons for the reliability 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.	The management of the EP should demonstrate the existence of a mechanism for communication with students, employees and other stakeholders, as well as conflict resolution mechanisms.		+		
24	9.	The OE should demonstrate the existence of mechanisms for measuring the degree of satisfaction with the needs of teaching staff, staff and students within the framework of the EP		+		
25	10.	The OE should provide for an assessment of the effectiveness and efficiency of activities, including in the context of the EP		+		
		<i>The information intended for collection and analysis within the framework of the EP should take into account:</i>				
26	11.	key performance indicators		+		
27	12.	the dynamics of the contingent of students in the context of forms and types		+		
28	13.	of academic performance, student achievements 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 OE must confirm the implementation of procedures for processing personal data of students, employees and teaching staff on the basis of their documentary consent		+		
Total according to the standard			0	15	1	0
Standard "Development and approval of the educational program"						
32	1.	The OE should define and document the procedures for the development of the EP and their approval at the institutional level		+		
33	2.	The management of the EP should ensure that the content of the EP meets the established goals, including the expected learning outcomes		+		
34	3.	The management of the EP should demonstrate the existence of mechanisms for reviewing the content and structure of the EP, taking into account changes in the labor market, the requirements of employers and the social request of society	+			
35	4.	The management of the EP should ensure the availability of developed models of the graduate of the EP, describing the learning outcomes and personal qualities		+		
36	5.	The management of the EP must demonstrate the conduct of external examinations of the content of the EP and the planned results of its implementation		+		
37	6.	The qualification assigned upon completion of the EP must be clearly defined and correspond to a certain level of the NSC and QF-EHEA		+		
38	7.	The management of the EP should determine the influence of disciplines and professional practices on the formation of learning outcomes	+			
39	8.	An important factor is the possibility of training students for professional certification		+		
40	9.	The management of the EP must provide evidence of the participation of students, teaching staff and other interested parties in the development of the EP, ensuring its quality	+			
41	10.	The management of the EP should ensure that the content of academic disciplines and the planned results correspond to the level of education (bachelor's, master's, doctoral studies)		+		
42	11.	The structure of the EP should provide for various types of activities that ensure that students achieve the planned learning outcomes		+		
43	12.	An important factor is the correspondence of the content of the EP and the results of the training of the EP, implemented by organizations of higher and (or) postgraduate education in the EHEA		+		
Total according to the standard			3	9	0	0
Standard "Continuous monitoring and periodic evaluation of educational programs"						
44	1.	The OE should define mechanisms for monitoring and periodic evaluation of the EP to ensure the achievement of the goal and meet the needs of students, society and show the orientation of the mechanisms for the continuous improvement of the EP		+		
		Monitoring and periodic evaluation of the EP should include:				
45	2.	the content of the program in the light of the latest achievements of science in a particular discipline to ensure the relevance of the discipline taught		+		
46	3.	changes in the needs of society and the professional environment		+		
47	4.	the workload, academic performance and graduation of students		+		
48	5.	the effectiveness of evaluation procedures for students		+		
49	6.	expectations, needs and satisfaction of students with training in EP		+		
50	7.	educational environment and support services, and their compliance with the goals of the EP		+		

51	8.	The management of the EP should demonstrate a systematic approach to monitoring and periodic evaluation of the quality of the EP		+		
52	9.	The OE, the management of the EP should define a mechanism for informing all interested parties about any planned or taken actions in relation to the EP		+		
53	10.	All changes made to the EP must be published		+		
Total according to the standard			0	10	0	0
Standard "Student-centered learning, teaching and assessment of academic performance"						
54	1.	The management of the EP should ensure respect and attention to different groups of students and their needs, provide them with flexible learning paths		+		
55	2.	The management of the EP should provide for the use of various forms and methods of teaching and learning		+		
56	3.	An important factor is the availability of own research in the field of teaching methods of educational disciplines.		+		
57	4.	The management of the EP should demonstrate the existence of feedback mechanisms for the use of various teaching methods and evaluation of learning outcomes		+		
58	5.	The management of the EP should demonstrate the existence of mechanisms to support the autonomy of students with simultaneous guidance and assistance from the teacher		+		
59	6.	The management of the EP must demonstrate the existence of a procedure for responding to complaints from students			+	
60	7.	The OE should ensure consistency, transparency and objectivity of the learning outcomes assessment mechanism for each EP, including the appeal		+		
61	8.	The OE should ensure that the procedures for evaluating the learning outcomes of the students of the EP correspond to the planned results and goals of the program, the publication of criteria and evaluation methods in advance		+		
62	9.	The OE should define mechanisms to ensure that each graduate of the EP achieves learning outcomes and ensures the completeness of their formation		+		
63	10.	Evaluators should be familiar with modern methods of evaluating learning outcomes and regularly improve their skills in this area		+		
Total according to the standard			0	9	1	0
Standard "Students"						
64	1.	The OE must demonstrate the existence of a policy for the formation of a contingent of students in the context of the EP, ensure transparency and publication of its procedures governing the life cycle of students (from admission to completion)		+		
		The management of the EP should determine the order of formation of the contingent of students based on:				
65	2.	minimum requirements for applicants		+		
66	3.	of the maximum size of the group when conducting seminars, practical, laboratory and studio classes		+		
67	4.	forecasting the number of state grants		+		
68	5.	analysis of available material and technical, information resources, human		+		
69	6.	resources, analysis of potential social conditions for students, including the provision of places in the dormitory		+		
70	7.	The management of the educational institution should demonstrate readiness to conduct special adaptation and support programs for newly enrolled and foreign students		+		

