



«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 evaluation of educational programs  
7M05311 « Nuclear Medicine »  
for compliance with the requirements of the primary  
specialized accreditation standards  
AL FARABI KAZAKH NATIONAL UNIVERSITY  
from May 15 to May 17, 2023

**INDEPENDENT AGENCY FOR ACCREDITATION AND RATING**  
*External Expert Commission*

*Addressed to  
To the Accreditation  
Council IAAR*



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**Almaty**

**«17» May 2023**

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## (I) LIST OF SYMBOLS AND ABBREVIATIONS

**KazNU named after. al-Farabi** – Al-Farabi Kazakh National University  
**BD** – Basic disciplines  
**EEC** – External Expert Commission  
**SCC** – State Certification Commission  
**SCED** – State Compulsory Education Standard  
**ICT** – Information and Communication Technologies  
**IS** – Information Systems  
**IC** – Individual curriculum  
**CCh** – Component of choice  
**CED** – Catalog of elective disciplines  
**MES RK** – Ministry of Education and Science of the Republic of Kazakhstan  
**MEP** – Modular educational programs  
**IAAR** – Independent accreditation and rating agency  
**NAO** – Non-profit joint stock company  
**SRW** – Scientific research work  
**RWU** – Research work of undergraduates  
**SRWS** – Scientific research work of students  
**SMS** – Scientific and methodological seminar  
**NPI** – Non-profit institution  
**RC** – Required component  
**EP** – Educational programs  
**MD** – Major disciplines  
**Teaching staff** – Teaching staff  
**WC** – Working curriculum  
**IWU** – Independent work of undergraduates  
**IWUT** – Independent work of undergraduates under the guidance of a teacher  
**LLP** – Limited Liability Partnership  
**EMCD** – Educational and methodological complex of discipline

## (II) INTRODUCTION

In accordance with Order No. 74-23-MA dated 10.03.2023 of the Independent Agency for Accreditation and Rating, from May 15 to 17, 2023, an external expert commission assessed the compliance of educational programs 6B05310 – Nuclear Medicine and 8D05309 – Nuclear Medicine of the Al-Farabi Kazakh National University for compliance with the requirements of the primary specialized accreditation standards of the NAAR (No. 68-18/1-MA of May 25, 2018) in a hybrid format.

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

The composition of the EEC:

**Expert IAAR, the chairman of EEC** – Tulupova Elena Sergeevna, Ph.D., Institute of Public Health and Medical Law, 1st Medical Faculty of Charles University (Czech Republic, Prague), *Off-line participation*;

**Expert IAAR** – Vasilevskaya Ekaterina Sergeevna, Ph.D., Associate Professor, Omsk State Medical University (Omsk, Russian Federation), *Off-line participation*;

**Expert IAAR** – Shukirbekova Alma Boranbekovna, Ph.D., Professor, JSC "Astana Medical University" (Republic of Kazakhstan, Astana), *On-line participation*;

**Expert IAAR** – Seydakhmetova Aizat Ashimkhanovna, Candidate of Medical Sciences, JSC "South Kazakhstan Medical Academy" (Republic of Kazakhstan, Shymkent), *Off-line participation*;

**Expert IAAR** - Zhalilov Fazliddin Sodikovich, MD, Tashkent Pharmaceutical Institute, (Republic of Uzbekistan, Tashkent), *Off-line participation*;

**Expert IAAR** – Maukenova Altynai Amanbayeva, Candidate of Economics, Kazakh National Medical University named after S.D.Asfendiyarov, (Republic of Kazakhstan, Almaty), *Off-line participation*;

**Expert IAAR** – Muchkin Dmitry Pavlovich, PhD, Associate Professor, NAO "Pavlodar Pedagogical University" (Republic of Kazakhstan, Pavlodar), *Off-line participation*;

**Expert IAAR** – Sultanova Gulnar Dostanovna, candidate of the medical sciences, NAO "West Kazakhstan Medical University" (Republic of Kazakhstan, Aktobe), *Off-line participation*;

**Expert IAAR** - Imasheva Bagdat Sakenovna, PhD, Professor, Advisor to the Chairman of the Board, National Center for Public Health of the Ministry of Health of the Republic of Kazakhstan (Republic of Kazakhstan, Astana), *Off-line participation*;

**Expert IAAR** – Ganagina Irina Gennadievna, Candidate of Technical Sciences, Siberian State University of Geosystems and Technologies (Novosibirsk, Russian Federation), *On-line participation*;

**Expert IAAR** – Yerdauletov Meir Sapargalievich, Joint Institute for Nuclear Research (Dubna, Russian Federation), *Off-line participation*;

**Expert IAAR** – Kabyshev Asset Maratovich, PhD, L.N. Gumilyov Eurasian University (Republic of Kazakhstan, Astana), *Off-line participation*;

**Expert IAAR** – Kasymov Askar Bagdatovich, PhD, NAO "Shakarim University of Semey" (Republic of Kazakhstan, Semey), *Off-line participation*;

**Expert IAAR** - Kulzhumieva Ayman Amangeldievna, Ph.D., M.Utemisov West Kazakhstan University (Republic of Kazakhstan, Uralsk), *On-line participation*;

**Expert IAAR, employer EEC** – Yeseneev Olzhas Brimzhanovich, Master of Business Administration in Healthcare, GU Hospital with Polyclinic of the Police Department of the North Kazakhstan region (Republic of Kazakhstan, Petropavlovsk), *On-line participation*;

**Expert - Employer IAAR** - Pilipenko Yuri Alexandrovich, International Association of Manufacturers of Goods and services "Expobest" (Republic of Kazakhstan, Almaty) *Off-line participation*;

**Expert IAAR, EEC student** – Kaibagarova Indira Boranbaevna, doctoral student, NAO "West Kazakhstan Medical University" (Republic of Kazakhstan, Aktobe), *On-line participation*;

**Expert IAAR, student of EEC**- Zhelubaeva Kainesh Turgunovna, master's student, JSC "Astana Medical University" (Republic of Kazakhstan, Astana), *On-line participation*;

**Expert IAAR, student of EEC**– Orazayeva Bayan Bolatkalikyzy, graduate student of NAO "Medical University of Semey" (Republic of Kazakhstan, city of Semey), *On-line participation*;

**Expert IAAR, student of EEC**– Tungushov Sherkhan Jasulanbekuly, student, NAO "Arkalyk Pedagogical Institute named after Y. Altynsarina" (Republic of Kazakhstan, Arkalyk city), *On-line participation*;

**Expert IAAR, student of EEC**- Shirinbek Beklan Saparalyuly, student, South Kazakhstan Medical Academy JSC (Republic of Kazakhstan, Shymkent), *On-line participation*;

**Expert IAAR, student of EEC**– Dildabek Turar Kanatuly, student, Kazakh National Medical University named after S. D. Asfendiyarova, (Republic of Kazakhstan, city of Almaty), *Off-line participation*;

**Expert IAAR, student of EEC**– Tirzhanova Sabina Erkinovna, doctoral student, NJSC "Kazakh National Research Technical University named after K. I. Satpayev" (Republic of Kazakhstan, Almaty), *Off-line participation*;

**Expert IAAR, student of EEC**– Bagramova Asel Aidosovna, doctoral student, NJSC Eurasian University named after L.N. Gumilyov" (Republic of Kazakhstan, Astana), *On-line participation*;

**Expert IAAR, student of EEC**– Kuzyakova Valentina Alekseevna, student of the NJSC "Medical University of Karaganda", (Republic of Kazakhstan, Karaganda), *On-line participation*;

**Expert IAAR, student of EEC**– Mustafina Mergul Oralbekovna, doctoral student at the East Kazakhstan University named after S. Amanzholov (Republic of Kazakhstan, Ust-Kamenogorsk), *On-line participation*;

**Координатор IAAR** – Dzhakenova Alisa Satbekovna, Ph.D., Head of Medical Projects of the Agency (Republic of Kazakhstan, Astana), *Off-line participation*.

### **(III) REPRESENTATION OF THE EDUCATIONAL ORGANIZATION**

Al-Farabi Kazakh National University carries out educational activities in accordance with the updated state license KZ27LAA00019309, issued by the Committee for Control over the Sphere of Education and Science of the Republic of Kazakhstan dated November 19, 2020.

January 15, 1934 is the day of the official opening of the Kazakh State University (KazSU), created on the basis of the Pedagogical Institute by the Resolution of the Council of People's Commissars of the USSR and the Kazakh Regional Committee of the All-Union Communist Party. On December 2 of the same year, Kazakh State University was named after the famous Soviet party and statesman S. M. Kirov.

Currently, Kazakh National University named after. al-Farabi is a large scientific, educational and innovation center where new knowledge, advanced ideas and technologies are accumulated. The main guidelines for the University are the tasks set in the Address of the President of the country: entering the ranking of the best universities in the world, carrying out innovative activities and introducing the results of scientific research into production. KazNU named after. al-Farabi, a modern world-class university, is a leading scientific, methodological, research center for the development of the higher education system in the Central Asian region.

The mission of Al-Farabi Kazakh National University is to form human resources - competitive and in-demand specialists in the national and international labor markets, to achieve a qualitatively new effect in the formation of citizens of the country and the world, and to promote the sustainable development of society through the transfer and increase of knowledge.

The goal of the university is to be a locomotive of progressive economic, social and cultural changes in society; to build human resources potential for the domestic and Eurasian labor markets in accordance with their needs and development prospects for the country and region; promote the introduction of innovative technologies into all spheres of the country's life through the commercialization of the results of scientific research by university scientists; ensure the improvement of the nation's education, its intellectual, cultural and moral potential.

The strategic goal of the university is the transformation of NJSC "KazNU named after. al-Farabi" into a world-class research university. Target indicators for strategic areas.

The University operates in accordance with the Constitution of the Republic of Kazakhstan, the laws of the Republic of Kazakhstan "On Education" dated July 27, 2007, "On Science" dated February 18, 2011, "On the commercialization of scientific and (or) scientific and technical activities" dated October 31 2015 and other regulatory legal acts of the Republic of Kazakhstan regulating educational and scientific activities, as well as the Charter of the Al-Farabi Kazakh National University.

According to the results of the world ranking QS World University Ranking in 2022, the leading Kazakh University is KazNU named after. al-Farabi took 150th place in the list of the best universities in the world (<https://www.topuniversities.com/universities/al-farabi-kazakh-national-university>).

KazNU named after. al-Farabi consists of a scientific and educational cluster, the structure of which includes 16 faculties, in which 67 departments function; 8 research institutes of natural science and technology; science and technology park; open national laboratory of nanotechnology; 5 institutes and 17 scientific centers of social and humanitarian profile. The university management system is built on a vertical principle and provides for a structural division into areas of activity: educational and methodological work, research work, educational work, etc. Internal normative and organizational and regulatory documents approved at the Al-Farabi Kazakh National University allow for operational management and distribution of powers.

Table 1 – Student population for 2022-2023

Name of EP	Number of students
6B05310 - Nuclear medicine	18
7M05311 - Nuclear medicine	11
8D05309 - Nuclear medicine	2

The following table presents data on the total number of full-time teaching staff and part-time teaching staff of the department participating in the implementation of the EP (lectures, seminars, laboratory and practical classes, industrial practice) on an ongoing basis and on the principle of rotation or replacement. A total of 45 people, excluding educational and support staff in laboratories and those accepted for grant funding projects for engineering and laboratory positions, and in one way or another participating in the maintenance of educational and research activities related to the EP.

