«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 on the assessment of compliance with the standards of primary specialized accreditation of educational programs (Ex-ante)

6B07114 BIOMEDICAL ENGINEERING
6B07112 ELECTRONIC AND ELECTRICAL ENGINEERING
8D06105 INFORMATION SECURITY SYSTEMS

NON-PROFIT 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 ACCREDITATION AND RATING AGENCY
External Expert Commission

Addressed to
To the IAAR Accreditation
Council

АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТІҢ ТӘУЕЛСІЗ АГЕНТТІГІ
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Almaty "21" April 2022

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(I) LIST OF DESIGNATIONS AND ABBREVIATIONS

JSC – Joint Stock Company
EEC– External Expert Commission
KazNRTU – Non-profit Joint Stock Company "Kazakh National Research Technical University named after K.I. Satbayev "
CPSI – Cybersecurity, processing and storage of information
NJSC – non-profit joint stock company
NI IAAR – Non–profit institution "Independent Agency of Accreditation and Rating"
EO - Educational Organization
EP – Educational program
TS– Teaching staff
RAE – Robotics and automation equipment
LLP – Limited Liability Partnership
ETST – Electronics, telecommunications and space technologies

(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 21, 2022. an external expert commission assessed the compliance of the educational programs listed below, including an external assessment of EP 6B07114 "Biomedical Engineering", 6B07112 Electronic and electrical engineering, 8D06105 Information security systems for compliance with the standards of primary specialized accreditation of educational programs (Ex-ante) organizations of higher and postgraduate education (put into effect by Order No. 68-18/1-OD from "25" May 2018).

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

The composition of the EEC:The Chairman of the IAAR EEC is Alexander Cheslavovich Luschik, Ph.D., 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 is Guliyash Balkenovna Niyazova, project manager for institutional and specialized accreditation of universities (Nur-Sultan, Republic of Kazakhstan).

Cluster 1. Primary specialized accreditation

6B05103 Engineering ecology	*Expert Iaar-Berdenov Zharas Galimzhanovich, PhD, associate professor of the Eurasian National University. L. N. Gumileva (G. Nur-Sultan, Republic of Kazakhstan).* *Iaar expert, student-Serikkaliyev Tasbolat Serikkalievich (Serikkaliyev Tasbolat Serikkalievich), executive director of the branch of the alliance of students of vuzov 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, Ph.D., Associate Professor of 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 Kazakhstan*).

8D07114 Nanomaterials and nanotechnology	*IAAR expert – Najipkyzy Meruert, PhD, Associate Professor of Al-Farabi Kazakh National University (Almaty, Republic of Kazakhstan).*
	Cluster 3. Primary specialized accreditation
7M11201 Occupational health and safety	*IAAR expert – Baytelesova Laura Ilyasovna, PhD, 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	*Expert Khodun-Rakhimov Murat Amanzholovich, Ph.D. 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 Korkyt 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	*Expert Yuri N. Sun-PAK, Doctor of Technical Sciences, Professor of Karaganda Technical University (Republic of Kazakhstan).* *Сыйкырлоо ой жүгүртүү, МБА, экономика боюнча илим магистри, бизнес-менеджер, Бгц Партнерлор, (АЯН, кадр).*
7M04104 Executive MBA	*IAAR expert – Maya Arzayeva, Ph.D. in Economics, Associate Professor of the Academy of Logistics and Transport (Almaty, Republic of Kazakhstan).*
8D04102 Management	*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, Ph.D., Senior lecturer at the Kazakh Agrotechnical University named after S.Seifullin (Nur-Sultan, Republic of Kazakhstan).* *IAAR expert – Shunkeev Kuanyshbek Shunkeevich, Ph.D., Professor of Aktobe Regional University named after K.Zhubanov (Aktobe, Republic of Kazakhstan).*
8D06105 Information Security systems	*IAAR expert, student – Talipova Janel Sairanovna, 2nd year student of* EP *7M07105 Automation and Management of S.Seifullin Kazakh Agrotechnical University (Nur-Sultan, Republic of Kazakhstan).*
6B07112 Electronic and Electrical	

Engineering	
	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, Ph.D., 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).* *IAAR expert – Mashan Togzhan Turgalievna, PhD, Associate Professor of L.N. Gumilyov Eurasian National University (Nur-Sultan, Republic of Kazakhstan).*
8D07109 Innovative technologies and new inorganic materials	*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).*

During the work of the EEC was guided by:

- The program of the visit of the EEC IAAR using a hybrid model to the NJSC “Kazakh National Research Technical University named after K.I. Satbayev". Developed on the basis of the Guidelines for organizing and conducting an external evaluation procedure in the process of accreditation of an educational organization and (or) an educational program (Order of the Director of the IAAR No. 42-17-OD dated June 30, 2017).
- Guidelines for conducting self-assessment for primary specialized accreditation of an educational program (Ex-ante) of an organization of higher and (or) postgraduate education. Astana: IAAR, 2018 - 53 p.
- Standards for primary specialized accreditation of an educational program (Ex-ante) of an organization of higher and (or) postgraduate education (Republic of Kazakhstan). Astana: IAAR, 2018 - 25 p. (Order of the Director of the Non-Profit Institution "Independent Agency for Accreditation and Rating" No. 68-18 / 1-OD dated May 25, 2018).
- Guidelines for organizing and conducting an on-line visit of an external expert commission (including a visit by an expert group on post-accreditation monitoring) for the period of restrictive measures in connection with the COVID-19 pandemic. Nur-Sultan: IAAR, 2020 - 11 p. (Order of the Director General of the NU "Independent Agency for Accreditation and Rating" dated July 01, 2020 No. 58-20-OD).

(III) REPRESENTATION OF THE EDUCATIONAL ORGANIZATION

Decree of the Government of the Republic of Kazakhstan dated December 19, 2014 No. 1330 “On the establishment of a non-profit joint stock company “Kazakh National Research Technical University named after K.I.Satbayev" The University was reorganized into NJSC "KazNRTU" named after K.I. Satbayev.

The university implements a multi-level system of higher and postgraduate education (bachelor's degree - master's degree - PhD doctoral studies). At the same time, the University has a license in 41 areas of training, incl. undergraduate - 15; magistracy - 15; doctoral studies PhD - 11.

The training of specialists in all educational programs of higher and postgraduate education is conducted in the state and Russian languages.

KazNRTU named after K.I. Satbayev takes an active position in the implementation of the international activities of the university. To date, 173 agreements, cooperation agreements and memorandums of understanding have been concluded with foreign universities, organizations and research centers.

KazNRTU named after K.I. Satbayev is the only university in the sub-Soviet space included in the University Partnership Program sponsored by Chevron. This program involves Cambridge, Stanford Universities and the Massachusetts Institute of Technology.

Since 2005 at KazNRTU named after K.I. Satbayev, a quality management system was introduced that complies with ISO 9001:2000, certified by the Russian Register and IQNet in relation to educational activities for the training of personnel with higher professional education based on state educational standards of the Republic of Kazakhstan in specialties and areas in accordance with the area of licensing, state certification and accreditations. The University has repeatedly (2008, 2011, 2014, 2017, 2020) passed the recertification procedure and confirmed the double Certificate ISO 9001-2015 dated November 26, 2020 No. 20.2014.026 Certification Association "Russian Register" and the International network of certification bodies "IQNet". KazNRTU implements the International Accreditation Program, and currently 16 EPs in the field of engineering and technology have already been accredited. The University cooperates with the ASIIN Agency. At the national level, institutional accreditation was successfully passed at the National Accreditation Center under the Ministry of Education and Science of the Republic of Kazakhstan, at the international level - institutional assessment at the European Association of Universities.

Academic activity KazNRTU them. K.I. Satbayev is aimed at improving the quality of training of a competitive generation of modern engineers to meet the needs of the industry not only in specialists, but also in technological developments.

(IV)DESCRIPTION OF THE PREVIOUS ACCREDITATION PROCEDURE

Educational programs 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security Systems undergo an external assessment for compliance with the standards of primary specialized accreditation for the first time.

(V) DESCRIPTION OF THE VISIT OF THE EXTERNAL EXPERT COMMISSION

Within the framework of the visit of the external expert commission of IAAR on the assessment of the quality of educational programs of the Non-profit Joint Stock Company "Kazakh National Research Technical University named after K.I. Satbayev ", it was provided:

- Interview with the rector - Begentaev Meiram Mukhametrakhimovich;
- Meeting with five Vice-Rectors (Board Member – Vice–Rector for Academic Affairs – Bakhyt Akhatovich Zhautikov, PhD, Professor, Board Member - Vice-Rector for Corporate Development and Strategic Planning – Yerzhan Itemenovich Kuldeev, PhD, Associate Professor, Board Member – Vice-Rector for Science and International Cooperation – Alibek Zhumabekovich Shokparov, PhDPh.D., Member of the Board – Vice-Rector for Socio–Cultural Development - Alimkhanov Mansur Sansyzbaevich, Head of the Board Staff – Shalabaev Sapar Kataevich);
- Meeting with the senior management of structural subdivisions of EO (Togzhigitova G. B., Tynybekov R. I.,– chief accountant – Togzhigitova Gulnara Beisengazievna, director of Infrastructure Management – Tynybekov Rishat Imelovich, director of Information Technology Department – Alchimbayev Arman Bulatovich, director of academic issues – zhunusbekova Nazym maratovna, director of the Center for relations with society – Balgabayeva Madina Kadyrovna, director of the Department of Nauki – Baktygali zhanibek Kadyrzhanovich, director

of the Department of Corporate Development – Yensebayeva Marzhan Zaitovna, director of the Department of international cooperation – Abdykalikov Adylbek Asanovich, director of the Registrar's office – Kyrylbayev Nurlan Kuttybayevich, director of the Institute of distance education and professional development – Simonov Andrey Gennadyevich director of the HR service – Beisova Azhar Kairolovna, director of the Scientific Department Biblioteca – Uzbayeva Bagdat zhumashevna, director rating Center – alipbayev Daniyar dauletovich, director of the Department of Youth and sports – tolepbergen Adilkhan Temirkhanuly, head of the Department of post – graduate education-khvedelidze Madina zheksenovna,

Executive Secretary of the admissions Committee – Narbayev Mars Tursynbekovich, Head of the Quality Assessment Department – Sauranbayeva Aigul);

- Interviews with six directors of institutes (Director of the Institute of Geology and Oil and Gas Business – Syzdykov Askar Khamzaevich, Director of the Institute of Architecture and Construction – Kuspangaliev Bolat Uraykhanovich, Director of the Institute of Energy and Mechanical Engineering – Elemesov Kasym Koptleuovich, Director of the Institute of Automation and Information Technology – Uskenbayeva Raisa Kabievna, Director of the Mining and Metallurgical Institute - Rysbekov Kanai Bakhytovich, Director Institute of Project Management – Amralinova Bakytzhan Bazarbekovna);

- Interviews with thirteen heads of the EP (Head of the Department "Chemical Processes and Industrial Ecology" – Kubekova Sholpan Nakishbekovna, Head of the Department "Hydrogeology, Engineering and Oil and Gas Geology" – Ensebaev Talgat Ablaevich, Head of the Department "Geophysics" – Abetov Auez Egemberdievich, Head of the Department "Construction and Building Materials" – Nashiraliev Zhankeldi Turtemirovich, Head Department of "Technological machines and Transport"

– Bortebaev Sayyn Abilkhanovich, Head of the Department "Materials Science, Nanotechnology and Engineering Physics" – Kakimov Ulan Kadyrkhanuly, Head of the Department "Engineering Systems and Networks" – Alimova Kulyash Kabpasovna, Head of the Department "Logistics" – Mukhanova Gulmira Samudinovna, Head of the Department "Management and Mathematical Economics" – Turegeldinova Aliya Zhumabekovna, Head of the Department "Robotics and technical means of automation" – Kasymbek Adilbekovich Ozhikenov, Head of the Department of Electronics, Telecommunications and Space Technologies – Tashtai Erlan, Head of the Department of "Cybersecurity, Processing and Storage of Information" – Satybaldieva Ryshan Zhakanovna, Head of the Department of "Engineering Mechanics and Modeling" – Kaltaev Aidarkhan);

- Interviews with teaching staff on accredited programs;

- Visual inspection of the EO (infrastructure and laboratory capacity);

- Interviews with students on accredited EP;

- Visiting the practice bases of the EP;

- constant work with documents;

- Work of an external expert commission, (development and recommendations, discussion, decision-making by voting);

- The final meeting of the external expert commission with the leadership of Kazntu.

These procedures were carried out in the period from April 19 to April 21, 2022. Detailed information information indicating the date, time and direct participants is given in the program of the visit of the external expert commission.

At each procedure, contact was established with the audience in order to survey and clarify the state, situation in the educational organization and conduct further analysis.

