«АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТІҢ ТӘУЕЛСІЗ АГЕНТТІГІ» КЕМ

НУ «НЕЗАВИСИМОЕ АГЕНТСТВО АККРЕДИТАЦИИ И РЕЙТИНГА»

INDEPENDENT AGENCY FOR ACCREDITATION AND RATING

REPORT

on the results of work of the external expert commission on assessment for compliance with the requirements of specialized accreditation standards degree programs
8D07104 – Instrumentation
7M07107 - Space Engineering and Technologies
8D07105 - Space Engineering and Technologies

JSCo "Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev"
Between March 11-13, 2024.

INDEPENDENT ACCREDITATION AND RATING AGENCY
External expert committee

Addressed to
Accreditation
to the IAAR board

АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТІҢ ТӘУЕЛСІЗ АГЕНТТІГІ
НЕЗАВИСИМОЕ АГЕНТСТВО АККРЕДИТАЦИИ И РЕЙТИНГА
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Almaty c.

CONTENTS

(I) LIST OF NOTATIONS AND ABBREVIATIONS

AIS	-	Automated information system
AILS	-	Automated integrated library system
BD	-	Basic disciplines
EEC	-	External expert committee
SOSE RK	-	State obligatory standard of education of the Republic of Kazakhstan
SAC	-	State Attestation Commission
SEC	-	State Examination Commission
DAA	-	of the Department of Academic Affairs
DP	-	Documented procedures
DET	-	Distance education Technologies
ICSE	-	Institute of Communication and Space Engineering
IIP	-	Individualized learning plans
CE	-	Computer Engineering
CED	-	Catalog of elective disciplines
MSHE RK	-	Ministry of Science and Higher Education of the Republic of Kazakhstan
JSCo AUPET	-	Non-Profit Joint-Stock Company «Almaty University of Power Engineering and Telecommunication named after Gumarbek Daukeyev»
MDP	-	Modular degree program
R&W	-	Research work
NQF	-	National Qualifications Framework
DP	-	Degree program
OR	-	Office Registrar
PD	-	Profile disciplines
S	-	Software
AS	-	The academic staff
WC	-	Working curriculum
MEDIA	-	Media
QMS	-	Quality management system
EMCD	-	Educational and methodical complex of the discipline
TM	-	Training manual
EMW	-	Educational and methodological work
ED	-	Educational work
EMC	-	Educational and Methodical Council
AC	-	Academic Council
CED	-	Catalog of Elective Disciplines
EE	-	Electronic engineering

(II) INTRODUCTION

In accordance with the order №32-24-OD dated 31.01.2024 of the Director General of the Independent Accreditation and Rating Agency from March 11-13, 2024 the external expert commission conducted an assessment of compliance of degree programs 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies" in JSCo "Almaty University of Power Engineering and Telecommunication named after G. Daukeyev" . (Almaty c.) standards of specialized accreditation of educational program of higher and postgraduate education organization IAAR (№57-20-OD from June 16, 2020, edition sixth).

The report of the External Expert Commission (EEC) contains the evaluation of the submitted educational program to the criteria of the IAAR standards, recommendations of the EEC on further improvement of the DP and parameters of the DP profile.

Composition of the EEC:

EEC Chairman - Popovs Anatolijs PhD, Professor, Institute of Solid State Physics, University of Latvia (Riga, Latvia), on-line participation;

IAAR Foreign Expert - Fartunova Maria Atanasova, Associate Professor, Doctor, St. Joan Rilski University of Mining and Geology, Sofia, Bulgaria, on-line participation. St. Joan of Rila (Sofia, Bulgaria), on-line participation;

IAAR Foreign Expert - Andrey Valerievich Tamyarov, Candidate of Technical Sciences, Associate Professor, FGBOU VO "Ulyanovsk State Technical University" (Ulyanovsk, Russian Federation), Expert of 1 category; on-line participation;