Table 2 – Data on the total number of full-time teaching staff and part-time teaching staff of the department participating in the implementation of the EP

Department of Theoretical and Nuclear Physics	Total	Established				Part-timers				Number of teaching staff participating in the work of PhD-doctoral councils	Number of full-time teaching staff participating in the implementation of projects (and % of participation from the total number of actual teaching staff)
		Total	Doc.s	Cand.s	PhD	Total	Doc.s	Cand.s	PhD		
1	2	3	4	5	6	7	8	9	10	11	12
Total	45	40	10	13	17	5	1		4	5	19

Table 2 shows data on the total number of doctors and candidates of science among full-time and part-time employees, the number of teaching staff participating in the work of PhD doctoral councils and the number of employees leading their own grant funding projects with leading organizations of Al-Farabi KazNU and third-party organizations.

#### (IV) DESCRIPTION OF PREVIOUS ACCREDITATION PROCEDURE

The educational program 7M05311 “Nuclear Medicine” is being accredited by the IAAR for the first time.



## (V) DESCRIPTION OF THE EEC VISIT

The work of the EEC was carried out on the basis of the approved Visit Program of the expert commission for specialized accreditation of educational programs of the Kazakh National University. Al-Farabi from May 15 to May 17, 2023.

In order to coordinate the work of the EEC, an on-line orientation meeting was held on May 12, 2023, during which powers were distributed among the commission members, the visit schedule was clarified, and agreement was reached on the choice of examination methods.

To obtain objective information about the quality of educational programs and the entire infrastructure of the university, to clarify the content of self-assessment reports, meetings were held with the vice-rectors of the university in the areas of activity, heads of structural divisions, deans (deputy deans), heads of departments, EP coordinators, teachers, students, graduates, employers. A total of 49 representatives took part in the meetings (Table 3).

Table 3. Information about employees and students who took part in meetings with the IAAR EEC.

Category of participants	Quantity
Vice-rectors	2
Heads of structural divisions	15
Deans of faculties	2
Head of department, EP coordinators	2
Teachers	12
Students, undergraduates	10
Graduates	2
Employers	4
<b>Total</b>	<b>49</b>

During the visual inspection, members of the EEC got acquainted with the state of the material and technical base, visited the Keremet student service center, the University Situation Management Center, the al-Farabi library (subscription, classical reading room, electronic room, dissertation room, self-service terminal), general laboratories physical workshop, laboratory of interactions of radiation with matter, department of theoretical and nuclear physics, laboratory of nuclear electronics, radio energy and radiation safety, laboratory of general physics, lecture hall named after academician of NAS RK Abdildin M.M., computer class.

At meetings of the IAAR EEC with target groups of the university, the mechanisms for implementing the university's policy were clarified and certain data presented in the university's self-assessment report were specified.

Members of the EEC visited the practice bases of the accredited program: KazNIIOiR, KSE at the Almaty Oncology Center.

In accordance with the accreditation procedure, a survey was conducted of 12 teachers and 10 students, including 1st and 2nd year undergraduates.

In order to confirm the information presented in the self-assessment report, external experts requested and analyzed the working documentation of the university. Along with this, experts studied the online positioning of the university through the official website of the university <https://www.kaznu.kz/ru>

As part of the planned program, recommendations for improving the accredited educational programs of the Al-Farabi Kazakh National University, developed by the EEC based on the results of the examination, were presented at a meeting with the management on May 17, 2023.



## (VI) COMPLIANCE WITH SPECIALIZED ACCREDITATION STANDARDS

### 6.1. The standard "Educational Program Management"

#### *Evidence*

Determining the goal and development strategy of the EP “7M05311-Nuclear Medicine” is achieved based on an analysis of the state and trends in the development of nuclear medicine in the world and in Kazakhstan. It is important to note that the focus of this EP on training competitive specialists is ensured largely due to the features of this EP, in the curriculum of which, the basic and specialized disciplines have medical and physical directions and are dedicated to laying the foundation for highly qualified support and assistance in diagnosis and treatment in the field of nuclear medicine.

The structure and content of the EP “7M05311-Nuclear Medicine” correspond to the strategic goals and objectives of the University for 2020-2025, aimed at ensuring the state order - training graduates in the field of nuclear medicine with high personal and professional qualities that meet the requirements of the labor market. Graduate model of the educational program – “Nuclear Medicine” (available at the link [https://welcome.kaznu.kz/ru/education\\_programs/magistracy/speciality/1554](https://welcome.kaznu.kz/ru/education_programs/magistracy/speciality/1554))

The EP development strategy satisfies the state’s needs for qualified personnel with the knowledge and skills to carry out activities in the field of nuclear medicine.

The development and implementation of the EP is carried out on the basis of research work (R&D) of teaching staff and undergraduates. The interaction between research, teaching and learning can be seen:

- in publications of scientific works (monographs, articles in journals indexed in Scopus and KOKSONVO, materials of scientific, practical and methodological conferences);
- in using the results of scientific research in updating the EP. The curators of the practices included in the EP are full-time teachers and practitioners of the INP (Deputy General Director for Scientific Work of the INP Dzhanseitov Daniyar Maralovich, Scientific Secretary of the INP Bekbaev Askhat Kausovich, Mukhametuly B., Burtebaev N., Valiolda D., Serikov A.Zh.)
- in participation and taking prizes of students in republican and international conferences and olympiads.

Students, undergraduates and doctoral students actively participate in the International Scientific Conference of Students and Young Scientists “Farabi Alemi” held annually at the Republican Research University. The result of a combination of teaching and scientific research of students are publications of students ([https://docs.google.com/file/d/1-eIBgFifGZo4nzo8iKCVmlOkUUK6iPH6/edit?usp=doclist\\_api&filetype=microsoftword](https://docs.google.com/file/d/1-eIBgFifGZo4nzo8iKCVmlOkUUK6iPH6/edit?usp=doclist_api&filetype=microsoftword)), certificates, diplomas and diplomas (<https://drive.google.com/drive/folders/1eH58uHlk4sxoXZv4AC2UXj6wknBkXZy9>),

Enterprises, institutes, medical institutions, which are, according to contracts, places for conducting scientific and research practices, the main place of work for part-time teachers, and the main employers for graduates, are also co-authors of the EP, customers for the development of modules and trajectories of the EP and actively participate in the publication process, and also in joint scientific developments with the involvement of students.

The following table 4 displays the partnership of the faculty and EP developers with republican scientific organizations and centers [https://drive.google.com/drive/folders/1NR3JZszZzIAaup\\_Mfv78JpyDW2XSAS\\_B?usp=share\\_link](https://drive.google.com/drive/folders/1NR3JZszZzIAaup_Mfv78JpyDW2XSAS_B?usp=share_link)

Table 4 – Partner companies

No.	Partners: scientific organization, research institute, scientific center, laboratory (city)	Area, directions of scientific cooperation	Implementation timeline	Availability of an agreement on scientific and technical cooperation (No. and date of signing)
1	2	3	4	5
1	JSC "Almaty Oncology Center"	Academic, educational, scientific and industrial cooperation	From 2022	01.09.2022
2	Institute of Nuclear Physics, Almaty, Kazakhstan	Research of materials for nuclear and thermonuclear reactors	2018-2023	01.09.2018
3	JSC at the PVC "Kazakh Research Institute of Oncology and Radiology", hereinafter referred to as "KazRIOR"	Academic, educational, scientific and industrial cooperation	From 2021	21.12.2021
4	University Medical Center	Academic, educational, scientific and industrial cooperation	2021 (short-term)	01.04.2021 No.396/ДНО-770
5	LLP "Physical Technical Institute"	Academic, educational, scientific and industrial cooperation	2019-2023	02.09.2019
6	LLP "National Scientific Oncology Center"	Academic, educational, scientific and industrial cooperation	2022-2027	01.07.2022
7	LLP Oncological Center "Sunkar"	Academic, educational, scientific and industrial cooperation	2022-2027	14.02.2022 No.02/2022-2441

The university and the developers of the EP are participants in the accreditation and certification processes of both internal and external international accreditation agencies. The initiator is both external regulatory bodies and the university itself. Al-Farabi Kazakh National University in the world university ranking Times Higher Education (THE) WUR - 2023 took position 1001-1200 (<https://www.timeshighereducation.com/world-university-rankings/al-farabi-kazakh-national-university>). Al-Farabi Kazakh National University has once again achieved high results in the international QS WUR ranking and improved its performance. In one year, the university moved up 25 positions within the Top 200, rising from 175th position to 150th place (<https://www.topuniversities.com/universities/al-farabi-kazakh-national-university>). Thus, Al-Farabi KazNU once again proved its leading position not only among universities in Kazakhstan, but throughout Central Asia and the CIS countries. Achieving significant progress at KazNU is the result of transformation into a world-class research university, as well as the result of the dynamic work of management, teachers, scientists and students. Undoubtedly, this is an indicator of the university's high competitiveness and recognition in the international arena. On June 8, 2022, the results of the global Quacquarelli Symonds World University Rankings (QS WUR) were determined. The QS WUR ranking included 2,462 higher education institutions, from which 1,422 of the strongest were selected. The QS WUR list of the best universities in the world has been published since 2004. The QS WUR ranking evaluates higher education institutions based on six criteria:

Academic reputation - 40%;

Reputation among employers - 10%;

The ratio of teaching staff to the number of students is 20%;

Citation index - 20%;

The share of foreign teachers is 5%;

The share of foreign students is 5%.

The needs of the state are to develop a high-tech healthcare system; a healthcare system capable of providing clinical and service personnel is interested in technical specialists, in particular in nuclear medicine; teachers are interested in mastering in-demand specialties of an interdisciplinary nature. A timely request for the development of an EP was made by representatives of the relevant ministries, heads of medical institutions and diagnostic centers, in which there was always a vacancy for a medical physicist, laboratory assistant/radiology technician.

The educational program in nuclear medicine was offered for the first time on the territory of the Republic of Kazakhstan. The development of this program is actively enriched by the presence of a material and technical base and a developed network of cooperation with medical and diagnostic institutions. The program is especially attractive due to the presence of a similar program at the partner university - the Engineering Physics Institute of Biomedicine (IFIB) Department of Medical Physics (Department 035) at the National Research Nuclear University "MEPhI", Moscow, Russian Federation.

The development of an educational program is a multi-vector process that takes into account the current and future interests of customers, implementers and direct program participants - students. Traditional planning is used, taking into account the balance between the state order, the number of incoming applicants, the request of customer organizations and the availability of material and technical base and qualified teaching staff. Consolidated planning or planning from below involves the redistribution of resources of one or another participant in the development and implementation of an educational program, due to objective circumstances of the development or reduction of needs for a particular element of the educational program and its results (in the number of graduates, their qualifications and competencies, changes in funding). Targeted and adaptive planning is initiated by goal setting of the relevant ministries and forecasts of changes in the environment and goals of the living space of the EP.

The revision of the EP development plan is initiated by the state order for the training of specialists, the initiative proposal of the development group to expand the EP specification, as well as the results of the recruitment of applicants for bachelor's, master's and doctoral programs, adjusted for the employment of graduates of these EP trajectories. The formation of a group of developers and the setting of the task of developing an EP occurs in the general order, according to the developed procedures of the University.