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

6.1. Standard "Educational Program Management"

- ✓ *The university should demonstrate the development of a goal and strategy for the development of the EP based on the analysis of external and internal factors with the broad involvement of a variety of stakeholders.*
- ✓ *The quality assurance policy should reflect the relationship between scientific research, teaching and learning.*
- ✓ *The university demonstrates the development of a culture of quality assurance.*
- ✓ *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.*
- ✓ *The management of the EP ensures transparency in the development of the EP development plan based on an analysis of its functioning, the real positioning of the university and the orientation of its activities to meet the needs of students, the state, employers and other interested parties.*
- ✓ *The management of the EP demonstrates the functioning 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.*
- ✓ *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.*
- ✓ *The management of the educational institution should demonstrate the individuality and uniqueness of the development plan of the educational institution, its consistency with national development priorities and the development strategy of the educational organization.*
- ✓ *The management of the educational institution should demonstrate the individuality and uniqueness of the development plan of the educational institution, its consistency with national development priorities and the development strategy of the educational organization.*
- ✓ *The university must demonstrate a clear definition of those responsible for business processes within the framework of the EP, the distribution of staff duties, the differentiation of functions of collegial bodies.*
- ✓ *The management of the EP ensures coordination of the activities of all persons involved in the development and management of the EP, and its continuous implementation, as well as involves all stakeholders in this process.*
- ✓ *The management of the EP should ensure the transparency of the management system, the functioning of the internal quality assurance system, including its design, management and monitoring, and the adoption of appropriate decisions.*
- ✓ *The management of the EP should carry out risk management.*
- ✓ *The management of the educational institution should ensure the participation of representatives of interested persons (employers, teaching staff, students) in the collegial management bodies of the educational program, as well as their representativeness in making decisions on the management of the educational program.*
- ✓ *The university must demonstrate innovation management within the framework of the EP, including the analysis and implementation of innovative proposals.*
- ✓ *The management of the EP should demonstrate its openness and accessibility to*

students, teaching staff, employers and other interested persons.

- ✓ *The management of the EP confirms the completion of training in educational management programs.*
- ✓ *The management of the EP should strive to ensure that the progress made since the last external quality assurance procedure is taken into account when preparing for the next procedure.*

The evidentiary part

Training of personnel on accredited *EP* is carried out on the basis of license №. KZ56LAA00005304, issued on 11.07.2015.

Educational programs 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security systems are focused on the acquisition of professional competencies that provide in-depth theoretical knowledge and practical skills in the field of biomedical engineering, fundamental research of industrial and civil electrical engineering and electronics, information protection and security and are aimed at production, research and educational and pedagogical training bachelor's, master's, and doctoral students. Russian Russian and English languages are taught in EP 6B07114 and 8D06105, and Kazakh and Russian languages are taught in EP 6B07112.

The EEK has the necessary management mechanisms and material and technical base for the implementation of training on EP 6B07114 Biomedical Engineering.

The educational program is managed through the "Educational Program Development Plan" and "Academic Policy" (https://official.satbayev.university/ru/vnutrennie-normativnye-dokumenty/3-uroven-upravlenie-obrazovatelnym-protsessom).

The materials submitted for accreditation indicate that the education of the staff of the teaching staff of the Department of RTiTSA corresponds to the profile of the disciplines taught to the qualification requirements for the educational activities of educational organizations implementing higher education. Educational disciplines of the physical and mathematical direction within the framework of EP 6B07114 Biomedical engineering are taught by the main staff of the department, while third-party teachers are involved in teaching medical disciplines - Darmen Oralbai, Prof., MD and Ozhikenova A. K., PhD, associate professor (https://drive.google.com/drive/folders/1IvHFLZe5Nao7YV4Lzal72FblpsN8C2UP, https://drive.google.com/drive/folders/1fdkZN9dXnNgulo2iXSoBSJ0eeQK3QrLZ).

The mission of accredited bachelor's degree programs in the field of Biomedical Engineering and 6B071 Engineering and Engineering from the group of educational programs Electrical Engineering and Power Engineering, electrical Engineering and automation, as well as in the direction of doctoral studies 8D063 – "Information security" corresponding to the classifier of training areas with higher and postgraduate education of the Republic of Kazakhstan is aimed at training highly qualified specialists in the field of biomedical engineering, digital electronics and electrical engineering, information security systems with in-depth knowledge, skills and practical skills that ensure high-quality performance of functional responsibilities for the selected educational program.

The main strategic goal of the 8D06105 Information Security System is to ensure quality guarantees of educational and scientific activities, taking into account the requirements and wishes of all interested parties – students, industry representatives and scientific activities.

During the visit to the departments of accredited EP, the leadership of the department demonstrated the connection between scientific research and teaching in the profile. Students of EP 6B07114 Biomedical Engineering, can practice in such companies as Medremzavod LLP, Saiman Corporation LLP, OMIX JSC, etc.

Students of EP 6B07112 are interning in such companies as JSC "Saiman", JSC "Transtelecom", JSC "ALTEL", JSC "KazTransCom", LLP "Kar-Tel", ASKB "Alatau", branches of LG, Cisco, Rochde&Schwarz, LLP "ICTT", LLP "Kazakhstan ASELSAN engineering", etc.

The practice of doctoral students is carried out in the Technopark and engineering laboratory of Kazntu, in the scientific laboratories of the RCP and the KN of the Ministry of Education and Science of the Republic of Kazakhstan, at the enterprises of Kazakhstan, at universities in the USA, Poland, Malaysia, Germany, Russia. The content of research and production practices is determined by the topic of the doctoral dissertation.

Also, the connection between scientific research and training at the departments of accredited programs is ensured by the involvement of students in research conducted within the framework of existing scientific projects implemented at the department (according to the results of interviews and information provided from the department, research and development in the laboratory "Robolab" is already carried out by Adilbek Dimash, 1st year student of Biomedical Engineering, Zhylkeld Bakdoulet, 1st year student course EP Biomedical Engineering, Adilbekov Altai, 1st year student EP Biomedical Engineering, Zhakanov Ansar, 1st year student EP Biomedical Engineering).

Accredited educational program EP 6B07114 Biomedical Engineering uses outsourcing opportunities in the face of research institutes, techno-park, engineering laboratories, foreign partner universities and consultants are involved.

The staff of the Department of which has strong scientific ties with many foreign research centers and universities: In the field of information security, the university cooperates with universities of the CIS, Europe and Asia, including the National Aviation University (Ukraine), the National Research Nuclear University "MEPhI" (Moscow, Russia), the Odessa National Academy named after A.S. Popov, the Igor Sikorsky Kyiv Polytechnic Institute (Kiev, Ukraine), the Caucasian University (Georgia), University Putra Malaysia, University of Bielsko-Biala (Poland).

The management of the EP presented feedback from employers received for programs of the same direction 7MO7106 Biomedical Engineering and 8D07105 Biomedical Engineering, confirming the existence of a mechanism for involving employers in the formation of a plan for the development of educational programs (https://drive.google.com/drive/folders/1npp5ppSbrNUSfUIQ5AsXOUMYJ79RVMrT).

According to EP 6B07112 Electronic and Electrical Engineering, a review and a review of the accredited educational program were received from Inchin A.S. (DTO ICTT) and Kalzhanov A.A. (Transtelecom JSC).

The heads of accredited EP and teaching staff constantly undergo advanced training courses both in their field of scientific interests and language courses, which is confirmed by certificates.

The analytical part

Of the Kazakh National Research Technical University named after K.I. Satbayev has a quality assurance policy presented in regulatory documents and published on the university's website.

The management of the EP and the EO supports high standards of quality assurance of higher education, expressed in ensuring the procedures for the development of the EP, high positioning of the implementation of the EP at the international level, confirmed by numerous contacts with higher educational institutions and industrial organizations.

The development of the EP at the department level is constantly reviewed and adapted to the current needs of students and employers, taking into account the opinion of the teaching staff. The departments have mechanisms for regular review of the monitoring and implementation of the EP, confirmed by the feedback received from employers and questionnaires of students. The monitoring confirms a clear definition of those responsible for the educational and other business processes carried out at the university.

It confirms the existence of mechanisms for involving students in scientific research and also maintaining communication with employers, attracting potential employers to the formation of an EP.

But, at the same time, there is a discrepancy between the administrative level and the heads

of the University regarding the development policy of the University, which manifests itself in the inconsistency of current decisions and the existing strategic plan for the development of the university. This states that the university administration has not paid enough attention to explaining the current policy, the mechanisms for achieving it and the expected results among the working staff. The result is a weak return on efforts, both on the part of the university administration and on the part of the heads of the EP.

Strengths/Best practices

According to EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security systems, no strengths were identified.

EEC Recommendations

According to EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 There is no information security system.

Conclusions of the EEC by criteria:

According to the standard "Educational Program Management", 15 criteria are disclosed, of which:

According to EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security Systems 15 – have a satisfactory position.

Analytical part

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The development of the EP at the department level is constantly reviewed and adapted to the current needs of students and employers, taking into account the opinion of the teaching staff. The departments have mechanisms for regular review of the monitoring and implementation of the EP, confirmed by the feedback received from employers and questionnaires of students. The monitoring confirms a clear definition of the responsible persons for the educational and other business processes carried out at the university.

It confirms the existence of mechanisms for involving students in scientific research and also maintaining communication with employers, attracting potential employers to the formation of an EP.

But, at the same time, there is a discrepancy between the administrative level and the heads of the University regarding the development policy of the University, which manifests itself in the inconsistency of current decisions and the existing strategic plan for the development of the university. This states that the university administration has not paid enough attention to explaining the current policy, the mechanisms for achieving it and the expected results among the working staff. The result is a weak return on efforts, both on the part of the university administration and on the part of the heads of the EP.

Strengths/Best practices

According to EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security systems, no strengths were identified.

VTEC Recommendations

According to EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 There is no information security system.

Conclusions of the EEC by criteria:

According to the standard "Educational Program Management", 15 criteria are disclosed, of which:

According to EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security Systems 15 – have a satisfactory position.

6.2. «Information Management and Reporting Standard»

✓ *The university should ensure the functioning of the information collection, analysis and management system based on modern information and communication technologies and software.*

✓ *The* EP *management demonstrates the systematic use of processed, adequate information to improve the internal quality assurance system.*

✓ *The management of the* EP *demonstrates the existence of a reporting system reflecting the activities of all structural divisions and departments within the framework of the* EP*, including an assessment of their effectiveness.*

✓ *The university should determine the frequency, forms and methods of assessing the management of the* EP*, the activities of collegial bodies and structural units, and top management.*

✓ *The university must demonstrate a mechanism for ensuring the protection of information, including the identification of responsible persons for the reliability and timeliness of information analysis and data provision.*

✓ *The university demonstrates the involvement of students, employees and teaching staff in the processes of collecting and analyzing information, as well as making decisions based on them.*

✓ *The management of the* EP *should demonstrate the availability of communication mechanisms with students, employees and other stakeholders, including conflict resolution.*

✓ *The university must ensure the measurement of the degree of satisfaction of the needs of students, teaching staff and staff within the framework of the* EP *and demonstrate evidence of the elimination of the detected shortcomings.*

✓ *The university should evaluate the effectiveness and efficiency of its activities in the context of the* EP.

✓ *The information collected and analyzed by the university within the framework of the OP should take into account:*

key performance indicators;

dynamics of the contingent of students in the context of forms and types;

academic performance, student achievements and expulsion;

satisfaction of students with the implementation of the EP *and the quality of education at the university;*

availability of educational resources and support systems for students;

employment and career growth of graduates.

✓ *Students, teaching staff and staff must document their consent to the processing of personal data.*

✓ *The management of the* EP *should help to provide the necessary information in the relevant fields of sciences.*

The evidentiary part

"Kazakh National Research Technical University named after K.I. Satbayev demonstrated the presence of an SSU system for organizing the educational process according to educational programs. This is a proprietary development that is a single entry point for students and faculty, providing access to electronic educational materials of disciplines, curricula and individual plans. The portal provides interaction between students, teaching staff, as well as other departments directly or indirectly involved in the educational process.

Employees' access to information is delimited by specialized roles. Each role has its own specific access level.

The Data Center division conducts analytics and maintains statistics, receives a copy of the

educational process data and processes the received data.

The collected data allows for analysis in the context of one student, study group, by course, covering all elements of learning. The information collected makes it possible, based on structural analysis and quantitative methods, to develop measures aimed at ensuring the quality of the educational program.

The management of the Institute analyzes information from the annual reports of the department, the Institute in order to make a decision on the quality of teaching disciplines and student performance during the academic semester. In case of negative dynamics of quantitative indicators of students' academic performance from year to year and deterioration of the quality of teaching disciplines, the management should timely identify such risks and take them into account when developing new educational programs.

At the Academic Council of the Institute, the heads of departments report on the semi-annual and annual results of the department's activities.

In order to ensure control over the quality of the educational process, the training sessions are constantly monitored by the Intra-University Control Commission (IAC). A report on the activities of the KVK on the results of the academic semester and the academic year is presented at a meeting of the University's UMC.

Questionnaire surveys of teaching staff "Satisfaction of teaching staff with the university" and students "Teaching staff through the eyes of a student", "Student satisfaction with the university" are conducted at least once a year.

The NGO has developed a Strategy and Development Program according to which the main KPIs and Strategic goals until 2026 have been worked out.

Analytical part

The university collects, processes and analyzes the available information on the basis of the current information system.

The University management systematically analyzes the results of internal audits, competitions and a feedback system (annual questionnaire) to achieve confidence that the Quality Policy is being implemented (DP KazNRTU 502 "Management Analysis").

The focus on meeting the needs of students, teaching staff and staff are considered at meetings of the Academic Council, the Board and the Educational and Methodological Council of the University.

In case of changes in external factors in the educational space, reforming or reorganizing the existing management system of the university, restructuring the activities of the mission, quality goals and objectives of the development of the university are adjusted to meet new requirements.

The university has a Department for Youth and Sports, responsible for the socio-cultural development of students.

The university has organized work on the payment of monetary compensation for food and for the purchase of clothing, shoes and soft equipment to students for orphans and children left without parental care and under guardianship.

The Scientific Library, based on the principle of openness and accessibility of information resources and services, serves all participants in the scientific and educational process.

The strategic development plan of the university contains key indicators of the implementation of educational programs.

In general, all proper business processes are being implemented, but it should be noted that the university leaders, when developing a Development Strategy, at the current stage, have not reached the proper level of coordination of the current system of academic policy at the department level and the final goals of the Strategic Development Plan of the university. To be more precise, the developed system of indicators (underlying the Strategic Development Plan of the University) has not been integrated into the existing mechanisms at the department level to implement the quality of education.

