



«АККРЕДИТЕУ 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 evaluation commission  
for compliance with the requirements of the IAAR standards for primary  
specialized accreditation (EX-ANTE) of educational programs  
7M07114 "Engineering of transport and technological systems";  
7M07206 "Pharmaceutical production technology";  
6B07207 "Mineral processing"

Non-profit limited company  
Karaganda Industrial University  
during the period from 3 to 5 of May 2023

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

*Addressed to  
To the Accreditation Center  
IAAR Council*



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**Temirtau**

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**(I) LIST OF SYMBOLS AND ABBREVIATIONS**

AIS	-automated information system
VUZ	- higher educational institution
VEC	- external expert commission
GOSVPO	- State Educational Standard of Higher Professional Education
ESUVO	- Unified management system of higher education
IT competencies	- information technology competencies
ITTS	-Engineering of transport and technological systems
QED	-catalog of elective disciplines
KarIU	-Karaganda Industrial University
MiM	-Metallurgy and Materials Science
MNiVO RK	-Ministry of Science and Higher Education
MNPH	- International Research and Production Holding
MES RK	- Ministry of Education and Science of the Republic of Kazakhstan
IAAR	-Independent Accreditation Agency and Rating
NAO	-Non-profit Joint Stock Company
NII	- Research Institute
R & D -	research work
NPP RK	of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken"
NTP	-scientific and technical program (project)
NTS	- Scientific and Technical Council
OP	- educational program
OPI	- Mineral processing
PPS	staff-faculty of Teaching
RK	-Republic of Kazakhstan
RO	- learning outcomes
RUP	- working curriculum
CAD	- computer-aided design systems
SMI	-mass media
QMS	-quality management system
TMiT	-Technological machines and transport
LLP	-Limited Liability Partnership
TFP	-pharmaceutical production technology
UMKD	UMCD-educational and methodical complex of the discipline
UMS	-Educational and methodical Council
UP	-KTiE curriculum
KHTiE	-Chemical Technology and Ecology
GMP	- Good Manufacturing Practice, Good Manufacturing Practice

## **(II) INTRODUCTION**

In accordance with Order No. 67-23-OD of 6.03.2023 of the Independent Accreditation and Rating Agency, from May 3 to May 5, 2023, an external expert commission evaluated the compliance of educational programs 7M07114 "Engineering of Transport and Technological Systems" (ITTS), 7M07206 "Pharmaceutical Production Technology" (TFP), 6B07207 "Mineral Processing" (OPI) (Cluster 2) to the standards of primary specialized accreditation of the educational program of the organization of higher and postgraduate education of the IAAR (No. 68-18 / 1-OD of May 25, 2018, first edition).

The report of the External Expert Commission (EEC) contains an assessment of the submitted EOS to the IAAR criteria, recommendations of the EEC for further improvement of the EOS, and parameters of the EOS profile.

### **The composition of the VEC:**

**Chairman of the IAAR HEC** - Andrey V. Tamyarov, c.t.s., Associate Professor of Ulyanovsk State Technical University (Ulyanovsk, Russian Federation), *Off-line participation.*

**IAAR Foreign Expert** – Inna Sidorova, MBA, ACMA/CGMA (London, UK), *On-line participation.*

**IAAR expert** – Torlanova Botagoz Ongarovna, c.pharm.s., Associate Professor of the Department of Pharmaceutical Production Technology, South Kazakhstan Medical Academy (Shymkent, Republic of Kazakhstan), *Off-line participation..*

**IAAR expert** - Aliya Kairatovna Aldungarova, PhD, Associate Professor, D. Serikbayev East Kazakhstan University (Ust-Kamenogorsk, Republic of Kazakhstan), *Off-line participation..*

**IAAR expert** – Baktymbet Saule Serikovna, c.s. in Economics, Associate Professor, Deputy Director of the Academy of Political Management (Almaty, Republic of Kazakhstan), *On-line participation.*

**IAAR expert** – Yermek Tolegenovich Abilmazhinov, Doctor of Technical Sciences, Associate Professor, Associate Professor Shakarim University (Semey, Republic of Kazakhstan), *Off-line participation.*

**IAAR expert, Employer** – Gulmira Zeynulovna Dzhangiparova, Head of Commercial unit, KT Cloud lab, *On-line participation.*

**IAAR expert, Student** – Sisenova Tolganay, 1st year Master's student of OP "Management", Turan University (Almaty, Republic of Kazakhstan), *On-line participation.*

**Coordinator of the IAAR HEC** - Gulfiya Nazyrova, c.s. in Economics, Project Manager for the formation of IAAR external expert commissions (Astana, Republic of Kazakhstan), *Off-line participation.*

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

By order of the Minister of Higher and Secondary Special Education of the USSR dated March 4, 1958, an evening branch of the Karaganda Polytechnic Institute was opened in Temirtau on the basis of the Chemical and Mechanical Technical School for on-the-job training of specialists. In 1961, the Temirtau evening branch was reorganized into the evening General Technical Faculty of the Karaganda Polytechnic Institute.

In 1963, by government decrees of the USSR and Kazakhstan. On the basis of the evening faculty of the Karaganda Polytechnic Institute in Temirtau, a VTUZ plant was opened at the Karaganda Metallurgical Plant (since 1970 - at the Karaganda Metallurgical Combine). During the first years of operation of the plant-VTUZ, all the necessary structural divisions of the university were formed, its material and technical base was created and strengthened, the main building of the institute was built, and the number of students tripled.

In the 1970s and 80s, the engineering, mainly metallurgical profile of the VTUZ plant was completed. By the end of the 80s, the university had seven educational and laboratory buildings equipped with equipment for conducting research in the field of metallurgy, chemistry and construction, one of the best information and computing centers in the USSR, a sports complex, two well-equipped dormitories, a sanatorium-preventorium, and a canteen with 530 seats. The university library consisted of about 200,000 volumes of scientific, educational and fiction literature.

The structure of the university consists of four faculties – metallurgy, mechanical engineering, civil engineering, evening-and preparatory department. Of the 26 departments, twelve were graduate departments. Training was conducted in 9 specialties in full-time and evening forms of education. More than 250 qualified teachers were engaged in scientific and pedagogical work, more than half of them with academic degrees and titles.

In 1993, the Karaganda Metallurgical Institute was established on the basis of the VTUZ plant (Resolution of the Cabinet of Ministers of the Republic of Kazakhstan dated March 19, 1993, No. 221 and Order of the Minister of Education of the Republic of Kazakhstan dated April 29, 1993, No. 193).

Karaganda Metallurgical Institute has retained its status as the only higher education institution in the Central Asian region that produces specialists in the entire spectrum of the metallurgical industry. The structure of the university included three full-time faculties, a correspondence faculty (created on the basis of the evening faculty in 1997), and a Kazakh department, where training was conducted in metallurgical, machine-building, construction, chemical and economic areas. There was a military department that trained signalmen-reserve officers.

On the basis of the university, the project of the educational and scientific complex of continuing education "KarMetI" was implemented. For the implementation of pre-university training at the Institute, a lyceum "Koktem" and a college were organized. Postgraduate training of specialists was conducted in postgraduate and master's programs.

In 2006, the Karaganda State Industrial University was established on the basis of the Karaganda Metallurgical Institute. (Resolution of the Government of the Republic of Kazakhstan dated July 25, 2006, No. 705).

In June 2020, Karaganda State Industrial University became a non-profit joint-stock company and was renamed "Karaganda Industrial University" Non-Profit Joint-Stock Company.

Currently, the university has 3 faculties and 11 departments: the Faculty of Metallurgy and Mechanical Engineering (Departments of Metallurgy and Materials Science; Materials Processing by pressure; Chemical Technology and Ecology); the Faculty of Energy, Transport and Control Systems (Departments of Energy; Artificial Intelligence Technologies; technological Machines and Transport; history of Kazakhstan, Social and Humanitarian

Disciplines, etc. physical education); Faculty of Economics and Construction (Departments of Economics and Business; construction; general education disciplines; Assembly of People of Kazakhstan).



**(IV) DESCRIPTION OF THE PREVIOUS ACCREDITATION PROCEDURE**

International program (specialized) accreditation of educational programs 7M07114 " Engineering of transport and technological systems" (ITTS), 7M07206 " Pharmaceutical production technology " (TFP), 6B07207 " Mineral processing " (OPI) according to IAAR standards is held for the first time.





## **(V) DESCRIPTION OF THE EC SESSION**

The work of the EEC was carried out on the basis of the approved Program of the visit of the expert Commission on Program accreditation of educational programs at the Karaganda Industrial University (here in after-KarIU) in the period from 3 to 5 May 2023.

In order to coordinate the work of the HEC, on May 02, 2023, an installation meeting was held in *the on-line mode*, 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 rector, vice-rectors of the university in their areas of activity, heads of structural divisions, deans of faculties, heads of departments, teachers, students, graduates, employers. A total of 53 representatives participated in the meetings (Table 1).

Table 1-Information about employees and trainees who participated in meetings with the IAAR HEC:

<b>Category of participants</b>	<b>Number</b>
of Rectors	1
Vice-rectors	2
Heads of structural divisions	13
Deans of faculties, heads of departments and heads of OP Cluster No. 2: OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing"	7
Teachers	11
Students	18
Graduates	-
Representatives of practice bases	9
<b>Total</b>	<b>61</b>

During the tour, the members of the EEC got acquainted with the state of the material and technical base, including visiting:

- 1) *Department of Metallurgy and Materials Science;*
- 2) *Department of Technological Machines and Equipment,*
- 3) *Department of Chemical Technology and Ecology;*
- 4) *An inclusive learning area;*
- 5) *Scientific Library Of The University;*
- 6) *Student canteen, etc.*

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

During their work, the EEC members visited the bases of professional practices: the International Research and Production Holding "Phytochemistry" and the Karaganda Pharmaceutical Plant (Karaganda), the official distributor of Hitachi Construction Machinery in the Republic of Kazakhstan, the Company "Eurasian Machinery" (Karaganda).

In accordance with the accreditation procedure, 25 teachers and 40 students were interviewed.

In order to confirm the information provided in the Self-assessment Report, external experts requested and analyzed the university's working documentation. Along with this, the experts studied the Internet positioning of the university through the official website <https://tttu.edu.kz/ru>.

As part of the planned program of the visit, the recommendations developed by the EEC based on the results of the examination within the framework of primary specialized accreditation (EX-ANTE) of the educational programs 7M07114 "ITTS", 7M07206 "TFP", 6B07207 "OPI" implemented at KarIU were presented at a meeting with the management on 05.05.2023.



## **(VI) COMPLIANCE WITH PROGRAM ACCREDITATION STANDARDS**

### **6.1 Standard "Educational program Management"**

- ✓ *The organization of higher and / or postgraduate education should have a published quality assurance policy that reflects the relationship between research, teaching and learning.*
- ✓ *The organization of higher and / or postgraduate education should demonstrate the development of a culture of quality assurance, including in the context of OP.*
- ✓ *Commitment to quality assurance should apply to any activity performed by contractors and partners (outsourcing), including the implementation of joint/two-degree education and academic mobility.*
- ✓ *The EP management demonstrates transparency in developing a development plan for the EP, which contains the time frame for the start of implementation, based on an analysis of its functioning, the real positioning of the PA and the focus of its activities on meeting the needs of the state, employers, students and other interested parties.*
- ✓ *The EP management demonstrates the existence of mechanisms for forming and regularly reviewing the EP development plan and monitoring its implementation, evaluating the achievement of training goals, meeting the needs of students, employers and society, and making decisions aimed at continuous improvement of the EP.*
- ✓ *The EP management should involve representatives of groups of stakeholders, including employers, trainees and teaching staff, in the formation of the EP development plan.*
- ✓ *The management of higher education institutions should demonstrate the individuality and uniqueness of the development plan of higher education institutions, its consistency with national priorities and the development strategy of the organization of higher and (or) postgraduate education*
- ✓ *The organization of higher and (or) postgraduate education should demonstrate a clear definition of those responsible for business processes within the framework of higher education institutions, an unambiguous distribution of*
- ✓ *The OP management should provide evidence of the transparency of the educational program management system.*
- ✓ *The EP management should demonstrate the existence of an internal system for ensuring the quality of the EP, including its design, management and monitoring, their improvement, and fact-based decision-making.*
- ✓ *The management of the OP should manage risks, including within the framework of the OP undergoing initial accreditation, and also demonstrate a system of measures aimed at reducing the degree of risk.*
- ✓ *The EP management should ensure the participation of representatives of employers, teaching staff, students and other interested persons in the composition of the collegial management bodies of the educational program, as well as their representativeness in making decisions on the management of the educational program.*
- ✓ *The public organization must demonstrate innovation management within the framework of the EP, including the analysis and implementation of innovative proposals.*
- ✓ *The EP management should demonstrate evidence of readiness for openness and accessibility for students, teaching staff, employers, and other interested parties.*
- ✓ *The OP management should be trained in educational management programs.*

### ***Proof part***

KarIU management is doing a lot of work to develop competitiveness in the field of engineering education, including in the development of pharmaceutical, machine-building and mining science and practice in accordance with the Strategic Plan of NAO "Karaganda Industrial University" for 2021-2025, and the Quality Policy. At the same time, it is also indicated that the "Quality goals" of the departments are developed in accordance with the QMS StO II.6-01.01-2022 "Development of goals and plans in the field of quality", which sets out the procedure for developing quality goals and planning for improving the quality management system.

OP development is based on forecasting economic development trends. For this purpose, faculties and departments analyze the needs of the labor market. The demand for OP is determined by the report of the Front Office (admissions committee) and the results of a survey of stakeholders. Thus, the demand for chemical engineers was determined not only at pharmaceutical enterprises in Karaganda, but also at theta recomplex of KamaTyres KZ LLP under construction in Saran (Karaganda region), which served as the basis for the development of OP 7M07206 "Pharmaceutical Production Technology".

In order to ensure further improvement of the implemented educational programs at the University, based on the Quality Assurance Policy, Development Plans have been developed for OP 7M07114 "ITTS", 7M07206 "TFP", 6B07207 "OPI". These documents are available to all interested parties-they are posted on the University's website.

Institutional autonomy and academic freedom at KarIU are implemented to a sufficient extent, especially, for example, in the formation of curricula (duration of semesters, number of biomedical, behavioral, special disciplines, including elective subjects, types of practices, ensuring maximum compliance with national and international requirements). So, for the development of students' research skills in working curricula (supporting documents are presented – Curricula for the 2022-2023 academic year) OP 7M07114 "ITTS", 6B07207 "OPI" includes such disciplines as "Methodology of scientific research", "Planning of a scientific experiment and processing of experimental data", "Fundamentals of scientific research". For OP 7M07206 "TFP", the Module "Scientific research in the pharmaceutical industry" includes such disciplines as "Patent Science", "Statistical methods of analysis in the system of control and quality assurance of pharmaceutical production", "Theory of inventive problem solving", "Scientific Communication" and "Modern problems of pharmaceutical technology".

The external expert commission is presented with supporting documents on the integration of research activities of teachers and students' educational activities, including individual research plans for undergraduates and bachelors.

Monitoring the degree of satisfaction of internal and external stakeholders is based on conducting questionnaires among students, teaching staff and employees of the university, interviewing employers. The results of the survey are discussed at departments, faculties, and the Academic Council of the University. A survey conducted in early March 2023 among students showed that 84 % of respondents are satisfied with the quality of education at KarIU.

The main results of scientific and innovative activities of teachers of the departments of TMiT, KhTI, MiM, implementing OP 7M07114 "ITTS", 7M07206 "TFP", 6B07207 "OPI" for 2022:

- Professor Nurkenov O.A. was the responsible executor of the scientific and technical program (NTP) on the grant topic "Functionalized antiviral and antibacterial conjugates based on quinolizidine and pyridine alkaloids: rational design and production" (implementation period 2020-2022). Head of the Department Kabieva S. K. is a member of the team of authors of the patent of the Republic of Kazakhstan for invention dated 03.09.2018 2 years for a method of obtaining a substance with hepatoprotective activity (Department of CTiR).

- AP14972831 Investigation of the structure and properties of experimental aluminum-matrix composites reinforced with metal carbides and silicon production waste. Grant approved. Competition for grant funding of research of young scientists under the project "Zhas galym". 2022-2024. Abishkenov M. Zh. (Department of TMiT).

- Patent No35948 Republic of Kazakhstan. Device for separation of metallurgical melts: No 2021/0420. 1: declared 09.07.2021: published 18.11.2022 / Zhautikov B. A., Nogaev K. A., Romanov V. I., Aikeeva A. A., Tatueva M. M., Zhaslan R. K., Yerzhanov A. S., Zhautikov F. B., Akhmetov B. A., Akhmetova A. S., Kydyrbaeva S. Zh. applicant "Karaganda Industrial University" (Department of KhTI).

- Copyright certificate No30768 Republic of Kazakhstan. Analytikalyk khimiya online courses: announced 29.11.2022 published 01.12.2022 / Abilkanova F. Zh. (Department of KhTI).

- AR 13068023 "Research and development of technology for processing steel with Fe-Si-Mn-Al complex ligature". Grant approved. Competition for grant funding of research of young scientists under the project "Zhas galym". 2022-2024. Kelamanov B. S. (Department of MiM).

- AP14972699 "Investigation of the influence of high-ash hard coals on the technological performance of ferrochrome carbon grades smelting". Grant approved. Competition for grant



funding of research of young scientists under the project "Zhas galym", 2022-2024 Kuatbay E.K. (Department of MiM).

- AP14972750 Development of resource-saving technology for smelting medium-carbon ferromanganese using advanced ferrosilicon manganese and low-quality manganese ores. Competition for grant funding of research of young scientists under the project "Zhas galym". 2022-2024. Makhambetov E. N.