Assessing the achievement of learning objectives occurs in accordance with generally accepted procedures for assessing current and residual knowledge, the demand for graduates by employer organizations, and the popularity of the program among incoming applicants. The relevant structural divisions of the university, including the educational and methodological department, departments of science and innovation, social development and innovation, participate in monitoring the life cycle of educational programs according to their functional responsibilities.

In a mandatory manner, based on last year's enrollment of students, taking into account the planned state order for the training of specialists, taking into account students from paid departments, educational, methodological, economic and other departments carry out an analysis of the availability of places in the hostel for first-year students, classroom fund, including computer classes, in the context of two semesters and the total number of students at the faculty, the provision of educational and methodological literature based on syllabuses, teaching materials and teaching staff applications.

Resource analysis plans are used in the preparation and execution of requests for the purchase, renovation, repair, classroom fund, and material and technical base of laboratories and institutes at the University.

The main criteria for the success and relevance of an EP are the number of applications from applicants for a given EP, the percentage of graduates' employment, the demand for an EP when drawing up a state order for the training of specialists in a given specialty.

The material and technical base of partner organizations for scientific internships is being developed, the quality of EP is being developed in accordance with the current state of science and clinical medicine, and teaching tools and methods are being developed. The goal of this development is to meet the educational process with modern requirements of science, medicine and education, as well as to increase satisfaction with the educational process among all participants in the EP. The results are the constant improvement of the educational program and its attractiveness for all parties in the educational process.

Continuous improvement of EP processes is ensured by feedback from all participants in the EP, both during its development and during its execution, using operational mechanisms for managing EP processes provided for by the legislation of the Republic of Kazakhstan in the field of education and internal acts and regulations of the University.

Data from sociological surveys and satisfaction programs for teaching staff and students with learning outcomes, as well as feedback from regulatory organizations, departments and accreditation agencies.

During the functioning of the EP and its development, the entire range of reporting provided for by laws and regulations when organizing educational activities in higher educational institutions is used, including all indicators of academic performance, availability of practices, assessment of residual knowledge, qualifications of teaching staff performing this EP, etc.

Feedback and reporting results are used to adjust the goals and objectives of already developed and adopted EPs, as well as to develop new EPs.

By promptly adjusting the set goals and objectives, as well as redistributing the internal resources of the organization of the EP administrator.

The EP development strategy satisfies the state's needs for qualified personnel with the knowledge and skills to solve scientific and technological problems in introducing nuclear technologies in healthcare, including nuclear medicine, providing research and development, and forming highly professional scientific teams in this field. And also capable of practically applying interdisciplinary knowledge in the diagnosis and treatment of diseases and disorders of the human body using physical methods. The successful implementation of an educational program is determined based on its goals and plans, targeted and effective implementation, which is reflected in the content of each educational program. The plan and goal for the development of the EP are drawn up on the basis of an analysis of the external and internal environment with the involvement of all stakeholders: teaching staff, employers, students, determining the satisfaction of students and teaching staff, employees, available and necessary resources, etc. This affects the content of the programs.

The development plan and goals of the EP are as open as possible and accessible to all interested parties. To prepare a plan for the development and content of the EP, first of all, all persons of interest in the training of specialists in the field of medical physics are involved. Discussion of strategic documents is carried out at meetings of collegial bodies - the council of employers, student government, faculty council, and the Academic Council. Information about the mission and strategy of the university is posted on the University website and sent to departments. Based on the strategy and policy in the field of quality, significant changes have occurred - IT centers and the Bologna Process Center have been created. The quality assurance policy is supported by the university management, structural divisions of the University and teaching staff, employees and students. Activities to ensure and improve quality are carried out through monitoring, reporting, analyzing results and taking measures to improve the efficiency of the university. All interested parties have the opportunity to influence the content of the EP

development plan based on the choice of elective disciplines of the EP and have the right to vote when approving the plan; based on the results of the interview, their opinion is taken into account and changes are made to the catalog of elective disciplines.

The mechanism for forming an EP plan consists of the following stages: 1) at a meeting with parents, graduates and employers, the need for an educational program and its specialization is determined; 2) the level of satisfaction of employers and graduates of the EP and its specialization is determined; 3) as a result of such control of the EP, its strengths and weaknesses are identified, and adjustments are made to the EP to optimize it; 4) the adjusted EP plan is discussed at a meeting of the department and agreed upon with employers and the University's teaching and learning department.

In this regard, all interrelated educational components are focused on the implementation of the state program - the training of highly qualified specialists who are competitive in the world market, taking into account the Standards and recommendations in the field of quality assurance developed by the European Association for Quality Assurance in Higher Education. All educational activities are based on the principle of "result-oriented management".

The university has a database of internal and external regulations governing business processes within the EP (including management, development, implementation, monitoring and evaluation). (link to document <https://www.kaznu.kz/ru/20484/page/>)

When developing an educational program and during its implementation, connections with internal and external stakeholders are taken into account on an ongoing basis. The internal stakeholders of the educational program are teaching staff and students. External stakeholders are employers, graduates of the educational program with whom constant communication is maintained, seminars and round tables are held to improve the quality of EP implementation.

To ensure the participation of all interested parties in the management of the educational program on the basis of OVPO in 2022, an Academic Committee was created in the direction of training "Physical and Chemical Sciences", one of the tasks of which is to develop and update the EP on an ongoing basis, taking into account the current and future needs of the labor market, and also ensuring effective interaction between the main participants in the educational and scientific process (academic staff, employers and students) in the development and updating of EP. In addition, the Academic Committee participates in assessing the quality of EP, academic and digital modernization of educational activities, determining the minimum educational, scientific, personnel, information, library, educational, laboratory and other resources for the implementation of EP and ensuring their accessibility for students. The committee includes: academic staff (teaching staff of OVPO), students and employers. The composition of the Committee is approved by order of the Chairman of the Board-Rector ([https://drive.google.com/file/d/1hWqosoTTqeSUNnHuuw6nDXeHYD1UDyNn/view?usp=share\\_link](https://drive.google.com/file/d/1hWqosoTTqeSUNnHuuw6nDXeHYD1UDyNn/view?usp=share_link)) The Chairman, co-chairs and secretary of the Committee are elected by open voting at the first meeting. All participants have the right to vote.

### ***Analytical part***

Analyzing the EP's compliance with international accreditation standards in accordance with IAAR standards, it should be noted that it complies with the parameters of the "Educational Program Management" standard.

Students in this EP have the opportunity to satisfy their needs in obtaining a specialty focused on the development of professional and research skills. Individualization of student learning is ensured by the possibility of them choosing their preferred disciplines from the list of disciplines of all three cycles in the curriculum and EP catalogs (in the sections of elective components). In the cycle of major EP disciplines, conditions are created for differentiation and individualization of training, additional, more in-depth study of specialized courses.

The quality assurance policy is controlled within the framework of the strategic directions of QMS development <https://www.kaznu.kz/ru/4828>.

Quality management of the EP “Nuclear Medicine” is carried out through systematic interaction between teaching, research and training.

The transparency of the EP development process management system is built on an internal audit of the organization of EP development processes, their compliance with the standards and documents of relevant ministries and regulatory agencies, as well as the involvement of representatives of employers and cooperating organizations in the EP development process.

The EP development plan is adopted in accordance with the state program for the development of higher and post-secondary education, the EP Development Strategy, and is based on the volume of the state order for the training of specialists, the number of teaching staff and the available material and technical base of the university.

Thus, as a result of the analysis of compliance with the IAAR criteria for the “Educational Program Management” standard, it can be stated that compliance is largely satisfactory.

***Strengths/Best Practices***

- The university demonstrates a high level of organization of activities between scientific research, teaching and learning.

***EEC recommendations***

- according to this standard no.

***Conclusions of the EEC according to the standard “Educational Program Management”.***».

According to the “Educational Program Management” standard, the educational program “7M05311-Nuclear Medicine” has 1 strong and 16 satisfactory positions.

## **6.2. The standard “Information Management and Reporting”**

***Evidence***

Assessment of the quality of information management is carried out on the basis of an analysis of methods and forms of collecting and analyzing information, decisions of collegial bodies and management, made on the basis of facts; surveys of information systems and software used in educational organizations for the purpose of information management; surveying information resources of educational organizations, interviewing and questioning students, teaching staff and stakeholders.

At the current level of production development, prompt access to a variety of information obtained in modern information and communication technologies is required. At KazNU named after. Al-Farabi Institute of Information Technologies and Innovative Development operates, the main goal of which is to provide effective information and technical support for the educational process of the university, the functioning of a complex of technical means (CTM) using new modern information technologies to improve the quality of educational services provided by the university. To achieve the goal, the IT infrastructure development management departments solve problems of supporting the university's IT infrastructure, which include planning the development and modernization of network and server infrastructure, providing computer equipment to university departments, administering network and server resources, system and technical support of computer equipment, video surveillance systems and access control.

The Department for Development of IT Infrastructure of the University includes 3 departments:

- IT resource planning and management department



- Service support department
- Situation monitoring center

All necessary information is posted on the university website. Official website of KazNU named after. al-Farabi: <https://www.kaznu.kz>. Each department presents its information on the university website. Here, the student is provided with information about current events in Kazakh, Russian, and English.

Official website of Al-Farabi KazNU <https://www.kaznu.kz> – the main platform for accessible and transparent information.

Information and software complex <https://univer.kaznu.kz/user/login?ReturnUrl=%2f> (UNIVER) is a system for administering and managing the educational activities of the university with a full cycle of coverage of the educational process.

The UNIVER system allows you to manage the following processes: management of the admissions committee and analysis of recruitment; management of educational activities (formation of curricula, certification, etc.); management and organization of electronic educational document flow for the entire technological cycle of the educational process; management and monitoring of the organization of a data bank of electronic educational and methodological materials for each discipline; management of registration for disciplines; management and organization of an additional semester; formation of various types of schedules (classes, exams, supervisory hours); organization of a system of statistical analysis and reporting on the main tasks of the educational process; organizing an administration system for managing software support and using the system in the educational process, for prompt response to eliminating incidents and analyzing the history of the user's work with the system.

Scientific Library of Al-Farabi Kazakh National University (KazNU) - <https://elibrary.kaznu.kz/ru/node/69> is a cultural and spiritual center for students, teaching and educational support staff. It contains textbooks, monographs, wonderful examples of fiction, rare books of the 16th-19th centuries, and more than 200 thousand copies of periodicals.

There is a transparent system for considering complaints received both in written and oral form, as well as through questionnaires, including anonymous ones.

- Survey of teachers "Teacher through the eyes of colleagues" - conducted annually;
- survey "Curator-advisor through the eyes of students" - conducted once a semester;
- the survey "Social adaptation of first-year students" is conducted annually.

To study the external environment, a survey of employers is conducted on the level of knowledge of university graduates. When studying the internal environment, a survey is conducted of employees and students about the conditions of study and work, the security of the workplace, the quality of services provided, the quality of canteens, wardrobes, etc. Questionnaires are conducted on the topic of corruption at the university and religious extremism.