According to EP 6B07112 Electronic and Electrical Engineering to the head of the EP using

the current information system together with:

- updated material and technical base (Hardware and software complex "Access information networks and optical technologies", Laboratory installations "Physical foundations of optical wave propagation in fiber light guides", "Study of characteristics of optical sources and photodiodes", "Study of optical amplifier", "Study of fiber-optic passive components", "Optical fiber model linear path", "Measurement of optical communication line parameters", Fujikura FSM-36s welding machine, KIT A, Optical Reflectometer Yokogawa AQ 1000);

- highly qualified teaching staff who have completed advanced training at a specialized university in Russia (St. Petersburg State University of Telecommunications named after Prof. M.A. Bonch-Bruevich), 11 teachers;

- developed at the Department of Educational and Methodological Support (UML: Study of the characteristics of optical sources and photodiodes, Turakty toktyn elektr tizbegin zerdeleu, Optical linear path model, Physical foundations of optical wave propagation in fiber light guides, Measurement of optical communication line parameters, Study of fiber-optic passive components, Optikalyk talshykty zharyk bagyttagyshtaryn sipattamalaryn zertteu);

- working with practice databases;

and with their own cognitive systems to maintain the quality of education, it is possible to achieve a high level of decision-making based on facts.

Strengths/Best practices

According to EP 6B07114 Biomedical Engineering, 8D06105 There is no Information security system.

According to EP 6B07112 Electronic and Electrical Engineering, the Head of the OP manages to achieve a high level of decision-making based on facts.

Recommendations of the EEC

According to EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security Systems:

- it is necessary to improve the corporate system for accessing and downloading summary data on teaching staff, the educational process and students, which would greatly facilitate the process of their analysis and evaluation of the effectiveness of the implementation of the EP. The implementation period is 2022-2023 academic year.

According to EP 6B07114 Biomedical Engineering:

- to post on the university's website curricula and descriptions of disciplines on EP 6B07114 Biomedical engineering Implementation period 2022-2023 academic year.

Conclusions of the EEC by criteria:

according to the Information Management and Reporting standard, 16 criteria are disclosed, of which:

according to EP 6B07114 Biomedical Engineering, 8D06105 Information Security Systems 16 – have a satisfactory position;

according to 6B07112 Electronic and Electrical Engineering 1 – has a strong, 15 – satisfactory position;

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

The university must demonstrate the existence of a documented procedure for the development of an EP and its approval at the institutional level.

The university must demonstrate the compliance of the developed EP with the established goals and planned learning outcomes.

The management of the EP should determine the impact of disciplines and professional practices on the formation of learning outcomes.

The university demonstrates the existence of a graduate model of an EP describing learning outcomes and personal qualities.

The qualification assigned upon completion of the EP must be clearly defined, explained and correspond to a certain level of the NSC, QF-EHEA.

The management of the OP should demonstrate the modular structure of the program based on ECTS, ensure that the structure of the content of the EP meets the set goals with a focus on achieving the planned learning outcomes for each graduate.

The management of the educational institution should ensure that the content of academic disciplines and learning outcomes correspond to each other and to the level of study (bachelor's, master's, doctoral studies).

The management of the EP must demonstrate the conduct of external examinations of the EP.

The management of the EP must provide evidence of the participation of students, teaching staff and other stakeholders in the development and quality assurance of the EP.

The management of the EP should demonstrate the uniqueness of the educational program, its positioning in the educational market (regional/national/ international).

An important factor is the possibility of preparing students for professional certification.

An important factor is the presence of joint(s) and/or double-degree EP with foreign universities.

The evidentiary part

Accredited educational programs on the basis of compulsory and elective components allow to form an individual educational trajectory of students.

The choice of the learning trajectory is carried out by students independently, but with the help of consultations, conversations with advisors, leading teachers of the departments of RTITS, Etiquette, KOI, graduates, employers. An individual curriculum is formed for each student for the academic year.

The academic disciplines included in the curriculum are arranged according to academic periods (semesters) in a logical sequence and correspond to the bachelor's degree level.

The Department of RTiTSA has long-term relations with the Faculty of Information Technologies and Electronics of Penza State University, Kovrov State Technological Academy named after V.A.Degtyarev, Tokai University, with which it exchanges experience, scientific publications and exchange of students on research internship (Self-assessment report, https://drive.google.com/drive/folders/1zUJW5EhMku0_QzowihpvmHbqlThQtjvg).

According to EP 6B07112 - Electronic and Electrical Engineering, the graduating department cooperates with Omsk State Technical University, Moscow Aviation University, Saiman JSC, Transtelecom JSC, ALTEL JSC, KazTransCom JSC, Kar-Tel LLP, Alatau ASKB, a branch of LG, Cisco, Rochde&Schwarz, "ICTT" LLP, "Kazakhstan ASELSAN Engineering" LLP, etc.

According to EP 8D06105 - Information Security Systems, the graduating department cooperates with the National Aviation University (Kiev, Ukraine), the National Research Nuclear University "MEPhI" (Moscow, Russia), the Odessa National Academy named after A.S. Popov, the Igor Sikorsky Kyiv Polytechnic Institute (Kiev, Ukraine), the Caucasus University (Georgia), University Putra Malaysia, University of Bielsko-Biala (Poland), Kaspersky Lab, Cisco Network Academy.

Responsible for the high-quality training of students in the areas of training are the heads of the EP, i.e. heads of departments who have developed graduate models that reflect knowledge skills and professional skills.

The process of forming bachelor's and doctoral degree programs is transparent, leading teaching staff, employers, as well as students take part in its compilation.

EP 6B07114 Biomedical Engineering was developed jointly with the departments of the Faculty of Information Technology and Electronics of Penza State University, Kovrov State Technological Academy named after V.A. Degtyarev, Akdeniz University, the School of Engineering of the University of Tokyo. EP 6B07112 "Electronic and Electrical Engineering" was

developed jointly with the departments of Omsk State Technical University, Moscow Aviation University. EP 8D06105 of the Information Security System was developed jointly with the departments of the Odessa National Academy of Communications named after A.S. Popov, the National Aviation University (Ukraine), the Belarusian State Academy of Communications "BGAS".

The University uses the licensed program "Strike Plagiarism" to check the written works of students and teaching staff and establish the facts of academic fraud.

Analytical part

The EO defines and documents the procedure for the development and approval of the EP. All interested parties participate in it. The management of the EP and EO strives to ensure that the content of the EP meets the established goals and learning outcomes. In accordance with the results of monitoring and internal audits, the content of the EP and the conditions for its implementation are being harmonized. The university has a generalized graduate model and the management of each EP develops its own, so the management of EP 6B07114 Biomedical Engineering has developed a graduate model of the EP describing personal qualities (Specialist model from 09/16/2021). The management of EP 6B07114 Biomedical Engineering ensured that the content of the EP corresponded to the expected learning outcomes. Syllabuses of disciplines, which were provided in electronic and printed form, indicate that the discipline plans are drawn up qualitatively. The content of compulsory and elective academic disciplines is aimed at the formation and achievement of the stated learning outcomes of EP 6B07114 Biomedical Engineering. The stated learning outcomes are measurable, aimed at the formation of specific competencies of the graduate, meet the requirements of professional standards and the expectations of employers.

The management of the EP presents feedback from employers received for programs of the same specialization in the areas of bachelor's, master's and doctoral studies. Also, the management of the EP justifies the expediency of the content of the EP plans, so according to EP 6B07114 Biomedical Engineering, the disciplines "Biomedical electronics", "Fundamentals of Biomechanics", "Artificial life support systems", "Medical imaging", "Clinical Engineering", "Management in biotechnical systems" are included in the training program. The management of the EP demonstrated the existence of a mechanism for the involvement of the employer of Medremzavod LLP in the development and approval of the EP.

According to EP 6B07114 Biomedical Engineering, the name of the declared discipline "Cardiac Engineering" does not fully correspond to its content, since its content is aimed at studying the anatomy and physiology of the heart (Topics: heart structure, anatomy and physiology of the heart, circulatory circles, cardiac cycle, cardiovascular system, cardiac conduction system, electrophysiology of the heart muscle, heart rhythm), whereas the name implies the acquisition of knowledge about the development of medical equipment in the field of cardiology, or about the tissue engineering of the heart.

In the register of EP in the Unified Higher Education Management System, the assessment of the achievability coefficient of EP 6B07114 Biomedical Engineering was estimated at 91%.

In general, the management of the NGO and the heads of the EP comply with all regulatory requirements regarding the development, approval and monitoring of the EP.

Strengths/Best practices

According to EP 6B07114 Biomedical Engineering, the content of the EP is consistent with the expected learning outcomes.

According to EP 6B07112 Electronic and Electrical Engineering, 8D06105 The Information Security System has no strengths.

Recommendations of the EEC

According to the EP "6B07114 Biomedical engineering" to revise the name of the declared discipline "Cardiac Engineering". The implementation period is 2022-2023 academic year.

Conclusions of the EEC by criteria:

according to the standard "Development and approval of an educational program", 12 criteria are disclosed, of which:

according to EP 6B07114 Biomedical engineering, 1 – has a strong, 11 – a satisfactory position;

According to EP 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security Systems 12 – have a satisfactory position.

6.4. The standard «Continuous monitoring and periodic evaluation of educational programs»

The university must ensure the revision of the structure and content of the EP, taking into account changes in the labor market, the requirements of employers and the social request of society.

The university must demonstrate the existence of a documented procedure for monitoring and periodic evaluation to achieve the goal of the EP and continuous improvement of the EP.

Monitoring and periodic evaluation of the EP should consider:

the content of the program in the context of the latest achievements of science and technology in a particular discipline;

changes in the needs of society and the professional environment;

workload, academic performance and graduation of students;

effectiveness of student assessment procedures;

needs and degree of satisfaction of students;

compliance of the educational environment and the activities of support services with the goals of the EP.

The management of the EP should publish information about the changes in the EP, inform interested parties about any planned or undertaken actions within the framework of the EP.

Support services should identify the needs of various groups of students and their degree of satisfaction with the organization of training, teaching, evaluation, and mastering of the EP in general.

The evidentiary part

The management of the NGO provides for improving the quality of the EP, which is achieved by constant monitoring of the implementation of the development plan of the EP, the results of which are considered at the departments, the council of specialties, also mandatory at the academic councils of institutes, the Educational and Methodological Council and the Academic Council of the University.

Monitoring involves:

– questionnaire survey of students "Teacher through the eyes of students";

– annual certification of teaching staff;

– interviews with students, business representatives;

– open lectures and practical classes;

– mutual attendance of teaching staff classes;

– attendance of teachers' classes by members of various commissions;

– involvement of employers in the evaluation of educational programs and conducting classes;

– external examination of educational and methodological documents;

– current knowledge control;

– boundary control of knowledge;

– final control of knowledge.

The decision to adjust the curricula is made by the UMS of the Institute and the University. To adjust the content of syllabuses and work programs - the graduating departments and the directorate of the Institute. These decisions are recorded in the minutes of the meeting of the departments, the council of the specialty of the UMS Institute and the University.

When developing educational programs, taking into account the requirements of the training levels (bachelor's, master's and doctoral studies), the graduating departments form goals that are consistent with the mission of the university and the requirements and requests of potential employers.

At the level of the KazNRTU Rector's office, the main monitoring tools are: self-assessment, rating and periodic evaluation of the effectiveness of bachelor's and doctoral degree educational programs, certification of workplaces. At the institute level – rating of students, doctoral students, analysis of their satisfaction and teaching staff, employer proposals. At the department level – ratings of the department and teaching staff (in the context of the Institute and University), performance analysis (internal audit of knowledge acquisition), Internet exam (external audit of knowledge acquisition). At the departments of RTiTSA, ETaST, of which a questionnaire is conducted twice a year in order to timely identify problems and "bottlenecks" with the disciplines of EP 6B07114 Biomedical Engineering / 5B071600 Instrumentation, 6B07112 Electronics and Electrical Engineering, 8D06105 Information Security Systems.

In addition, the Department of RTiTSA, Etiquette, which also performs an analysis of academic performance based on the results of attestations and passing final exams in disciplines.

After completion of all procedures for making adjustments / changes to the EP, all interested parties are informed about upcoming adjustments / changes.

The educational program 6B07114 Biomedical Engineering is an innovative EP. It was established in 2021 on the basis of the specialty 5B071600 Instrument Engineering. The set of bachelors for the 2021-2022 academic year is the first set for EP 6B07114 Biomedical Engineering.

Analytical part

The university has developed a system that allows monitoring and periodic evaluation of EP. Stable mutual relations between departments have been built and proper information exchange of data using information systems is ensured. Regulatory documents define the frequency and form for reporting at each level of the NGO. Data collection, processing and analysis of implemented business processes are carried out on a regular basis.

But, at the same time, it should be noted that the mechanisms underlying the current Development Strategy of the university are not fully consistent with the existing work processes at the department level. This leads to a mismatch of work between the level of the department and the level of institutes, etc. The probable cause of this phenomenon is updated approaches that are not fully communicated to the working staff. Therefore, it is recommended to pay attention to this fact.

Within the framework of this standard, I would like to draw attention to approaches to monitoring the effectiveness of evaluation procedures implemented by EP 6B07112 Electronic and Electrical Engineering, where the department regularly holds a competition "The best signalman" among students, with the issuance of a diploma for the winners. The competition is aimed at confirming the possession of communication skills in a playful way in a competitive environment. This approach allows, firstly, to create the proper motivation of students and, secondly, to identify the most gifted students.

Strengths/Best practices

According to EP 6B07114 Biomedical Engineering, 8D06105 Information Security systems have no strengths.

According to EP 6B07112 Electronic and Electrical Engineering, monitoring of the effectiveness of assessment procedures for students is provided.