### ***Analytical part***

After reviewing the submitted supporting documents, as well as receiving answers during interviews with target groups, *members of the IAAR EEC* note that the strategic goal of the University's graduate departments in improving the quality of educational services is to carry out educational activities at a level that provides educational consumers with services that meet international education standards.

When developing Plans for the development of the EP, trends in the business community are taken into account through the analysis of professional standards, qualification characteristics contained in the Qualification Directory of Positions of Managers and other Employees, questionnaires and interviews of employers.

However, it should be noted that in the Development Plan of OP 7M07206 "Pharmaceutical Production Technology" for 2022-2025, measures for the development of OP, measures to reduce the impact of risks on the implementation of OP are not tied to specific dates, performers, forms of implementation and reporting forms, to target indicators, which makes it impossible to track the implementation of certain tasks. It will be difficult for the management of OP 7M07206 "Pharmaceutical Production Technology" to follow the development of a quality assurance culture in the implementation of the OP.

In addition, experts note that the content of planned activities in the development plans of the OP 2 cluster is standard, without any substantive points of implementation that are different from other OPS, respectively, it can be concluded that the individuality and uniqueness of the development plans of the OP 2 cluster is not traced.

It should be noted that a number of teaching staff of accredited departments of cluster 2 carry out scientific research in the field of their core activities, and the reporting period for the university is a period with good results in the implementation of scientific research and the implementation of research results in the educational process.

However, it should be noted that most of the published works, including those obtained patents by teachers of the Department of KHTIEH, are focused in the field of metallurgy, including chemical technology and methods of mineral processing.

### ***Strengths/best practices for OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing":***

1. Demonstration by the management of the educational programs 7M07114 "Engineering of transport and technological systems" and 6B07207 "Mineral processing" of good indicative achievements in the field of commercialization of innovative research of teaching staff and implementation of research results in the educational process.

### ***VEC recommendations for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing":***

1. To the management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" to ensure their individuality and uniqueness, to determine the advantages in comparison with other OP implemented in the region and the Republic of Kazakhstan, and, based on the analysis, adjust the development plans of OP, defining them individuality and uniqueness. *The deadline is until the beginning of the 2023-2024 academic year.*

***Additional recommendations of the VEC for OP 7M07206 "Pharmaceutical production technology":***

2. The management of OP 7M07206 "Pharmaceutical Production technology" should include in the Development Plan quantitative and time indicators of achievement, responsible for their implementation and forms of the implementation report, to ensure systematic monitoring of the culture of improving the quality of educational services provided. The deadline is until the beginning of the 2023-2024 academic year.

3. The management of OP 7M07206 "Pharmaceutical production technology" should ensure regular revision of the Development Plan to monitor its implementation and assess the achievement of training goals, with access to the results of monitoring analysis to all interested parties (students, employers), including decisions taken aimed at continuous improvement of the OP. *The deadline is annually.*

***VEC conclusions:***

*According to the standard "Educational resources and student support systems", 15 criteria are disclosed, including:*

*- according to OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing": 1 criterion is strong, 13 criteria have a satisfactory position, 1 criterion requires improvement;*

*- according to OP 7M07206 "Pharmaceutical production technology": 12 positions - satisfactory, 3 positions – require improvement.*

**6.2 Information Management and Reporting Standard**

- ✓ *The public organization should demonstrate that it has a system for collecting, analyzing and managing information based on the use of modern information and communication technologies and software tools, and that it uses a variety of methods for collecting and analyzing information in the context of OP.*
- ✓ *The CA management should demonstrate that there is a mechanism in place to systematically use the processed, adequate information to improve the internal quality assurance system.*
- ✓ *OP management should demonstrate evidence-based decision-making.*
- ✓ *The EP should include a system of regular reporting that reflects all levels of the structure, including an assessment of the effectiveness and efficiency of the activities of structural divisions and scientific research.*
- ✓ *The public organization should establish the frequency, forms and methods of evaluating the management of the Public Organization, the activities of collegial bodies and structural divisions, senior management, and the implementation of scientific projects.*
- ✓ *The public organization must demonstrate the definition of the procedure and ensuring the protection of information, including the identification of those responsible for the accuracy and timeliness of information analysis and data provision.*
- ✓ *An important factor is the availability of mechanisms for involving students, employees and teaching staff in the processes of collecting and analyzing information, as well as making decisions based on them.*
- ✓ *The EP management should demonstrate that there is a mechanism for communication with students, employees, and other stakeholders, as well as mechanisms for conflict resolution.*
- ✓ *The PA should demonstrate that there are mechanisms in place to measure the degree of satisfaction with the needs of staff, staff, and trainees within the framework of the EP.*
- ✓ *The public organization should provide for an assessment of the effectiveness and efficiency of its activities, including in the context of the OP.*
- ✓ *Information intended to be collected and analyzed within the framework of the EP should take into account:*
  - *key performance indicators;*
  - *the dynamics of the student body in terms of forms and types;*
  - *the level of academic performance, student achievements and deductions;*
  - *student satisfaction with the implementation of the OP and the quality of education at the university;*
  - *availability of educational resources and support systems for students.*
- ✓ *The public organization must confirm the implementation of procedures for processing personal data of students, employees and teaching staff on the basis of their documented consent.*

***Proof part***

Information flows that require management include external incoming information (regulatory documents, orders and orders of the Ministry of Education and Science of the Republic of Kazakhstan; changes in legislation and in the market of educational services, announcements of competitions, conferences, etc.); internal information generated in the course of activity by all structural divisions of the university (orders, orders, decisions, acts, contracts reports, official and explanatory notes, conclusions, reviews, lists, letters, summaries, lists, references, statements, planned reports, etc.) and external outgoing information (reports on the university's activities, information for applicants, etc.). External information includes all information posted on the University's website and accessible to everyone interested parties. General information about the university and OP is available in three languages (Kazakh, Russian and English) on the official website of the university <https://tttu.edu.kz/>. On the official website, students, employees and interested parties can find information about the University's structure, Mission and Development Strategy, get acquainted with information about events in the scientific, educational and social life of the university, with an electronic schedule of classes, as well as get information on educational programs, in particular, information about departments that implement educational programs (<https://tttu.edu.kz/ru/kafedra-texnologicheskie-mashini-i-transport/>, <https://tttu.edu.kz/ru/kafedra-metallurgiya-i-materialovedenie/>, <https://tttu.edu.kz/ru/kafedra-ximicheskaya-texnologiya-i-ekologiya/>), about the compulsory and elective subjects studied (QED) <https://tttu.edu.kz/ru/katalog-elektivnix-disciplin/>), about the competencies obtained by the graduate, about the teaching staff, etc.

During interviews with target groups, it was found that corporate email, the application for communication within the university's local network Net Speakerphone, social networks Facebook, WhatsApp, Instagram are used to distribute internal current information at the University. Also, the University has created a unified information network that includes all computers, information resources (web portals, file servers) that allow you to effectively manage the educational process and all information resources. For example, in the teacher's personal account, you can set grades, inform students about the deadlines for completing tasks, post training cases, certificates, and other materials.

All university buildings have access to a wireless Wi-Fi network with Internet access. Providing effective information support for the management processes of the education system, as well as managing the educational process of the university is carried out by the Platonus and Moodle system.

To ensure information security, access to the Platonus AIS is provided through the login and password issued by the Registrar's Office. Thus, the level of access to databases is set depending on the functions performed by the user. Requirements for information security management, including the storage, use and protection of personal data of students and employees of the university are defined in such documents as "Instructions for ensuring the safety of information of KarIU "and in the document QMS P4-27-2022 "Regulations on informing the public", which ensures the trust of stakeholders. The safety of digital information is ensured by the university's structural division-the Department of Digital Transformation (DCT), which is responsible for the operability and continuous improvement of servers designed for storing and processing information. Backup of the KarIU website information is performed by storing a copy on remote servers of the hosting service provider. Platonus AIS databases are backed up by duplicating them to RAID 2. Mirroring is created after a system update.

The KarIU Scientific Library has an alphabetical, systematic, alphabetic-service, as well as an electronic catalog of CABIS.

Accounting and tax accounting in KarIU is provided by using the 1C Accounting program, the main task of which is to combine and rationalize primary documentation, to derive the financial result of the organization, calculate the tax base and provide tax reporting.



KarIU sets out the frequency, forms and methods of evaluating the management of the University, the activities of collegial bodies and structural divisions, senior management, and the implementation of scientific projects. Thus, during interviews with the University management (vice-rectors, deans) and teaching staff, it was found that the system of regular reporting of departments and all structural divisions of the University includes an assessment of the effectiveness and efficiency of their activities. Special attention is paid to the effectiveness of scientific research. So, every year in February, all departments submit a report on research work for the year, which allowed the University to introduce a system of financial incentives for scientific research of each individual teacher. Based on the results of the results of academic semesters and in general for the academic year, teaching staff and staff of departments prepare reports of teaching staff on educational, teaching-methodical, scientific and educational activities (individual reports of teachers, individual reports of undergraduates). Also, departments make reports on all types of practices, AC reports, etc.

To provide feedback, the University periodically (2 times a year, after each semester) conducts sociological surveys (questionnaires) of students, teaching staff, and employers. "Open Days" are also held on a regular basis, the rector receives students on personal issues and meets with students, as well as maintaining the rector's blog on the official website of the university. Managers of enterprises, firms, and companies are invited to participate in "Student Employment Fairs".

Identification and forecasting of risks is carried out on the basis of information analysis, carried out in accordance with the requirements of QMS StO II.6-01.02-2022 "Actions in relation to risks". Each project development plan includes a section entitled "Measures to reduce the impact of risks for the Company".

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

Information management at the University is the collection, analysis and further dissemination of information to improve the quality of services provided, including for the management of educational, teaching-methodical, research, educational, financial and other processes. *Members of the IAAR VEC* note that the University provides information management and reporting based on the use of modern information and communication technologies and software tools in accordance with such documents as QMS: QMS P 4-27-2022 "Regulation on informing the public" and QMS StO II.7-04.02-2021 "Internal informing". Since the departments are the executors of educational services, the effectiveness and efficiency of their activities within the framework of the implementation of the EP is reflected in the annual reports on the main types of activities: educational and methodological work, research, educational work, etc., considered at meetings of the department, Faculty Council, UMS, STC, Academic Council. External experts (National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken", Independent Accreditation Agencies, etc.) are also involved to assess the effectiveness and efficiency of the OP. Thus, the University provides information management and regular reporting at the required level.

***Strengths/best practices for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical Production technology", 6B07207 "Mineral processing":***

- according to this Standard, OP's do not have strong points.

***VEC recommendations for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing":***

- there are no recommendations for this standard.



*Conclusions of the HEC: according to the standard "Information Management and Reporting", 16 criteria are disclosed, of which all 16 criteria have a satisfactory position.*

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

- ✓ *The PA should define and document procedures for the development of the EP and their approval at the institutional level.*
- ✓ *The EP management should ensure that the content of the EP meets the established goals, including the expected learning outcomes.*
- ✓ *The EP management should demonstrate the existence of mechanisms for reviewing the content and structure of the EP, taking into account changes in the labor market, the requirements of employers and the social demand of society.*
- ✓ *The management of the OP should ensure that the developed models of the OP graduate are available, describing the learning outcomes and personal qualities.*
- ✓ *The management of the EP should demonstrate that external reviews of the content of the EP and the planned results of its implementation are conducted.*
- ✓ *The qualification awarded upon completion of the EP should be clearly defined and correspond to a certain level of NSC and QF-EHEA.*
- ✓ *The OP management should determine the impact of disciplines and professional practices on the formation of learning outcomes.*
- ✓ *An important factor is the possibility of training students for professional certification.*
- ✓ *The management of the EP should provide evidence of the participation of students, teaching staff and other interested parties in the development of the EP, ensuring its quality.*
- ✓ *The OP management should ensure that the content of academic disciplines and planned results correspond to the level of study (bachelor's, master's, doctoral studies).*
- ✓ *The structure of the EP should provide for various types of activities that ensure that students achieve the planned learning outcomes.*
- ✓ *An important factor is the correspondence of the content of the EP and the learning outcomes of the EP implemented by organizations of higher and / or postgraduate education in the EHEA.*

#### **Proof part**

QMS submitted by the University for specialized accreditation were developed and approved in accordance with the requirements of such documents as QMS StOII.8-03.01-2021 "Design and development of educational services" and QMS P 4-25-1-2021 "Regulations on the development of modular educational programs".

OP 7M07114 "ITTS" was developed and proposed for implementation for the first time on 24.05.2020, the date of updating the OP passport is 09.08.2022. The Department of Chemical Technology and Ecology developed OP 7M07206" TFP "for the first time, approved it on 23.05.2020, and the OP passport was updated on 09.08.2022. OP 6B07207 " OPI " was first approved on 31.08.2020, the date of updating the OP passport is 31.08.2020. Revision of the listed OP is planned at the extended meetings of the departments "TMiT", "KhTI", "MiM", respectively, in May 2022-2023 academic year. For the development of the EP at KarIU, the Rector's Order No. 07.3-02/161 of 14.12.2021 approved working groups that include teaching staff of departments, students of the EP, representatives of employers and foreign partners.

For example, the working group on updating OP 6B07207 " OPI " includes a representative from employers - Reshotkina E. N. (Candidate of Technical Sciences, Head of the LMID of the Central Research Institute of "ArcelorMittal Temirtau" JSC) and a representative of a foreign partner university Salina V. A. (leading employee of the Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Candidate of Technical Sciences). The working group on updating OP 7M07114 "ITTS" includes representatives from employers - Senyuk L. I. (head of the production and technical department of "Gordorservis-T" LLP), Konovalenko M. V. (head of sheet rolling shop No. 1 of "Arcelor Mittal Temirtau" JSC), a representative of a foreign partner university D.V. Professor B.T. Mardonov (Navoi State Mining Institute) and Master's student I. Tav'shanov, ITTS-21 group. The working group on updating OP 7M07206 "TFP" includes a representative from employers - O.A. Nurkenov (head

of the laboratory of the Institute of Organic Synthesis of Coal Chemistry of the National Academy of Sciences of the Republic of Kazakhstan), a representative of a foreign partner university, Doctor of Chemical Sciences, Professor V.V. Konshin (Altai State Technical University named after I.I. Polzunov).

*Members of the IAAR VEC* note that the OPs clusters No 2 submitted for accreditation have passed an external review. Thus, external expertise at the stage of developing educational programs was carried out with the involvement of leading specialists from foreign universities and scientific organizations. For example, external expertise of OP 7M07114 "ITTS", OP 7M07206 "TFP", 6B07207 "OPI" was carried out by representatives of NUST MISIS (Russian Federation), Tomsk State University (Russian Federation), Istanbul Technical University (Turkey). OP passports were subject to external expertise at the Center for the Bologna Process and Academic Mobility of the Ministry of Education and Science of the Republic of Kazakhstan before being included in the Register of Educational Programs of Higher and Postgraduate Education.

The OP is approved in stages in accordance with the established procedure, first heard at an expanded meeting of departments (Protocol No. 8 of 12.04.2022), then the OP is approved at a meeting of the Council of Faculties (protocol No. 7 of 17.05.2022), then the approval of programs will take place at a meeting of the Educational and Methodological Council of the University (protocol No. 6 of 28.06.2022).

A significant number of elective courses are provided for individualization of training in accredited educational institutions, which makes it possible for undergraduate and graduate students to develop professional skills taking into account their interests in the future profession. Students can get acquainted with the list and brief content of disciplines on the University's website, in the AIS "Platonus" in the sections "Curriculum" and "Catalogs of Disciplines", as well as in the Register of Educational Programs of the Unified System of Higher Education Management (USE) of the Ministry of Education and Science of the Republic of Kazakhstan.

### ***Analytical part***

*Members of the IAAR EEC* note that the University defines goals for each developed and approved program, which are based on the State Educational Standard (SES), regulatory acts of the Republic of Kazakhstan and labor market needs. So, for OP 7M07206 "TFP", the goal is to train highly qualified specialists by deepening theoretical and practical individual training of students in the field of pharmaceutical production technology and pedagogical activities, developing the ability to self-develop and acquire skills in organizing and conducting scientific research. The implementation of OP 7M07114 "ITTS" is aimed at achieving the following goal-training of highly educated and harmoniously developed masters with social and professional, practice-oriented, scientific and pedagogical competencies and in-depth knowledge of engineering activities in the field of transport and technological systems. For OP 6B07207 "OPI", the main goal is to train competitive specialists-concentrators who analyze and implement technological processes, operate and design equipment for concentrating production, capable of effective teamwork and continuing training throughout life.

When determining the contribution of disciplines to the process of determining learning outcomes, employers' recommendations and suggestions are taken into account. However, during the visit to the practice bases of OP 7M07206 "TFP", employers from MNPH "Phytochemistry" acad. S.M. Adekenov and E.G. Tolokonnikov, Director of KFZ, said that graduates do not have the skills to work on complex devices – Gas chromatograph, electron spectrometer, etc. This indicates that the University needs to regularly update the equipment of educational and scientific laboratories, acquire modern devices, and instill in students the skills of working with accurate devices for analyzing biologically active substances obtained by chemical synthesis, as well as isolated from medicinal plant raw materials. Accordingly, the management of the OP should work out mechanisms for revising the content and structure of

the OP in such a way that the results of training and competencies of undergraduates of OP 7M07206 "TFP" are formed taking into account changes in the labor market, the requirements of employers and the social demand of society.

*The HEC notes the need to introduce* a more active practice of implementing dual training, which *отметилу* was also noted by groups of students, graduates, employers, and managers of practice bases during the meeting with the HEC. *It was noted* that the university, in general, is ready both morally and according to documented procedures to start purposeful work on large-scale practice-oriented training. It is necessary to bring not only summer professional practices to the bases of internships, branches of departments, but also to conduct practical, laboratory and lecture classes within the framework of full-fledged disciplines, with the preparation of official schedules at the bases of enterprises (not only guest or excursion classes), including outside the city of Temirtau.