IAAR National Expert - Gulnar Bayanova Turtkaraeva, Candidate of Pedagogical Sciences, Valikhanov Kokshetau University, Expert of I category, (Kokshetau, Republic of Kazakhstan), off-line participation;

IAAR National Expert - Vadim Pavlovich Markovsky, PhD in Technical Sciences, Professor, Toraigyrov University (Pavlodar, Republic of Kazakhstan), off-line participation;

IAAR National Expert - Alexandra Potapenko, PhD, Toraigyrov University (Pavlodar, Republic of Kazakhstan), off-line participation;

IAAR National Expert - Askar Bagdatovich Kasymov, PhD, Acting Associate Professor, Shakarim University (Semey, Republic of Kazakhstan), off-line participation;

IAAR National Expert - Laura Ilyasovna Baitelesova, PhD in Chemistry, Associate Professor, West Kazakhstan Innovation and Technologies University (Uralsk, Republic of Kazakhstan), off-line participation ;

IAAR National Expert - Isayeva Zhazira Rakhatdinovna, PhD, Kazakh Agrotechnical University named after S. Seifullin (Astana, Republic of Kazakhstan), off-line participation;

IAAR National Expert - Nazgul Bolatovna Kalieva, PhD, Acting Associate Professor, Al-Farabi Kazakh National University (Almaty, Republic of Kazakhstan), off-line participation;

Employer - Gulmira Zeynulovna Jagiparova, Head of Commercial Block, KT Cloud lab (Almaty, Republic of Kazakhstan), on-line participation;

Employer - Azamat Serikovich Burumbayev, Chamber of Entrepreneurs "Atameken" of Aktobe region (Aktobe, Republic of Kazakhstan), on-line participation;

IAAR Student - Adelina Adelevna Rakisheva, 2nd year doctoral student, East Kazakhstan Technical University named after D. Serikbayev, Ust-Kamenogorsk, Republic of Kazakhstan, on-line participation. D. Serikbayev East Kazakhstan Technical University (Ust-Kamenogorsk, Republic of Kazakhstan), on-line participation;

IAAR Student - Darmen Gabitov, 1st year Master's ***student,*** Nazarbayev University (Astana, Republic of Kazakhstan), on-line participation;

IAAR Student - Mukhamedjan Alisher Sabyrzhanuly, 3rd year student, L.N.Gumilev Eurasian National University, Astana, Republic of Kazakhstan. L.N.Gumilev Eurasian National University (Astana, Republic of Kazakhstan), on-line participation;

IAAR Student - Өserbatov Raul Batbairuly, 4th year student, East Kazakhstan Technical University named after Serikbayev. Serikbayev East Kazakhstan Technical University (Ust-Kamenogorsk, Republic of Kazakhstan), on-line participation;

IAAR Student - Gulnaz Zhairbaeva, 1st year doctoral student, L.N.Gumilev Eurasian National University, Astana, Republic of Kazakhstan, on-line participation. L.N.Gumilev Eurasian National University (Astana, Republic of Kazakhstan), on-line participation;

IAAR student - Sisenova Tolganay, Master's student of the 2nd year of DP "Management" Turan University (Almaty, Republic of Kazakhstan), on-line participation;

IAAR Coordinator - Gulfiya Rivkatovna Nazirova, Ph.D. in Economics, Head of the project on formation of external expert commissions of IAAR (Astana, Republic of Kazakhstan).

(III) REPRESENTATION OF THE EDUCATIONAL ORGANIZATION

History. Non-profit joint stock company "Almaty University of Power Engineering and Telecommunications" (hereinafter - AUPET named after G.Daukeyev) was formed in January 10, 1997 on the basis of Almaty Energy Institute (AEI) and is the first non-state technical university with the status of a non-profit organization. The history of the university begins in 1975, when the Almaty Energy Institute (AEI) was established on the basis of the Kazakh Polytechnic Institute named after Lenin (now the Kazakh National Research Technical University named after K.I.Satpayev). In 2019, the university was renamed JSCO "Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev".