Recommendations of the EEC

According to EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 There is no information security system.

Conclusions of the EEC by criteria:

According to the standard «Continuous monitoring and periodic evaluation of educational programs», 10 criteria are disclosed, of which:

according to EP 6B07114 Biomedical Engineering, 8D06105 Information security systems 10 – have a satisfactory position.

according to EP 6B07112 Electronic and Electrical Engineering 1 – has a strong, 9 – satisfactory position;

6.5. The standard "Student-centered learning, teaching and assessment of academic performance"

The management of the EP should ensure respect and attention to different groups of students and their needs, providing them with flexible learning paths.

The management of the EP should provide teaching based on modern achievements of world science and practice in the field of training, the use of various modern teaching methods and evaluation of learning outcomes that ensure the achievement of the goals of the EP, including competencies, skills to perform scientific work at the required level.

The management of the EP should determine the mechanisms for distributing the educational load of students between theory and practice within the framework of the EP, ensuring the development of the content and achievement of the goals of the EP by each graduate.

An important factor is the availability of own research in the field of teaching methods of the disciplines of the EP.

The university must ensure that the procedures for evaluating learning outcomes correspond to the planned results and goals of the EP.

The university must ensure the consistency, transparency and objectivity of the mechanism for evaluating the results of the EP training, the publication of criteria and evaluation methods in advance.

Evaluators should be familiar with modern methods of evaluating learning outcomes and regularly improve their skills in this area.

The management of the EP should demonstrate the existence of a feedback system for the use of various teaching methods and evaluation of learning outcomes.

The management of the EP should demonstrate support for the autonomy of students with simultaneous guidance and assistance from the teacher.

The management of the EP must demonstrate the existence of a procedure for responding to complaints from students.

The evidentiary part

Planning and management of educational activities under the guidance of the EO and EP is aimed at the implementation of student-oriented learning and improving the quality of education.

The NGO implements student-centered learning processes in educational programs: provides the development of flexible learning trajectories. The management of the NGO provides a respectful attitude and provides students with the opportunity to choose the teaching staff, the learning trajectory, and the choice of the preferred choice of training time.

The teaching staff of the department have an education corresponding to the trajectory of training specialists, constantly undergo advanced training courses to ensure teaching based on modern achievements of world science and practice.

To ensure the successful training of students, computer classes for data processing and interpretation have been created on the basis of the departments, equipped with modern software.

The classrooms are equipped with interactive whiteboards with video projectors that allow lectures and practical classes with slides and videos.

To ensure the successful teaching of disciplines, the teachers of the department develop textbooks, manuals and methodological guidelines for conducting classes in the state and Russian languages, which, after a certain period of time, are reviewed, discussed and approved by the department and the methodological council of the Institute.

Compliance of the teaching and learning methods used with the objectives of the discipline, module, EP is determined by ensuring that the teaching staff meets the qualification requirements, level and specifics of the educational program.

For the period of the examination session (intermediate attestation), a commission (appeal and examination) is created. The composition of the appeal commission from among experienced teachers whose qualifications correspond to the profile of the specialty is created by the head of the department and approved by the director of the Institute.

At the end of the EP program, the final certification is carried out with the protection of the final work.

Analytical part

The management of the EO and EP provides teaching and assessment of academic performance taking into account the needs of various groups of students, providing the university infrastructure and appropriate educational conditions.

In the implementation of the educational process, it is envisaged to use various forms and methods of teaching and learning based on the specifics of accredited educational institutions.

The management of the EP supports feedback mechanisms on the use of various teaching methods based on the available technical equipment of departments and practice bases. Within the framework of educational processes, a procedure is provided for responding to possible complaints from students. A consistent, transparent and objective mechanism for evaluating learning outcomes has been introduced, described in syllabuses, for example, in the educational and methodological complex EP 6B07112 Electronic and Electrical Engineering, when evaluating, not only the accuracy of the answer is taken into account, but also the time spent on forming answers, which can be considered a fairly progressive approach, especially for training technical specialists. According to EP 6B07112 Electronic and Electrical Engineering, the head of the EP provides the conditions for the comprehensive development of educational and methodological equipment of the educational process. So the teaching staff of the department in 2021, 2022 released: monograph " Automatic pressing of the process of purification and disinfection of natural water by means of an electric discharge", Abdikadyrov A.A. 2022;for the updated material and technical base, they released educational and methodological literature: Study of the characteristics of optical sources and photodiodes, 2021; Turakty toktyn elektr tizbegin zerdeleu, 2021 year; Model of an optical linear path, 2021; Physical basis of optical wave propagation in fiber optical fibers, 2021; Measurement of parameters of an optical communication line, 2021; Research of fiber-optic passive components, 2021; Investigation of the characteristics of optical fiber light guides, 2022).

According to EP 6B07114 Biomedical Engineering, it should be noted that the first two years of training specialists mainly include seminars and surveys, since most disciplines of a socio-humanitarian profile. Starting from the 3rd year, laboratory and practical classes are mainly conducted within the framework of specialized disciplines. However, for the implementation of student-oriented learning within the framework of the implementation of EP 6B07114 Biomedical Engineering, it is also important to include in the learning process such forms as case studies, etc. No information has been provided in full and no own research has been conducted in the field of methods of teaching EP disciplines. Also, when using various teaching methods, it is important to work out a feedback system from students on the use of various teaching methods.

The data of the self-assessment report state the high academic performance of students, for example, according to EP 6B07114, Biomedical engineering averaged 85-95%. A high student performance indicator indicates the appropriate quality of teaching of the disciplines included in

the content of the EP. The developed program EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information security systems provide students with the opportunity to choose disciplines to form an individual trajectory of their training. The proven mechanisms of teaching and assessment of student performance used at the departments of accredited EP correspond to the level of training of students.

It should be noted that according to EP 8D06105 of the Information Security System, there is a deplorable situation with the procedure for its implementation, and organizational aspects have been poorly worked out, which led to a low readiness of doctoral students for protection. Therefore, a radical revision of the procedure for preparing doctoral students is required. Special attention should be paid to the following areas: improving the quality of work with publication activity, both doctoral students and their supervisors; to attract successful foreign leaders and ensure the interaction of the doctoral student with them in order to achieve maximum effect; to open a dissertation council to enhance the image of the EP and attract the most capable applicants for doctoral studies.

Strengths/Best practices

According to EP 6B07114 Biomedical Engineering, 8D06105 Information Security systems have no strengths.

According to EP 6B07112 Electronic and Electrical Engineering, the existence of own research in the field of teaching methods of educational disciplines of EP is confirmed.

EEC Recommendations

According to EP 6B07114 Biomedical Engineering:

- *to conduct their own research in the field of methods of teaching the disciplines of the* EP. The implementation period is 2022-2023 academic year.

- *to work out a feedback system on the use of various teaching methods.* The implementation period is 2022-2023 academic year.

According to EP 8D06105 Information security systems:

- *to develop a roadmap for the timely implementation of individual plans of doctoral students and the provision of their scientific work for protection.* The implementation period is 2022-2024 academic years.

- *provide jobs for doctoral students who have defended their dissertations on time.* The implementation period is 2022-2024 academic years.

- *scientific consultants of doctoral students who successfully defend doctoral students significantly (up to 1.5 times) reduce the total academic load with the decision of the Academic Council of the University.* The implementation period is 2022-2024 academic years.

- *increase by 2-3 times the contact hours of scientific consultants with doctoral students.* The implementation period is 2022-2023 academic year.

- - *develop a step-by-step plan for the opening of the dissertation Council on* EP *8D06105 Information Security System.* The implementation period is 2022-2024 academic years.

- *to concentrate leading scientists with a high Hirsch index (above 7) in the field of information security systems, both domestic and foreign, as consultants to doctoral students.* The implementation period is 2022-2024 academic years.

- *it is mandatory to organize a long scientific trip (up to 3 months) of doctoral students to foreign partner universities, to foreign scientific consultants.* The implementation period is 2022-2024 academic years.

- *open a dissertation council on* EP *8D06105 Information Security Systems.* The implementation period is 2024.

Conclusions of the EEC by criteria:

According to the standard "Student-centered learning, teaching and assessment of academic performance", 10 criteria are disclosed, of which:

according to EP 6B07114 Biomedical Engineering, 10 – have a satisfactory position.

according to EP 6B07112 Electronic and Electrical Engineering 1 – has a strong, 9 – satisfactory position;

8D06105 Information security systems *9 – have a satisfactory position, 1 – suggests improvement.*

6.6. Standard "Students"

- ✓ *The university must demonstrate the policy of forming a contingent of students and ensure transparency, publicity of the procedures governing the life cycle of students (from admission to completion).*
- ✓ *The EP management should provide for special adaptation and support programs for newly enrolled and foreign students.*
- ✓ *The university must demonstrate the compliance of its actions with the Lisbon Recognition Convention, including the existence and application of a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and non-formal education.*
- ✓ *The university should provide an opportunity for external and internal academic mobility of students, as well as assist them in obtaining external study grants.*
- ✓ *The university should encourage students to self-education and development outside the main program (extracurricular activities).*
- ✓ *An important factor is the existence of a gifted students-support tool.*
- ✓ *The university must demonstrate cooperation 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.*
- ✓ *The university must provide students with internship places, demonstrate the procedure for facilitating the employment of graduates, maintaining contact with them.*
- ✓ *The university must demonstrate the procedure for issuing documents to graduates confirming the qualifications received, including the achieved learning outcomes.*
- ✓ *The EP management must demonstrate that the program graduates have skills that are in demand in the labor market and that these skills are really relevant.*
- ✓ *The EP management must demonstrate the existence of a monitoring the employment and professional activities of graduates tool.*
- ✓ *An important factor is the existence of an active alumni association/union.*

Evidence

Information on the rules and conditions for admission to undergraduate, doctoral studies, a list of required documents, a list of specialties, entrance exam programs in Kazakh, English and Russian, exam schedules, regulatory documents, announcements, etc. posted in advance on the official university website.

The formation of the contingent of students is carried out on the basis of the "Model Rules for Admission to Education in Educational Organizations Implementing Educational Programs of Higher and Postgraduate Education".

When accepting documents, all individual achievements of applicants and applicants, professional experience are taken into account. For the convenience of applicants, a guide that describes all the stages of filing documents and the registration itself has been created. Every year the University conducts special adaptation and support programs for newly enrolled students. The adaptation program is divided into several days. On the first day, there is an official acquaintance with the administration with the strategy, principles and internal regulations of the University explanation. Then the students are introduced to advisors who explain the system of education at the University. Later a cultural and entertainment program is being held, there is an initiation

ceremony, aimed at getting to know each other and joining a new team. The university creates a comfortable environment for the good mood of students and ensures quick adaptation to the educational process. An adviser, who holds an advisory hour every week according to the schedule, is assigned to each group. Various issues are discussed, including the results of assessments of student knowledge in all disciplines.

Social assistance and support for students is expressed in their provision with social and nominal scholarships, grants, allowances, compensations and subsidies.

The organization of the program of external academic mobility and international exchange programs for students abroad on additional education programs, including retraining and advanced training, scientific internships, participation in seminars, master classes, trainings and other training events, always takes place strictly in accordance with the approved Documented Procedures of Satbayev University № 718 “Academic Mobility”. Academic mobility of students is supported by the following foreign universities: Ufa State Oil Technical University, Ural State Agrarian University, National Research Technological University "MISiS", Moscow State Technical University named after N.E. Bauman, Tomsk Polytechnic University.

The departments are working to promote the employment of graduates: the labor market is being studied, vacancies are being searched, cooperation with representatives of enterprises and organizations is being organized. Every year, in order to increase efficiency and consistency in solving employment problems, a job fair is held within the walls of the University, where graduates meet directly with employers.

Analytics

The university has a published policy on the formation of a contingent. Informing consistently sets out the rules for admission, periods of study, academic performance, recognition and certification of students. The PA and EP management analyzes the available material and technical, information resources and personnel. It should be noted that in relation to EP 6B07112 Electronic and Electrical Engineering, the personnel composition fully complies with the qualification requirements for higher educational institutions, but unfortunately there is a tendency towards an overage composition - the current average age of employees is striving for fifty. Also, the department implementing EP 6B07112 Electronic and Electrical Engineering created an updated laboratory base, provided it with educational and methodological literature, and a little less than half of the teaching staff underwent advanced training in a Russian specialized institution. This integrated solution ensures high readiness for the formation of the current and future contingents.

It should be noted that EP 6B07114 Biomedical Engineering is an innovative EP. It was created in 2021 on the basis of the specialty 5B071600 Instrument Engineering. The set of bachelors for the 2021-2022 academic year is the first set for EP 6B07114 Biomedical Engineering. The number of students in EP 6B07114 Biomedical Engineering at the moment is 9. Based on the current indicators of accredited EPs, it is not possible to fully analyze the implementation of special adaptation and support programs for foreign students, since the entire contingent is represented by citizens of the RK.

To ensure the objective recognition of higher education qualifications, including the recognition of non-formal education, Satbayev University has approved a documented procedure in the regulatory document "Academic Mobility".

The university has experience of student participation in Erasmus + academic mobility programs, student Sh. Yessenova participated in the RTMoA department.

In relation to the accredited EP, there has not yet been a graduation, and it is possible to fully judge employment only by related EP departments, so according to the last request made in December 2020, the employment rate of Satbayev University graduates in 2020 was 91%.

According to the development plans of the university, a further increase in the number of students is expected, including for accredited EPs, however, it should be noted that the maximum group size, optimal for maintaining the quality of the planned practical and laboratory work, was

not presented for EP "6B07114" Biomedical Engineering ".