*In addition, accredited departments have an excellent potential* to work in the field of providing students with additional professional competencies that will enable students to be more in demand and competitive after graduation due to various qualifications obtained during their studies, conducting professional certifications of students, developing and implementing programs for assigning micro-qualifications to students, etc. Internal work on developing massive open online courses should also not work only in one direction. It is also necessary to involve your students to study external courses from open platforms to develop their professional skills. *The university management needs* to move to the format of recognition of non-formal learning methods.

***Strengths/best practices for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical Production technology", 6B07207 "Mineral processing":***

- according to this Standard, OP's do not have strong points.

***VEC recommendations for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing":***

1. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206" Pharmaceutical production technology ", 6B07207" Mineral processing " in the development plans of each OP should include measures to introduce elements of the dual training system and start implementing them. *The deadline is by the beginning of the 2023-2024 academic year.*

2. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206" Pharmaceutical production technology ", 6B07207" Mineral processing " should carry out targeted work on *organizing training* of students for professional certification, including recognition of the results of non-formal training. *The deadline is by the beginning of the 2023-2024 academic year.*

***Additional recommendation of the EEC for OP 7M07206 "Pharmaceutical production technology":***

3. The management of OP 7M07206 "Pharmaceutical Production Technology" should conduct an annual survey of external stakeholders in order to review the content and structure of the MOE, taking into account changes in the labor market, employers ' requirements and the social demand of society. *The deadline is annually.*

***WEC conclusions:***

*According to the standard "Development and approval of educational programs", 12 criteria are disclosed, including:*

- according to OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing": 11-satisfactory, 1 criterion-requires improvement;



- according to OP 7M07206 "Pharmaceutical production technology": 10-satisfactory, 2-require improvement.

#### 6.4 Standard "Continuous monitoring and periodic evaluation of educational programs"

- ✓ The public organization should define mechanisms for monitoring and periodically evaluating the EP to ensure that the goal is achieved and that the needs of students and society are met, and show that the mechanisms are aimed at continuous improvement of the EP.
- ✓ Monitoring and periodic evaluation of the EP should include:
  - content of programs in the light of the latest scientific achievements in a particular discipline to ensure the relevance of the discipline taught;
  - changes in the needs of society and the professional environment;
  - the load, academic performance and graduation of students;
  - the effectiveness of student assessment procedures;
  - expectations, needs and satisfaction of students with training in the EP; the
  - educational environment and support services, and their compliance with the
- ✓ The EP management should demonstrate a systematic approach to monitoring and periodically evaluating the quality of the EP.
- ✓ The PA and the management of the PA should define a mechanism for informing all stakeholders of any planned or undertaken actions in relation to the PA.
- ✓ All changes made to the OP must be published

#### **Proof part**

The university defines and consistently applies procedures for monitoring, periodically evaluating and reviewing educational programs to ensure that they achieve their goals and meet the needs of students and society. The procedure for monitoring and periodic evaluation of the University's OP is carried out on the basis of internal documents of the QMS: QMS P 4-25-1-2021 "Regulations on the development of modular educational programs", QMS P-27-2-2021 "Regulations on conducting a survey on monitoring the quality of educational, educational and research processes at Karaganda Industrial University", QMS P4-57-2022 "Regulations on the procedure for developing an educational program development plan and assessment procedure effectiveness of the implementation of the educational program".

The university ensures the participation of students, potential employers and other stakeholders in the evaluation and revision of programs. This is confirmed by the participation of teaching staff, students, and employers in Academic Committees, and the availability of external expertise submitted to the VEC experts with proposals for studying and updating the cluster's MOP.

These procedures are based on:

- approval of new standard curricula for specialties;
- introduction of new professional standards;
- proposals of potential employers formed based on the results of a survey or joint events with graduate departments;
- recommendations of representatives of the practice bases;
- results of research activities of university teaching staff in the field of special sciences and innovative research of accredited laboratories;
- changes in the regulatory requirements for the development of OP.

Improvement of educational programs includes the following procedures:

- Annual examination of methodological support at the level of meetings of departments, UMS of the university, the Academic Council of the University.
- Annual analysis and expansion of QED with the involvement of employers.

- Maintaining feedback with stakeholders aimed at improving the OP (round tables, final conferences on industrial, pedagogical and research practices, joint scientific and methodological seminars).
- Monitoring of OP implementation at the UMS level.
- Assessment of OP quality by key stakeholders.
- Annual internal audits to determine whether the processes of planning, organizing, monitoring and developing the quality of EP meet the established requirements.
- Analysis of the results of external quality assurance procedures.
- Review of the overall results of monitoring and evaluation of the OP, and develop improvement measures.

Assessment of the quality of implementation of the EP is determined by analyzing the conducted open classes and mutual visits of teaching staff.

Students' academic performance is systematically monitored in the form of discussion of the results of boundary controls 1 and 2, examination sessions in study groups. Based on the results, corrective actions and decisions are made.

The process of monitoring, evaluation and improvement is reflected in the decisions of the collegial bodies.

The quality of educational programs is assessed annually by the main stakeholders, namely:

- an annual survey of students on the quality of the educational program, learning environment, and support services;
- analysis of the organization of open classes and mutual visits of teaching staff;
- assessment of academic results of students studying in the OP is considered at meetings of departments, UMS;
- interaction of the department with representatives of the practice bases, including through the joint formation of the catalog of elective disciplines.

The management of accredited educational institutions conducts coordinated work with stakeholders, interaction is carried out through joint coordination of educational and professional practice programs, participation in training sessions, research projects, participation in seminars, organization of advanced training courses, discussion of topics of theses and master's works.

Internal evaluation of educational programs is carried out through the conclusion of an expert group. Based on the conclusion of the expert group, the educational program is reviewed and recommended for approval at meetings of departments, the educational and methodological Council of the university and approved by the Academic Council of the university. After passing all the stages of approval and approval, the educational program is introduced into the educational process.

All measures to control the quality of the educational process carried out at different levels are recorded in the form of records, certificates, certificates, reports, etc., and discussed at meetings of departments, UMS and the Academic Council of the University. Based on the analysis and evaluation of control indicators, measures are developed to improve the quality of implementation of educational programs.

Students' workload, academic performance, and graduation meet regulatory requirements and state standards. Based on continuous monitoring data, a report on the results of sessions is analyzed and generated. This issue is periodically considered at meetings of departments, UMS, and the Academic Council of the university to take the necessary measures to improve academic performance and achieve the desired results.

A student who does not agree with the results of the assessment on the exam has the right to appeal. In some cases (due to illness, family circumstances, or other objective reasons), the dean's office may allow students to take an individual exam session.

Every year, students are surveyed to assess the pedagogical activity of teaching staff, and the survey is analyzed at meetings of departments. Based on the results of the discussion, the OP management decides on corrective actions.

The educational environment and support services meet the goals of the EP, so the educational process for accredited programs is implemented in specialized classrooms and training laboratories equipped with the necessary equipment and software.

### ***Analytical part***

The process of monitoring, evaluating and improving the OP is the responsibility of the head of the department and is controlled by the UMS. Documentary evidence of changes in educational programs are: decisions of collegial bodies; action plans for improving the OP; updated methodological support based on decisions of collegial bodies; protocols of events. The main objectives of discussion of the results of monitoring and evaluation of the EP at collegial meetings are: to promote the evaluation of the educational program and its improvement; to inform about changes in external requirements for the educational program; to support the exchange of ideas with other organizations implementing the educational program; to harmonize the content with the educational programs of Kazakhstani and foreign universities; to determine the areas of professional development of teaching staff implementing the educational program recommendations for passing external quality assurance procedures; determining the forms and content of feedback with stakeholders for the development of the educational program. However, experts note the need to analyze the applied procedures for evaluating students for their effectiveness.

Information about changes in OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" is provided at meetings of departments, educational and methodological councils, and the Academic Council of the university. Also, interested parties are informed about upcoming meetings on the review of educational programs by means of communication (mobile communication /e-mail/ WhatsApp). Departments have social media accounts (Instagram, Facebook), through which they inform all interested persons about events held at the departments and at the university. However, the EEC Commission notes that there is no mechanism for informing all interested parties about any planned or taken actions in relation to the accredited OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" on the university's website. The University does not publish information about changes made to the OP.

VEC experts want to draw the attention of the university management to the results of the survey of teaching staff who have unsatisfactory answers on the following points:

- face problems: *Inappropriate classroom conditions – 40 % of teaching staff, Lack of Internet access/weak Internet – 48 %, Lack of students' interest in learning-68 %, Late receipt of information about events-32 %, Lack of technical training tools in classrooms-48 %.*

- *The teaching staff note “insufficient amount of equipment for audio and video lectures, low technical support for creating online resources, for example, video recording of lectures, the need for repair of research equipment...”.*

***Strengths/best practices for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical Production technology", 6B07207 "Mineral processing":***

- according to this Standard, OP's do not have strong points.

***VEC recommendations for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing":***

1. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing",

in addition to traditional evaluation funds, should include alternative evaluation funds in the list. *The deadline is by the beginning of the 2023-2024 academic year.*

2. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" on the website of the university should annually post detailed information related to changes in the structure and/or content of the OP, the graduate model, etc., in order to inform stakeholders about the decisions taken in terms of: accounting for their suggestions. *The deadline is within 10 days after the relevant changes are made.*

3. The university management should conduct a separate, detailed, anonymous survey of students and teaching staff, regarding their satisfaction with the technical and digital means for implementing the university's OP, based on the results obtained, hold a discussion at the KarIU Academic Council in order to identify problematic issues, develop a plan for corrective and preventive actions, with further implementation in accordance with the deadlines strategies for the development of the university and the publication of information on the work done for teaching staff and students. The deadline is until the beginning of the 2023-2024 academic year.

### **WEC conclusions:**

*According to the standard "Continuous monitoring and periodic evaluation of educational programs", 10 criteria are disclosed, including: 7 - have a satisfactory position, 3 criteria-require improvement.*

### 6.5 Standard "Student-centered learning, teaching and assessment of academic performance"

- ✓ *The EP management should ensure respect and attention to different groups of students and their needs, and provide them with flexible learning paths.*
- ✓ *The OP guidelines should provide for the use of various forms and methods of teaching and learning.*
- ✓ *An important factor is the availability of our own research in the field of teaching methods of academic disciplines of the OP.*
- ✓ *The EP management should demonstrate the existence of feedback mechanisms on the use of various teaching methods and assessment of learning outcomes.*
- ✓ *The OP management should demonstrate the existence of mechanisms to support students' autonomy, while providing guidance and assistance from the teacher.*
- ✓ *The EP management should demonstrate that there is a procedure in place to respond to student complaints.*
- ✓ *The PA should ensure consistency, transparency and objectivity of the learning outcomes assessment mechanism for each OP, including appeal.*
- ✓ *The public organization should ensure that the procedures for evaluating the learning outcomes of OP students correspond to the planned results and goals of the program, and that the evaluation criteria and methods are published in advance.*
- ✓ *The public organization should define mechanisms for ensuring that each OP graduate achieves learning outcomes and ensure that they are fully formed.*
- ✓ *Evaluators should be familiar with modern methods of evaluating learning outcomes and regularly improve their skills in this area.*

### **Proof part**

At the University, student-centered learning is implemented by following the following provisions:

1) The student uses an adviser to create their own individual curriculum for each academic period, using a standard curriculum and QED. The choice of an individual educational trajectory is made on the basis of MES, which, in addition to general education, basic disciplines of the mandatory component, include elective courses and practices that are aimed at ensuring professional competencies.

2) The student has the right to complete academic mobility training at other universities both in Kazakhstan and abroad, with subsequent transfer of the subjects studied at the



university and their inclusion in the transcript.

3) A student who is in another university within the framework of academic mobility, if there is no opportunity to study some disciplines there, has the right to study these disciplines using distance learning technologies.

4) To meet the need for additional or repeated study of disciplines at the university, a summer semester is held annually.

Organization of the educational process for persons with special educational needs is regulated in the "Academic Policy" of KarIU and QMS P 4-50-2021 "Regulations on the organization of inclusive education for persons with disabilities in the NAO "Karaganda Industrial University"

During the academic year, the schedule includes CPR hours, departments have staff consultation schedules, additional information is provided in syllabuses for disciplines, students can also contact the teacher by e-mail.

Ensuring equal opportunities for students is achieved by developing educational, methodological, organizational, methodological and informational support for the educational process in two languages of instruction: Kazakh and Russian. Within the framework of OP 6B07207 "OPI", students are grouped by language of instruction (with Kazakh, Russian language of instruction, multilingual groups).

For students to choose an individual educational path, the necessary conditions are created, which include:

- the ability to choose the language of instruction, elective subjects, teachers;
- electronic registration for elective subjects;
- formation of an individual curriculum;
- organization of an additional semester for repeated or additional study of disciplines;
- possibility of learning by remote technologies;
- familiarization with personal results of academic achievements;
- the possibility of studying within the framework of academic mobility;
- ability to use the educational portal;
- possibility of using the electronic library of the university, the Republican interuniversity electronic library;
- for conducting laboratory and practical work, students can use specialized laboratories, multimedia classrooms of the university and conditions for obtaining practical skills at the practice bases.

The university monitors the effectiveness of educational services provided by systematically conducting surveys of students using various standardized questionnaires.

The university has developed a system for handling student complaints, and the complaint handling mechanism is implemented according to the following schemes:

- *student* → *advisor* → *department* → *dean's office*;
- *student* → *rector* (rector's blog or personal appointment).

KarIU provides procedures for responding to student complaints. The procedure for submitting applications with requests and complaints on various issues is set out in QMS P 4.18-2021 "Regulations on working with student complaints". Students' complaints are accepted by the deans, considered at meetings of the Board of Supervisors, at meetings, meetings of various levels, at meetings of students with the university management.

A number of complaints, such as appeals for interim control and appeals for current (rating) control, are regulated by the Regulation on the organization of current and mid-term controls, intermediate certification and assessment of students' knowledge (2022).

The main methods of periodic evaluation of educational activities include questionnaires, interviews and surveys; internal audits; analysis of the rector's blog, "box of complaints and suggestions"; content analysis of the media, etc.

The training process uses a generally accepted criterion in the world practice on the scale of alphabetic and numeric designations, reflecting the mechanism for implementing a credit



transfer based on the ECTS credit system. In accordance with this scale, grades are given for oral and written exams.

When implementing the student-centered approach, the feedback process takes into account the wishes and needs of students and makes decisions that are taken into account when drawing up the OP. Feedback from students is carried out through the definition of an individual login and password, which creates the possibility of forming a two-way connection between the subjects of the educational process. Access to the necessary educational materials can also be obtained through the "Educational Portal" of the university's website.

Implementation of the principles of academic integrity is ensured by the Regulation on ensuring academic integrity in the "Karaganda Industrial University".

### ***Analytical part***

The university conducts systematic work to monitor the academic performance of students. The mechanism for assessing the knowledge, skills and qualities acquired by students in the course of training is reflected in the Regulations and on the organization of current and mid-term controls, intermediate certification and assessment of students' knowledge (2022).

Experts note the lack of indicators for teaching staff in the framework of training in new, modern methods for assessing students' achievements in the implementation of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing". More than 90% of KarIU exams are conducted in the form of electronic testing using the Platonus AIS.

Teaching staff of OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing" use traditional and interactive teaching methods as part of the educational process: information technologies (electronic textbooks, MOOC courses); training programs: "Platonus" program; Internet service, mixed learning, group work, method of working in the classroom, small groups, discussion method, round table method, business game method, brainstorming, seminar-dialogue. The Not demonstrated feedback mechanism for using different teaching methods and evaluating learning outcomes has not been demonstrated. Also, the interview with the teaching staff of OP 7M07206 "Pharmaceutical production technology" did not confirm the use of innovative training methods. In addition, the management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" did not demonstrate the presence of their own research in the field of teaching methods of academic disciplines.

***Strengths/best practices for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical Production technology", 6B07207 "Mineral processing":***

- according to this Standard, OP's do not have strong points.

***Recommendations of the EEC on OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing":***

1. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" should monitor the applied teaching methods of specialized disciplines in order to improve the quality of teaching. *The deadline is annually.*

2. Based on the results of monitoring the teaching methods used, the development plans of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" include measures for the development and implementation of innovative and proprietary research of teaching staff in the field of teaching methods of academic disciplines. *The deadline is by the beginning of the 2023-2024 academic year.*

2. The development plans of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" include measures to improve the skills of teaching staff in the field of applying modern methods of evaluating students' achievements, and start implementing them. *The deadline is by the beginning of the 2023-2024 academic year.*

### **WEC conclusions:**

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

- according to OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing": 7 criteria have a satisfactory position, 3 criteria require improvement;

- according to OP 7M07206 "Pharmaceutical production technology": 6 positions are satisfactory, and 4 positions require improvement.