The QMS department after each examination session conducts a survey among students "The teacher through the eyes of students." The survey is conducted anonymously twice a year. The results of the survey are processed by the sociological laboratory of the university, advantages, disadvantages and recommendations are identified, the results are brought to the attention of management, which takes measures to eliminate shortcomings and improve processes. The purpose of the survey is to obtain reliable objective data about the object or process being studied. The main tasks of sociological research at KazNU named after. al-Farabi: identification of the main problems in the functioning of the educational, scientific and educational process; identifying the main forms and methods of improving the quality and level of teaching. The results of sociological research are stored in the unit that conducted the sociological research. Based on the results of the survey, problems were identified that some classrooms were poorly equipped with posters and an insufficient number of measuring

instruments. To solve this problem, new posters and measuring instruments for the EP were purchased.

The procedures regulating the life cycle of students (from admission to completion) are reflected in the Academic Policy of KazNU. al-Farabi (<https://www.kaznu.kz/ru/20484/page/>), which is based on the norms of the Law of the Republic of Kazakhstan dated July 27, 2007 No. 319-III “On Education” (as amended and supplemented as of August 28, 2021) (<https://adilet.zan.kz/rus/docs/Z070000319>); Model rules for the activities of organizations of higher and (or) postgraduate education (approved by Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 30, 2018 No. 595 (as amended and supplemented as of 06/09/2021) (<https://adilet.zan.kz/rus/docs/V1800017657>); State mandatory standards for higher and postgraduate education (Order of the Ministry of Education and Science of the Republic of Kazakhstan dated October 31, 2018 No. 604 dated July 23, 2021) (<https://adilet.zan.kz/rus/docs/V1800017669/history>); Rules for organizing the educational process in credit technology of education (Order of the Ministry of Education and Science of the Republic of Kazakhstan dated April 20, 2011 No. 152, amended and supplemented as of May 6, 2021) (<https://adilet.zan.kz/rus/docs/V1100006976>); Model rules for admission to training in educational organizations implementing educational programs of higher and postgraduate education (Order of the Ministry of Education and Science of the Republic of Kazakhstan No. 600 dated 08/09/2021) (<https://adilet.zan.kz/rus/docs/V1800017650/history>) and other regulatory legal acts of the Ministry of Science and Higher Education of the Republic of Kazakhstan, as well as internal regulatory documents of the university.

All submitted educational programs undergo external examination in the prescribed manner and are included in the national Register of educational programs.

### ***Analytical part***

The analysis of compliance with IAAR criteria according to the “Information Management and Reporting” standard allowed us to state that most of the criteria are satisfactory. A strength in terms of information management and reporting is the presence of a situational management center operating at the university. It provides opportunities for interactive collection and analysis of information to control and monitor current activities and prompt decision-making.

Management of the educational program, as well as other areas of activity, is carried out on the basis of the collection, analysis and use of relevant information. EP management uses a variety of methods to collect and analyze information. Information management is especially important for new programs that are being developed for the first time by an institution and may be innovative at the national level.

During the visit, the experts were shown the UNIVER information system, which makes it possible to create a unified teaching and educational environment at the university and ensure integration into the global educational space. It also provides support for a high-tech educational process; allows you to deploy a platform for e-learning; forms the foundation for building a self-organizing university management system; creates an effective university management, accounting and reporting system; expands the accessibility and openness of education; ensures an increase in the university's rating in the educational services market; increases the efficiency and quality of making management decisions, as well as improving control over their implementation; makes it possible to extend the research results to the management systems of other educational organizations. The system has such a function as multilingual organization, and is represented by three user interfaces in Kazakh, Russian and English. The information system ensures the organization of synchronous work of all participants in the educational process; it is a completely web-based solution, which allows all users of the system to remotely perform their functions in the system without being tied to a workplace. Provides secure user access to data

through personalized access, as well as the differentiation of user rights by category of tasks being solved. The system keeps records of user actions.

Also during the visit, the experts were shown the scientific library of KazNU - one of the largest university libraries in the Republic of Kazakhstan, founded in 1934.

The scientific library is a widely branched network of subscriptions and reading rooms located in educational buildings. The number of seats in the halls is more than 1,100. Every year the Scientific Library registers about 900 thousand visits and issues up to 1.9 million copies of books, magazines, and newspapers. More than 700 titles of Kazakh and Russian periodicals are subscribed. The Scientific Library strives to ensure that its rich information potential is used to the maximum by readers.

The library's reading rooms are very popular among students; the rooms are well stocked with auxiliary collections and a variety of periodicals are presented. Several specialized halls are located compactly, geographically close to each other. The reading room collections attract the attention of students from other universities in the city.

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

***Strengths/Best Practices:***

The Center for Situational Management operating at the university is definitely a strength of the educational organization in terms of information management and reporting. It provides opportunities for interactive collection and analysis of information to control and monitor current activities and prompt decision-making.

***EEC recommendations***

No

***Conclusions of the EEC on the “Information Management and Reporting” standard.***

According to the “Information Management and Reporting” standard, the educational program “7M05311 – Nuclear Medicine” has 1 strong and 16 satisfactory positions.

**6.3. The standard “Development and approval of an educational program”**

***Evidence***

In order to control the quality of the development of the EP “7M05311 – Nuclear Medicine”, the program undergoes an assessment procedure within the university and is sent for external examination to representatives of employers, the public and the academic environment. The purpose of the examination is to improve the quality of educational programs. The examination of educational programs and methodological documents is based on the principles of transparency, objectivity, and systematic organization of expert work.

The university's educational programs are developed in areas of training for which the university has a license to conduct educational activities, within groups of educational programs according to the classifier of areas of trainin

Each educational program has a coordinator, who is appointed by decision of the Academic Council of the faculty and coordinates the design, development and implementation of educational programs aimed at achieving learning outcomes in accordance with qualification requirements, with the involvement of all stakeholders, including students and employers.

It is not allowed to change the content of the educational program (change of disciplines) after completion of registration of students for disciplines and the formation of individual curricula.

Academic policy of KazNU, methodological guidelines and instructions describe all procedures for assessing and developing EP (link to document [2.8. Академическая образовательная программа | Казахский национальный университет им. аль-Фараби \(kaznu.kz\)](#))

Review and adjustment of the content of existing EPs taking into account changes in the labor market, the requirements of employers and the social demands of society, as well as based on the results of monitoring, professional standards are carried out annually. EP “7M05311 – Nuclear Medicine” was updated on the ESUVO website on 11/05/2021. ([http://esuvo.platonus.kz/#/register/education\\_program/application/34992](http://esuvo.platonus.kz/#/register/education_program/application/34992))

The University considers the successful employment of graduates as the main indicator of the effectiveness of its educational activities. The University encourages long-term multilateral cooperation with employers in order to update the content of educational programs in accordance with the demands of the labor market; attracts practicing teachers from among employers to conduct training sessions, including on the basis of third-party organizations, as well as to participate in the final certification of graduates, in order to ensure the competitiveness and relevance of KazNU graduates.

To promote employment, the Career and Professional Development Center operates, which ensures the involvement of employers in holding various events at the university in order to inform KazNU students and graduates about employment opportunities and professional internships.

The purpose of the educational program is to prepare qualified specialists who meet the current requirements of the specialty “Nuclear Medicine”, possess academic and professional skills, and are able to combine theoretical knowledge with applied research skills to solve problems in the field of nuclear medicine

The model of a graduate of the Master's program in nuclear medicine can be seen at the following link ([Поступающим \(kaznu.kz\)](#))

A graduate model for a Master's degree in nuclear medicine is usually created by conducting an analysis of labor market requirements and employers' needs for qualified specialists in the field. Also, to create a graduate model, the results of research and analysis of educational programs in other countries and leading universities in the world can be used.

The responsible persons are the coordinator and developers of the EP: M. Abishev, Yu. Zaripova.

The nuclear medicine educational program was developed based on an analysis of current trends and needs in the medical industry, as well as on the basis of best practices and experiences existing in the international community.

When developing EP in nuclear medicine, modern advances in the field of nuclear medicine and molecular medicine, as well as the capabilities of modern medical technology, are taken into account.

The higher the level of training, the deeper and more complex the knowledge and skills the student must master.

The graduate model of a master's degree in nuclear medicine, as a rule, provides for the student to obtain knowledge and skills in such areas as the physics and chemistry of radioisotopes, biology of cells and tissues, methods for studying biomedical objects using radioisotope technologies, principles and methods for diagnosing and treating diseases using radioactive drugs and equipment.

### *Analytical part*

As a result of the analysis of compliance with the IAAR criteria according to the “Development and approval of an educational program” standard, it can be stated that compliance is largely satisfactory.

Having analyzed the work of EPs according to this standard, the commission notes that the university has a system for assessing EPs based on the use of a variety of methods for collecting, processing and analyzing information in the context of EPs and the university as a whole. Data is provided indicating the involvement of teaching staff, students and university staff in the process.

A survey of students and teaching staff is being conducted using information and communication technologies, which was confirmed by focus group participants. The results, containing the evaluation of educational programs, are heard at department meetings.

The dean's office and university services carry out systematic work to register and analyze information on the current, intermediate and final certification of students in disciplines, courses and course performance indicators and subsequently calculate the transfer score.

Members of the commission note that feedback to stakeholders on improving the quality of educational programs, measures taken, and suggestions from stakeholders taken into account is organized quite well, which was confirmed by graduates, students, and employers.

At meetings with focus groups of teaching staff and students, when asked what active learning methods are used, both groups gave convincing answers and gave examples of the forms of teaching used in specific disciplines. Students noted that these forms of training were more motivating to attend classes and contributed to better learning of the material.

In general, al-Farabi Kazakh National University monitors educational and other processes, for which appropriate procedures and regulations have been developed. The monitoring results are used to improve the educational program and are aimed at student progress. Feedback is maintained between teachers and students, including a survey system on satisfaction with educational and other activities of the university, aimed at improving the educational program.

***Strengths/Best Practices***

No

***Recommendations of the EEC***

No

***Conclusions of the EEC on the standard “Development and approval of an educational program”.***

According to the standard “Development and approval of an educational program,” the educational program “7M05311 – Nuclear Medicine” has 12 satisfactory positions.

**6.4. The standard “Continuous monitoring and periodic evaluation of educational programs”**

***Evidence***

In order to control the quality of the development of the EP “7M05311 – Nuclear Medicine”, the program undergoes an assessment procedure within the university and is sent for external examination to representatives of employers, the public and the academic environment. In order to manage and improve the activities of KazNU named after. Al-Farabi carries out regular monitoring in various areas, including individual educational programs. The monitoring system is an important tool for managing the quality of university activities.

The purpose of monitoring is to assess the quality of management, educational, research and educational work of the university, on the basis of which optimal solutions are selected for

organizing the effective activities of KazNU named after. al-Farabi. Monitoring is carried out in the following areas: educational programs, teaching staff activities and teaching effectiveness, student satisfaction and conditions for their personal development, research activities and their effectiveness, material, technical, library and information resources. The Department of Theoretical and Nuclear Physics monitors and periodically evaluates the educational program “7M05311-Nuclear Medicine” to achieve the goal of the EP and fully formulate the planned learning outcomes. To improve the quality of the EP and increase its efficiency, the EP is updated taking into account the monitoring results and based on requests from stakeholders. EP “7M05311-Nuclear Medicine” is being developed in accordance with the state mandatory standards of higher and postgraduate education, the national qualifications framework, the industry qualifications framework, the international standard classification of education and the European Qualifications Framework, and the Academic Policy of Higher Professional Education. All EP departments of KazNU undergo external examination in the prescribed manner and are included in the national Register of educational programs. In the process of developing the EP and monitoring educational activities within the EP, all interested parties are involved, including students and employers, and a SWOT analysis is carried out, which is the basis for improving and revising the results of the EP. EP “7M05311-Nuclear Medicine” is aimed at developing personal and professional competencies in students, ensuring the formation of both relevant academic knowledge and the necessary skills and abilities that can affect their personal development and can be used both in their future career and with continued education.