Interviews of students and the current picture of the provision of accommodation for students showed the need to improve the social conditions for students regarding the provision of places in the dormitory. With further growth of the contingent, this trend will take on alarming proportions and will create a negative picture regarding the public perception of the university and the EP in particular.

According to EP 6B07114 Biomedical Engineering, a demonstration of the readiness of the EP management to provide students with internship places, promote the employment of graduates, and maintain contact with them was revealed. So, all seven employees of the Robolab laboratory at the department of RTMoA are graduates of Satbayev University. Also, graduates of the Department of RTMoA Nurbekov N. and Ismagulov M. created their own, successful in the labor market, companies, LLP "MedService" (Service Company for Medical Equipment) and LLP "Omiks" (School of Robotics), while maintaining contact with the leadership of the department and provide assistance in the training of new specialists.

Strengths/best practice

In relation to EP 6B07114 Biomedical Engineering, the management of the EP demonstrates its readiness to provide available places of practice, promote the employment of graduates, and maintain contact with them.

In relation to EP 6V07112 Electronic and Electrical Engineering, the EP manual determines the formation of the contingent, taking into account the analysis of the available material, technical, information resources and personnel.

EEP recomendations

In relation to EP 6V07114 Biomedical Engineering:

- it is necessary to increase the dormitories fund and their quality, as there is a shortage of places for studying students. Perhaps by signing additional agreements with other universities and dormitorys. Implementation period 2022-2023 academic year.

- set the maximum group size during seminars, practical, laboratory and studio classes (since an increase in the number of students is planned). Implementation period 2022-2023 academic year.

In relation to EP 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security Systems: *develop a phased plan to maximize the provision of students with places in the dormitory and/or other places of residence with the provision of the necessary social conditions with the prospect of a percentage of 100% implementation in the future. Implementation period 2022-2023 academic year.*

In relation to EP 8D06105 Information security systems: *constantly update and modernize the existing material and technical bases with modern software. Implementation period 2022-2023 academic year.*

EEP conclusions by criteria:

according to the “Students” standard, 12 criteria are disclosed, of which:

in relation to EP 6B07114 Biomedical Engineering 1 - has a strong position, 10 - a satisfactory position, 1 - suggests improvement*;*

in relation to EP 6V07112 Electronic and Electrical Engineering 1 - has a strong position, 11 - a satisfactory position*;*

in relation to EP 8D06105 Information security systems 12 - has a satisfactory position.

6.7. Standard "Teaching Staff"

✓ *The university must have an objective and transparent personnel policy in the context of the EP, including recruitment (including invited teaching staff), professional growth and development of staff, ensuring the professional competence of the entire staff.*

- ✓ *The university must demonstrate the compliance of the qualitative composition of the teaching staff with the established qualification requirements, the strategy of the university, and the goals of the EP.*
- ✓ *The EP management should demonstrate the change in the role of the teacher in connection with the transition to student-centered learning and teaching.*
- ✓ *The university should provide opportunities for career growth and professional development of teaching staff, including young teachers.*
- ✓ *The university should involve in the teaching of specialists from relevant industries with professional competencies that meet the requirements of the EP.*
- ✓ *The university must demonstrate the presence of a motivation mechanism for the professional and personal development of teaching staff.*
- ✓ *The university must demonstrate the widespread use of information and communication technologies and software in the educational process by the teaching staff (for example, on-line training, e-portfolio, MOOCs, etc.).*
- ✓ *The university must demonstrate its focus on the development of academic mobility, attracting the best foreign and domestic teachers.*
- ✓ *The university must demonstrate the involvement of each teacher in promoting a culture of quality and academic integrity at the university, determine the contribution of teaching staff, including those invited, to achieving the goals of the EP.*
- ✓ *An important factor is the involvement of teaching staff in the development of the economy, education, science and culture of the region and the country.*

Evidence

The main human resource of the University, associated with the implementation of the educational and scientific process, is the personnel potential, formed by the personnel policy. The purpose of the personnel policy of Satbayev University is the creation of a system for the formation, development and management of the university staff, which has a high level of professionalism. Information about personnel is systematized in the form of a single electronic database that includes data on teaching staff, including their personal data, including information about their education, qualifications, academic degrees and titles, scientific and methodological publications, certificates and patents, individual plans of teachers, as well as educational and methodological complexes of specialties, syllabuses of disciplines.

The University develops transparent and objective criteria for hiring employees, appointments, filling vacancies, promotions, dismissals and follows them in its activities in accordance with the above provisions. Competitive selection of candidates for filling vacant positions of teaching staff 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 formation of teaching staff takes place on the basis of hiring by concluding labor contracts with teachers for a period of 1 and 3 years. The procedures for hiring, familiarizing the staff with the rights and obligations, movement, dismissal are carried out by the HR service.

The high level of professional competencies of university staff is maintained and developed in the system of continuous training and advanced training. The main emphasis in this process is placed on intra-corporate training, which comes in various forms: on-the-job training, mentoring, intra-university seminars and trainings. Every year a plan is formed to improve the qualifications of the teaching staff of the department, monitoring of the passage of these courses is carried out. The teaching staff and students annually publish scientific articles in the materials of foreign and domestic, scientific and practical conferences and scientific publications with a high impact factor.

The leadership of the PA supports the principles of student-centered learning - this is continuous improvement and the adoption of new forms, depending on the interests and needs of students. In this regard, teachers, students conduct a constant analysis of teaching and learning methods, as well as providing students with the appropriate infrastructure in order to stimulate

critical thinking and personal skills of students.

The departments of accredited EPs received a number of foreign professors invited to give lectures and conduct scientific consultations for the faculty of the University, PhD-doctoral students, undergraduates and bachelors: Candidate of Technical Sciences, Associate Professor Bagaev Dmitry Viktorovich (R.F., Kovrov, Kovrov State Technological Academy named after V.A. Degtyarev) lectures on the topics “Autonomous robotics and its application in industry” and “The current state of mobile robotic systems and complexes”; Professor Koichi Koganezawa (Tokai University) lectured on the topic “Multibody Dynamics”; Doctor of Technical Sciences, Professor Mikhailov Petr Grigoryevich (Russian Federation, Penza State Technological University) lectured on the topic “Designs and technologies of modern instrumentation”; Bodin Oleg Nikolaevich Doctor of Technical Sciences, Professor (Russian Federation, Penza State Technological University) lectured on the topics "Medical Information Systems in Emergencies", "Modern Technologies of Non-Invasive Cardiac Diagnostics" and "Mobile Telemedicine Complex in Emergencies".

Analytics

At the department of RTMoA in the training direction of 6B07114 "Biomedical Engineering" classes are taught by 15 teachers, including 12 full-time teaching staff, of which: doctors of science, professors (awarded by the Higher Attestation Commission of the Republic of Kazakhstan) - 0; PhD doctors - 4; Candidates of Sciences, Associate Professors (awarded by the Higher Attestation Commission of the Republic of Kazakhstan) - 7, the rest with an academic master's degree. The share of full-time teaching staff in the department is 80%, which corresponds to the established qualification requirements for licensing the educational activities of the university.

The staff of teachers who ensure the implementation of EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security Systems is formed from highly qualified and competent employees with a fairly extensive experience in scientific, pedagogical and practical activities. Leading scientists with great teaching and industrial experience - Doctor of Technical Sciences, Professor Isembergenov N.T., Assoc. professor Tashtai E.T., assoc. professor Zhunusov K.Kh., PhD doctor (Khabai A., Smailov N.K., Yusupova G.M.), senior lecturers (Kuttybaeva A.E., Utebaeva D.) and lecturer (Baikenova G.M., Sharipova G.) take an active part in the development of standard curricula and standard training programs for EP 6B07112 Electronic and Electrical Engineering. A positive achievement of the EP Management 6B07112 Electronic and Electrical Engineering is the coordinated organization of the purchase of specialized equipment and the advanced training of 11 teaching staff of the department at a Russian university.

In relation to EP 6B07114 Biomedical Engineering, the leadership of the department involved in teaching specialists Doctor of Medical Sciences, Professor Darmenov O., Ozhikenova A.K., PhD from the medical field. Under the guidance of Ph.D. Ozhikenova K.A. in 2018-2021, the research project "Portable Cardioanalyzer" was implemented, funded by the Ministry of Education and Science of the Republic of Kazakhstan, JSC "Science Fund" 127,000,000 tenge, which is evidence of the presence of a developing scientific direction at the department, the involvement of teaching staff in the development of the economy, science of the country (development at currently submitted for commercialization). In the period from 01/18/2021 to 01/22/2021, 11 members of the department completed advanced training courses Педагогикалық шеберлікті арттыру (72 h.). Six teachers in the period from November 10 to December 10, 2021 completed a 72-hour advanced training course - "The current state of mobile robotic systems and complexes." The department is implementing a project to commercialize a portable cardiograph, which, if successfully implemented, will contribute to the economy and science of the country.

One of the mechanisms for motivating the professional development of teaching staff is bonuses for scientific publications in the Web of Science, Scopus (Q1, Q2) databases.

Based on the results of the analysis of the evidence part of EP 6B07114 Biomedical Engineering, it meets the criteria of the IAAR Standard "Teaching Staff", since the composition of the RTMoA department meets the qualification requirements, the management of the department ensures the involvement of third-party specialists to train students in the medical field. The teaching staff of the department regularly take refresher courses.

The PA has a system of rewards for scientific publications in high-ranking journals.

In relation to EP 8D06105 Information Security Systems, special attention should be paid to measures and mechanisms to stimulate the publication activity of doctoral students, and the result should be not only an increase in the number of publications, but also an increase in the quartile.

Strengths/best practice

In relation to EP 6B07114 Biomedical Engineering, 8D06105 Information Security Systems: *there are no strengths.*

In relation to EP 6B07112 Electronic and Electrical Engineering: *the PA ensured full compliance of the personnel potential of the teaching staff with the specifics of the EP by purchasing equipment and additional training of the teaching staff of the department.*

EEP recomendations

In relation to EP 8D06105 Information security systems:

- develop an expanded plan for the implementation of increasing the publication activity of teaching staff and doctoral students, especially in conjunction with foreign consultants. Implementation period - 2022-2024 academic years.

EEP conclusions by criteria:

According to the standard "Teaching staff", 9 criteria are disclosed, of which:

In relation to EP 6V07114 Biomedical Engineering *9 - have a satisfactory position.*

In relation to EP 6V07112 Electronic and Electrical Engineering 1 - *has a strong position, 8 - a satisfactory position.*

In relation to EP 8D06105 Information security systems *7 - have a satisfactory position, 2 - suggest improvement.*

6.8. Standard "Educational resources and student support systems"

✓ *The university must guarantee the compliance of the infrastructure, educational resources, including material and technical, with the goals of the EP.*

✓ *The EP management must demonstrate the sufficiency of classrooms, laboratories and other facilities equipped with modern equipment to ensure the achievement of the objectives of the EP.*

✓ *The university must demonstrate the compliance of information resources with the needs of the university and the oPAing EPs, including in the following areas:*

technological support for students and teaching staff in accordance with EP (for example, online learning, modeling, databases, data analysis programs);

library resources, including a fund of educational, methodical and scientific literature on general education, basic and major disciplines on paper and electronic media, periodicals, granted access to scientific databases;

examination of the results of research, final works, dissertations for plagiarism;

access to educational Internet resources;

functioning of WI-FI in the university territory.

✓ *The university must demonstrate that it creates conditions for conducting scientific research, integrating science and education, publishing the results of research work of teaching staff, staff and students.*

✓ *The university should strive to ensure that the educational equipment and software used for the development of educational programs are similar to those used in the relevant sectors*

of the economy.

- ✓ *The EP management must demonstrate the existence of procedures for supporting various student groups, including information and counseling.*
- ✓ *The EP management should demostrate the existence of conditions for the advancement of the student along his/her individual educational trajectory*
- ✓ *The university must take into account the needs of different groups of students (adults, working, foreign students, as well as students with special educational needs).*
- ✓ *The university must ensure that the infrastructure meets the safety requirements.*

Evidence

The policy of the University is aimed at the academic support of students in achieving their personal and professional competencies, and receiving an academic degree.

The University has 14 student organizations in various areas. During the year, student government holds more than 50 events of various directions.

There is a youth committee in the PA - the highest body of student and youth self-government of the university in the field of implementing the state youth policy. The student trade union committee "Жас қанат" organizes such events as "The best dormitory", team building for students from socially vulnerable segments of the population, sports competitions among students, etc.

The university pays special attention to the anti-corruption culture and the general understanding of students about the essence of corruption.

To involve newly enrolled students in student clubs and organizations, student organizations annually participate in the Student Organizations Fair.

In the sports club of the university, which is headed by the master of sports in rhythmic gymnastics V. Laktionova, there are 10 sections in 9 sports.

The PA has an electronic catalog (EC) of the library created on the basis of the automated library system "MegaPRO" - a new generation web-system built on the basis of "cloud" technologies, adapted for mobile devices. The university has developed a mobile application for the Android platform for the convenience of students.

To implement the EP, the departments have the necessary number of classrooms, computers, a database of modern instruments and equipment, which is constantly updated.

When enrolling in academic disciplines (forming individual educational trajectories), advisors provide constant advice to students, explaining the learning outcomes, competencies that students acquire when mastering a particular discipline for each trajectory.

There is the possibility of connecting to Wi-Fi on the territory of the PA, which provides access to the local network of the University and the Internet. Wi-Fi is available for students, faculty and staff.

The Microsoft 365 cloud platform provided by Satbayev University for students, students, students and faculty is used as the main auxiliary tool for the online learning process.

To conduct exams and assess knowledge, teachers have the opportunity to use the service «Emtihunter» https://emtihunter.satbayev.university developed by employees of the Department of Information Technology can be used.