In 1989, Almaty Power Engineering Institute was certified by the commission of the State Inspection of the USSR State Educational Institution. In May 1997 "UNK E&TK" was reorganized into Almaty Institute of Energy and Telecommunications with the status of a non-profit joint stock company. Since July 2010, the Almaty Institute of Power Engineering and Telecommunications has received the status of a university with the right to traECin masters and PhD students and a new name - non-profit joint stock company "Almaty University of Power Engineering and Telecommunications" (AUPET).

In 1999 the University signed an agreement between AUPET and the Moscow Technical University of Telecommunications and Informatics on joint activity on training specialists for the communication industry of the Republic of Kazakhstan and in 2001 the Ministry of communication of the Republic of Tajikistan on cooperation and training of specialists for the communication industry. An agreement was signed between AUPET and Tashkent State Technical University named after Abu Rayhan Beruni. Abu Rayhan Beruni Tashkent State Technical University on rendering assistance to scientists in carrying out joint research works (2002). An agreement was signed with Moscow Power Engineering Institute on joint organization of the program of distance learning and second economic education for the students of AUPET(https://AUPET.edu.kz/frontend/web/uploads/academ-calendar/ru/1609229217_Pn6kCC.pdf).

The university has international research and training centers such as CISCO Regional Academy, Microsoft IT Academy, Huawei ICT Academy, SpaCE Research Center, Schneider Electric Competence Center for Industrial Automation, Dr.Web training laboratory, regional center within the USAID Future Energy program, school of 3D printing and robotics and PROLAB laboratory of new professions.

In the 2019 edition of U-Multirank, AUPET named after Gumarbek Daukeyev was ranked among the world's top 25 universities in the parameter "Cooperation with the working environment" and was among the top 3 universities in Kazakhstan, according to the international ranking of U-Multirank.

In 2020 AUPET named after Gumarbek Daukeyev entered the TOP-20 universities of the Republic of Kazakhstan and took the 6th place in the national rating of the best technical universities of Kazakhstan.

The University launched a new interdisciplinary educational program Industry 4.0 in 2021 in cooperation with the University of Applied Sciences Anhalt. Systems Engineering.

Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev trains personnel in power engineering, communications, IT-Technologies and information security, space engineering, robotics, medical Technologies and artificial intelligence.

To publish the results of scientific research the University publishes "AUPET Bulletin", recommended by the Committee for Quality Assurance in Field of Science and Higher Education of the Ministry of Science and Higher Education of the Republic of Kazakhstan (CQAFS and HE

MSHE RK). Also, the results of conferences are published in the electronic journal Technical Journal Daukeyev University.

MISSION. Formation of the best intellectual resources of the national knowledge economy and the most advanced technologies for industrial-innovative development of the country, adapted to the conditions of world integration and globalization.

VISION. By 2025, AUPET is an advanced research university in Central Asia in the fields of energy, telecommunications, information and aerospace technologies.

The material and technical base of the University includes 3 academic buildings, 3 dormitories, 4 student canteens, sports and recreation center, library with reading rooms.

Brief description of accredited DPs:

DP 7M07107 "Space Engineering and Technologies"

The aim of DP is to train highly qualified personnel in the field of space engineering and, possessing theoretical and practical knowledge, skills and abilities to study processes and devices of space systems, design and implementation of technical projects, system solution of problems using innovative approaches, building concepts and strategies of activity, meeting the needs of domestic and world markets of intellectual labor, ready to make a qualitative breakthrough in the development of astronomy, cosmophysics and astronautics.

The field of education - 7M07 "Engineering, Manufacturing and Construction", the direction of training - 7M071 "Engineering and Engineering", the group of degree programs - M107 "Space Engineering".