71	8.	The OE must demonstrate compliance of its actions with the Lisbon Recognition Convention, 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		+		
72	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		+		
73	10.	The OE should provide an opportunity for external and internal mobility of students of the EP, as well as readiness to assist them in obtaining external grants for training			+	
74	11.	The management of the EP should demonstrate readiness to provide students with internship places, promote the employment of graduates, and maintain communication with them	+			
75	12.	The OE should provide for the possibility of providing graduates of the EP with documents confirming the qualifications obtained, including the achieved learning outcomes, as well as the context, content and status of the education received and certificates of its completion		+		
Total according to the standard			1	10	1	0
Standard "Teaching staff"						
76	1.	The OE should have an objective and transparent personnel policy, including in the context of the EP, including hiring, professional growth and development of personnel, ensuring the professional competence of the entire staff		+		
77	2.	The OE must demonstrate the compliance of the personnel potential of the teaching staff with the specifics of the EP		+		
78	3.	The management of the EP must demonstrate awareness of responsibility for its employees and ensure favorable working conditions for them		+		
79	4.	The management of the EP should demonstrate the change in the role of the teacher in connection with the transition to student-centered learning		+		
80	5.	The OE should determine the contribution of the teaching staff of the EP to the implementation of the development strategy of the OE, and other strategic documents		+		
81	6.	The OE should provide opportunities for career growth and professional development of the teaching staff of the EP		+		
82	7.	The management of the EP should demonstrate readiness to involve practitioners of relevant sectors of the economy in teaching	+			
83	8.	The OE should demonstrate the motivation of the professional and personal development of the teachers of the EP, including encouragement for the integration of scientific activity and education, the use of innovative teaching methods		+		
84	9.	An important factor is the readiness to develop academic mobility within the framework of the EP, to attract the best foreign and domestic teachers			+	
Total according to the standard			1	7	1	0
Standard "Educational resources and student support systems"						
85	1.	The OE should guarantee a sufficient number of educational resources and student support services to ensure the achievement of the goal of the EP		+		
86	2.	The OE must demonstrate the sufficiency of material and technical resources and infrastructure, taking into account the needs of various groups of students in the context of educational institutions (adults, working, foreign students, as well as students with disabilities)		+		

87	3.	The management of the EP should demonstrate the availability of support procedures for various groups of students, including information and counseling		+		
		The management of the EP must demonstrate the compliance of information resources with the specifics of the EP, including:				
88	4.	technological support for students and teaching staff (for example, online training, modeling, databases, data analysis programs)		+		
89	5.	library resources, including a fund of educational, methodological and scientific literature on general education, basic and profile disciplines on paper and electronic media, periodicals publications, access to scientific databases		+		
90	6.	examination of research results, graduation papers, dissertations on plagiarism		+		
91	7.	access to educational Internet resources			+	
92	8.	functioning of WI-FI on the territory of the educational organization			+	
93	9.	The OE demonstrates the planning of providing the EP with educational equipment and software tools similar to those used in the relevant sectors of the economy		+		
Total according to the standard			0	7	2	0
Standard "Informing the public"						
		The OE must publish reliable, objective, up-to-date information about the educational program and its specifics, which should include:				
94	1.	expected learning outcomes of the educational program being implemented		+		
95	2.	qualifications and (or) qualifications that will be assigned upon completion of the educational program		+		
96	3.	teaching approaches, training, as well as the system (procedures, methods and forms) of assessment		+		
97	4.	information about passing scores and educational opportunities provided to students		+		
98	5.	information about graduate employment opportunities		+		
99	6.	The management of the EP should provide for a variety of ways to disseminate information, including mass media, information networks to inform the general public and interested persons		+		
100	7.	Public awareness should include support and explanation of the national development programs of the country and the system of higher and postgraduate education		+		
101	8.	The OE must demonstrate the reflection on the web resource of information that characterizes 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 teaching staff of the EP		+		
103	10.	An important factor is informing the public about cooperation and interaction with partners within the framework of the EP		+		
Total according to the standard			0	10	0	0
TOTAL			8	89	6	0

8 (7,9 %) of parameters have the position "*strong*"

89 (86,2 %) parameters have the position "*satisfactory*"

6 (5,9 %) parameters have the position "*suggests improvement*"

0 % of parameters have the position "*unsatisfactory*"