### 6.6 "Learners" Standard

- ✓ The public organization should demonstrate the existence of a policy for forming a contingent of students in the context of the OP, ensure transparency and publication of its procedures regulating the life cycle of students (from admission to completion).
- ✓ The OP management should determine the procedure for forming a contingent of students based on:
  - minimum requirements for applicants;
  - maximum group size when conducting seminars, practical, laboratory and studio classes;
  - forecasting the number of state grants;
  - analysis of available material and technical resources, information resources, human resources;
  - analysis of potential social conditions for students, including the provision of places in dormitories.
- ✓ The OP management should demonstrate its readiness to conduct special adaptation and support programs for newly enrolled and foreign students.
- ✓ The public organization must demonstrate that its actions comply with the Lisbon Recognition Convention and that there is a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and non-formal education.
- ✓ The NGO should cooperate with other educational organizations and national centers of the "European Network of National Information Centers for Academic Recognition and Mobility/National Academic Recognition Information Centers" ENIC/NARIC to ensure comparable recognition of qualifications.
- ✓ The PA should provide opportunities for external and internal mobility of OP students, as well as readiness to assist them in obtaining external grants for training.
- ✓ The OP management should demonstrate its readiness to provide students with places of practice, promote employment of graduates, and maintain communication with them.
- ✓ The public organization should provide the opportunity to provide graduates of the OP with documents confirming their qualifications, including the achieved learning outcomes, as well as the context, content and status of the education received and evidence of its completion

### **Proof part**

KarIU has a policy of forming a contingent of students in the context of OP from admission to graduation and ensures transparency of its procedures. The procedures governing the life cycle of students (from admission to completion) are defined, approved, and published in the internal documents of QMS P 4-28-1-2019 "Regulations on career guidance", QMS StO II.8-01.01-2021 "Management of the selection process of applicants", QMS StO II.8-02.02-2021 "Management of the process of educational activities", QMS StO II.8-02.03-2021 "Management of the educational process", QMS P 4 – 53 – 2022 Regulations on the internal quality assurance system of "Karaganda Industrial University", Academic policy of KarIU.

Formation of the contingent of students is carried out by the Admissions Committee (Front Office), which operates in accordance with the Standard Rules for Admission to Study in Educational organizations that implement educational programs of higher and postgraduate

education, as well as the Rules for Admission to KarIU and the regulations on the admissions committee." This

The formation of a contingent of students is carried out by placing a state educational order for the training of specialists with higher and postgraduate education, as well as paying for training at the expense of citizens' own funds and other sources. KarIU accepts people with general secondary, technical and vocational, post-secondary, and higher education.

The contingent by accredited OP is shown in Table 2:

Table 2-Content of accredited CSтингент аккредитуемых ОП

№	OP No	Course				Total
		1	2	3	4	
1	7M07114 - ITTS	2	1			3
2	7M07206 - TFP		1			
3	6B07207 - OPI	19	29			48

There is a lack of recruitment of 2022 undergraduates of OP 7M07206 "Pharmaceutical production technology".

When applying to KarIU, the admissions committee is also guided by the internal document of the QMS StO II.8-01.01-2021 "Management of the selection process of applicants".

Admission of foreign citizens to study on a paid basis is carried out in the form of an interview conducted by the admissions committee. Educational documents issued by foreign educational organizations are subject to the procedure of nostrification in accordance with the procedure established by law after the enrollment of individuals, during the first semester of study.

Informing students about the requirements of the educational program and the specifics of its implementation is provided by conducting career guidance work conducted in accordance with QMS P 4-28-1-2019 "Regulations on career guidance work". Systematic career guidance work is carried out by departments on the basis of Career Guidance Plans approved annually by the rector.

The university's website has all the necessary information for applicants.

The management of the university and accredited educational institutions conduct adaptation and support programs for newly enrolled and foreign students. In order to organize assistance in adapting first-year students to the educational process at the university, a first-year Student Week is held at KarIU at the beginning of each academic year. Representatives of the student community conduct various introductory events for first-year students, for example, on February 16, 2022, the "Dating day" event was held with the participation of the Chairman of the Student Parliament. On the basis of a state order, a preparatory department of KarIU (Foundation program course – for further admission to the bachelor's degree) is organized for persons of Kazakh nationality who are not citizens of the Republic of Kazakhstan.

KarIU has a practice of recognizing higher education qualifications, periods of study and prior learning, including recognition of non-formal and informal learning, which is based on ensuring actions in accordance with the Lisbon Convention on the Recognition of Qualifications Related to Higher Education in the European Region.

In accordance with the KarIU Academic Policy and the Rules of Transfer and Reinstatement of Students (QMS P 4-33-2022), a student has the right to transfer subjects previously mastered in other educational institutions. The transfer of subjects is also carried out for admission to reduced programs that are mastered on the basis of higher or technical and vocational education.

KarIU, as a member of the Bologna process, cooperates with 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, that is, with the Center for the Bologna Process of the Republic of Kazakhstan.

Academic mobility in higher education institutions can be financed by:

- budgetary and extra-budgetary funds of the University;
- funds from the host country, including grants from international organizations and private foundations;
- personal funds of academic mobility participants.

Monitoring and analysis of the results of academic mobility is carried out by DAP and DNIiMS.

One of the main activities of the university management and the OP management is to provide students with internship places, promote employment of graduates and maintain communication with them. To analyze the assessment of students' satisfaction with places and the organization of internships, a survey of students is conducted annually. When defending reports on practical training, the commission for accepting reports conducts a survey of students for satisfaction with the place of practical training given by the task. Based on the results of monitoring, new internship contracts are concluded, including individual ones, and the terms of internship are discussed with the heads of enterprises (the number of internship days, jobs, etc.).

The work on the employment of KarIU graduates is coordinated by the DAP and the DNIiMS. The sector of organization of the educational process and professional development of the DAP, together with departments, monitors the labor market, employs graduates, maintains communication with enterprises and graduates, and annually organizes a "Fair".

The management of the OP provides graduates of the OP with documents confirming their qualifications, including the achieved learning outcomes, as well as the context, content and status of the education received and evidence of its completion. Each graduate receives a standard diploma with a transcript in 3 languages indicating the volume of subjects mastered in credits and a European diploma supplement.

### ***Analytical part***

The OP management has demonstrated its readiness to provide students with places of practice, promote employment of graduates, and maintain communication with them. For example, an interview with the Director of the International Research and Production Holding "Phytochemistry" Adekenov S. M. and the Director of "Karaganda Pharmaceutical Plant" LLP Tolokonnikov E. G. demonstrated their interest in graduates of the master's degree program of OP "TFP". Management has the opportunity to provide graduates with housing and individual salaries.

The university provides an opportunity for external and internal mobility of OP students. Memoranda and agreements have been signed to develop cooperation between internal and external mobility. After signing a contract with the university, a coordinator for academic mobility is appointed, who provides advice to students in determining the list of disciplines to study and applying for. Based on the received application, the university issues an order on the terms of training, languages of study and specialty. VEC experts note the need for further development of the implementation of the program "Academic mobility of students", special attention should be paid to the criterion of incoming (external and internal) mobility, passing research internships on the basis of the university for undergraduates of partner universities.

Based on the data on the formation of the OP contingent 7M07206 "Pharmaceutical production technology" (no recruitment in 2022), it should be concluded that the mechanism for forming the number of trainees is not clear enough, based on predicting the number of state grants and based on the needs of employers for graduates of the OP. The management of OP 7M07206 "Pharmaceutical Production Technology" should pay special attention to career guidance work to attract students on a contractual basis, including at the expense of enterprises, and also pay attention to international programs that can also provide funding for

undergraduates ' training.

***Strengths / best practices for OP 7M07206 "Pharmaceutical Production Technology":***

1. High interest in graduates of OP 7M07206 "Pharmaceutical Production Technology" from the International Research and Production Holding "Phytochemistry", "Karaganda Pharmaceutical Plant" LLP, the tire complex "KamaTyres KZ" LLP under construction in Saran (Karaganda region) (a joint production of PJSC Tatneft and Allur).

***VEC recommendations for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing":***

1. In accordance with the University Development Program, the guidelines of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing" достигать provide indicative indicators for the development of plans of educational programs of the item "academic mobility – incoming / outgoing, internal / external", including including when completing research internships for undergraduates. *The deadline is annually.*

***Additional recommendation for OP 7M07206 "Pharmaceutical production technology":***

2. The management of OP 7M07206 "Pharmaceutical production technology" should analyze the need of employers for graduates of OP and develop a mechanism for forming the number of trainees based on forecasting the number of state grants, include in the development plan of OP measures to form a contingent of students on a contractual basis and start implementing it. *Term – annually, in the spring and summer period.*

***VEC conclusions:***

*According to the "Learners" standard, 12 criteria are disclosed, including:*

*- according to OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing": 11 criteria have a satisfactory position, 1 criterion requires improvement;*

*- according to OP 7M07206 "Pharmaceutical production technology": 1 position – strong, 10 positions-satisfactory, 1 position-requireseimprovement.*

**6.7 Standard "Teaching staff"**

✓ *The public organization should have an objective and transparent personnel policy, including in the context of the OP, including hiring, professional growth and development of personnel, ensuring the professional competence of the entire staff.*

✓ *The public organization must demonstrate that the personnel potential of the teaching staff corresponds to the specifics of the OP.*

✓ *The EP management should demonstrate an awareness of responsibility for its employees and the provision of favorable working conditions for them*

✓ *. The EP management should demonstrate a change in the role of the teacher in connection with the transition to student-centered learning. 7.2.5 The PA should determine the contribution of the PA's teaching staff to the implementation of the PA's development strategy and other strategic documents.*

✓ *The public organization should provide opportunities for career growth and professional development of the teaching staff of the OP.*

✓ *The OP management should demonstrate its readiness to attract practitioners from the relevant sectors of the economy to teach.*

✓ *The public organization should demonstrate motivation for the professional and personal development of teachers of educational institutions, including encouragement for the integration of scientific activities and education, and the use of innovative teaching methods.*

✓ *An important factor is the willingness to develop academic mobility within the framework of the EP, to attract the best foreign and domestic teachers.*

***Proof part***

The personnel policy of KarIU is regulated by the following documents: QMS StO II. 7-01. 01-2020 "Human resource management"; QMS P 4-20-2022 "Regulations on the qualification characteristics of positions of scientific and pedagogical workers"; QMS 4-19-2020 "Rules for competitive replacement of positions of teaching staff and researchers of Karaganda Industrial University".

The University has developed job descriptions that establish the level of knowledge, skills, professional skills and work experience, responsibilities and powers, functions, job responsibilities, and rights.

One of the ways to improve the level of competence of teaching staff at KarIU is to conduct open training sessions, discuss the results of mutual visits to classes, as well as the results of the "Teacher through the eyes of students" questionnaire. The measures taken serve as a basis for extending employment contracts with teaching staff and promoting them. Teaching staff annually participates in the republican contest "Best university teacher". 2 holders of the state grant "Best university teacher" in 2008 – Isanova B. Kh., 2012 – Kabieva S. K. work at the Department of "KhTI"; at the Department of "TMiT" - The Best university teacher – 2021 Ashkeev Zh. A.; at the Department of "MiM" - The Best University teacher-2015 Nurumgaliyev A. Kh., Best University teacher-2022 T. T. Zhuniskaliyev

The university management creates favorable working conditions for teaching staff and employees, which is reflected in the appropriate equipment of workplaces at departments and offices in compliance with sanitary standards and requirements, providing the educational and working process with the necessary technical equipment of a new generation, as well as participation in solving a number of social issues of teaching staff, for example, a discount for employees and their children providing financial assistance in difficult life situations, etc.

Based on the results of scientific research, the Faculty publishes scientific articles and reports in various periodicals and proceedings of international and national conferences. Also, the results of research work are implemented in the educational process as part of the implementation of graduation papers, the development of elective courses, teaching aids and instructions. The Department of Metallurgy and Materials Science is implementing 3 grant-funded projects for 2022-2025, and 2 projects are currently under examination. According to the Department of "Technological Machines and Transport" under the project "Zhas -alym" for 2020-2024, 1 project was approved, and three projects are under examination for grant funding under the NSTP. In the Department of Chemical Technology and Ecology, one project is under examination.

KarIU has introduced a rating of teaching staff and UIP, based on the results of which incentives and bonuses are provided. For example, all teachers and staff received the award for the Independence Day of the Republic of Kazakhstan in 2022 and in 2023 on the eve of the holiday on March 8. In 2019, the head of the Department, Candidate of Chemical Sciences, Associate Professor Kabieva S. K. was awarded the badge "For achievements in the field of science of the Republic of Kazakhstan" (award of the Ministry of Education and Science of the Republic of Kazakhstan). In 2022, 3 teachers of the Department were awarded the following awards: associate Professor of the Department Merkulov V. V.-badge "For achievements in the field of science of the Republic of Kazakhstan" (award of the Ministry of Education and Science of the Republic of Kazakhstan), Associate Professor of the Department Gavva N. F.-Certificate of Honor of the Ministry of Education and Science of the Republic of Kazakhstan, Professor of the Department Amanzhol I. A. - badge of the Association of Universities of the Republic of Kazakhstan.

As part of the development of digitalization and improvement of teaching methods in higher education institutions, the requirements for the IT competence of teaching staff are increasing. Everywhere there is digitalization and computerization of the entire learning process with the use of video lectures, presentations, the creation and constant replenishment of electronic training manuals, Internet resources. Senior lecturer of the Department "MiM



"conducted an open lesson on the discipline" Applied programs and modeling in engineering "(extract from the minutes of the meeting of the Department "MiM" No. 2 dated 14.09.2022).

As part of the academic mobility of teachers and University employees, they are sent to partner universities and educational organizations for: giving lectures, conducting classes and consultations; participating in scientific work within the framework of joint research projects; participating in advanced training programs; completing internships during creative vacations; participating in scientific conferences and seminars. For example, the head of the Department of TMI, K.A. Nogaev, on the basis of a cooperation agreement with NUST MISIS (Russian Federation) in December 2021, received an invitation to complete a research internship under the Presidential Bolashak program.

As part of attracting foreign teachers, from November 30 to December 28, 2021, a series of lectures and seminars for students and undergraduates of the OP "Pharmaceutical Production Technology" was held at the university by a foreign scientist Konshin Vadim Vladimirovich, Doctor of Chemical Sciences, Professor of the Altai State Technical University named after I. I. Polzunov.

Based on the results of a survey of teaching staff, which was attended by 25 people, experts note the following level of staff satisfaction with the organization of the main processes of the university, in particular:

- To what extent does the content of the educational program meet your scientific and professional interests and needs? 72/28% of PPS were rated "very good"/"good", respectively.
- 52/48% and 56/44% of respondents described the opportunities provided by the university for professional development and career growth of teaching staff as "very good"/"good", respectively.
- How do you assess the degree of academic freedom of teaching staff, the rating "very good"/"good/relatively bad" characterized 60/36/4% of teaching staff, respectively;
- What is the level of incentives and involvement of young professionals in the educational process? The rating of "very good" / "good/relatively bad" was characterized by 24/68/8% of PPP, respectively.

Teachers' free responses indicate the availability of opportunities for creative implementation, development prospects, and are satisfied with the working conditions and management policies.

### ***Analytical part***

The quantitative and qualitative composition of the teaching staff of the accredited OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing" meet the requirements of the MIVO of the Republic of Kazakhstan. *However*, according to OP 7M07206 "Pharmaceutical production technology", *there is no provision* of specialists with basic education for teaching the following disciplines: "Modern problems of pharmaceutical technology", "Production of sterile dosage forms", "Theoretical foundations of preclinical and clinical research of new medicines".

At the university, by the decision of the Academic Council, the costs of teaching staff when applying for an invention, the university fully covers the financial costs. 3 patents were obtained for the Department of "TMI" in 2022 (2 utility model patents and 1 patent of the Republic of Kazakhstan), 1 patent was obtained for the Department of "KhTI". However, *the EEC Commission notes* a decrease in the number of submitted and received applications for inventions compared to the previous period and non-fulfillment of the planned target indicators specified in the Development Plan OP 6B07207 "Mineral processing".

In order to ensure high-quality classes, KarIU operates a system of advanced training and professional development of teaching staff and university staff. For example, teachers of the Department of "KhTI", implementing OP 7M07206 "TFP" passed advanced training courses on innovative training technologies (Merkulov V. V., Gavva N. F., Kabieva S. K. passed advanced training courses on the basis of the Laboratory of Organic Synthesis of NITSU, Tomsk, on the

topic" Technology of virtual laboratory workshop " 03.10.2022. – 21.10.2022). However, *the Commission of the Higher Economic Commission notes* a stable classical presentation of educational material for students of accredited educational institutions. *Experts of the Higher School of Economics note* that, as part of the intensive development of distance learning technologies, the teaching staff of departments should continue to develop their skills in using information and communication technologies, develop mass open online courses, and practice studying professional courses on the Coursera platform.

*The Commission of the Higher Economic Commission notes* that the *dynamics of development* in attracting the best foreign and domestic teachers and outgoing mobility of teaching staff are not observed in accredited educational institutions.

Information about teachers participating in the implementation of the EP is presented on the KarIU website in the context of three departments "TMiT", "KhTI", "MiM", however, *the EEC commission notes* that for accredited EP it is necessary to supplement information about teachers serving the entire educational program, including the disciplines of the OOD cycle.

***Strengths/best practices for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical Production technology", 6B07207 "Mineral processing":***

- according to this Standard, OP's do not have strong points.

***VEC recommendations for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing":***

1. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing" should include indicative indicators in the development plans of educational programs and in the work plans of departments and implement the following points: "development of mass open online courses", " participation of teaching staff in the program "external and internal academic mobility", "invitation of Kazakhstani and foreign scientists" and start implementing them. *The deadline is by the beginning of the 2023-2024 academic year.*

2. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing" on the website of the university is recommended to supplement information about teachers serving all modules of OP, including disciplines of the OOD cycle, etc. *The deadline is by the beginning of 2023-2024 academic year.*

***Additional recommendation of the VEC for OP 6B07207 "Mineral processing":***

3. The management of OP 6B07207 "Mineral processing" should ensure the achievement of the target indicators of the OP development plan in terms of preparing applications for obtaining protection documents (patents for inventions, intellectual property certificates). *Implementation period-annually.*

***Additional recommendation of the VEC for OP 7M072067 - "Pharmaceutical production technology":***

4. The management of OP 7M072067 - "Pharmaceutical Production technology" should provide the staff of teaching staff implementing OP with specialists with basic education in the specialties "TFP" / "Pharmacy" for teaching the following disciplines: "Modern problems of pharmaceutical technology", "Production of sterile dosage forms", " Theoretical foundations of preclinical and clinical research of new medicines". *Term – during the period of implementation of the specified disciplines.*

***VEC conclusions:***

*According to the standard "Teaching staff and teaching efficiency", 9 criteria are disclosed, including:*



- according to OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing": 8 criteria have a satisfactory position, 1 criterion requires improvement;

- according to OP 7M07206 "Pharmaceutical production technology": 7 positions are satisfactory, 2 positions require improvement.