Analytics

The PA infrastructure and the departments equipment meet the requirements for the sufficiency of educational resources and support services for students.

The accredited EPs departments have good material and technical support with laboratory equipment and information technology equipment.

The university provides sufficient support to students by services that provide assistance in the educational process, library facilities and outside of educational pastime. In addition, support services for international cooperation providing academic mobility are quite extensively represented, as well as well-established links with practice places.

The university implements programs of social support for the vulnerable category of students, cash benefits and grants are allocated for them and priority is given when enrolling in a dormitory.

There is also an adviser among the staff who informs and advises students on the learning process.

Information resources in the form of an information platform, library support support the educational and scientific activities of teaching staff and students at a high level.

The university carries out an examination of graduation and test papers for borrowing.

Students and teaching staff have access to WI-FI throughout their entire territory of the PA.

When questioning teachers during the visit of the EEP, and from the information of the self-assessment report, it turned out that some of the computers and components require updating. In the material and technical fund there are obsolete instruments and equipment that require repair and renewal. At the department of RTMoA there is a need to purchase laboratory equipment for individual disciplines. For example, in the discipline "Signal processing", aimed at analyzing cardiac signals, it is required to purchase the appropriate equipment.

During the interview during the visit of the EEP, EEP revealed that the library fund of the organization of educational and scientific literature in the form of printed and electronic publications of the ten-year release period contains about 80% (according to the director of the scientific library).

The self-assessment report, as well as on the open resources of the PA, does not reflect the permissible percentage (threshold) of borrowings when checking examination and graduation papers in the Anti-plagiarism system, despite the fact that all papers undergo this check without fail.

The self-assessment report reflects the need to repair some obsolete equipment and devices in order to further use them for educational purposes.

Strengths/best practice

In relation to EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information security systems *no strengths.*

EEP recomendations

In relation to EP 6B07114 Biomedical Engineering:

- ensure the replenishment of the library fund of educational and scientific literature in the form of printed and electronic publications of a ten-year release period equal to 100% equipment. Implementation period 2022-2023 academic year.

- determine a reasonable allowable percentage (threshold) of borrowings when checking examination and graduation papers in the Antiplagiarism system. Implementation period 2022-2023 academic year.

- repair/replace obsolete appliances and other equipment. Implementation period 2022-2023 academic year.

- develop a mechanism for retrofitting the device for analyzing cardiac signals in the discipline "Signal processing". Implementation period 2022-2023 academic year.

In relation to EP 8D06105 Information security systems: *organize a scientific journal included in the Scopus database and CQASES MES RK. Implementation period 2022-2024 academic years*.

EEP conclusions by criteria:

according to the standard "Educational resources and student support systems", 9 criteria are disclosed, of which:

in relation to EP 6V07114 Biomedical Engineering 8 - *have a satisfactory position*, 1 - *suggests improvement.*

In relation to EP 6B07112 Electronic and Electrical Engineering, 8D06105 Information

security systems 9 - *have a satisfactory position.*

6.9. Standard "Public Information"

✓ *The university guarantees that the published information is accurate, objective, up-to-date and reflects all the activities of the university within the framework of the educational program.*

✓ *Informing the public should include support and explanation of the national development programs of the country and the system of higher and postgraduate education.*

✓ *The university management should use a variety of ways to disseminate information (including the media, web resources, information networks, etc.) to inform the general public and interested parties.*

✓ *Information about the educational program is objective, up-to-date and should include:*

the purpose and planned results of the EP, the qualification to be awarded;

information and the system for assessing the educational achievements of students;

information about academic mobility programs and other forms of cooperation with partner universities, employers;

information about the opportunities for developing personal and professional competencies of students and employment;

data reflecting the positioning of the EP in the market of educational services (at the regional, national, international levels).

✓ *An important factor is the publication on open resources of reliable information about teaching staff, in the context of personalities.*

✓ *The university must publish audited financial statements for the EP on its own web resource.*

✓ *The university must post information and links to external resources based on the results of external evaluation procedures.*

✓ *An important factor is the placement of information about cooperation and interaction with partners, including scientific/consulting organizations, business partners, social partners and educational organizations.*

Evidence

The University pays special attention to the transparency and relevance of information for all stakeholders. The official web resource of the University is constantly analyzed by the Management. Informing the public by the University is carried out by posting announcements about upcoming events on the main page of the official website, posting all the necessary internal regulatory documents for the use of all interested parties, as well as information on the EP. The pages of the department contain the necessary information on the educational program, information on teaching staff and employers.

There is a museum at the university, a system of traditional events, Open Doors Day, Student Communities Fair, Job Fair are supported.

There is a "Rector's Blog" on the website of the PA, where everyone can ask a question to the first head of the university and get an answer. Since 2019, the Facebook page of the Rector of Satbayev University has been functioning. Posts, links, orders and orders of the rector are published on the page.

The Satbayev University website is the main source of informing the public about the detailed content of educational programs, mission, tasks and procedures of the university. The university operates a public information system on the Internet, consisting of publications on the university website and social networks (Facebook, VK, YouTube), there is a university PR program aimed at working with traditional and electronic media.

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 based on the internal standard of the university.

The university provides the public with information about its activities, including ongoing programs, expected learning outcomes for these programs, qualifications awarded, teaching, learning, assessment procedures, passing scores and learning opportunities provided to students, as well as information about employment opportunities alumni based on the principle of transparency. The site contains complete information about all teachers working at the university. Each teacher has a profile containing a photo of the teacher, information about his scientific achievements and interests, syllabuses.

All important events held by the university are reflected in presentations on large-format permanent monitors located at the university. Reviews of publications in the press, as well as news stories aired on various TV and radio channels are regularly prepared for the administration.

Informing the public about cooperation and interaction with partners within the framework of the EP, including scientific/consulting organizations, business partners, social partners and educational organizations, is carried out through the university website and in electronic media.

Analytics

The PA management supports the publication on the main website, in electronic media and social networks regarding: implemented accredited EPs; qualifications of the graduate upon completion of the EP; information about teaching approaches, learning and assessment methods; information required for admission; potential employment; support and explanation of national programs for the development of the country and the higher education system; information about teaching staff; existing partners and places of internship.

For a number of new directions adopted for the implementation of the EP, there is either a lack or incomplete reflection of information on the website and in social networks. For example, information about EP 6B07114 Biomedical Engineering and changes in it on the pages of the department on Instagram, Facebook (https://m.facebook.com/profile.php?id=100047632216011&__rdr is dated May 2021).

Also, the information presented on the university website is “rigidly structured”, namely, the information is divided into local pieces between which there is no connection. For example, information about the EP as a whole is presented in the block institutes, further the department, and information about employment in the general block of the university, between which there is no connection and you have to reload the pages, links on the pages would be useful. Also, data on employment is not detailed in the context of the EP, which is most important for stakeholders, and not general data for the university, especially since at the department level, these data are monitored. In addition, information about the development plans of the EP is not presented in full, but there are only links to contact persons and corporate mail, which does not allow a complete picture of the trends within the accredited EP.

Strengths/best practice

In relation to EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information security systems *no strengths.*

EEP recomendations

In relation to EP 6B07114 Biomedical Engineering: *to ensure that the public is widely informed about cooperation and interaction with partners. Implementation period 2022-2023 academic year.*

EEP conclusions by criteria:

In relation to the Public Information standard, 10 criteria are disclosed, of which:

In relation to EP 6V07114 Biomedical Engineering *9 - has a satisfactory position, 1 - suggests improvement.*

In relation to EP 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security Systems *10 - has a satisfactory position.*

(VII) STRENGTHS/BEST PRACTICE FOR EACH STANDARD OVERVIEW

Standard "Information Management and Reporting"

In relation to EP 6B07112 Electronic and Electrical Engineering *The head of the EP manages to achieve a high level of decision-making based on facts.*

Standard "Development and approval of the educational program"

In relation to EP 6B07114 Biomedical Engineering *compliance of the content of the EP with the expected learning outcomes is ensured.*

Standard "Continuous monitoring and periodic evaluation of educational programs"

In relation to EP 6B07112 Electronic and Electrical Engineering *monitoring of the effectiveness of student assessment procedures is provided.*

Standard "Student-Centered Learning, Teaching and Assessment"

In relation to EP 6B07112 Electronic and Electrical Engineering *the presence of own research in the field of teaching methods of academic disciplines of the EP is confirmed.*

Standard "Students"

In relation to EP 6B07114 Biomedical Engineering *the EP management demonstrates its readiness to provide available places of practice, to promote the employment of graduates, to maintain contact with them.*

In relation to EP 6B07112 Electronic and Electrical Engineering *the EP management determines the formation of the contingent, taking into account the analysis of the available material, technical, information resources and personnel.*

Standard "Teaching Staff"

In relation to EP 6B07112 Electronic and Electrical Engineering *The PA ensured full compliance of the personnel potential of the teaching staff with the specifics of the EP by purchasing equipment and additional training of the teaching staff of the department.*

(VIII) RECOMMENDATIONS FOR IMPROVING QUALITY OVERVIEW

Standard "Information Management and Reporting"

In relation to EP 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information security systems:

- improvement of the corporate system for accessing and downloading summary data on teaching staff, the educational process and students, which would greatly facilitate the process of their analysis and evaluation of the effectiveness of the implementation of the EP is required. Implementation period 2022-2023 academic year.

In relation to EP 6B07114 Biomedical Engineering:

- post curricula and descriptions of disciplines of the EP 6B07114 Biomedical Engineering on the university website. Implementation period 2022-2023 academic year.

Standard "Development and approval of the educational program"

In relation to EP 6B07114 Biomedical Engineering:

- to revise the name of the declared discipline "Cardiac Engineering". Implementation period 2022-2023 academic year.

Standard "Student-Centered Learning, Teaching and Assessment"

In relation to EP 6B07114 Biomedical Engineering:

- conduct their own research in the field of teaching methods of EP disciplines. Implementation period 2022-2023 academic year.

- work out a feedback system on the use of various teaching methods. Implementation period 2022-2023 academic year.

In relation to EP 8D06105 Information security systems:

- develop a roadmap for the timely implementation of individual plans of doctoral students and the provision of their scientific work for defense. Implementation period 2022-2024 academic years.

- provide jobs for doctoral students who defended their dissertations on time. Implementation period 2022-2024 academic years.

- scientific advisers to doctoral students who successfully defend doctoral students to significantly (up to 1.5 times) reduce the total teaching load with the decision of the Academic Council of the University. Implementation period 2022-2024 academic years.

- increase by 2-3 times the contact hours for scientific consultants with doctoral students. Implementation period 2022-2023 academic year.

- develop a step-by-step plan for opening a dissertation council for EP 8D06105 - "Information Security Systems". The implementation period is 2022-2024 academic years.

- concentrate leading scientists with a high Hirsch index (above 7) in the direction of the information security system, both domestic and foreign, as consultants for doctoral students. Implementation period 2022-2024 academic years.

- organize a long-term scientific business trip (up to 3 months) for doctoral students to foreign partner universities, to foreign scientific consultants in a mandatory form. Implementation period 2022-2024 academic years.

- open a dissertation council for EP 8D06105 Information Security Systems. Implementation period 2024.

Standard "Students"

In relation to EP 6B07114 Biomedical Engineering:

- increase of the fund of dormitories and their quality, as there is a shortage of places for studying students is required. Perhaps by signing additional agreements with other universities and dormitories. Implementation period 2022-2023 academic year.

- set the maximum group size during seminars, practical, laboratory and studio classes (since an increase in the number of students is planned). Implementation period 2022-2023 academic year.

In relation to EP 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security Systems:

- develop a phased plan to maximize the provision of students with places in the dormitory and/or other places of residence with the provision of the necessary social conditions with the prospect of a percentage of 100% implementation in the future. Implementation period 2022-2023 academic year.

In relation to EP 8D06105 Information Security Systems:

- constantly update and modernize the existing material and technical bases with modern software. Implementation period 2022-2023 academic year.

Standard "Teaching Staff"

In relation to EP 8D06105 Information Security Systems:

- develop an expanded plan for the implementation of increasing the publication activity of teaching staff and doctoral students, especially in conjunction with foreign consultants. Implementation period 2022-2024 academic years.

Standard "Educational resources and student support systems"

In relation to EP 6B07114 Biomedical Engineering:

- ensure the replenishment of the library fund of educational and scientific literature in the form of printed and electronic publications of a ten-year release period equal to 100% equipment. Implementation period 2022-2023 academic year.

- determine a reasonable allowable percentage (threshold) of borrowings when checking examination and graduation papers in the Antiplagiarism system. Implementation period 2022-2023 academic year.

- repair/replace obsolete appliances and other equipment. Implementation period 2022-2023 academic year.

- to develop a mechanism for retrofitting the device for analyzing cardiac signals in the discipline "Signal processing". Implementation period 2022-2023 academic year.

In relation to EP 8D06105 Information Security Systems:

- organize a scientific journal included in the Scopus database and *CQASES* MES RK. Implementation period 2022-2024 academic years.

Standard "Public Information"

In relation to EP 6B07114 Biomedical Engineering:

- ensure that the public is widely informed about cooperation and interaction with partners. The implementation period is 2022-2023 academic year.

(IX) OF THE RECOMMENDATION FOR THE DEVELOPMENT OF EDUCATIONAL ORGANIZATION OVERVIEW

Formation of a journal included in the Scopus database is recommended.

Introducing additional methods and forms of teaching in 1-2 courses is recommended, since most of the seminars involve the form of assessment in the form of a survey.

Raise funding for PAs to purchase additional equipment.

Pay attention to the ratio of teaching staff to the total staff working at the university, at the moment there are 879 auxiliary persons for 605 teaching staff, parity should be strived for.