The EP demonstrates the existence of a documented procedure for monitoring and periodic evaluation to achieve the goal and continuously improve the EP. Constant monitoring and periodic evaluation of EP at the university is carried out by three methods: the method of questioning and interviewing, the method of systematic and direct monitoring of the learning outcomes of undergraduates, and the method of external expert assessments. Analysis of procedures for monitoring and periodic evaluation of the educational program “7M05311-Nuclear Medicine” is carried out on the basis of: analysis of the curriculum, catalog of elective disciplines, individual plans of students, internal regulatory documents governing the implementation of the educational program, their monitoring and evaluation; minutes of collegial bodies and department meetings; interviewing and questioning students, teaching staff and stakeholders; results of observations of the activities of support services.

Monitoring and evaluation of the EP is also aimed at ensuring that the EP is oriented toward global trends in the development of higher and postgraduate education: multidisciplinary, student-centeredness, innovation, focus on the formation of systems thinking and social communication; focus on national trends - internationalization, integration of education, science and production, digitalization, spiritual revival; compliance with the strategic priorities of KazNU, comparability with the EP of universities included in the top QS-200.

Educational program of higher and postgraduate education (EPHPE) ensures a revision of the structure and content of the EP, taking into account changes occurring in the educational environment, in the country's economy and modern trends in the development of the world economy: 1) current and future market needs (the need for specialists and requirements for them, employment prospects for graduates, namely their shortage or surplus); 2) development of professional standards; 3) updating the state compulsory standard of higher and postgraduate education. The Center for the Bologna Process and Academic Mobility has established that the EP must be updated at least once within four years from the date of inclusion in the ESUHE Register. If there is no update, the Operator excludes it from the Register. However, the educational program of higher and postgraduate education can make an unscheduled update of the EP when updating the State Educational Standard, developing new PS and receiving requests

from stakeholders. EP “7M05311-Nuclear Medicine” was included in the Register in 2019 and updated in 2021 ([http://esuvo.platonus.kz/#/register/education\\_program/application/34992](http://esuvo.platonus.kz/#/register/education_program/application/34992)).

Responsible for the timely revision of the EP are the head of the department, coordinator and developers of this EP, who are appointed by decision of the Academic Council of the faculty and coordinate the work on the design, development and implementation of the EP, focused on achieving learning outcomes in accordance with qualification requirements, with the involvement of all interested parties. On the basis of the EPHPE, an Academic Committee has also been created for the direction of training “Physical and Chemical Sciences”, one of whose tasks is to develop and update the EP on an ongoing basis, taking into account the current and future needs of the labor market. As part of the work of this committee, academic staff, students and employers are involved in updating the EP. The composition of the Committee is approved by order of the Chairman of the Board-Rector ([https://drive.google.com/file/d/1hWqosoTTqoSUNnHuuw6nDXeHYD1UDyNn/view?usp=share\\_link](https://drive.google.com/file/d/1hWqosoTTqoSUNnHuuw6nDXeHYD1UDyNn/view?usp=share_link))

In order to control the quality of EP development, the program undergoes an assessment procedure within the E and is sent for external examination to representatives of employers, the public and the academic environment. The examination of educational programs and methodological documents is based on the principles of transparency, objectivity, and systematic organization of expert work.

#### ***Analytical part***

As a result of the analysis of compliance with the IAAR criteria according to the “Monitoring and Periodic Evaluation of the Educational Program” standard, it can be stated that compliance is satisfactory.

Having analyzed the work of the EP according to this standard, the commission notes that the university has a system of monitoring and evaluation of the EP, which is also aimed at ensuring that the EP is oriented towards global trends in the development of higher and postgraduate education: multidisciplinary, student-centeredness, innovation, focus on the formation of systems thinking and social communication ; focus on national trends - internationalization, integration of education, science and production, digitalization, spiritual revival; compliance with the strategic priorities of KazNU, comparability with the EP of universities included in the top QS-200.

A survey of students and teaching staff is being conducted using information and communication technologies, which was confirmed by focus group participants. The results, containing the evaluation of educational programs, are heard at department meetings.

When monitoring and revising the EP, the opinion of the teaching staff of the department and the faculty as a whole is taken into account. At meetings of the department and the Faculty Academic Council, the results of monitoring the EP, issues of the need to revise it and make changes to the EP are discussed. In addition, the university annually holds methodological conferences and round tables on the organization and improvement of the educational process, in which teaching staff take part. For example, the research developments of the teaching staff of the Department of Theoretical and Nuclear Physics are reflected in the disciplines of the EP “7M05311-Nuclear Medicine”, which can be assessed as the introduction of individual innovative proposals <https://www.kaznu.kz/ru/11672/page/>.

Students, teaching staff and employers have the right at any time to send their comments, complaints and suggestions on any issues related to the organization and quality of the scientific and educational process to the University through oral or written appeals addressed to the responsible persons. Consideration of appeals is carried out in the prescribed manner by authorized officials or commissions and councils. Ignoring requests by authorized officials is

regarded as failure to fulfill functional duties and may serve as the basis for taking administrative measures by the University management.

Members of the commission note that feedback to stakeholders on improving the quality of educational programs, measures taken, and suggestions from stakeholders taken into account is organized quite well, which was confirmed by graduates, students, and employers.

In general, Al-Farabi Kazakh National University carries out constant monitoring and periodic evaluation of the educational program and other processes, for which appropriate procedures and regulations have been developed. The monitoring results are used to improve the educational program and are aimed at student progress. Feedback is maintained between teachers and students, including a survey system on satisfaction with educational and other activities of the university, aimed at improving the educational program.

### ***Strengths/Best Practices***

НЕТ

### ***Recommendations of the EEC***

НЕТ

### ***Conclusions of the EEC according to the standard “Continuous monitoring and periodic evaluation of educational programs”.***

According to the standard “Continuous monitoring and periodic evaluation of educational programs,” the educational program 7M05311 - “Nuclear Medicine” has 10 satisfactory positions.

## **6.5. The standard “Student-centered learning, teaching and assessment”**

### ***Evidence***

This educational program includes student-centered learning processes that promote motivation, self-reflection and involvement of undergraduates in the educational process. Al-Farabi KazNU ensures respect for different groups of students. It also pays attention to their needs, provides a flexible learning path, and makes it possible to use various forms of teaching and a variety of pedagogical methods. Provides regular feedback on the techniques and methods used to evaluate and adjust pedagogical methods, helps strengthen mutual respect between the teacher and the undergraduate; the existence of appropriate procedures for responding to complaints from undergraduates.

The university has the following documentation for assessing the level of achievement of program goals: “Regulations on ensuring the quality of the educational process at Al-Farabi KazNU”, “Regulations of the Academic Committee on the quality of education at university faculties”, “Methodological recommendations for the examination of educational programs of Al-Farabi KazNU” Farabi”, “Guidelines for the development of control and measurement materials intended for assessing learning outcomes: intermediate control, final control, state exam, protection of pedagogical and production practices.”

When implementing student-centered learning, academic groups are formed according to the language of instruction (with Kazakh and Russian as the language of instruction).

To master the educational program, undergraduates annually determine and sign an individual curriculum (IC). The IC determines the individual educational trajectory of each student. With the help of a curator-advisor, a master's student determines his IC based on a catalog of disciplines (modules). Within the framework of student-centered education, a master's student is a central participant in the implementation of the educational program, therefore, when ensuring the quality of the educational process, the interests of the master's student are taken into



account first of all. In the conditions of credit education technology, in order to fully master the educational program, a large amount of independent work is performed by undergraduates, which is divided into two parts: independent work, which is performed under the guidance of a teacher (IWPST), and the part that is performed independently. (IWPS).

The main form of assessment of student learning within the credit-module system is a point-rating assessment of the quality of students' knowledge. A rating system for monitoring students' academic work is being introduced to motivate them to study the subject and improve the quality of training of specialists. The methods used to assess the educational achievements of a master's student meet the criteria of reliability and validity, and are student-oriented in nature. The choice and amount of independent work of a master's student is a central aspect of effective learning within the framework of student-centered learning. Effective teaching methods used in the implementation of training: encouraging the student; transparency of evaluation criteria; person-centered approach; practice-oriented training.

When studying disciplines, special attention is paid to such elements as:

- obtaining the latest science-based theoretical knowledge and experimental discoveries that allow solving a theoretical or applied problem or are a major achievement in the development of specific scientific areas;

- mastering modern theoretical, methodological and technological achievements of science, technology and production, based on modern methods of processing and interpreting data using computer technology and carried out using modern methods of scientific research; offering specific practical recommendations, independent solutions to management problems of a complex, cross-functional nature;

- development of advanced international experience in the relevant field of knowledge.

Teachers are proficient in testing and testing the knowledge of undergraduates. Teachers regularly undergo advanced training in this area. The criteria and assessment methods are published in advance, and the assessment demonstrates the level of achievement of the master's student's planned learning outcome. Assessment is carried out in a consistent manner and is carried out in accordance with established rules. For a specific discipline for one semester: midterm control<sup>1</sup>; boundary control<sup>2</sup>; final control ( $\frac{PK1+PK2}{2} \cdot 0.6 + IK \cdot 0.4$ ). Midterm control (RC) – control of students' educational achievements within the framework of an academic discipline, carried out in accordance with the academic calendar. Final control in the discipline is carried out in the form of a final exam with the participation of alternative examiners.

Master's students can receive advice on the learning process. All types of control involve assessing the level of expected learning outcomes on a 100-point scale. There is a formal appeal process.

To assess the level of achievement of goals and improve the effectiveness of the educational program at the departmental level, a survey of teachers through the eyes of students and a survey of teachers through the eyes of colleagues were introduced.

To support the scientific work of KazNU undergraduates, scientific clubs, scientific conferences, scientific seminars, round tables are regularly organized, collections of scientific articles, abstracts of scientific conferences are published.

Independent work under the guidance of a teacher is carried out in contact with the teacher according to the teacher's separate schedule. This type of work includes consultations on the most complex issues of the curriculum, homework, course projects (works), control of semester work, reports and other types of independent work assignments.

All types of independent work must be described in the discipline syllabus, indicating specific tasks, assessment criteria and a schedule for submitting tasks.

All types of written work by students are subject to mandatory checking for plagiarism.

**Analytical part**

Thus, as a result of the analysis of compliance with the IAAR criteria for the standard “Student-centered learning, teaching and performance assessment”, it is satisfactory.