#### 6.8 Standard "Educational resources and student Support systems"

- ✓ The PA should ensure that there are sufficient training resources and student support services to ensure that the goal of the EP is achieved.
- ✓ The public organization must demonstrate the adequacy of material and technical resources and infrastructure, taking into account the needs of various groups of students in the context of OP (adults, working students, foreign students, as well as students with disabilities).
- ✓ The EP management should demonstrate that there are procedures in place to support various groups of students, including informing and advising them.
- ✓ The OP management should demonstrate that the information resources correspond to the OP specifics, including:
  - technological support for students and teaching staff (for example, online learning, modeling, databases, data analysis programs);
  - library resources, including a fund of educational, methodological and scientific literature on general education, basic and profile disciplines on paper and electronic media, periodicals, access to scientific databases;
  - examination of research results, graduation papers works, dissertations for plagiarism;
  - access to educational Internet resources;
  - functioning of WI-FI on the territory of the educational organization.
- ✓ The public organization demonstrates planning for providing the OP with training equipment and software tools similar to those used in the relevant sectors of the economy.

#### ***Proof part***

The University ensures the availability of sufficient material, technical and social infrastructure that meets the needs of students and the requirements of the OP. The university's need for material and technical resources is determined by the design capacity of the university. The design capacity of Karaganda Industrial University is 4,500 students, currently the number of students is 3,000.

All academic buildings of the university meet the Sanitary and epidemiological requirements for educational facilities. Students in need and teaching staff of the University are provided with a dormitory in accordance with the QMS Regulation "On student dormitories of Karaganda Industrial University".

The university has 6 teaching and laboratory buildings with a total area of 44.01 thousand square meters, which house classrooms, specialized offices and laboratories, a university museum, an Information Technology and Telecommunications Center, and 20 computer classes. The sports complex of the University, with a total area of 2300 sq. m., includes 6 game halls and 2 outdoor playgrounds.

At the departments that implement the considered OP, there are laboratory research stands, both from leading manufacturers and made by teaching staff and students.

VEC experts note that OP 7M07114 "Engineering of transport and technological systems" and 6B07207 "Mineral Processing" are well equipped for implementation. Within the framework of OP 7M07114 "Engineering of transport and technological systems", the OP management updated the material and technical base at the expense of grant and contractual research. For example, the 3D Laboratory was upgraded with modern equipment and devices: a 3D printer, a 3D scanner, laser and CNC milling machines. The main task of the new laboratory is to research and study promising digital production technologies, such as 3D modeling, 3D printing, reverse engineering, technology design and manufacturing of products on CNC machines, within which OP undergraduates complete their master's theses. In addition to the upgraded laboratory, undergraduates have the opportunity to conduct their research in the

following laboratories: lifting, transport and construction machinery, metallurgical machinery and equipment, hydraulic drive and mechanical engineering technology, repair, installation and operation of machinery and equipment, computer graphics and CAD, in specialized classrooms of technological machines and in a specialized audience of transport equipment.

The MiM Department, which implements OP 6B07207 "Mineral processing", is equipped with the following material and technical facilities: Laboratories "Preparation of ores for processing", "Flotation methods of processing", "Metallurgical processes", "Preparation of ores for processing", "Testing and Control", etc.

Within the framework of OP 7M07206-TFP, the laboratory fund is used: the laboratory of organic synthesis, laboratories of physical and chemical analysis, pharmaceutical technology, polymer synthesis, pharmaceutical chemistry, and chromatography. In the period from 2020 to 2022, the following items were purchased for the Department of "KhTI": a STA voltammetric complex with a sample preparation stove; a KristalLux-4000M gas chromatograph; a spectrophotometer; a vacuum pump; flask heaters; a centrifuge; an aquadistillator; a fume hood; molds for tableting, etc. *However, the experts of the Higher Economic Commission note* that the existing material and technical base does not fully meet the conditions for achieving the results of undergraduates' training, since the purchased equipment allows conducting laboratory training sessions only in such disciplines as Organic Chemistry, General Chemical Technology, Innovative methods for the synthesis of pharmaceutical substances. For the development of such disciplines as "Technology of production of aerosols and liquid dosage forms", "Production of sterile medicines", "Theoretical foundations of preclinical and clinical trials of new medicines", this equipment cannot be used in the educational process.

Training of students and undergraduates in safety requirements is carried out in accordance with regulatory documents: Instructions on safety and electrical safety when working with electrical equipment, Instructions on fire safety measures in KariU divisions, Instructions on safety when working with computer equipment. However, HEC experts note that at the time of the visit of the OP 7M07206 – TFP laboratories, not all safety logs were up-to-date: there were logs with data from 2021, which were not filled in further.

KariU has organized various student support services, such as the Student Service Center, Registrar Office, which provide academic support to students in choosing and mastering the educational program, monitor the student performance rating, etc.

Questions on the provision of educational, scientific and methodological literature, as well as on the improvement of the university's laboratory base are considered at a meeting of the Academic Council. The university practices the publication of electronic textbooks, which are placed in the digital library and are freely available. The University has a library and reading room, in the fund of which there are more than 290 thousand copies of educational, methodical, scientific literature in Kazakh, Russian and foreign languages, more than 30 titles of newspapers and magazines are issued annually. The University library is located in the main academic building of the university. In the periodicals hall, which is located inside the subscription, there are 12 computerized seats, with the ability to access the Internet and access the library's electronic resources. The reading room is designed for 42 readers. For the convenience of readers, Wi-Fi access is available on the subscription and in the reading room. Students from KariU IP-addresses have access to international databases of peer-reviewed scientific literature, such as Scopus, Web of Science, which expands the range of use of electronic research resources.

KariU constantly strives to ensure that the training equipment and software used for mastering educational programs are similar to those used in the relevant industries. For example, when mastering accredited training programs, students learn the techniques of working in the CAD system "COMPASS-3D" of ASCON, which is used by more than 11,000 industrial enterprises and design organizations in the CIS countries.

VEK experts note that students of the university are trained on the basis of such leading companies as ArcelorMittal Temirtau JSC, TEMK JSC, Kurylysmet LLP, Karaganda Pharmaceutical Plant LLP (Karaganda), MNPH "Phytochemistry" (Karaganda), Eurasian Machinery (Karaganda), Borusan Makina Kazakhstan (Karaganda), Central processing plant Vostochnaya (Abay) where they can put into practice the knowledge and skills regarding equipment and software tools obtained during their studies.

The survey of students showed positive data on the following points of the questionnaire: The level of accessibility and responsiveness of the management – fully satisfied-was answered by 90% of respondents, partially satisfied - 10% of respondents; The existing educational resources of the university – fully satisfied - 90% of respondents, partially satisfied – 10% of respondents; The quality of the educational program as a whole – fully satisfied – 90% of respondents, partially satisfied - 10%; Objectivity and fairness of teachers-fully satisfied – 90%, partially satisfied-10%; Informing students about courses, educational programs and academic degrees - fully satisfied – 92.5%, partially satisfied – 7.5%.

### ***Analytical part***

*Члену БЭК* According to the results of meetings with the management, students, graduates and employers, it was *established* that the university has organized work in the field of career guidance and student support, created an educational environment for students to achieve the required professional level, provided representation of students in the collegial management bodies of the university, developed methods of feedback and informing students, organized cultural and social life students.

The OP management, together with the university management, regularly creates conditions for ensuring the sufficiency of material resources and infrastructure for conducting scientific research, providing databases of practices, integrating science into the educational process, and publishing the results of research work of students.

For students of all OP levels in CE, the types of training sessions, including calculation, term papers, and theses, and projects are supported by modern software packages - Mathcad, Matlab, KOMPAC, DEFORM, and others.

One of the main advantages of the university is the availability of a modern educational and scientific laboratory base, which includes the only pilot industrial sites in the Republic of Kazakhstan with semi-industrial units and installations that reproduce the closed cycle of metallurgical processes and metal processing by pressure. On the basis of the university there is a Laboratory of engineering profile "Electron microscopy and nanotechnologies".

Analysis of the library collection for OP 7M07206 "Pharmaceutical Production Technology" showed that its volume in terms of the number of titles of educational, methodological and scientific literature for the above-mentioned OP (a total of 119 titles, the bulk relates to organic and physical chemistry, organic synthesis, etc.) is 6 times less compared to the library collection for OP 7M07114 "Engineering of transport and technical systems" and almost 50 times less than the library fund for OP 6B07207 "Mineral processing", which indicates insufficient work on the analysis of sufficiency and periodic updating of UML. The training manuals and textbooks prepared by the staff of the Department of "KhTI" are mainly devoted to organic chemistry, physical chemistry, organic synthesis, physico-chemical methods of analysis and processes characteristic of metallurgy. It is necessary to acquire basic and additional literature for students to master such disciplines as "Qualification of equipment, clean rooms and engineering systems", "Technology for the production of aerosols and liquid dosage forms", "Production of sterile medicines", "Theoretical foundations of preclinical and clinical trials of new medicines", etc.

The procedure for supporting students with disabilities is regulated by the regulation of the QMS P 4-50-2021 "Regulations on the organization of inclusive education for persons with disabilities in the "Karaganda Industrial University". At the same time, VEC experts note that the university management needs to analyze the opportunities for potential groups of people



with disabilities to participate in educational and other processes, and for the identified categories of people, continue to work on organizing barrier-free access to all resources and processes.

***Strengths / best practices for OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing":***

1. Compliance of the stated mission and goals of OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing" with the available material, technical and information resources of the university, the learning environment contributes to the formation of professional competence of students, taking into account their individual needs.

***VEC recommendations for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing":***

1. The university management, taking into account the University Development Strategy, should develop a roadmap for further improvement of the university infrastructure, taking into account the special needs of students, teaching staff and other interested parties (barrier-free environment, tactile markings and signs, development of specialized literature, passing special courses for teaching staff) and start implementing it. *The deadline is by the beginning of the 2023-2024 academic year.*

***Additional recommendation of the EEC for OP 7M07206 "Pharmaceutical production technology":***

2. The management of OP 7M07206 "Pharmaceutical production Technology" together with the management of the university should analyze the available material and technical resources, including library resources (including the "publication plan of the Teaching Staff Department") for compliance with the goals and mission of the educational program, the results of training of master's degree graduates and obtaining all the necessary professional competencies, based on the results of the analysis consider the possibility of planning additional funding for the modernization of MTB. *The deadline is 2024.*

***WEC conclusions:***

*According to the standard "Educational resources and student support systems", 9 criteria are disclosed, including:*

- *according to OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing": 1 criterion is strong, 8 criteria have a satisfactory position;*
- *according to OP 7M07206 "Pharmaceutical production technology": 7 positions are satisfactory, 2 positions require improvement.*

**6.9 Public Awareness Standard**

✓ *The public organization must publish reliable, objective, and up-to-date information about the educational program and its specifics, which should include:*

- *expected learning outcomes of the implemented educational program;*
- *qualifications and / or qualifications that will be awarded upon completion of the educational program;*
- *teaching and learning approaches, as well as the system (procedures, methods and forms) of assessment;*
- *information on passing scores and educational opportunities provided to students;*
- *information on employment opportunities for graduates.*

✓ *The management of the OP should provide for a variety of ways to disseminate information, including the media, information networks to inform the general public and interested parties.*

✓ *Public awareness should include supporting and explaining the national development programs of the country and the system of higher and postgraduate education.*

- ✓ The public organization should demonstrate that the web resource reflects information that characterizes it in general and in the context of educational programs.
- ✓ An important factor is the availability of adequate and objective information about the staff of the OP.
- ✓ An important factor is to inform the public about cooperation and interaction with partners within the framework of the EP.

### ***Proof part***

The university carries out targeted work to inform the public about the activities of the educational organization, the conditions and features of the implementation of the OP. The procedure for publishing information about the university's activities is regulated by an internal document of the QMS.-4-27-2022 "Regulation on informing the public".

OP Guidelines 7M07114 "ITTS", 7M07206 "TFP", 6B07207 "OPI" uses a variety of information dissemination methods, including mass media, information networks to inform the general public and interested persons.

Information tools are: the Republican magazine "Bulletin of Karaganda State Industrial University", the KarIU website, social networks ([https://www.instagram.com/kariu\\_kz1/](https://www.instagram.com/kariu_kz1/), <https://vk.com/id378236673>, <https://www.facebook.com/profile.php?id=100022651051239&mibextid=ZbWKwL>, [https://www.youtube.com/channel/UCxgobaOnSnEzI78E4sb4xOA?view\\_as=subscriber](https://www.youtube.com/channel/UCxgobaOnSnEzI78E4sb4xOA?view_as=subscriber), <https://ok.ru/profile/579438130734>), printed materials (brochures, booklets); reports; posters, stands; letters; thematic articles in the media; press releases in the media; advertising in the media; surveys; Open Doors days; excursions; seminars, conferences; exhibitions, fairs, interviews in the media, on radio or television; presentations; personal contacts with interested parties.

Information services such as "News and Announcements" and "Rector's Blog" are available on the University's website (<https://tttu.edu.kz/ru/blog-rektora/>), "Mission and Strategy of the University", "Faculties and other structural divisions of the university". The site contains links to important information resources of the university, full-text electronic information systems, and other resources that are useful for the educational and scientific process. Information on the site is available in three languages: the state language-Kazakh, Russian and English.

The principles of construction and structure of information materials posted on the official information website of the University are determined by the internal document of the QMS P 4-27-1-2021 "Regulations on the official website of Karaganda Industrial University", which also regulates the technology of its creation and operation. The site contains links to important information resources of the university, full-text electronic information systems, and other resources that are useful for the educational and scientific process.

KarIU informs the public about cooperation and interaction with partners within the framework of the EP, including scientific / consulting organizations, business partners, social partners and educational organizations. The sections "International Academic Partners" are provided on the KarIU website to provide relevant information (<https://tttu.edu.kz/ru/mezhdunarodnie-akademicheskie-partneri/>), "International scientific partners" (<https://tttu.edu.kz/ru/mezhdunarodnie-nauchnie-partneri-2/>), "Our partners" (<https://tttu.edu.kz/ru/ob-universitete/nashi-partneri/>). Also, information about new facts of cooperation and interaction is published in the site's news feed and social networks.

*A survey of students conducted during the visit to the VEC IAAR showed:*

- *Informational support and explanation of admission rules and educational program strategy before entering the university – 85% of respondents are fully satisfied, 15% of respondents are partially satisfied.*
- *Content and information content of the website of educational organizations in general and faculties (schools) in particular of the program-fully satisfied-80%, partially satisfied-20% of respondents.*

***Analytical part***

The university's website contains links to important information resources of the university, full-text electronic information systems, and other resources that are useful for the educational and scientific process. The KarIU website contains reliable, objective, and up-to-date information about the educational programs under consideration, which reflects the expected learning outcomes of the implemented educational programs; qualifications and (or) qualifications that will be assigned upon completion of the educational program; teaching and learning approaches, as well as the system (procedures, methods, and forms) of assessment; information about passing scores and training programs. opportunities provided to students; information on employment opportunities for graduates.

The University's website contains information about the history of the university, its Mission, and the Strategic Plan of "Karaganda Industrial University" for 2021-2025, approved by the decision of the Board of Directors of 19.05.2021 (Protocol No. 3), in accordance with which the NGO operates. The website and educational portal of the university is system of information support for students and teaching staff.

***Strengths/best practices for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical Production technology", 6B07207 "Mineral processing":***

- according to this Standard, OP's do not have strong points.

***VEC recommendations for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing":***

- there are no recommendations for this standard.

***VEC conclusions:***

*According to the "Informing the Public" standard, 10 criteria are disclosed, of which all 10 criteria are satisfactory.*

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

### **Standard «Educational Program Management Standard»**

1. Demonstration by the management of the educational programs 7M07114 "Engineering of transport and technological systems" and 6B07207 "Mineral processing" of good indicative achievements in the field of commercialization of innovative research of teaching staff and implementation of research results in the educational process.

### **Information Management and Reporting Standard**

- according to this Standard, OP's do not have strong points.

### **Standard "Development and approval of educational programs"**

- according to this Standard, OP's do not have strong points.

### **Standard "Continuous monitoring and periodic evaluation of educational programs"**

- according to this Standard, OP's do not have strong points.

### **Standard "Student-centered learning, teaching and assessment of academic performance"**

- according to this Standard, OP's do not have strong points.

### **Standard "Students"**

1. High interest in graduates of OP 7M07206 "Pharmaceutical Production Technology" from the International Research and Production Holding "Phytochemistry", "Karaganda Pharmaceutical Plant" LLP, the tire complex "KamaTyres KZ" LLP under construction in Saran (Karaganda region) (a joint production of PJSC Tatneft and Allur).

### **Standard "Teaching staff"**

- according to this Standard, OP's do not have strong points.

### **Standard "Educational resources and student Support systems"**

1. Compliance of the stated mission and goals of OP 7M07114 "Engineering of transport and technological systems", 6B07207 "Mineral processing" with the available material, technical and information resources of the university, the learning environment contributes to the formation of professional competence of students, taking into account their individual needs.

### **Public Awareness Standard**

- according to this Standard, OP's do not have strong points.



## **(VIII) OVERVIEW QUALITY IMPROVEMENT RECOMMENDATIONS FOR EACH STANDARD**

***VEC recommendations for OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing":***

### **According to the Educational Program Management standard:**

1. To the management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing" to ensure their individuality and uniqueness, to determine the advantages in comparison with other OP implemented in the region and the Republic of Kazakhstan, and, based on the analysis, adjust the development plans of OP, defining them individuality and uniqueness. *The deadline is until the beginning of the 2023-2024 academic year.*

***Additional recommendations of the EEC for OP 7M07206 "Pharmaceutical production technology":***

2. The management of OP 7M07206 "Pharmaceutical Production technology" should include in the Development Plan quantitative and time indicators of achievement, responsible for their implementation and forms of the implementation report, to ensure systematic monitoring of the culture of improving the quality of educational services provided. The deadline is until the beginning of the 2023-2024 academic year.