In the register of DP from 04.09.2019. Term of study - 2 years. Language of instruction: Russian, Kazakh. *Level of NRC, ORC*: 7. *License number for the direction of training:* №KZ80LAA00018161 from May 5, 2020.

DP 8D07105 "Space Engineering and Technologies"

The aim of DP is to train highly qualified personnel in the field of space engineering and, possessing theoretical and practical knowledge, skills and abilities to study processes and devices of space systems, design and implementation of technical projects, system solution of problems using innovative approaches, building concepts and strategies of activity, meeting the needs of domestic and world markets of intellectual labor, ready to make a qualitative breakthrough in the development of astronomy, cosmophysics and astronautics.

The field of education - 8D07 "Engineering, Manufacturing and Construction", the direction of training - 8D071 "Engineering and Engineering Science ", the group of degree programs - D107 "Space Engineering".

In the register of DP from 02.09.2019. Term of study - 3 years. Language of instruction: Russian, Kazakh. *Level of NRC, ORC*: 8. *License number for the direction of training:* №KZ80LAA00018161 from May 5, 2020.

DP 8D07104 Instrumentation.

The purpose of DP - training of highly qualified specialists in the field of electronics and, possessing theoretical and practical knowledge, skills and abilities necessary for their realization in professional activity, being competitive specialists, demanded in the domestic and international labor markets.

The field of education - 8D07 "Engineering, Manufacturing and Construction", the direction of training - 8D071 "Engineering and Engineering", the group of degree programs - D103 "Mechanics and Metalworking".

In the register of DP from 29.08.2019. Term of study - 3 years. Language of instruction: Russian, Kazakh. *Level of NRC, ORC*: 8. *License number for the direction of training:* №KZ80LAA00018161 from May 5, 2020.

(IV) DESCRIPTION OF THE PREVIOUS ACCREDITATION PROCEDURE

Degree programs 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies" are undergoing the IAAR accreditation procedure for the first time.

(V) DESCRIPTION OF VISIT EEC

The work of the EEC was carried out on the basis of the approved Program of visit of the expert commission for specialized accreditation of degree programs in JSCo "Almaty University of Power Engineering and Telecommunication named after G. Daukyev" in the period from 11-13 March 2024.

To align the EEC, an initial meeting was held on March 9, 2024, to define the duties of the commissioners, clarify the schedule of visits, and reach agreement on the selection of examination methods.

To obtain objective information about the quality of the educational program and the entire infrastructure of the university, to clarify the content of the self-assessment report, meetings were held with the Rector of the university, members of the Board - vice-rectors for areas of activity, heads of structural units, directors of institutes, heads of departments, teachers, students, employers. A total of 84 representatives took part in the meetings (Table 1).

Table 1 - Information about employees and students who participated in meetings with the IAAR EEC:

Category of participants	Quantity
Rector	1
Members of the Management Board - Vice-Rectors	2
Heads of structural subdivisions	9
Deans, directors	2
Heads of departments	17
Teachers	26
Learners	16
Graduates	6
Employers	5
Total	**84**

During the excursion EEC members got acquainted with the state of the material and technical base of the university were seen: Flight Control Center, ICT Academy HUAWEI, Laboratory of augmented and virtual reality VR/AR, Center of "Medical Technologies" by Ordamed, DP Lab, etc.

At the meeting of the IAAR EEC with the university's target groups, the mechanisms of the university's policy implementation were clarified and individual data presented in the university's self-assessment report were concretized.

Classes were attended during the accreditation period:

-"Programming in Python", class topic: "Introduction to Django. Downloading and installing the PyCharm application development environment. Installation of django library" (Bachelor's degree, 3rd year, the number of attendees - 12, aud. B328), lecturer Master of IS, senior lecturer A.R. Kalpebaev.

There was a shortage of computers and low speed of university Wi-fi in the classrooms during classes. There are only 18 students in the group, while there are only 7 computers in the

auditorium. All students worked on their laptops. The class was conducted in a traditional form with parallel online broadcasting in Microsoft Teams and recording of the class.