The University considers feedback as one of the most effective mechanisms for ensuring the quality of the educational process and student satisfaction. The University has a permanent monitoring system for educational activities:

- survey “Teacher through the eyes of students” - conducted annually following the results of the autumn and spring semesters;
- survey “Evaluation of the effectiveness of courses” - carried out at the end of the course;
- sociological survey of graduates of KazNU named after. al-Farabi “Support your Alma Mater” – held annually;
- survey “Assessment of student satisfaction” based on the QS University Rankings Methodology (Student Satisfaction) - conducted annually;
- survey of teachers “Teacher through the eyes of colleagues” - conducted annually;
- survey “Curator-advisor through the eyes of students” – conducted annually;
- the survey “Social adaptation of first-year students” is conducted annually.

Members of the commission note that al-Farabi Kazakh National University carries out constant monitoring of educational activities. The monitoring results are used to improve the “Student-centered learning, teaching and performance assessment” educational program, aimed at feedback and student satisfaction. Feedback is maintained between teachers and students, including a system of questionnaires, a sociological survey of graduates, a survey of teachers of educational processes and other activities of the university, aimed at improving the educational program.

**Strengths/Best Practices**

No

**Recommendations of the EEC**

- The management of the EP needs to expand the criteria and methods of assessment, providing students with the opportunity to choose and feedback in each discipline. You can use forums, social networks or a special application or other relevant tools that are provided to students. Regular assessments, teacher comments, constructive criticism and recommendations will help students understand their strengths and areas for improvement. (until May 2024)

**Conclusions of the EEC on the standard “Student-centered learning, teaching and performance assessment”.**

According to the standard “Student-centered learning, teaching and assessment of academic performance,” the educational program 7M05311 - “Nuclear Medicine” has 10 satisfactory positions.

**6.6. The standard "Students"****Evidence**

The contingent of students is formed at the expense of funds through the placement of a state educational order for the training of scientific and teaching personnel, as well as payment for training at the expense of citizens’ own funds and other sources. On the website of KazNU named after. Al-Farabi published a regulation on a KazNU student. This provision is discussed by groups of students together with advisors <https://www.kaznu.kz/ru/11509/page/>.

The necessary documents for the student are published on the KazNU website in the documentation section <https://www.kaznu.kz/ru/165/page/>

**Table 6. Student population for 2022-2023.**

<b>Title of EP</b>	<b>Number of students</b>
6B05310 - Nuclear medicine	18
7M05311 - Nuclear medicine	11
8D05309 – Nuclear medicine	2

The university has developed a transparent policy for the formation of the student population. The student population formation policy includes career guidance work throughout the year. In this regard, work is underway to provide applicants with information about the university, departments, and specialties through the use of broad marketing tools. Image articles are published in the newspaper "Kazakh Universities", as well as in the media and social networks, advertising booklets about specialties, structural divisions, and admission rules. Events such as "Open Doors Day", subject Olympiads, NIRM <https://www.kaznu.kz/ru/19289/news/one/35739/> are held. Students and applicants will learn about the procedure for implementing formation procedures through the information resources of the university, faculty, departments, as well as through curators-editors of academic groups, dean's office employees, and Student Office specialists.

For bachelor's and master's degrees of the EP, a presentation week is provided, the purpose of which is to inform about the requirements of the EP and the specifics of its implementation, to study credit technology, which includes knowledge of the standards and provisions of the university's QMS. Heads of departments and teachers conduct introductory classes where students are introduced to the peculiarities of studying EP and the department. The introductory course is conducted with the aim of familiarizing the disciplines and forming an IC.

Information about the content of each educational program and a list of required documents for admission can be obtained on the university website in the "Applicants" section (<https://welcome.kaznu.kz/ru/>), as well as from the consultants of the Admissions Committee. Admission is carried out separately for educational programs of higher and postgraduate education and language departments (<https://welcome.kaznu.kz/ru/welcome/magistr>).

The population formation policy is regulated by the "Regulations on the formation of a student population" and includes the procedure for planning the contingent; student enrollment; contingent movements; student expulsions; granting academic leaves; monitoring and analysis <https://www.kaznu.kz/ru/20563/page/>

Enrollment of applicants into the contingent of students in educational programs of higher and postgraduate education (bachelor's, master's) at the University is carried out on the basis of the Standard Rules for Admission to Study in Organizations Implementing Educational Programs of Higher and Postgraduate Education <https://adilet.zan.kz/rus/docs/V1800017650>.

To be admitted, applicants submit an application for admission to the University Admissions Committee, enclosing documents, the list of which is posted on the university website in the section "Applicants" ("Master's Degree"). Documents in a foreign language are provided with a notarized translation into Kazakh or Russian. Admission to the master's program is carried out on a competitive basis based on the results of entrance exams. Admission of foreigners to master's programs is carried out on a paid basis. The receipt of free postgraduate education by foreigners on a competitive basis in accordance with the state educational order is determined by international treaties of the Republic of Kazakhstan, with the exception of the scholarship program for master's programs.

Admission of foreign citizens to study in postgraduate education programs on the basis of contracts for the provision of educational services for a fee is carried out during the calendar year in accordance with the academic calendar. Education documents issued by foreign educational

organizations undergo the nostrification procedure in the manner established by the legislation of the Republic of Kazakhstan, during the first academic period of study after enrollment.

Citizens of the Republic of Kazakhstan entering on the basis of a state grant enter into an agreement to work for at least 3 (three) years in the manner determined by the Government of the Republic of Kazakhstan.

The master's program accepts persons who have completed educational programs of higher education. Admission to the master's program is carried out based on the results of comprehensive testing for groups of educational programs, consisting of a test in a foreign language, a test according to the profile of a group of educational programs, and a test to determine readiness for learning. Admission to a master's program with English as the language of instruction is carried out based on the results of comprehensive testing, consisting of a test on the profile of a group of educational programs in English and a test to determine readiness to study in Kazakh or Russian (optional).

To participate in the competition for a state educational grant for master's studies, applicants submit an appropriate application, accompanied by a certificate with comprehensive testing scores, to the Admissions Committee of KazNU or any other university. In the application, the applicant indicates a group of educational programs and up to three universities of study. The decision to award a state grant and issue the appropriate certificate to the applicant is made by the Republican Competition Commission. The dean of the faculty, heads of the department, advisers, teaching staff of the departments introduce students to the corporate ethics of the University. The "Student Honor Code" is enshrined on the university website <https://www.kaznu.kz/ru/23307/page/>.

### ***Analytical part***

Thus, as a result of the analysis of compliance with the IAAR criteria for the "Students" standard, it can be stated that compliance is largely satisfactory. The educational process in the EP is accompanied by research work of students and undergraduates in scientific circles and clubs of the department. Academic mobility is carried out in the form of educational or scientific internships. The EP provides for annual travel abroad for undergraduates to improve their skills, collect materials for scientific works, and receive consultations from foreign scientists.

It should be noted that master's students in the educational program "7M05311 – Nuclear Medicine" have the opportunity to engage in research activities and prepare master's theses at the Almaty Oncology Center, which is engaged in diagnosing and administering the treatment of oncological diseases at various stages of their development and manifestation.

The management of the EP provides the opportunity for external and internal mobility of students, there is a mechanism for recognizing the results of academic mobility of students, as well as the results of the double degree program of NRNU MEdPhI.

Students' internship is an important aspect of the educational process. Agreements and reports on the practice of EP – Nuclear Medicine. [https://drive.google.com/drive/folders/1NR3JZszZzIAaup\\_Mfv78JpyDW2XSAS\\_B](https://drive.google.com/drive/folders/1NR3JZszZzIAaup_Mfv78JpyDW2XSAS_B)

### ***Strengths/Best Practices***

No

### ***Recommendations of the EEC***

No

***Conclusions of the EEC according to the "Learners" standard.*** According to the "Students" standard, the educational program 7M05311 - "Nuclear Medicine" has 12 satisfactory positions.

## 6.7. The standard “Faculty and teaching staff”

### *Evidence*

The structure of the department, staffing table and teaching staff management system is formed by the university’s personnel policy and repeats on a reduced scale the structure of the management bodies of the scientific, personnel and educational activities of the university. The department is headed by the head of the department, then there are deputies for educational and methodological work, as well as for science and innovation, and other public and elected positions occupied by teaching staff are additionally designated.

Currently, the staff of the department includes employees and practice teachers from the Almaty Oncology Center (Ishkinin Evgeniy Ivanovich), the Institute of Nuclear Physics (Dzhanseitov D.M., Mukhametuly B., Burtebaev N., Bekbaev A., Serikov O.) on a permanent basis. .I.), Astrophysical Institute (Aimuratov E.K.), and Institute of the Ionosphere (Seifullina B.), Institute of Physics and Technology of the National Academy of Sciences of the Republic of Kazakhstan. Young doctoral students who have completed a course of study in master's and doctoral educational programs, employed in scientific institutions of the Republic, near and far abroad, do not lose contact with the graduating department and teaching staff, providing for joint use the research capacities of their organizations, joint publications and opportunities for further employment of graduates of educational programs departments.

Personnel policy is carried out in accordance with the following documents, Laws of the Republic of Kazakhstan and Orders of relevant ministries with amendments and additions relevant at the time of submission of the report:

Labor Code of the Republic of Kazakhstan dated November 23, 2015 No. 414-V ZRK;

Civil Code of the Republic of Kazakhstan dated December 27, 1994 No. 268-XIII;

Law of the Republic of Kazakhstan “On Education” dated July 27, 2007 No. 319-III;

Law of the Republic of Kazakhstan dated February 18, 2011 “On Science” No. 407-IV;

Order of the Ministry of Education and Science of the Republic of Kazakhstan dated October 30, 2018 No. 595 “On approval of standard rules for the activities of educational organizations of relevant types” (Appendix No. 5 “Model rules for the activities of educational organizations implementing educational programs of higher and (or) postgraduate education”), (with amendments and additions by order of the Ministry of Education and Science of the Republic of Kazakhstan dated 06/09/2021 No. 282);

Order of the Ministry of Education and Science of November 16, 2018 No. 634 “On approval of qualification requirements for educational activities and the list of documents confirming compliance with them”;

Order of the Minister of Education and Science of the Republic of Kazakhstan dated March 31, 2011 No. 128 “On approval of the Rules for awarding academic titles (associate professor (associate professor), professor).”

Rules for competitive filling of positions of teaching staff and researchers of NJSC "Al-Farabi Kazakh National University" (<https://www.kaznu.kz/content/files/pages/folder24416/Правила%20конкурсного%20замещения%20ППС.pdf>).

The staffing of the department in terms of employees serving the EP and those who have passed the competitive selection procedure fully complies with the requirements set forth in the regulatory documents of the regulatory bodies and the university itself.

The following table 6 presents data on the total number of full-time teaching staff and part-time teaching staff of the department involved in the implementation of EP (lectures, seminars, laboratory and practical classes, industrial practice) on an ongoing basis and on the principle of rotation or replacement. A total of 45 people, excluding educational and support staff in laboratories and those accepted for grant funding projects for engineering and laboratory

positions, and in one way or another participating in the maintenance of educational and research activities related to the EP.

**Table 6. Teaching staff of the department**

Department of Theoretical and Nuclear Physics	Total	Established				Part-timers				Number of teaching staff participating in the work of PhD-doctoral councils	Number of full-time teaching staff participating in the implementation of projects (and % of participation from the total number of actual teaching staff)
		Total	Doc.s	Cand.s	PhD	Total	Doc.s	Cand.s	PhD		
1	2	3	4	5	6	7	8	9	10	11	12
Total	45	40	10	13	17	5	1		4	5	19

The table shows data on the total number of doctors and candidates of science among full-time and part-time employees, the number of teaching staff participating in the work of PhD doctoral councils and the number of employees conducting their own grant funding projects with leading organizations of Al-Farabi KazNU and third-party organizations.