3. The management of OP 7M07206 "Pharmaceutical production technology" should ensure regular revision of the Development Plan to monitor its implementation and assess the achievement of training goals, with access to the results of monitoring analysis to all interested parties (students, employers), including decisions taken aimed at continuous improvement of the OP. *The deadline is annually.*

### **According to the "Information Management and Reporting" standard:**

- there are no recommendations for this standard.

### **According to the Standard "Development and approval of the educational program":**

1. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206" Pharmaceutical production technology ", 6B07207" Mineral processing " in the development plans of each OP should include measures to introduce elements of the dual training system and start implementing them. *The deadline is by the beginning of the 2023-2024 academic year.*

2. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206" Pharmaceutical production technology ", 6B07207" Mineral processing " should carry out targeted work on organizing training of students for professional certification, including recognition of the results of non-formal training. *The deadline is by the beginning of the 2023-2024 academic year.*

***Additional recommendation of the VEC for OP 7M07206 "Pharmaceutical production technology":***

3. The management of OP 7M07206 "Pharmaceutical Production Technology" should conduct an annual survey of external stakeholders in order to review the content and structure of the MOE, taking into account changes in the labor market, employers ' requirements and the social demand of society. *The deadline is annually.*

### **According to the Standard "Continuous monitoring and periodic evaluation of educational programs":**

1. The management of OP 7M07114 "Engineering of transport and technological



systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing", in addition to traditional evaluation funds, should include alternative evaluation funds in the list. *The deadline is by the beginning of the 2023-2024 academic year.*

2. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" on the website of the university should annually post detailed information related to changes in the structure and/or content of the OP, the graduate model, etc., in order to inform stakeholders about the decisions taken in terms of: accounting for their suggestions. *The deadline is within 10 days after the relevant changes are made.*

3. The university management should conduct a separate, detailed, anonymous survey of students and teaching staff, regarding their satisfaction with the technical and digital means for implementing the university's OP, based on the results obtained, hold a discussion at the KarIU Academic Council in order to identify problematic issues, develop a plan for corrective and preventive actions, with further implementation in accordance with the deadlines strategies for the development of the university and the publication of information on the work done for teaching staff and students. The deadline is until the beginning of the 2023-2024 academic year.

**According to the Standard "Student-centered learning, teaching and assessment of academic performance":**

1. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" should monitor the applied teaching methods of specialized disciplines in order to improve the quality of teaching. *The deadline is annually.*

2. Based on the results of monitoring the teaching methods used, the development plans of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" include measures for the development and implementation of innovative and proprietary research of teaching staff in the field of teaching methods of academic disciplines. *The deadline is by the beginning of the 2023-2024 academic year.*

2. The development plans of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" include measures to improve the skills of teaching staff in the field of applying modern methods of evaluating students' achievements, and start implementing them. *The deadline is by the beginning of the 2023-2024 academic year.*

**According To the "Students" Standard:**

1. In accordance with the University Development Program, the guidelines of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" provide in dilative indicators for the developmenteñ plans of educational programs of the item "academic mobility – incoming / outgoing, internal / external", including including when completing research internships for undergraduates. *The deadline is annually.*

**Additional recommendation for OP 7M07206 "Pharmaceutical production technology":**

2. The management of OP 7M07206 "Pharmaceutical production technology" should analyze the need of employers for graduates of OP and develop a mechanism for forming the number of trainees based on forecasting the number of state grants, include in the development plan of OP measures to form a contingent of students on a contractual basis and start implementing it. *Term – annually, in the spring and summer period.*

**According to the Standard "Teaching staff":**

1. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology", 6B07207 "Mineral processing" should include indicative indicators in the development plans of educational programs and in the work plans of departments and implement the following points: "development of mass open online courses", " participation of teaching staff in the program "external and internal academic mobility", "invitation of Kazakhstani and foreign scientists" and start implementing them. *The deadline is by the beginning of the 2023-2024 academic year..*

2. The management of OP 7M07114 "Engineering of transport and technological systems", 7M07206 "Pharmaceutical production technology ", 6B07207 "Mineral processing" on the website of the university is recommended to supplement information about teachers serving all modules of OP, including disciplines of the OOD cycle, etc. *The deadline is by the beginning of 2023-2024 academic year.*

***Additional recommendation of the EEC for OP 6B07207 "Mineral processing":***

3. The management of OP 6B07207 "Mineral processing" should ensure the achievement of the target indicators of the OP development plan in terms of preparing applications for obtaining protection documents (patents for inventions, intellectual property certificates). *Implementation period-annually.*

***Additional recommendation of the EEC for OP 7M072067 - "Pharmaceutical production technology":***

4. The management of OP 7M072067 "Pharmaceutical Production technology" should provide the staff of teaching staff implementing OP with specialists with basic education in the specialties "TFP" / "Pharmacy" for teaching the following disciplines: "Modern problems of pharmaceutical technology", "Production of sterile dosage forms", " Theoretical foundations of preclinical and clinical research of new medicines". *Term – during the period of implementation of the specified disciplines.*

***According to the Standard "Educational resources and student support systems":***

1. The university management, taking into account the University Development Strategy, should develop a roadmap for further improvement of the university infrastructure, taking into account the special needs of students, teaching staff and other interested parties (barrier-free environment, tactile markings and signs, development of specialized literature, passing special courses for teaching staff) and start implementing it. *The deadline is by the beginning of the 2023-2024 academic year.*

***Additional recommendation of the VEC for OP 7M07206 "Pharmaceutical production technology":***

2. The management of OP 7M07206 "Pharmaceutical production Technology" together with the management of the university should analyze the available material and technical resources, including library resources (including the "publication plan of the Teaching Staff Department") for compliance with the goals and mission of the educational program, the results of training of master's degree graduates and obtaining all the necessary professional competencies, based on the results of the analysis consider the possibility of planning additional funding for the modernization of MTB. *The deadline is 2024.*

***According to the "Informing the Public" Standard:***

- there are no recommendations for this standard.

## **(IX) OVERVIEW RECOMMENDATIONS FOR THE DEVELOPMENT OF AN EDUCATIONAL ORGANIZATION**

- Harmonization of the content of the university's OP with foreign educational organizations, targeted work on the development of joint (network) educational programs with partner universities (including the implementation of a dual degree program).
- Expanding the geography of higher education institutions to develop international relations with foreign educational organizations, involving all interested parties, including employers, in the process.
- Expanding the geography of partner companies to develop relationships in the organization of professional practices, internships, and places of employment.
- Development of a PR-management strategy and/or marketing strategy of the university in order to strengthen competitiveness in the market of educational services.



**(X) RECOMMENDATIONS TO THE ACCREDITATION COUNCIL**

The external expert Commission decided to recommend the Accreditation Council of educational programs of NAO "Karaganda Industrial University" *to accredit:*

- *OP 6B07207 "Mineral processing" - for a period of 5 (five) years;*
- *OP 7M07114 "Engineering of transport and technological systems" – for a period of 5 (five) years;*
- *OP 7M07206 "Pharmaceutical production technology" - for a period of 3 (three) years.*





**Appendix 1. EVALUATION TABLE "PARAMETERS OF A SPECIALIZED PROFILE" (EX-ANTE)**

**Conclusion of the Higher Attestation Commission on the evaluation of the educational program  
7M07206-Pharmaceutical production technology**

N n\п	N п\п	Evaluation Criteria	Position the organization of education			
			is strong	satisfactory	Involves improving	unsatisfactory
Standard "Management of the educational program"						
1	1.	the Organization of higher and (or) postgraduate education have to have a published policy for the assurance of quality which reflects the relationship between research, teaching and learning		+		
2	2.	Organization of higher and (or) postgraduate education must demonstrate the development of a culture of quality assurance including in the context of OP			+	
3	3.	Commitment to quality assurance should relate to any activity carried out by contractors and partners (outsourcing), including the implementation of joint/double-diploma education, academic mobility		+		
4	4.	OP Guide shows transparency in the elaboration of the development plan OP that contain the timing of implementation, based on the analysis of its functioning, the real OO positioning and orientation of its activities to meet the needs of the state, employers, students and other interested persons		+		
5	5.	OP Guide demonstrates the existence of mechanisms of formation and regular revision of the development plan OP and monitoring its implementation, and assessment of achievement of learning objectives, meet the needs of students, employers and society, decision-making, aimed at continuous improvement of OP			+	
6	6.	Manual OP should involve representatives of stakeholder groups, including employers, students and teachers to the formation of a development plan OP		+		
7	7.	Guide OP must demonstrate the individuality and uniqueness of the development plan OP consistency with national priorities and development strategy of the organization of higher and (or) postgraduate education (English education)			+	
8	8.	Organization of higher and / or postgraduate education must demonstrate a clear definition of those responsible for business processes within the EP, an unambiguous distribution of job responsibilities of staff, differentiation of functions of collegial bodies		+		
9	9.	The EP management must provide evidence of the transparency of the educational program management		+		

		system				
10	10.	The EP management must demonstrate the existence of an internal quality assurance system for the EP, including its design, management and monitoring, their improvement, adoption fact-based decision		+		
11	11.	The management of the OP should manage risks, including within the framework of the OP undergoing primary accreditation, and demonstrate a system of measures aimed at reducing the degree of risk.		+		
12	12.	The EP management should ensure the participation of representatives of employers, teaching staff, students and other interested persons in the composition of the collegial management bodies of the educational program, as well as their representativeness in making decisions on the management of the educational program (revision of the regulations on the composition of members of the educational system), inclusion of teaching staff( share), students in the regulations.)		+		
13	13.	OO must demonstrate innovation management in OP, including analysis and implementation of innovative proposals		+		
14	14.	Manual OP must demonstrate proof of the readiness to openness and accessibility for students, faculty, employers, and other stakeholders		+		
15	15.	Manual OP should be trained in management education,		+		
<b>Total according to the standard</b>			<b>0</b>	<b>12</b>	<b>3</b>	
<b>Standard is "Information management and reporting"</b>						
16	1.	OO must demonstrate the existence of a system of collection, analysis and management of information through the use of modern information and communication technologies and software that uses a variety of methods to collect and analyze information in the context of the OP		+		
17	2.	Manual OP must demonstrate the existence of a mechanism system, the use of treated, adequate information to improve the internal quality assurance system		+		
18	3.	Manual OP must demonstrate decision-making based on facts		+		
19	4.	In OP should be a system of regular reporting on all levels of structure, including the assessment of the effectiveness and efficiency of activity of divisions and departments, scientific research		+		
20	5.	OO should set the frequency, forms and methods of assessment, management, activities of collective bodies and structural units, senior management, research projects		+		
21	6.	OO must demonstrate the determination of the order and the protection of information, including the definition of responsible persons for the accuracy and timeliness of information analysis and provide data		+		
22	7.	Important factor is the availability of mechanisms for the involvement of students, employees and teachers in the process of collecting and analyzing information as well as making decisions based on them		+		

23	8.	Manual OP must demonstrate the existence of a mechanism of communication with students, employees and other stakeholders, as well as mechanisms of conflict resolution		+		
24	9.	OO must demonstrate the existence of mechanisms for measuring the degree of satisfaction of needs of faculty, staff and students within the framework of OP		+		
25	10.	The public organization should provide for an assessment of the effectiveness and efficiency of its activities, including in the context of the OP		+		
		<i>Information intended for collection and analysis within the framework of the OP should take into account:</i>				
26	11.	key performance indicators		+		
27	12.	dynamics of the number of students in the context of forms and types		+		
28	13.	level of academic performance, student achievements and deductions		+		
29	14.	satisfaction of students with the implementation of the OP and the quality of education at the university		+		
30	15.	availability of educational resources and support systems for students		+		
31	16.	The public organization must confirm the implementation of procedures for processing personal data of students, employees and teaching staff on the basis of their documented consent		+		
<b>Total according to the standard</b>			<b>0</b>	<b>16</b>	<b>0</b>	
<b>Standard "Development and approval of the educational program"</b>						
32	1.	The PA should define and document procedures for the development of the EP and their approval at the institutional level		+		
33	2.	The EP management should ensure that the content of the EP meets the established goals, including expected learning outcomes		+		
34	3.	The EP Management should demonstrate that mechanisms are in place to review the content and structure of the EP, taking into account changes in the labor market, employer requirements, and social needs			+	
35	4.	The EP Management should It should ensure that there are developed models of the OP graduate describing learning outcomes and personal qualities		+		
36	5.	The OP management should demonstrate external expertise of the OP content and planned results of its implementation		+		
37	6.	The qualifications awarded upon completion of the OP should be clearly defined and correspond to a certain level of NSC and QF-EHEA		+		
38	7.	The OP management should determine the impact of disciplines the impact of professional practices on the formation of learning outcomes		+		
39	8.	An important factor is the possibility of preparing students for professional certification			+	
40	9.	The EP management should provide evidence of the participation of students, teaching staff and other interested parties in the development of the EP, ensuring its quality		+		

41	10.	The EP management should ensure that the content of academic disciplines and planned results correspond to the level of training (bachelor's, master's, doctoral program)		+		
42	11.	The structure of the EP should provide for various types of activities that ensure that students achieve the planned learning outcomes		+		
43	12.	An important factor is the correspondence of the content of the EP and the learning outcomes of the EP implemented by organizations of higher and / or postgraduate education in the EHEA		+		
<b>Total according to the standard</b>			<b>0</b>	<b>10</b>	<b>2</b>	
<b>Standard "Continuous monitoring and periodic evaluation of educational programs"</b>						
44	1.	The public organization should determine the mechanisms for monitoring and periodic evaluation of educational programs to ensure the achievement of the goal and meet the needs of students and society, and show the focus of the mechanisms on continuous improvement of educational		+		
		<i>Monitoring and periodic evaluation of the EP should include: request a questionnaire</i>				
45	2.	content of the program in the light of the latest scientific achievements in a particular discipline to ensure the relevance of the discipline taught		+		
46	3.	changes in the needs of society and the professional environment		+		
47	4.	student workload, academic performance, and graduation		+		
48	5.	effectiveness of student assessment procedures			+	
49	6.	students' expectations, needs, and satisfaction with learning under the EP		+		
50	7.	the educational environment and support services, and their compliance with the goals of the EP		+		
51	8.	The EP management should demonstrate a systematic approach to monitoring and periodically evaluating the quality of the EP		+		
52	9.	the PA, the EP management should determine mechanism for informing all stakeholders of any planned or undertaken actions in relation to the OP			+	
53	10.	All changes made to the OP should be published			+	
<b>Total according to the standard</b>			<b>0</b>	<b>7</b>	<b>3</b>	
<b>Standard "Student-centered learning, teaching and assessment of academic performance"</b>						
54	1.	The EP management should ensure respect and attention to different groups of students and their needs, provide them with flexible learning paths		+		
55	2.	The EP management should provide for the use of various forms and methods of teaching and learning			+	
56	3.	An important factor is the availability of their own research in the field of areas of teaching methodology of academic disciplines of the EP			+	
57	4.	The EP management should demonstrate the existence of feedback mechanisms for using various teaching methods and evaluating learning outcomes			+	



58	5.	The EP management should demonstrate the existence of mechanisms for supporting student autonomy while providing guidance and assistance from the teacher		+		
59	6.	The EP management should demonstrate the existence of a procedure for responding to student complaints		+		
60	7.	the PA should ensure consistency, transparency and objectivity of the learning outcomes assessment mechanism for each OP, including appeal		+		
61	8.	The PA should ensure that the procedures for evaluating the learning outcomes of OP students correspond to the planned results and program goals, publish evaluation criteria and methods in advance		+		
62	9.	The PA should define mechanisms for ensuring that each OP graduate achieves learning outcomes and ensure that they are fully formed		+		
63	10.	Evaluators should be proficient in modern methods of evaluating learning outcomes and regularly improve their skills in this area			+	
<b>Total according to the standard</b>			<b>0</b>	<b>6</b>	<b>4</b>	
<b>Standard "Students"</b>						
64	1.	The public organization should demonstrate the existence of a policy for forming a contingent of students in the context of OP, ensure transparency and publication of its procedures regulating the life cycle of students (from admission to completion).		+		
		<i>The OP management should determine the procedure for forming a contingent of students based on:</i>				
65	2.	minimum requirements for applicants		+		
66	3.	maximum group size when conducting seminars, practical, laboratory and studio classes		+		
67	4.	forecasting the number of state grants		+		
68	5.	analysis of available material and technical resources, information resources, and human resources		+		
69	6.	analysis of potential social conditions for students, including: including the provision of places in the hostel		+		
70	7.	The OP management must demonstrate readiness to conduct special adaptation and support programs for newly enrolled and foreign students		+		
71	8.	The NGO must demonstrate that its actions comply with the Lisbon Recognition Convention, that it has a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and non-formal education		+		
72	9.	The NGO should cooperate with other educational organizations and national centers of the " European Network of National Information Centers for Academic Recognition and Mobility/National Academic Recognition Information Centers " ENIC / NARIC in order to ensure comparable recognition of qualifications		+		

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

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

	<b>TOTAL</b>	<b>1</b>	<b>85</b>	<b>17</b>	
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**Conclusion of the Higher Attestation Commission on the evaluation of the educational program**