(X) ACCREDITATION BOARD RECOMMENDATIONS

The External Expert Panel has made a decision by a majority of votes to recommend to the Accreditation Council educational programs 6B07114 Biomedical Engineering, 6B07112 Electronic and Electrical Engineering, 8D06105 Information Security Systems of the Non-Profit Joint Stock Company "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 educational program 6B07114 Biomedical Engineering of the Non-profit Joint Stock Company "Kazakh National Research Technical University named after K.I.Satbayev" for a period of 1 (one) year.

item No.	NNo.	Evaluation criteria	Position of the educational organization			
			Strong	Satisfactory	To be improved	Unsatisfactory
Standard " Management of Educational Programme"						
1	1.	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		+		
2	2.	The organisation of higher and (or) postgraduate education should demonstrate the culture's development of quality assurance, including in EP context		+		
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.	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		+		
5	5.	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'		+		
6	6.	needs, employers and society, making decisions aimed at continuous improvement of EP		+		
7	7.	EP management should involve representatives of stakeholder groups, including employers, students and TS in the formation of EP development plan		+		
8	8.	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		+		
9	9.	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		+		
10	10.	EP management should provide evidence of the transparency of the educational programme management system		+		
11	11.	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		+		

12	12.	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		+		
13	13.	EP management should ensure the participation of representatives of employers, TS, 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		+		
14	14.	EO should demonstrate innovation management within EP framework, including the analysis and implementation of innovative proposals		+		
15	15.	EP management should demonstrate evidence of readiness for openness and accessibility for students, TS, employers and other concerned parties		+		
		Total on standard	**0**	**15**	**0**	**0**
Standard "Information Management and Reporting"						
16	1.	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		+		
17	2.	EP management should demonstrate the existence of a mechanism for the systematic use of processed, adequate information to improve the internal quality assurance system.		+		
18	3.	EP management should demonstrate decision-making based on facts		+		
19	4.	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		+		
20	5.	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		+		
21	6.	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.		+		
22	7.	An important factor is the availability of mechanisms for involving students, employees and TS in the processes of collecting and analysing information, as well as making decisions based on them		+		
23	8.	EP management should demonstrate the existence of a communication mechanism with students, employees and other concerned parties, as well as mechanisms for resolving conflicts		+		
24	9.	EO should demonstrate the existence of mechanisms for measuring the degree of satisfaction of the TS needs, personnel and students within EP framework		+		
25	10.	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:				
26	11.	key effectiveness indicators		+		
27	12.	the dynamics of the students contingent in the context of forms and types;		+		
28	13.	academic results, student achievement and expulsion		+		
29	14.	satisfaction of students with the realization of EP and the quality of education at HEI		+		
30	15.	availability of educational resources and support systems for students		+		
31	16.	EO should confirm the realization of procedures for processing personal data of students, employees and TS on the basis of their documentary consent		+		
		Total on standard	0	16	**0**	**0**
Standard "Development and Approval of the Education Programme"						

32	1.	EO should define and document the procedures for EP development and its approval at the institutional level		+		
33	2.	EP management should ensure that the developed EP meets the established objectives, including the expected learning outcomes	+			
34	3.	EP management should ensure the availability of developed models of EP graduate, describing the learning outcomes and personal qualities		+		
35	4.	EP management should demonstrate the performance of external examinations of EP content and the planned results of its implementation		+		
36	5.	The qualification awarded upon EP completion should be clearly defined and correspond to a certain NQS level		+		
37	6.	EP management should determine the influence of disciplines and professional practices on the formation of learning outcomes		+		
38	7.	An important factor is the ability to prepare students for professional certification		+		
30	8.	EP management should provide evidence of the participation of students, TS and other stakeholders in EP development, ensuring their quality		+		
40	9.	EP complexity should be clearly defined in Kazakhstani credits and ECTS		+		
41	10.	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).		+		
42	11.	EP structure should provide for various types of activities to ensure that students achieve the planned learning outcomes.		+		
43	12.	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		+		
		Total on standard	**1**	**11**	**0**	**0**
Standard "On-Going Monitoring and Periodic Review of Educational Programme"						
44	1.	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:				
45	2.	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		+		
46	3.	changes in the needs of society and the professional environment		+		
47	4.	workload, the level of academic achievement and students' graduation		+		
48	5.	the effectiveness of student assessment procedures		+		
49	6.	expectations, needs and satisfaction of students with EP training		+		
50	7.	educational environment and support services and their compliance with the objectives of EP		+		
51	8.	EO, EP management should define a mechanism for informing all concerned parties about any planned or taken actions in relation to EP		+		
52	9.	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		+		
53	10.	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		+		
		Total on standard	**0**	**10**	**0**	**0**
Standard "Student-Centered Learning, Teaching and Performance Evaluation"						

54	1.	EP management should ensure respect and attention to different groups of students and their needs providing them with flexible learning trajectory		+		
55	2.	EP management 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 EP academic disciplines		+		
57	4.	EP management should demonstrate the existence of feedback mechanisms on the use of various teaching methods and assessment of learning outcomes		+		
58	5.	EP management should demonstrate the existence of mechanisms to support the students' autonomy with simultaneous guidance and assistance from the teacher.		+		
59	6.	EP management should demonstrate the existence of a procedure for responding to student complaints		+		
60	7.	EO should ensure consistency, transparency and objectivity of the mechanism for assessing learning outcomes for each EP, including appeal		+		
61	8.	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		+		
62	9.	EO should determine the mechanisms for ensuring the achievement of learning outcomes by each EP graduate and ensure the completeness of their formation		+		
63	10.	Evaluators should be proficient in modern methods of assessing learning outcomes and regularly improve their qualifications in this area		+		
		Total on standard	**0**	**10**	**0**	**0**
Standard "Students"						
64	1.	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:				
65	2.	minimum requirements for applicants		+		
66	3.	maximum group size when conducting seminars, practical, laboratory and studio classes		+		
67	4.	forecasting the number of government grants		+		
68	5.	analysis of available material and technical, information resources, human resources		+		
69	6.	analysis of potential social conditions for students, including providing places in the hostel			+	
70	7.	EP management is obliged to demonstrate readiness to conduct special adaptation and support programmes for newly entered and foreign students		+		
71	8.	EO should demonstrate that its actions are consistent with the Lisbon Recognition Convention		+		
72	9.	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		+		
73	10.	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		+		
74	11.	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.	+			

75	12.	EP management should demonstrate its readiness to provide students with places of practice, to promote the graduates' employment, to maintain communication with them		+		
		Total on standards	**1**	**10**	**1**	**0**
Standard "Teaching Staff"						
76	1.	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		+		
77	2.	EO should demonstrate the compliance of the TS staff potential with EO development strategy and EP specifics		+		
78	3.	EP management should demonstrate awareness of responsibility for their employees and providing them with favorable working conditions		+		
79	4.	EP management should demonstrate the change in the role of the teacher in connection with the transition to student-centered learning		+		
80	5.	EO should determine the contribution of TS of the EP to the implementation of EO development strategy, and other strategic documents		+		
81	6.	EO should provide opportunities for career growth and professional development of TS of the EP		+		
82	7.	EP management is obliged to demonstrate readiness to involve practitioners of the relevant industries in teaching.		+		
83	8.	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		+		
84	9.	An important factor is the readiness to develop academic mobility within EP framework, to attract the best foreign and national teachers		+		
		Total on standard	**0**	**9**	**0**	**0**
Standard "Education Resources and Student Support Systems"						
85	1.	EO should ensure a sufficient number of training resources and student support services that meet EP objectives.		+		
86	2.	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).		+		
87	3.	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 TS in accordance with educational programmes (for example, online training, modeling, databases, data analysis programmes)				
88	4.	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		+		
89	5.	examination of research results, graduation works, dissertations for plagiarism			+	
90	6.	access to educational Internet resources		+		
91	7.	functioning of WI-FI on the territory of the educational organisation		+		
92	8.	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		+		
93	9.	EO should ensure a sufficient number of training resources and student support services that meet EP objectives.		+		
		Total on standard	**0**	**8**	**1**	**0**
Standard "Public Information"						

		EO should publish reliable, objective, relevant information about the educational programme and its specifics, which should include:				
94	1.	expected learning outcomes of EP implemented		+		
95	2.	qualifications and (or) qualifications that will be awarded upon EP completion		+		
96	3.	approaches of teaching, learning, as well as the system (procedures, methods and forms) of assessment		+		
97	4.	information about passing scores and learning opportunities provided to students		+		
98	5.	information about the possibilities of employment of graduates		+		
99	6.	EP management should provide for various ways of disseminating information, including mass media, information networks to inform the general public and concerned parties			+	
100	7.	Public awareness should include support and explanation of the country's national development programmes and the system of higher and postgraduate education		+		
101	8.	EO should demonstrate the reflection on the web resource of information characterizing it in general and in EP context.		+		
102	9.	An important factor is the availability of adequate and objective information about EP TS		+		
103	10.	An important factor is informing the public about cooperation and interaction with partners within EP framework		+		
Total on standard			**0**	**9**	**1**	**0**
TOTAL			**2**	**98**	**3**	**0**

2 % of the parameters have the *«strong" position»*
95 % of the parameters have the *«satisfactory" position»*
3% parameters have the position *« suggests improvement»*
0 % parameters have the position *« suggests improvement»*

Appendix 1.1

Conclusion of the external expert commission on the evaluation of the educational program 6B07112 Electronic and Electrical Engineering of the Non-profit Joint Stock Company "Kazakh National Research Technical University named after K.I.Satbayev" for a period of 1 (one) year.

item No.	NNo.	Evaluation criteria	Position of the educational organization			
			Strong	Satisfactory	To be improved	Unsatisfactory
Standard " Management of Educational Programme"						
1	16.	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		+		
2	17.	The organisation of higher and (or) postgraduate education should demonstrate the culture's development of quality assurance, including in EP context		+		
3	18.	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	19.	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		+		
5	20.	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'		+		
6	21.	needs, employers and society, making decisions aimed at continuous improvement of EP		+		
7	22.	EP management should involve representatives of stakeholder groups, including employers, students and TS in the formation of EP development plan		+		
8	23.	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		+		
9	24.	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		+		
10	25.	EP management should provide evidence of the transparency of the educational programme management system		+		
11	26.	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		+		
12	27.	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		+		
13	28.	EP management should ensure the participation of representatives of employers, TS, 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				
14	29.	EO should demonstrate innovation management within EP framework, including the analysis and implementation of innovative proposals		+		
15	30.	EP management should demonstrate evidence of readiness for openness and accessibility for students, TS, employers and other concerned parties		+		
		Total on standard	**0**	**15**	**0**	**0**
Standard "Information Management and Reporting"						
16	10.	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		+		
17	11.	EP management should demonstrate the existence of a mechanism for the systematic use of processed, adequate information to improve the internal quality assurance system.		+		
18	12.	EP management should demonstrate decision-making based on facts	+			
19	13.	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		+		
20	14.	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		+		
21	15.	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.		+		
22	16.	An important factor is the availability of mechanisms for involving students, employees and TS in the processes of collecting and analysing information, as well as making decisions based on them		+		
23	17.	EP management should demonstrate the existence of a communication mechanism with students, employees and other concerned parties, as well as mechanisms for resolving conflicts		+		
24	18.	EO should demonstrate the existence of mechanisms for measuring the degree of satisfaction of the TS needs, personnel and students within EP framework		+		
25	10.	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:				
26	11.	key effectiveness indicators		+		
27	12.	the dynamics of the students contingent in the context of forms and types;		+		
28	13.	academic results, student achievement and expulsion		+		
29	14.	satisfaction of students with the realization of EP and the quality of education at HEI		+		
30	15.	availability of educational resources and support systems for students		+		
31	16.	EO should confirm the realization of procedures for processing personal data of students, employees and TS on the basis of their documentary consent		+		
		Total on standard	**1**	**15**	**0**	**0**
Standard "Development and Approval of the Education Programme"						
32	13.	EO should define and document the procedures for EP development and its approval at the institutional level		+		
33	14.	EP management should ensure that the developed EP meets the established objectives, including the expected learning outcomes		+		

34	15.	EP management should ensure the availability of developed models of EP graduate, describing the learning outcomes and personal qualities		+		
35	16.	EP management should demonstrate the performance of external examinations of EP content and the planned results of its implementation		+		
36	17.	The qualification awarded upon EP completion should be clearly defined and correspond to a certain NQS level		+		
37	18.	EP management should determine the influence of disciplines and professional practices on the formation of learning outcomes		+		
38	19.	An important factor is the ability to prepare students for professional certification		+		
30	20.	EP management should provide evidence of the participation of students, TS and other stakeholders in EP development, ensuring their quality		+		
40	21.	EP complexity should be clearly defined in Kazakhstani credits and ECTS		+		
41	22.	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).		+		
42	23.	EP structure should provide for various types of activities to ensure that students achieve the planned learning outcomes.		+		
43	24.	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		+		
		Total on standard	**0**	**12**	**0**	**0**
Standard "On-Going Monitoring and Periodic Review of Educational Programme"						
44	11.	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:				
45	12.	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		+		
46	13.	changes in the needs of society and the professional environment		+		
47	14.	workload, the level of academic achievement and students' graduation		+		
48	15.	the effectiveness of student assessment procedures	+			
49	16.	expectations, needs and satisfaction of students with EP training		+		
50	17.	educational environment and support services and their compliance with the objectives of EP		+		
51	18.	EO, EP management should define a mechanism for informing all concerned parties about any planned or taken actions in relation to EP		+		
52	19.	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		+		
53	20.	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		+		
		Total on standard	**1**	**9**	**0**	**0**
Standard "Student-Centered Learning, Teaching and Performance Evaluation"						
54	11.	EP management should ensure respect and attention to different groups of students and their needs providing them with flexible learning trajectory		+		
55	12.	EP management should provide for the use of various forms and methods of teaching and learning		+		