#### ***Analytical part***

Thus, according to the “Faculty and Teaching Staff” standard, it can be argued that compliance with the criteria is satisfactory. The staff of the Department of Theoretical and Nuclear Physics, as well as practical teachers, are mainly involved, which is very important for training specialists in this area. An analysis of interviews with teaching staff shows that the main reward for activities is carried out for publication activity, and other indicators are not directly rewarded, but are taken into account indirectly when calculating the rating of teachers. One of the areas requiring improvement is the stimulation of all forms of academic mobility of teaching staff. This indicator remains at a very low level for teaching staff for the educational programs under consideration. It may be necessary to include this indicator in the teaching staff incentive system.

#### ***Strengths/Best Practices***

No

#### ***Recommendations of the EEC***

- In the development plans, the management of the EP should expand opportunities for teachers for professional development, for example, through the introduction of the institution of granting sabbatical leave or long-term targeted internships, stimulating them to self-education and continuous improvement of their skills and knowledge (until May 2024)

- Include in the ranking of teaching staff indicators for developing their own teaching methods and encourage increased activity in this area. (until May 2024)

**Conclusions of the EEC according to the “Faculty and Teaching Staff” standard.**  
According to the “Faculty and Teaching Staff” standard, educational programs “7M05311 – Nuclear Medicine” have 9 satisfactory positions and 1 position suggesting improvement

## 6.8. The standard “Educational Resources and Student Support Systems”

### **Evidence**

Material and technical resources for the implementation of the EP include an educational building with the necessary classroom facilities, including classrooms with electronic interactive whiteboards and computer video projectors, educational and research laboratories and computer classes.

Al-Farabi Kazakh National University practices electronic services for users - corporate information systems for university management <https://www.kaznu.kz/Content/univer.html>, the Univer 2.0 system, which integrates electronic means of communication between teaching staff and students, including DMS "Oqylyq" and "Moodle".

The scientific library of the Al-Farabi Kazakh National University was founded simultaneously with the university in 1934. In 2012, the library moved to a new modern five-story building with a total area of 17,856.6 m<sup>2</sup>, equipped with new technologies and communication solutions.

The Al-Farabi Library, being an informational, educational and cultural center of the university, contributes in every possible way to obtaining quality education and training highly qualified specialists; provides a book collection and modern electronic resources corresponding to the educational programs of the university; is in a continuous process of interaction with faculties and departments, studies the needs of users, provides information services, regularly holds exhibitions of new arrivals, and also develops cooperation with other universities of the city and the republic. In the daily teaching, educational and scientific process of the university, the library strives to create optimal conditions for its users.

All library activities are aimed at ensuring that the reader feels comfortable, receives the necessary information, proper attention from staff and moral satisfaction from each visit.

The Al-Farabi Library is a structural unit of the Al-Farabi Kazakh National University, providing information and library services for educational, research processes for 25 thousand students and undergraduates studying at 16 faculties of the university and 3000 people. Faculty and teaching staff (teaching staff) and university staff. The Library structure has 3 departments with 82 employees: department of acquisition and storage of fixed assets; information services department; management of automation of library and information processes

### **Analytical part**

Based on the information obtained during the visit, in general, it can be stated that the EPs have generally satisfactory positions according to this standard. Educational resources and student support systems are implemented at the proper level. On the other hand, it was noticeable that the material and technical database of educational programs could be updated with more modern equipment. In addition to this, during an inspection of the university grounds, it was discovered that not all of the area meets the needs of people with disabilities. Since inclusive education is important, the management of educational organizations should pay more attention to this factor.

### **Strengths/Best Practices**

No

***Recommendations of the EEC***

- The management of the educational organization should consider the possibility of including in the development plan the improvement of material and technical support for the EP “7M05311 – Nuclear Medicine”. It is also necessary to ensure the availability of infrastructure for students with disabilities throughout the university. (until May 2025)

***Conclusions of the EEC on the standard “Educational resources and student support systems”.*** According to the standard “Educational resources and student support systems,” educational programs “7M05311 – Nuclear Medicine” have 12 satisfactory positions and 1 position suggesting improvement.

**6.9. The standard “Public Information”*****Evidence***

The activities of the faculty, interaction with teachers, students, representatives of society, universities, foreign countries are published in the form of announcements, reports, news on the university website in the news section, as well as in the periodical “Kazakh University”. The university has accounts on social networks <https://www.facebook.com/FarabiKaznu/> - Facebook, [https://instagram.com/farabi\\_university](https://instagram.com/farabi_university) - Instagram, Telegram - <https://t.me/kaznu34>, where there is free access to all network users to express their opinions or participate in the discussion of certain aspects of the work of the university. The activities of the university are also actively monitored by periodic paper and online versions of various media, as well as the country’s television channels.

Interaction with students and teachers during the educational process is implemented through the internal website <https://www.univer.kaznu.kz/> Students have access to the content of the EP in which they study, as well as to all educational materials and the library. Through a personal account on this site, students receive and submit individual assignments. Teachers ensure timely uploading to the UMDK website, check assignments, and assign scores, which are reflected in students’ diaries. Through this site, students and teachers receive press releases of upcoming events, participate in surveys and enroll in additional distance courses.

Issues that require the involvement of a wide range of scientists, citizens, and students from different countries are brought up at conferences and round tables.

***Analytical part***

During a thorough analysis of the pages of the faculty and department on the official website of the university, as well as these pages on social networks, very limited information was discovered on the educational programs in question. Of course, the activities of the department are covered in the media space, however, for such educational programs that are on the path of their formation and can become, in a certain sense, branded, the promotion of these EPs is not at the proper level.

This factor acquires additional significance in the context of the fact that the enrollment of students for these EPs is not yet so significant, although there is certainly potential for growth in the contingent. Based on this, the management of the EP should intensify efforts to promote the EP data in the media.

**Strengths/Best Practices**

No

***Recommendations of the EEC***



- The management of the EP should more actively inform the public with up-to-date information about the educational program and its specifics through the media and information networks. This may include expert presentations, discussions and clarification of current issues related to the development of the country and education (on an ongoing basis).

**Conclusions of the EEC on the “Public Information” standard.** According to the “Public Awareness” standard, educational programs “7M05311 – Nuclear Medicine” have 11 satisfactory positions and 1 position suggesting improvement



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

### **The standard "Educational Program Management"**

- The university demonstrates a high level of organization of activities between scientific research, teaching and learning.

### **The standard "Information Management and Reporting"**

- The Center for Situational Management operating at the university is definitely a strong point of the educational organization in terms of information management and reporting. It provides opportunities for interactive collection and analysis of information to control and monitor current activities and prompt decision-making.

## (VIII) OVERVIEW RECOMMENDATIONS FOR IMPROVING QUALITY

### **- The standard "Educational Program Management"**

- -

### **- The standard "Information Management and Reporting"**

- -

### **- The standard "Development and approval of an educational program"**

- -

### **- The standard "Continuous monitoring and periodic evaluation of the educational program"**

- -

### **- The standard "Student-centered learning, teaching and assessment"**

The management of the EP needs to expand the criteria and methods of assessment, providing students with the opportunity to choose and feedback in each discipline. You can use forums, social networks or a special application or other relevant tools that are provided to students. Regular assessments, teacher comments, constructive criticism and recommendations will help students understand their strengths and areas for improvement. (until May 2024)

### **The standard "Students"**

-

### **The standard "Faculty and teaching staff"**

- In the development plans, the management of the EP should expand opportunities for teachers for professional development, for example, through the introduction of the institution of granting sabbatical leave or long-term targeted internships, stimulating them to self-education and continuous improvement of their skills and knowledge (until May 2024)

- Include in the ranking of teaching staff indicators for developing their own teaching methods and encourage increased activity in this area. (until May 2024)

### **The standard "Educational Resources and Student Support Systems"**

- The management of the educational organization should provide for the possibility of improving the material and technical support for the EP "7M05311 – Nuclear

Medicine”. It is also necessary to ensure the availability of infrastructure for students with disabilities throughout the university. (until May 2025)

- The management of the EP needs to introduce procedures for monitoring the satisfaction of students and teachers with the technical condition of laboratories and educational equipment in order to draw up an investment plan in accordance with the importance and relevance for students. (until May 2024)

**The standard “Public Information”**

- The management of the EP should more actively inform the public about information about the EP and measures for development and improvement, changes in programs of higher and postgraduate education through the media, which may include speeches by experts, discussions and clarification of current issues related to the development of the country and education (until May 2024 )

**(IX) RECOMMENDATIONS TO THE ACCREDITATION BOARD**

Members of the EEC came to a unanimous opinion that EP 7M05311 Nuclear Medicine, implemented by KazNU named after. Al-Farabi, can be accredited for a period of 5 (five) years.



## APPENDIX 1. PARAMETERS FOR A SPECIALIZED PROFILE

### Parameters for specialized accreditation EP 7M05311 Nuclear medicine

No.	No.	Criteria for evaluation	Position of the educational organization			
			Strong	Satisfactory	Suggests impro	Unsatisfactory
<b>Standard "Educational Program Management"</b>						
1	1.	The university must demonstrate the development of a goal and strategy for the development of the EP based on an analysis of external and internal factors with the wide involvement of a variety of stakeholders		+		
2	2.	Quality assurance policies should reflect the relationship between research, teaching and learning	+			
3	3.	Quality assurance policies should reflect the relationship between research, teaching and learning		+		
4	4.	A commitment to quality assurance must apply to any activity carried out by contractors and partners (outsourcing), including joint/double degree education and academic mobility.		+		
5	5.	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 focus of its activities on meeting the needs of students, the state, employers and other interested parties.		+		
6	6.	The leadership of the EP demonstrates the functioning of the mechanisms for the formation and regular review of the EP development plan and monitoring its implementation, assessing the achievement of training goals, compliance with the needs of students, employers and society, making decisions aimed at the continuous improvement of the EP		+		
7	7.	The management of the EP should involve representatives of stakeholder groups, including employers, students and teaching staff in the formation of a development plan for the EP		+		
8	8.	The management of the EP must demonstrate the individuality and uniqueness of the development plan of the EP, its consistency with national development priorities and the development strategy of the educational organization		+		
9	9.	The university must demonstrate a clear definition of those responsible for business processes within the EP, the distribution of job responsibilities of staff, and the delimitation of the functions of collegial bodies		+		
10	10.	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, and also involves all interested parties in this process		+		
11	11.	The management of the EP must 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		+		
12	12.	The management of the EP must exercise risk management		+		