**7M07114 - Engineering of transport and technological systems,  
6B07207-Mineral processing**

N n\п	N n\п	Evaluation Criteria	Position the organization of education			
			is Strong	satisfactory	Involves improving	unsatisfactory
Standard "Management of the educational program"						
1	1.	the Organization of higher and (or) postgraduate education have to have a published policy for the assurance of quality which reflects the relationship between research, teaching and learning		+		
2	2.	Organization of higher and (or) postgraduate education must demonstrate the development of a culture of quality assurance including in the context of OP		+		
3	3.	Commitment to quality assurance should relate to any activity carried out by contractors and partners (outsourcing), including the implementation of joint/double-diploma education, academic mobility		+		
4	4.	OP Guide shows transparency in the elaboration of the development plan OP that contain the timing of implementation, based on the analysis of its functioning, the real OO positioning and orientation of its activities to meet the needs of the state, employers, students and other interested persons		+		
5	5.	OP Guide demonstrates the existence of mechanisms of formation and regular revision of the development plan OP and monitoring its implementation, and assessment of achievement of learning objectives, meet the needs of students, employers and society, decision-making, aimed at continuous improvement of OP		+		
6	6.	Manual OP should involve representatives of stakeholder groups, including employers, students and teachers to the formation of a development plan OP		+		
7	7.	Guide OP must demonstrate the individuality and uniqueness of the development plan OP consistency with national priorities and development strategy of the organization of higher and (or) postgraduate education (English education)			+	
8	8.	Organization of higher and / or postgraduate education must demonstrate a clear definition of those responsible for business processes within the EP, an unambiguous distribution of job responsibilities of staff, differentiation of functions of collegial bodies		+		
9	9.	The EP management must provide evidence of the transparency of the educational program management		+		



		system				
10	10.	The EP management must demonstrate the existence of an internal quality assurance system for the EP, including its design, management and monitoring, their improvement, adoption fact-based decision		+		
11	11.	The management of the OP should manage risks, including within the framework of the OP undergoing primary accreditation, and demonstrate a system of measures aimed at reducing the degree of risk.		+		
12	12.	The EP management should ensure the participation of representatives of employers, teaching staff, students and other interested persons in the composition of the collegial management bodies of the educational program, as well as their representativeness in making decisions on the management of the educational program (revision of the regulations on the composition of members of the educational system), inclusion of teaching staff( share), students in the regulations.)		+		
13	13.	OO must demonstrate innovation management in OP, including analysis and implementation of innovative proposals	+			
14	14.	Manual OP must demonstrate proof of the readiness to openness and accessibility for students, faculty, employers, and other stakeholders		+		
15	15.	Manual OP should be trained in management education,		+		
<b>Total according to the standard</b>			<b>1</b>	<b>13</b>	<b>1</b>	
<b>Standard is "Information Management and reporting"</b>						
16	1.	OO must demonstrate the existence of a system of collection, analysis and management of information through the use of modern information and communication technologies and software that uses a variety of methods to collect and analyze information in the context of the OP		+		
17	2.	Manual OP must demonstrate the existence of a mechanism system, the use of treated, adequate information to improve the internal quality assurance system		+		
18	3.	Manual OP must demonstrate decision-making based on facts		+		
19	4.	In OP should be a system of regular reporting on all levels of structure, including the assessment of the effectiveness and efficiency of activity of divisions and departments, scientific research		+		
20	5.	OO should set the frequency, forms and methods of assessment, management, activities of collective bodies and structural units, senior management, research projects		+		
21	6.	OO must demonstrate the determination of the order and the protection of information, including the definition of responsible persons for the accuracy and timeliness of information analysis and provide data		+		
22	7.	Important factor is the availability of mechanisms for the involvement of students, employees and teachers in the process of collecting and analyzing information as well as making decisions based on them		+		

23	8.	Manual OP must demonstrate the existence of a mechanism of communication with students, employees and other stakeholders, as well as mechanisms of conflict resolution		+		
24	9.	OO must demonstrate the existence of mechanisms for measuring the degree of satisfaction of needs of faculty, staff and students within the framework of OP		+		
25	10.	The public organization should provide for an assessment of the effectiveness and efficiency of its activities, including in the context of the OP		+		
		<i>Information intended for collection and analysis within the framework of the OP should take into account:</i>				
26	11.	key performance indicators		+		
27	12.	dynamics of the number of students in the context of forms and types		+		
28	13.	level of academic performance, student achievements and deductions		+		
29	14.	satisfaction of students with the implementation of the OP and the quality of education at the university		+		
30	15.	availability of educational resources and support systems for students		+		
31	16.	The public organization must confirm the implementation of procedures for processing personal data of students, employees and teaching staff on the basis of their documented consent		+		
<b>Total according to the standard</b>			<b>0</b>	<b>16</b>	<b>0</b>	
<b>Standard "Development and approval of the educational program"</b>						
32	1.	The PA should define and document procedures for the development of the EP and their approval at the institutional level		+		
33	2.	The EP management should ensure that the content of the EP meets the established goals, including expected learning outcomes		+		
34	3.	The EP Management should demonstrate that mechanisms are in place to review the content and structure of the EP, taking into account changes in the labor market, employer requirements, and social needs		+		
35	4.	The EP Management should It should ensure that there are developed models of the OP graduate describing learning outcomes and personal qualities		+		
36	5.	The OP management should demonstrate external expertise of the OP content and planned results of its implementation		+		
37	6.	The qualifications awarded upon completion of the OP should be clearly defined and correspond to a certain level of NSC and QF-EHEA		+		
38	7.	The OP management should determine the impact of disciplines the impact of professional practices on the formation of learning outcomes		+		
39	8.	An important factor is the possibility of preparing students for professional certification			+	
40	9.	The EP management should provide evidence of the participation of students, teaching staff and other interested parties in the development of the EP, ensuring its quality		+		

41	10.	The EP management should ensure that the content of academic disciplines and planned results correspond to the level of training (bachelor's, master's, doctoral program)		+		
42	11.	The structure of the EP should provide for various types of activities that ensure that students achieve the planned learning outcomes		+		
43	12.	An important factor is the correspondence of the content of the EP and the learning outcomes of the EP implemented by organizations of higher and / or postgraduate education in the EHEA		+		
<b>Total according to the standard</b>			<b>0</b>	<b>11</b>	<b>1</b>	
<b>Standard "Continuous monitoring and periodic evaluation of educational programs"</b>						
44	1.	The public organization should determine the mechanisms for monitoring and periodic evaluation of educational programs to ensure the achievement of the goal and meet the needs of students and society, and show the focus of the mechanisms on continuous improvement of educational		+		
		<i>Monitoring and periodic evaluation of the EP should include:</i>				
45	2.	the content of the program in the light of the latest scientific achievements in a particular discipline to ensure the relevance of the discipline taught		+		
46	3.	changes in the needs of society and the professional environment		+		
47	4.	the load, academic performance and graduation of students		+		
48	5.	effectiveness of student assessment procedures			+	
49	6.	students ' expectations, needs, and satisfaction with training under the EP		+		
50	7.	the educational environment and support services, and their compliance with the goals of the EP		+		
51	8.	The EP management should demonstrate a systematic approach to monitoring and periodically evaluating the quality of the EP		+		
52	9.	the PA, the EP management should determine a mechanism for informing all interested parties about any changes planned or taken actions in relation to the OP			+	
53	10.	All changes made to the OP must be published			+	
<b>Total according to the standard</b>			<b>0</b>	<b>7</b>	<b>3</b>	
<b>Standard "Student-centered learning, teaching and assessment of academic performance"</b>						
54	1.	The EP management should ensure respect and attention to different groups of students and their needs, provide them with flexible learning paths		+		
55	2.	The EP management should provide for the use of various forms and methods of teaching and learning		+		
56	3.	An important factor is the availability of their own research in the field of areas of teaching methodology of academic disciplines of the EP			+	
57	4.	The EP management should demonstrate the existence of feedback mechanisms for using various teaching methods and evaluating learning outcomes			+	

58	5.	The EP management should demonstrate the existence of mechanisms for supporting student autonomy while providing guidance and assistance from the teacher		+		
59	6.	The EP management should demonstrate the existence of a procedure for responding to student complaints		+		
60	7.	the PA should ensure consistency, transparency and objectivity of the learning outcomes assessment mechanism for each OP, including appeal		+		
61	8.	The PA should ensure that the procedures for evaluating the learning outcomes of OP students correspond to the planned results and program goals, publish evaluation criteria and methods in advance		+		
62	9.	The PA should define mechanisms for ensuring that each OP graduate achieves learning outcomes and ensure that they are fully formed		+		
63	10.	Evaluators should be proficient in modern methods of evaluating learning outcomes and regularly improve their skills in this area			+	
<b>Total according to the standard</b>			<b>0</b>	<b>7</b>	<b>3</b>	
<b>Standard "Students"</b>						
64	1.	The public organization should demonstrate the existence of a policy for forming a contingent of students in the context of OP, ensure transparency and publication of its procedures regulating the life cycle of students (from admission to completion).		+		
		<i>The OP management should determine the procedure for forming a contingent of students based on:</i>				
65	2.	minimum requirements for applicants		+		
66	3.	maximum group size when conducting seminars, practical, laboratory and studio classes		+		
67	4.	forecasting the number of state grants		+		
68	5.	analysis of available material and technical resources, information resources, and human resources		+		
69	6.	analysis of potential social conditions for students, including: including the provision of places in the hostel		+		
70	7.	The OP management must demonstrate readiness to conduct special adaptation and support programs for newly enrolled and foreign students		+		
71	8.	The NGO must demonstrate that its actions comply with the Lisbon Recognition Convention, that it has a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and non-formal education		+		
72	9.	The NGO should cooperate with other educational organizations and national centers of the " European Network of National Information Centers for Academic Recognition and Mobility/National Academic Recognition Information Centers " ENIC / NARIC in order to ensure comparable recognition of qualifications		+		



73	10.	The Public Organization should provide opportunities for external and internal mobility of students of the OP, as well as readiness to assist them in obtaining external grants for training			+	
74	11.	The management of the OP should demonstrate readiness to provide students with places of practice, promote employment of graduates, maintain		+		
75	12.	The public organization should provide for the possibility of providing graduates of the OP with documents confirming their qualifications, including the achieved learning outcomes, as well as the context, content and status of the education received and evidence of its completion		+		
<b>Total according to the standard</b>			<b>0</b>	<b>11</b>	<b>1</b>	
<b>Standard "Teaching staff"</b>						
76	1.	PA should have an objective and transparent personnel policy, including in the context of the PA, including hiring, professional growth and development of personnel, ensuring professional competence of the entire staff		+		
77	2.	The PA should demonstrate that the personnel potential of the teaching staff corresponds to the specifics		of the PA+		
78	3.	The management of the PA should demonstrate awareness of responsibility for their employees and ensuring favorable working conditions for them		+		
79	4.	The PA management should demonstrate a change in the role of teachers in connection with the transition to student-centered training		+		
80	5.	The PA should determine the contribution of the PA teaching staff to the implementation of the PA development strategy and other strategic documents		+		
81	6.	the PA should provide career growth and professional development opportunities for the PA teaching staff		+		
82	7.	CE management should demonstrate readiness to attract practitioners from relevant sectors of the economy to teach		+		
83	8.	CE should demonstrate motivation for the professional and personal development of CE teachers, including encouragement for the integration of scientific activities and education, the use of innovative teaching methods		+		
84	9.	An important factor is readiness to develop academic mobility within the framework of the EP, attract the best foreign students. and domestic teachers			+	
<b>Total according to the standard</b>			<b>0</b>	<b>8</b>	<b>1</b>	
<b>Standard "Educational resources and student Support systems"</b>						
85	1.	The public organization should guarantee a sufficient number of educational resources and student support services to ensure the achievement of the OP	+			
86	2 goal.	The PA must demonstrate sufficient material and technical resources and infrastructure, taking into account the needs of different groups of students in the context of OP (adults, working people, foreign students,		+		

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

		framework of the OP				
		<b>Standard Total</b>	<b>0</b>	<b>10</b>	<b>0</b>	
		<b>TOTAL</b>	<b>2</b>	<b>91</b>	<b>10</b>	



## Appendix 2. PROGRAM OF A VISIT TO AN EDUCATIONAL ORGANIZATION



KARAGANDA  
INDUSTRIAL  
UNIVERSITY

**APPROVED**

Chairman of the Management Board-Rector  
of Non-profit joint stock Company  
"Karaganda  
Industrial University"

\_\_\_\_\_ Abdrasilov A. B.  
" " \_\_\_\_\_ 2023



АККРЕДИТЕУ ЖӘНЕ РЕЙТИНГТІН  
ТӘУЕЛСІЗ АГЕНТТІГІ  
НЕЗАВИСИМОЕ АГЕНТСТВО  
АККРЕДИТАЦИИ И РЕЙТИНГА  
INDEPENDENT AGENCY FOR  
ACCREDITATION AND RATING

**APPROVED**

by Director of the Independent  
Accreditation and Rating Agency"

\_\_\_\_\_ Zhumagulova A. B.  
" " \_\_\_\_\_ 2023

program  
**VISIT OF AN EXTERNAL EXPERT COMMISSION  
INDEPENDENT ACCREDITATION AND RATING AGENCY (IAAR)  
TO KARAGANDA INDUSTRIAL UNIVERSITY**

**Date of the visit: 03-05-MAY 2023**

### **Cluster 1. Program Accreditation**

- 1) 6B04101 Business Management
- 2) 6B04104 Financial Organization Economics
- 3) 6B04103 Business Economics
- 4) 6B04106 Accounting and Audit in Entrepreneurship

### **Cluster 2. Primary Program Accreditation**

- 5) 6B07207 Mineral Processing
- 6) 7M07206 Pharmaceutical Production Technology
- 7) 7M07114 Engineering of transport and technological systems

Date and time	Work of the VEC with the target groups of	Position, Surname, Name, patronymic of the members of the target groups	Form of communication
may 02, 2023			



<b>15.00-16.00</b> <i>Astana time</i>	the Preliminary meeting of the VEC	<i>External experts of the IAAR</i>	
<b>02 may 2023</b>			
<i>According to the schedule throughout the day</i>	Arrival of members of the External expert Commission		
20.00	Dinner	<i>External experts of the IAAR</i>	in the Hotel
<b>the 1st Day: 03 may 2023</b>			
<b>08.30 am-09.00 am</b> <i>Astana time</i>	transfer from the hotel to the University	<i>External experts of the IAAR, the coordinator from the University</i>	Hotel University
<b>09.00-09.15</b> <i>Astana time</i>	Allocation of responsibilities experts, the organizational issues	<i>External experts of the IAAR</i>	KarIU, N - 221
<b>09.15 -09.45</b>	And interviews with the rector of the	Chairman of the Board - Rector, <i>Bolatbek Abdrasilov</i> , d.b.s., academician	KarIU, N-201
<b>09.45-10.00</b>	Technical break		
<b>10.00-10.40</b>	Meeting with Vice-rectors	<ul style="list-style-type: none"> <li>• Vice-Rector for academic police – <i>Sivakova Galina</i>, c.t.s., associate professor</li> <li>• Vice-rector for scientific work and international relations – <i>Makhmutov Bolat</i>, c.phys.s.</li> </ul>	KarIU, N-201
<b>10.40-10.50</b>	Technical break		
<b>10.50-11.30</b>	Meeting with heads of structural divisions of OO	<ul style="list-style-type: none"> <li>• Director of the Department of educational work and youth policy - <i>Salpenova Madina</i>, master</li> <li>• Chief management staff <i>Onlanbekova Rahima</i></li> <li>• Director of the Department of academic policy - <i>Kharchenko Elena</i>, PhD</li> <li>• Director of the Department of digital transformation - <i>Karipov Tlegen</i></li> <li>• Director of the Department of development and operation of infrastructure – <i>Begalin Marat</i></li> </ul>	KarIU, N-201

		<ul style="list-style-type: none"> <li>• Director of the Department of science, innovation and international cooperation – Zhuniskaliyev <i>Talgat</i>, PhD</li> <li>• Engineer of the Department of science, innovation and international cooperation sector of postgraduate education - <i>Mukhamadiyeva Damegul</i></li> <li>• MainSt accountant – <i>Zhamantaeva Nazira</i></li> <li>• Head of the library - <i>Noskova Svetlana</i></li> <li>• Head of sector of the educational process and professional development – <i>Baimagambetova Altynai</i></li> <li>• Head of the Office of the Registrar - <i>Chalaya Oksana</i>, candidate of physico-mathematical sciences</li> <li>• Head of the service center students – <i>Busheva Nadezhda</i></li> <li>• Head of the sector of accreditation, ratings and QMS - <i>Pak Olga</i></li> </ul>	
<b>11.30-11.45</b>	Technical break		
<b>11.45-12.30</b>	Interviews with deans and Dean	<ul style="list-style-type: none"> <li>• Dean of the Faculty of "Economics and Construction" - Niyazov Talgat, Doctor of Economics, Professor</li> <li>• Dean of the Faculty of "Metallurgy and Mechanical Engineering" - <i>Zhabalova Gulnara</i>, Candidate of Technical Sciences, Associate Professor</li> <li>• Acting Dean of the Faculty of "Energy, Transport and Control Systems" - <i>Shayakhmetova Gulmira</i></li> <li>• Head of department "Technological machines and Transport", OP 7M07114 Engineering of transport and technological systems - <i>Nogaev Kairosh</i>, c.t.s.</li> <li>• Head of the department "Chemical Technology and Ecology", OP 7M07206 Pharmaceutical Production Technology - <i>Kabieva Saule</i>, c.ch.s., Associate Professor</li> <li>• Head of the department of "Economics and Business", OP 6B04101 Business Management, OP 6B04104 Financial Organization Economics, OP 6B04103 Business Economics, OP 6B04106 Accounting and Audit in Entrepreneurship - <i>Silaeva Olga</i>, c.s in Economics, Associate Professor</li> <li>• Head. Department of Metallurgy and Materials Science, OP 6B07207 Mineral Processing-<i>Almas Yerzhanov</i>, PhD</li> </ul>	, KarIU, N.-201
<b>12.30-13.00</b>	Work of the VEC	<i>External experts</i>	IAAR KarIU, N - 221
<b>13.00-14.00</b>	<b>Lunch</b>		