56	13.	An important factor is the availability of own research in the field of teaching methods of EP academic disciplines	+			
57	14.	EP management should demonstrate the existence of feedback mechanisms on the use of various teaching methods and assessment of learning outcomes		+		
58	15.	EP management should demonstrate the existence of mechanisms to support the students' autonomy with simultaneous guidance and assistance from the teacher.		+		
59	16.	EP management should demonstrate the existence of a procedure for responding to student complaints		+		
60	17.	EO should ensure consistency, transparency and objectivity of the mechanism for assessing learning outcomes for each EP, including appeal		+		
61	18.	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		+		
62	19.	EO should determine the mechanisms for ensuring the achievement of learning outcomes by each EP graduate and ensure the completeness of their formation		+		
63	20.	Evaluators should be proficient in modern methods of assessing learning outcomes and regularly improve their qualifications in this area		+		
Total on standard			**1**	**9**	**0**	**0**
Standard "Students"						
64	13.	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:				
65	14.	minimum requirements for applicants		+		
66	15.	maximum group size when conducting seminars, practical, laboratory and studio classes		+		
67	16.	forecasting the number of government grants		+		
68	17.	analysis of available material and technical, information resources, human resources	+			
69	18.	analysis of potential social conditions for students, including providing places in the hostel		+		
70	19.	EP management is obliged to demonstrate readiness to conduct special adaptation and support programmes for newly entered and foreign students		+		
71	20.	EO should demonstrate that its actions are consistent with the Lisbon Recognition Convention		+		
72	21.	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		+		
73	22.	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		+		
74	23.	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.		+		
75	24.	EP management should demonstrate its readiness to provide students with places of practice, to promote the graduates' employment, to maintain communication with them		+		
Total on standards			**1**	**11**	**0**	**0**
Standard "Teaching Staff"						

76	10.	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		+		
77	11.	EO should demonstrate the compliance of the TS staff potential with EO development strategy and EP specifics	+			
78	12.	EP management should demonstrate awareness of responsibility for their employees and providing them with favorable working conditions		+		
79	13.	EP management should demonstrate the change in the role of the teacher in connection with the transition to student-centered learning		+		
80	14.	EO should determine the contribution of TS of the EP to the implementation of EO development strategy, and other strategic documents		+		
81	15.	EO should provide opportunities for career growth and professional development of TS of the EP		+		
82	16.	EP management is obliged to demonstrate readiness to involve practitioners of the relevant industries in teaching.		+		
83	17.	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		+		
84	18.	An important factor is the readiness to develop academic mobility within EP framework, to attract the best foreign and national teachers		+		
		Total on standard	**1**	**8**	**0**	**0**
Standard "Education Resources and Student Support Systems"						
85	1.	EO should ensure a sufficient number of training resources and student support services that meet EP objectives.		+		
86	2.	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).		+		
87	3.	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 TS in accordance with educational programmes (for example, online training, modeling, databases, data analysis programmes)				
88	4.	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		+		
89	5.	examination of research results, graduation works, dissertations for plagiarism		+		
90	6.	access to educational Internet resources		+		
91	7.	functioning of WI-FI on the territory of the educational organisation		+		
92	8.	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		+		
93	9.	EO should ensure a sufficient number of training resources and student support services that meet EP objectives.		+		
		Total on standard	**0**	**9**	**0**	**0**
Standard "Public Information"						
		EO should publish reliable, objective, relevant information about the educational programme and its specifics, which should include:				
94	1.	expected learning outcomes of EP implemented		+		
95	2.	qualifications and (or) qualifications that will be awarded upon EP completion		+		

96	3.	approaches of teaching, learning, as well as the system (procedures, methods and forms) of assessment		+		
97	4.	information about passing scores and learning opportunities provided to students		+		
98	5.	information about the possibilities of employment of graduates		+		
99	6.	EP management should provide for various ways of disseminating information, including mass media, information networks to inform the general public and concerned parties		+		
100	7.	Public awareness should include support and explanation of the country's national development programmes and the system of higher and postgraduate education		+		
101	8.	EO should demonstrate the reflection on the web resource of information characterizing it in general and in EP context.		+		
102	9.	An important factor is the availability of adequate and objective information about EP TS		+		
103	10.	An important factor is informing the public about cooperation and interaction with partners within EP framework		+		
Total on standard				**10**	**0**	**0**
TOTAL			**5**	**98**	**0**	**0**

4,9% of the parameters have the *«strong" position»*
95,1% of the parameters have the *«satisfactory" position»*
0% parameters have the position *« suggests improvement»*
0 % parameters have the position *« suggests improvement»*

Appendix 1.2

Conclusion of the external expert commission on the evaluation of the educational program
8D06105 Information Security Systems
of the Non-profit Joint Stock Company "Kazakh National Research Technical University named after K.I.Satbayev" for a period of 1 (one) year.

item No.	**NNo.**	**Evaluation criteria**	**Position of the educational organization**			
			Strong	**Satisfactory**	**To be improved**	**Unsatisfactory**
Standard " Management of Educational Programme"						
1	31.	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		+		
2	32.	The organisation of higher and (or) postgraduate education should demonstrate the culture's development of quality assurance, including in EP context		+		
3	33.	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	34.	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				
5	35.	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'		+		
6	36.	needs, employers and society, making decisions aimed at continuous improvement of EP		+		
7	37.	EP management should involve representatives of stakeholder groups, including employers, students and TS in the formation of EP development plan		+		
8	38.	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		+		
9	39.	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		+		
10	40.	EP management should provide evidence of the transparency of the educational programme management system		+		
11	41.	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		+		
12	42.	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		+		
13	43.	EP management should ensure the participation of representatives of employers, TS, 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		+		
14	44.	EO should demonstrate innovation management within EP framework, including the analysis and implementation of innovative proposals		+		
15	45.	EP management should demonstrate evidence of readiness for openness and accessibility for students, TS, employers and other concerned parties		+		
		Total on standard	**0**	**15**	**0**	**0**
Standard "Information Management and Reporting"						
16	19.	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		+		
17	20.	EP management should demonstrate the existence of a mechanism for the systematic use of processed, adequate information to improve the internal quality assurance system.		+		
18	21.	EP management should demonstrate decision-making based on facts		+		
19	22.	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		+		
20	23.	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		+		
21	24.	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.		+		

22	25.	An important factor is the availability of mechanisms for involving students, employees and TS in the processes of collecting and analysing information, as well as making decisions based on them		+		
23	26.	EP management should demonstrate the existence of a communication mechanism with students, employees and other concerned parties, as well as mechanisms for resolving conflicts		+		
24	27.	EO should demonstrate the existence of mechanisms for measuring the degree of satisfaction of the TS needs, personnel and students within EP framework		+		
25	10.	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:				
26	11.	key effectiveness indicators		+		
27	12.	the dynamics of the students contingent in the context of forms and types;		+		
28	13.	academic results, student achievement and expulsion		+		
29	14.	satisfaction of students with the realization of EP and the quality of education at HEI		+		
30	15.	availability of educational resources and support systems for students		+		
31	16.	EO should confirm the realization of procedures for processing personal data of students, employees and TS on the basis of their documentary consent		+		
		Total on standard	**0**	**16**	**0**	**0**
Standard "Development and Approval of the Education Programme"						
32	25.	EO should define and document the procedures for EP development and its approval at the institutional level		+		
33	26.	EP management should ensure that the developed EP meets the established objectives, including the expected learning outcomes		+		
34	27.	EP management should ensure the availability of developed models of EP graduate, describing the learning outcomes and personal qualities		+		
35	28.	EP management should demonstrate the performance of external examinations of EP content and the planned results of its implementation		+		
36	29.	The qualification awarded upon EP completion should be clearly defined and correspond to a certain NQS level		+		
37	30.	EP management should determine the influence of disciplines and professional practices on the formation of learning outcomes		+		
38	31.	An important factor is the ability to prepare students for professional certification		+		
30	32.	EP management should provide evidence of the participation of students, TS and other stakeholders in EP development, ensuring their quality		+		
40	33.	EP complexity should be clearly defined in Kazakhstani credits and ECTS		+		
41	34.	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).		+		
42	35.	EP structure should provide for various types of activities to ensure that students achieve the planned learning outcomes.		+		
43	36.	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		+		
		Total on standard	**0**	**12**	**0**	**0**
Standard "On-Going Monitoring and Periodic Review of Educational Programme"						
44	21.	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:				

45	22.	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		+		
46	23.	changes in the needs of society and the professional environment		+		
47	24.	workload, the level of academic achievement and students' graduation		+		
48	25.	the effectiveness of student assessment procedures		+		
49	26.	expectations, needs and satisfaction of students with EP training		+		
50	27.	educational environment and support services and their compliance with the objectives of EP		+		
51	28.	EO, EP management should define a mechanism for informing all concerned parties about any planned or taken actions in relation to EP		+		
52	29.	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		+		
53	30.	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		+		
		Total on standard	**0**	**10**	**0**	**0**
Standard "Student-Centered Learning, Teaching and Performance Evaluation"						
54	21.	EP management should ensure respect and attention to different groups of students and their needs providing them with flexible learning trajectory		+		
55	22.	EP management should provide for the use of various forms and methods of teaching and learning		+		
56	23.	An important factor is the availability of own research in the field of teaching methods of EP academic disciplines		+		
57	24.	EP management should demonstrate the existence of feedback mechanisms on the use of various teaching methods and assessment of learning outcomes		+		
58	25.	EP management should demonstrate the existence of mechanisms to support the students' autonomy with simultaneous guidance and assistance from the teacher.		+		
59	26.	EP management should demonstrate the existence of a procedure for responding to student complaints		+		
60	27.	EO should ensure consistency, transparency and objectivity of the mechanism for assessing learning outcomes for each EP, including appeal		+		
61	28.	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		+		
62	29.	EO should determine the mechanisms for ensuring the achievement of learning outcomes by each EP graduate and ensure the completeness of their formation			+	
63	30.	Evaluators should be proficient in modern methods of assessing learning outcomes and regularly improve their qualifications in this area		+		
		Total on standard	**0**	**9**	**1**	**0**
Standard "Students"						
64	25.	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:				

65	26.	minimum requirements for applicants		+		
66	27.	maximum group size when conducting seminars, practical, laboratory and studio classes		+		
67	28.	forecasting the number of government grants		+		
68	29.	analysis of available material and technical, information resources, human resources		+		
69	30.	analysis of potential social conditions for students, including providing places in the hostel		+		
70	31.	EP management is obliged to demonstrate readiness to conduct special adaptation and support programmes for newly entered and foreign students		+		
71	32.	EO should demonstrate that its actions are consistent with the Lisbon Recognition Convention		+		
72	33.	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		+		
73	34.	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		+		
74	35.	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.		+		
75	36.	EP management should demonstrate its readiness to provide students with places of practice, to promote the graduates' employment, to maintain communication with them		+		
		Total on standards	**0**	**12**	**0**	**0**
Standard "Teaching Staff"						
76	19.	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			+	
77	20.	EO should demonstrate the compliance of the TS staff potential with EO development strategy and EP specifics		+		
78	21.	EP management should demonstrate awareness of responsibility for their employees and providing them with favorable working conditions			+	
79	22.	EP management should demonstrate the change in the role of the teacher in connection with the transition to student-centered learning		+		
80	23.	EO should determine the contribution of TS of the EP to the implementation of EO development strategy, and other strategic documents		+		
81	24.	EO should provide opportunities for career growth and professional development of TS of the EP		+		
82	25.	EP management is obliged to demonstrate readiness to involve practitioners of the relevant industries in teaching.		+		
83	26.	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		+		
84	27.	An important factor is the readiness to develop academic mobility within EP framework, to attract the best foreign and national teachers		+		
		Total on standard	**0**	**7**	**2**	**0**
Standard "Education Resources and Student Support Systems"						
85	1.	EO should ensure a sufficient number of training resources and student support services that meet EP objectives.		+		
86	2.	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).		+		
87	3.	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 TS in accordance with educational programmes (for example, online training, modeling, databases, data analysis programmes)				
88	4.	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		+		
89	5.	examination of research results, graduation works, dissertations for plagiarism		+		
90	6.	access to educational Internet resources		+		
91	7.	functioning of WI-FI on the territory of the educational organisation		+		
92	8.	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		+		
93	9.	EO should ensure a sufficient number of training resources and student support services that meet EP objectives.		+		
Total on standard			**0**	**9**	**0**	**0**
Standard "Public Information"						
		EO should publish reliable, objective, relevant information about the educational programme and its specifics, which should include:				
94	1.	expected learning outcomes of EP implemented		+		
95	2.	qualifications and (or) qualifications that will be awarded upon EP completion		+		
96	3.	approaches of teaching, learning, as well as the system (procedures, methods and forms) of assessment		+		
97	4.	information about passing scores and learning opportunities provided to students		+		
98	5.	information about the possibilities of employment of graduates		+		
99	6.	EP management should provide for various ways of disseminating information, including mass media, information networks to inform the general public and concerned parties		+		
100	7.	Public awareness should include support and explanation of the country's national development programmes and the system of higher and postgraduate education		+		
101	8.	EO should demonstrate the reflection on the web resource of information characterizing it in general and in EP context.		+		
102	9.	An important factor is the availability of adequate and objective information about EP TS		+		
103	10.	An important factor is informing the public about cooperation and interaction with partners within EP framework		+		
Total on standard				**10**	**0**	**0**
TOTAL			**0**	**100**	**3**	**0**

4,9% of the parameters have the *«strong" position»*
97% of the parameters have the *«satisfactory" position»*
3% parameters have the position *« suggests improvement»*
0 % parameters have the position *« suggests improvement»*