13	13.	The management of the educational program must ensure the participation of representatives of interested parties (employers, teaching staff, students) in the collegial bodies governing the educational program, as well as their representativeness when making decisions on issues of managing the educational program		+		
14	14.	The university must demonstrate innovation management within the EP, including the analysis and implementation of innovative proposals		+		
15	15.	The management of the EP must demonstrate its openness and accessibility to students, teaching staff, employers and other interested parties		+		
16	16.	The management of the EP confirms completion of training in educational management programs		+		
17	17.	The management of the EP should ensure that the progress made since the last external quality assurance procedure is taken into account in preparation for the next procedure		+		
<b>Total according to standard</b>			<b>1</b>	<b>16</b>	<b>0</b>	<b>0</b>
<b>“Information Management and Reporting” Standard</b>						
18	1.	The university must ensure the functioning of a system for collecting, analyzing and managing information based on modern information and communication technologies and software	+			
19	2.	The management of the EP demonstrates the systematic use of processed, adequate information to improve the internal quality assurance system		+		
20	3.	The management of the EP demonstrates the presence of a reporting system reflecting the activities of all structural divisions and departments within the EP, including an assessment of their effectiveness		+		
21	4.	The university must determine the frequency, forms and methods of assessing the management of the educational program, the activities of collegial bodies and structural divisions, and senior management		+		
22	5.	The university must demonstrate a mechanism for ensuring the protection of information, including identifying responsible persons for the accuracy and timeliness of information analysis and data provision		+		
23	6.	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 it		+		
24	7.	The management of the EP must demonstrate the availability of communication mechanisms with students, employees and other interested parties, including conflict resolution		+		
25	8.	The university must ensure the measurement of the degree of satisfaction of the needs of students, teaching staff and staff within the EP and demonstrate evidence of eliminating the identified deficiencies		+		
26	9.	The university must evaluate the effectiveness and efficiency of activities in the context of EP		+		
		<i>Information collected and analyzed by the university within the framework of the EP must take into account:</i>				
27	10.	key performance indicators		+		
28	11.	dynamics of the student population in terms of forms and types		+		
29	12.	grade level, student achievement and dropout		+		

30	13.	student satisfaction with the implementation of the EP and the quality of education at the university		+		
31	14.	Availability of educational resources and support systems for students		+		
32	15.	employment and career growth of graduates		+		
33	16.	Students, teaching staff and staff must document their consent to the processing of personal data		+		
34	17.	The management of the EP should help provide the necessary information in the relevant fields of science		+		
<b>Total according to standard</b>			<b>1</b>	<b>16</b>	<b>0</b>	<b>0</b>
<b>Standard “Development and approval of an educational program”</b>						
35	1.	The university must demonstrate the existence of a documented procedure for developing EP and its approval at the institutional level		+		
36	2.	The university must demonstrate compliance of the developed EP with the established goals and planned learning outcomes		+		
37	3.	The management of the educational program must determine the influence of disciplines and professional practices on the formation of learning outcomes		+		
38	4.	The university demonstrates the presence of a model of an EP graduate that describes learning outcomes and personal qualities		+		
39	5.	The qualification awarded upon completion of the EP must be clearly defined, explained and correspond to a certain level of the NQF, QF-EHEA		+		
40	6.	The management of the EP must demonstrate the modular structure of the program, based on ECTS, ensure that the structure of the content of the EP corresponds to the goals set, with a focus on achieving the planned learning outcomes for each graduate		+		
41	7.	The management of the EP must ensure that the content of academic disciplines and learning outcomes correspond to each other and the level of study (bachelor's, master's, doctoral)		+		
42	8.	The management of the EP must demonstrate the conduct of external examinations of the EP		+		
43	9.	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		+		
44	10.	The management of the EP must demonstrate the uniqueness of the educational program, its positioning in the educational market (regional/national/international)		+		
45	11.	An important factor is the ability to prepare students for professional certification		+		
46	12.	An important factor is the presence of joint (s) and/or double-degree EP with foreign universities		+		
<b>Total according to standard</b>			<b>0</b>	<b>12</b>	<b>0</b>	
<b>Standard “Continuous monitoring and periodic evaluation of the educational program”</b>						

47	1.	The university must ensure a revision of the structure and content of the EP, taking into account changes in the labor market, the requirements of employers and the social demands of society		+		
48	2.	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		+		
		<i>Monitoring and periodic evaluation of the EP should consider:</i>				
49	3.	the content of the program in the context of the latest achievements of science and technology in a specific discipline		+		
50	4.	changes in the needs of society and the professional environment		+		
51	5.	workload, performance and graduation of students		+		
52	6.	effectiveness of student assessment procedures		+		
53	7.	needs and degree of satisfaction of students		+		
54	8.	compliance of the educational environment and the activities of support services with the goals of the EP		+		
55	9.	The management of the EP must publish information about changes to the EP, inform interested parties about any planned or taken actions within the framework of the EP		+		
56	10.	Support services should identify the needs of various groups of students and the degree of their satisfaction with the organization of training, teaching, assessment, and development of EP in general		+		
<b>Total according to standard</b>			<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>
<b>Standard “Student-centered learning, teaching and assessment”</b>						
57	1.	The management of the educational program must ensure respect and attention to different groups of students and their needs, providing them with flexible learning paths		+		
58	2.	The management of the EP must provide teaching based on modern achievements of world science and practice in the field of training, the use of various modern teaching methods and assessment of learning outcomes that ensure the achievement of the goals of the EP, including competencies, skills in performing scientific work at the required level		+		
59	3.	The management of the EP must determine mechanisms for distributing the educational load of students between theory and practice within the EP, ensuring the mastery of the content and achievement of the goals of the EP by each graduate		+		
60	4.	An important factor is the presence of your own research in the field of teaching methods of EP disciplines		+		
61	5.	The university must ensure that the procedures for assessing learning outcomes comply with the planned results and goals of the EP		+		
62	6.	The university must ensure consistency, transparency and objectivity of the mechanism for assessing the learning outcomes of the EP, publishing criteria and methods for assessing learning outcomes in advance		+		
63	7.	Evaluators must be proficient in modern methods of assessing learning outcomes and regularly improve their skills in this area		+		

64	8.	The management of the educational program must demonstrate the presence of a feedback system on the use of various teaching methods and evaluation of learning outcomes		+		
65	9.	The leadership of the educational program must demonstrate support for student autonomy while simultaneously providing guidance and assistance from the teacher.		+		
66	10.	The management of the educational program must demonstrate the existence of a procedure for responding to student complaints		+		
<b>Total according to standard</b>			<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>
<b>Standard "Students"</b>						
67	1.	The university must demonstrate a policy for forming a student population and ensure transparency and publication of procedures regulating the life cycle of students (from admission to completion)		+		
68	2.	The management of the EP should provide for special adaptation and support programs for newly admitted and foreign students		+		
69	3.	The university must demonstrate compliance of its actions with the Lisbon Recognition Convention, including the presence and application of a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and informal learning		+		
70	4.	The university must provide opportunities for external and internal academic mobility of students, as well as assist them in obtaining external grants for studying		+		
71	5.	The university must encourage students to self-education and development outside the main program (extracurricular activities)		+		
72	6.	An important factor is the presence of a mechanism to support gifted students		+		
73	7.	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		+		
74	8.	The university must provide students with places of practice, demonstrate a procedure for promoting the employment of graduates, and maintaining contact with them		+		
75	9.	The university must demonstrate the procedure for issuing documents to graduates confirming the qualifications obtained, including the achieved learning outcomes		+		
76	10.	The management of the educational program must demonstrate that graduates of the program have skills that are in demand in the labor market and that these skills are truly relevant		+		
77	11.	The management of the educational program must demonstrate the existence of a mechanism for monitoring the employment and professional activities of graduates		+		
78	12.	An important factor is the presence of an active alumni association/union		+		
<b>Total according to standard</b>			<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>
<b>Standard "Faculty and teaching staff"</b>						
79	1.	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 personnel, ensuring the professional competence of the entire staff		+		
80	2.	The university must demonstrate 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				
81	3.	The leadership of the EP must demonstrate a change in the role of the teacher in connection with the transition to student-centered learning and teaching		+		
82	4.	The university must provide opportunities for career growth and professional development of teaching staff, including young teachers		+		
83	5.	The university must involve in teaching specialists from relevant industries who have professional competencies that meet the requirements of the EP		+		
84	6.	The university must demonstrate the presence of a mechanism for motivating the professional and personal development of teaching staff		+		
85	7.	The university must demonstrate the widespread use of information and communication technologies and software in the educational process by teaching staff (for example, on-line learning, e-portfolios, MOOCs, etc.)		+		
86	8.	The university must demonstrate a focus on developing academic mobility and attracting the best foreign and domestic teachers			+	
87	9.	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 invited ones, to achieving the goals of the EP		+		
88	10.	An important factor is the involvement of teaching staff in the development of the economy, education, science and culture of the region and country		+		
<b>Total according to standard</b>			<b>0</b>	<b>9</b>	<b>1</b>	<b>0</b>
<b>Standard “Educational Resources and Student Support Systems”</b>						
89	1.	The university must guarantee the compliance of infrastructure, educational resources, including material and technical ones, with the goals of the educational program		+		
90	2.	The management of the EP must demonstrate the sufficiency of classrooms, laboratories and other facilities equipped with modern equipment to ensure the achievement of the goals of the EP			+	
		<i>The university must demonstrate the compliance of information resources with the needs of the university and the educational programs being implemented, including in the following areas:</i>				
91	3.	technological support for students and teaching staff in accordance with educational programs (for example, online learning, modeling, databases, data analysis programs)		+		
92	4.	library resources, including a fund of educational, methodological and scientific literature on general education, basic and major disciplines on paper and electronic media, periodicals, access to scientific databases		+		
93	5.	examination of research results, graduation works, dissertations for plagiarism		+		
94	6.	access to educational Internet resources		+		
95	7.	functioning of WI-FI on your territory		+		

96	8.	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		+		
97	9.	The university should strive to ensure that the educational equipment and software used to master educational programs are similar to those used in the relevant sectors of the economy		+		
98	10.	The management of the educational program must demonstrate the availability of procedures for supporting various groups of students, including information and consultation		+		
99	11.	The management of the educational program must show the existence of conditions for the student's advancement along an individual educational path		+		
10	12.	The university must take into account the needs of different groups of students (adults, working people, foreign students, as well as students with special educational needs)		+		
10 1	13	The university must ensure that the infrastructure meets security requirements		+		
<b>Total according to standard</b>			<b>0</b>	<b>12</b>	<b>1</b>	<b>0</b>
<b>Public Information Standard</b>						
10 2	1.	The university guarantees that the published information is accurate, objective, relevant and reflects all areas of the university's activities within the educational program		+		
10 3	2.	Public information should include support and explanation of the country's national development programs and the system of higher and postgraduate education		+		
10 4	3.	University management must use a variety of methods of information dissemination (including the media, web resources, information networks, etc.) to inform the general public and interested parties			+	
		<i>Information about the educational program is objective, up-to-date and should include:</i>				
10 5	4.	purpose and planned results of the EP, assigned qualifications		+		
10 6	5.	information and system for assessing educational achievements of students		+		
10 7	6.	information about academic mobility programs and other forms of cooperation with partner universities and employers		+		
10 8	7.	information about opportunities for developing personal and professional competencies of students and employment		+		
10 9	8.	data reflecting the positioning of EP in the educational services market (at the regional, national, international levels)		+		
11 0	9.	An important factor is the publication on open resources of reliable information about teaching staff, in the context of personalities		+		
11 1	10.	The university must publish audited financial statements for the EP on its own website		+		
11 3	11.	The university must post information and links to external resources based on the results of external assessment procedures		+		
11 3	12.	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		+		

<b>Total according to standard</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>0</b>
<b>TOTAL</b>	<b>2</b>	<b>108</b>	<b>3</b>	<b>0</b>