14.00-14.15	Technical break		
14.15-15.00	Interview with the teaching staff of the PLO	Teachers of the evaluated OP <u><b>KarIU Appendix No. 1</b></u>	1, N-201
15.00-15.15	Technical break		
15.00-16.00	Survey of teaching staff (in parallel)	<u><b>Appendix No. 2</b></u> <i>All teachers of the evaluated OP VA, MA</i>	The link is sent to the teacher's e-mail personally
15.15-16.00	Interviews with students of the PLO	Students of the evaluated OP <u><b>Appendix No. 3</b></u>	KarIU, N-201
16.00-16.10	Technical break		
16.00-17.00	Student survey (parallel)	<u><b>Appendix No. 4</b></u> <i>All students of the evaluated OP VA, MA</i>	Link is sent to the student's e-mail personally
16.10-16.50	Interview with graduates of the PLO	<u><b>Appendix No. 5</b></u> <i>Cluster 1</i>	KarIU, N-201
16.50-17.00	Technical break		
17.00-18.00	Visual inspection of the public organization	According to the routes of excursions <b>1. New building room 325b School of Entrepreneurship, new building room .324 Computer Class</b> - OP 6B04101 Entrepreneurship Management, OP 6B04104 Financial Organization Economics, OP 6B04103 Business economics, OP 6B04106 Accounting and audit in entrepreneurship <b>2. New building room 002 Specialized audience of transport equipment, new building room 003 Laboratory "Lifting and transport, technological machines and equipment", new building room 113 Laboratory " 3D Engineering", new building aud. 110 specialized classroom "Computer graphics and CAD" - OP 7M07114 Engineering of transport and technological systems</b> <b>3. Building room 321 Laboratory of Physical and Chemical methods of Analysis, building A room 314 Laboratory of Pharmaceutical Chemistry, building A room 310 Laboratory of Pharmaceutical Technology, building A room. 104 Laboratory of Physical and Colloidal Chemistry,</b>	KarIU

		<i>building A room 305 Laboratory of Processes and Apparatuses, building B room 201 Laboratory of Organic Synthesis, building B room. 204 Chromatography Laboratory - OP 7M07206 Pharmaceutical Production Technology</i> <i>4. Building B Metallurgy Training and Research Center - OP 6B07207 Processing of minerals</i>	
<b>18.00-19.00</b>	Work of the HEC discussion of the first day results IAAR	<i>External experts</i>	KarIU, N. - 221
<b>19.00-20.00</b>	Dinner	<i>IAAR External Experts</i>	Goodies
<b>Day 2: May 04, 2023</b>			
<b>08.30-09.00</b> <i>Astana time</i>	Transfer from the hotel to the University	<i>IAAR External experts, coordinator from the University</i>	Hotel-University
<b>09.00-09.15.15</b>	Work of the HEC IAAR	<i>External experts</i>	KarIU, N - 221
<b>09.15-12.30.30</b>	Visit to the PLO practice bases  Meeting with representatives of the PLO practice bases and employers	<i>According to the itinerary</i>  <u><b>Appendix No. 6</b></u>  <i>Cluster 1</i> <i>Cluster 2</i>	
<b>12.30-13.00</b>	Work of the HEC, discussion	<i>External experts of</i>	IAAR KarIU, N - 221
<b>13.00-14.00</b>	<b>Lunch</b>		
<b>14.00-14.10</b>	Technical break		
<b>14.10-16.00</b>	Attending scheduled classes (Appendix: links to classes)	<i>According</i>	to the KarIU schedule
<b>14.10-16.00</b>	Work with department documents ( <i>documents must be uploaded to the cloud by cluster in advance</i> ) <i>Parallel</i>		KarIU, N-221
<b>to KarIU, N -</b>	Technical break		



<b>221 16.00-16.10</b>			
<b>16.10-16.50</b>	Work of the HEC, discussion IAAR	<i>External experts KarIU, N - 221</i>	KarIU, N-221
<b>16.50-17.00</b>	Technical break		
<b>17.00-18.00</b>	Work of the HEC, discussion of the results of the second day and profile parameters ( <i>recorded</i> )	<i>External experts of</i>	IAAR KarIU, N - 221
<b>18.30-19.30</b>	Dinner	<i>IAAR External experts</i>	Goodies
<b><i>Day 3: 05 May 2023</i></b>			
<b>08.30-09.00</b> <i>Astana time</i>	Transfer from the hotel to the University	<i>IAAR External experts, coordinator from the University</i>	Hotel-University
<b>09.00-10.00</b>	Work of the VEC development and discussion of recommendations ( <i>recorded</i> )	<i>External expertsof</i>	IAAR KarIU, N - 221
<b>10.00-10.20</b>	Technical break		
<b>10.20-12.30</b>	Work of the VEC discussion, decision-making by voting ( <i>recorded</i> )	<i>IAAR External experts IAAR External Experts</i>	KarIU, N-221
<b>12: 30-13: 00</b>	Final meeting of the HEC with the management of the University		KarIU, N-201
<b>13.00-14.00</b>	Lunch		
<b>14.00-15.00</b>	Work of the VEC, Discussion of the results of the quality assessment	<i>External experts IAAR</i>	KarIU, N-201
<b>15.00-15.15</b>	Technical break		
<b>15.15-18.00</b>	Work of the VEC, Discussion of the evaluation results Quality	<i>Assurance External experts IAAR</i>	KarIU, H-201

### Appendix 3. RESULTS OF THE TEACHER SURVEY

#### Teaching staff questionnaire

##### Total number of questionnaires: 25

What educational program do you participate in?

##### 2. Position

Professor	12
Associate Professor / Associate Professor	24
Senior Lecturer	48
Lecturer	8
Head of Department Department	8
Other	0

##### 3. Academic degree, academic title

Honored Worker	0 (0%)
Doctor of Science	2 (8%)
Candidate of Science	7 (28%)
Master	's degree 13 (52%)
PhD	3 (12%)
Professor	1 (4%)
Associate Professor / Associate Professor	4 (16)
No	0 (0%)
Other (Doctor of Transport)	0 (0%)

##### 4. Work experience at this university

Less than 1 year	0
1 year – 5 years	20
Over 5 years	80
Other	0

№	Questions	Very good	Good	Relatively bad	Bad	Very bad	Not answered
1	To what extent does the content of the educational program meet your scientific and professional interests and needs?	72	28				
2	How do you assess the opportunities provided by the University for the professional development of teaching staff	52	48				
3	How do you assess the opportunities provided by the University for the career growth of teaching staff	56	44				
4	How do you assess the degree of academic freedom of teaching staff	60	36	4			
	<b>How much teachers can use their own</b>						
5	• Learning strategies	52	48				

6	• Teaching methods	56	44				
7	• Educational programs innovations	60	40				
8	How do you assess the work on the organization of medical care and disease prevention at the university?	36	60	4			
9	What attention is paid by the management of the educational institution to the content of the educational program?	68	32				
10	How do you assess the adequacy and availability of the necessary scientific and educational literature in the library?	24	72	4			
11	Evaluate the level of created conditions that take into account the needs of different groups of students?	32	68				
	<b>Evaluate the openness and accessibility of management</b>						
12	• To students	64	36				
13	• to teachers	60	40				
14	Evaluate the involvement of teaching staff in the management and strategic decision-making process	40	60				
15	How is the innovative activity of teaching staff encouraged?	40	56	4			
16	Evaluate the level of feedback between the teaching staff and the management	44	52	4			
17	What is the level of incentive and involvement of young professionals in the educational process?	24	68	8			
18	Evaluate the created opportunities for professional and personal growth for each teacher and employee	40	56	4			
19	Evaluate the adequacy of the university management's recognition of the potential and abilities of teachers	36	60	4			
	<b>How the work</b>						
20	• On academic mobility	28	68	4			
21	• On staff development	32	60	8			
	<b>Evaluate the support of the university and its management</b>						
22	• Scientific and technical support research initiatives of teaching	staff 52	44	4			
23	• Development of new educational programs/academic disciplines/teaching methods	44	56				
	<b>Assess the level of teaching staff's ability to combine teaching</b>						
24	• with scientific research	32	62	8			
25	• with practical activities	24	72	4			
26	Assess how students' knowledge obtained at the university corresponds to the realities of the modern labor market requirements	52	44	4			
27	How does the management and administration of the university perceive criticism in their address?	24	64	12			
28	Evaluate to what extent your training load meets your expectations and capabilities?	32	64	4			
29	Evaluate the focus of educational programs/training programs on developing students' skills and abilities to analyze the situation and make forecasts?	48	52				
30	Evaluate whether the educational program meets the expectations of the labor market and employers in terms of content and quality of implementation	40	60				

**Why do you work at this particular university?**

- I was invited and based on the results of the competition I was appointed to the position
- I like the fact that the university gives me the freedom to choose the methods of work in educational and scientific activities
- I live in this city
- A patriot of your university and a good platform for implementing scientific ideas
- Ғылыми потенциалы жоғары
- I like it
- Permanent residence, there is social support for teaching staff from the management of KarIU
- Оқу үрдісінің жүйелі жұмыс жасауы мен коллектив
- I have been working at this university since March 1, 1978, first as a researcher, then as a teacher at the Department of Economics since 1993. This is my native university, I studied there from 1972-1977, majoring in Economics and Construction Management
- The work of a teacher is prestigious and this university gives you the opportunity to realize yourself as a teacher
- Working conditions, management policies, salary levels, and career opportunities meet my needs
- They are satisfied with the conditions and payment of labor.
- Маған ұнайды, менің тұрғылықты жерім
- I graduated from it myself and having practical experience consciously came to teach students
- Satisfied with the working conditions, like teaching activities
- Менің тұрақты жерім және жұмыс уақыты ыңғайлы
- Friendly atmosphere in the team, close location to the place of residence, decent pay.
- Бұл оқу орнын таңдау себебі, біріншіден докторантураға түсу, әріқарай кәсіптік білімді жетілдіру мен қоса университет базасындағы зертханаларда ірі зертханалық сынақтық тәжірибелер жүргізу және Қазақстандағы ең ірі қара металлургия бойынша ең ірі комбинатпен жұмыс тығыз байланыста жұмыс істеу. Ғылыми жұмыстар бойынша жобаларға қатысып, өз ісінің толық қанды маманы болуды игеру
- Located close to the place of residence, it is the only university in Temirtau. I am also pleased with the practice-oriented orientation of teaching at the department, that colleagues are practitioners of their own field.
- A patriot of his University, graduated from this university
- I like. I am a patriot of this university.
- Native university
- corresponds to the specialty

**32. How often are master classes and classes with the participation of practitioners held as part of your course?**

very often	often	sometimes	very rarely	never
16	56	24	4	0

**33. How often do external со стороны teachers (domestic and foreign) participate in the learning process?**

very often	often	sometimes	very rarely	never
12	52	36		

**34. How often do you encounter the following problems in your work: (please give an answer in each line)**

Questions	Often	Sometimes	Never	answered
Lack of classrooms	4	8	88	
Unbalanced academic load by semester	4	40	56	
Unavailability of necessary literature in the	4	36	60	



library				
Overcrowded study groups (too many students in the group)	4	24	72	
Inconvenient schedule	4	44	52	
Inappropriate classroom conditions	4	36	60	
Lack of Internet access/ weak internet	4	44	52	
Lack of students ' interest in learning	0	68	32	
Late receipt of information about events	0	32	68	
Lack of technical training facilities in classrooms	0	48	52	-
Other problems	<ul style="list-style-type: none"> <li>• There are no problems in organizing the educational process.</li> <li>• all is well</li> <li>• there are no problems</li> <li>• there</li> <li>• are few others grants are issued for the OP "Accounting and Audit in Entrepreneurship"</li> <li>• Insufficient equipment for audio and video lectures</li> <li>• low technical support for creating online resources, for example, video recording of lectures</li> <li>• Emerging problems are solved quickly</li> <li>• small number of grants for the OP</li> <li>• Economy mamandyktaryna grant az bolinedi</li> <li>• small number of grants</li> <li>• Small number of grants for data OP</li> <li>• Economy mamandygy boyynsha grant orny az bolinedi</li> <li>• tazhiribelik synaktar otkizuge keibir kerekti kural-zhabdyktardyn zhetispeushiligi</li> <li>• In my opinion there</li> <li>• are no Incoming applicants few and low knowledge applicants</li> <li>• have no Problems. Everything suits you.</li> <li>• -</li> <li>• the need for repair of research equipment</li> </ul>			

**35. In the life of a university, there are many different aspects and aspects that affect each teacher and employee in one way or another. Rate how satisfied you are with:**

Questions	Fully satisfied (1)	Partially satisfied (2)	Not satisfied (3)	I can't answer (4)
Attitude of the university management towards you	76	20		4
Relations with direct management	92	8		
Relations with colleagues in the department	96	4		
Degree of participation in managerial decision making	76	20	4	
Relations with students	96	4		
Recognition of your success and achievements by the administration	80	20		
Support for your suggestions and comments	76	24		
Activities of the university administration	84	16		
Conditions	60	36	4	

Working conditions, list and quality of services provided at the university	72	28		
health and safety	80	20		
Management of changes in the university's activities	72	24		4
Provision of a social package: recreation, sanatorium treatment, etc	. 52	36	8	4
Organization and quality of nutrition at the university	48	44		8
Organization and quality of medical care	68	32		



## Appendix 4. RESULTS OF THE STUDENT SURVEY

### *Application form for students*

**Total number of questionnaires: 40**

Gender:

Male	47.5
Female	52.5

**Rate how satisfied you are with:**

Questions	Fully satisfied	Partially satisfied	Partially	dissatisfied Not satisfied	I can't answer
1. Relations with the dean's office (school, faculty, department)	92,5	7,5			
2. availability of the Dean's office (school, faculty, Department)	95	5			
3. Levels of availability and responsiveness of management (University, school, faculty, Department)	90	10			
4. Accessibility to academic advising	87,5	12,5			
5. Support training materials in the process of learning	85	15			
6. Availability of counseling on personal problems	85	15			
7. Relationship between the student and the teacher	85	15			
8. Activities financial and administrative services of the educational institution	is 90	10			
9. Accessibility of health services	85	12,5			2,5
10. Quality of medical care at the University	of 77.5	15			7,5
11. availability of library resources	90	5			5
12. Quality of services in libraries and reading rooms	90	7,5			2,5
13. Existing educational resources of the University	90	10			
14. Availability of computer classes	92,5	7,5			
15. Availability and quality of Internet resources	82,5	15	2,5		
16. Content and information content of the web site of educational institutions in General and of the faculties (schools) in particular	80	20			
17. classrooms, with classrooms for large groups	90	10			
18. Lounges for students (if any)	72,5	12,5	2,5		12,5
19. Clear procedures for disciplinary action	90	10			
20. Quality educational programs in General	90	10			
21. Quality training programs in OP	87,5	12,5			
22. Methods of learning in General	92,5	7,5			

23. quick response to feedback from teachers in the educational process	90	10			
24. Quality of teaching in General	92,5	7,5			
25. Academic load/requirements for student	87,5	12,5			
26. Requirements of TS to the student	97.5	12,5			
27. Information support and clarification before admission to University admission rules and strategies of educational programs (specialty)	85	15			
28. Informing the requirements for successfully completing this educational program (specialty)	82.5	17.5			
29. The quality of exam materials (tests and exam questions, etc.)	90	10			
30. Objective assessment of knowledge, skills, and other academic achievements	87.5	12.5			
31. Available computer classes	92.5	7.5			
32. Available scientific laboratories	80	15			5
33. Objectivity and fairness of teachers	90	10			
34. Informing students about courses, educational programs and academic degrees	92.5	7.5			
35. Providing students with dormitories	82.5	2.5			15

Rate how much you agree with:

Statement	Full consent	I Agree	Partially agree	disagree	Complete disagreement	did Not answer
36. the course was clearly represented	75	25				
37. course Content is well structured	82,5	17,5				
38. Key terms explained enough	82,5	17,5				
39. Proposed teacher material is relevant and reflects the latest achievements of science and practice	77,5	22,5				
40. Teacher uses effective teaching methods	82,5	17,5				
41. Teacher owns the taught material	87,5	12,5				
42. Statement teacher clear	90	10				
43. , the Instructor presents the material in an interesting manner	85	12,5	2,5			
44. Objectivity of knowledge evaluation skills and other educational achievements	of 82.5	15	2,5			
45. Timeliness of evaluation of educational achievements of students	70	30				
46. Teacher satisfies Your requirements and expectations of professional and personal development	90	7,5	2,5			
47. Teacher stimulates the activity of students	75	25				
48. Teacher stimulates creative thinking of students	85	12,5	2,5			
49. appearance and manners of the teacher adequate	85	15				
50. Teacher showing a positive attitude towards students	85	12,5	2,5			
51. System of evaluation of educational achievements (seminars, tests, questionnaires, etc.) reflects the content of the course	77,5	22,5				
52. Evaluation criteria used by the teacher, clear and accessible	82,5	17,5				
53. Teacher objectively assesses the achievements of	80	20				



students						
54. Teacher owns professional language	70	30				
55. educational Organization provides sufficient opportunity for sports and other leisure	80	20				
56. facility and equipment for students are safe, comfortable and modern	77,5	20	2,5			
57. Library is well equipped and has sufficient Fund scientific, educational and methodical literature	67,5	30	2,5			
58. Equal opportunities for the development of OP and personal development provided to all students	77,5	20	2,5			

**Other concerns about the quality of teaching:**

- -
- No
- No problems
- There are no problems
- not problema
- No problem with that
- I didn't observe it
- Our teacher Nurbek Bolatovich is a very good and very smart and kind teacher
- There are no other problems. Everything is as it should be. I am glad that I entered this university!