EEC experts analyzed the conditions of practice bases where students carry out their practice, and also asked questions to employers from JSC "National Center for Space Research and Technologies".

In accordance with the accreditation procedure, an online questionnaire survey of 60 teachers, 13 students was conducted.

In order to confirm the information presented in the Self-Assessment Report, external experts requested and analyzed the university's working documentation. In addition, the experts analyzed the university's Internet positioning through its official website (https://AUPET.edu.kz/).

As part of the planned program, the recommendations on improvement of accredited degree programs of JSCO "Almaty University of Power Engineering and Telecommunication named after G. Daukeyev", developed by EEC based on the results of the examination, were presented at the meeting with the management on March 13, 2024.

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(VI) COMPLIANCE WITH SPECIALIZED ACCREDITATION STANDARDS

6.1 Standard "Degree Program Management"

- ✓ *The HEI must have a published quality assurance policy.*
- ✓ *Quality assurance policies should reflect the link between research, teaching and learning.*
- ✓ *The university should demonstrate the development of quality assurance culture, including in the context of DPs.*
- ✓ *The commitment to quality assurance should apply to any activities carried out by contractors and partners (outsourcing), including in the implementation of joint/double degree education and academic mobility.*
- ✓ *The DP management ensures transparency of the DP development plan elaboration based on the analysis of its functioning, real positioning of the HEI and orientation of its activities to meet the needs of the state, employers, stakeholders and students.*
- ✓ *The management of the DP demonstrates the functioning of mechanisms of formation and regular revision of the DP development plan and monitoring of its implementation, assessment of the achievement of learning objectives, compliance with the needs of students, employers and society, decision-making aimed at continuous improvement of the DP.*
- ✓ *The DP management should involve representatives of stakeholder groups, including employers, students and faculty in the formation of the DP development plan.*
- ✓ *The management of the DP should demonstrate the individuality and uniqueness of the DP development plan, its alignment with national development priorities and the development strategy of the educational organization.*
- ✓ *The university should demonstrate a clear definition of those responsible for business processes within the DP, unambiguous distribution of staff job responsibilities, delineation of the functions of collegial bodies.*
- ✓ *The management of the DP should provide evidence of the transparency of the management system of the degree program.*
- ✓ *The DP management shall demonstrate successful operation of the DP internal quality assurance system, including its design, management and monitoring, their improvement, evidence-based decision-making.*
- ✓ *The management of the DP should carry out risk management.*
- ✓ *The DP management should ensure the participation of representatives of stakeholders (employers, faculty, students) in the composition of collegial management bodies of the degree program, as well as their representativeness when making decisions on the management of the degree program.*
- ✓ *The HEI must demonstrate innovation management within the DP, including the analysis and implementation of innovative proposals.*
- ✓ *DP management should demonstrate evidence of openness and accessibility to learners, faculty, employers and other stakeholders.*
- ✓ *DP management must be trained in educational management programs.*
- ✓ *DP management should endeavor to ensure that progress made since the last external quality assurance procedure is taken into account in preparation for the next procedure.*

Evidentiary part

The analysis of the presented information and analytical material and as a result of familiarization with the technical base and meetings with stakeholders allow us to draw the following conclusions.

DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies" submitted for accreditation are implemented at the Institute of Communication and Space Engineering in Kazakh and Russian languages. DPs are developed and approved by the university taking into account the requirements of the labor market, in accordance with the State Standards of Higher and Postgraduate Education, approved by the order № 2 of July 20, 2022, Quality Policy and Objectives, the mission of the university (Quality Policy of JSCO AUPET).

The mission, main goals, strategic directions of development and objectives of the DP are defined on the basis of the following documents: "AUPET JSCO Transformation Strategy (2018-2025)", AUPET JSCO Charter, "Quality Assurance Policy and Objectives", which are published in public access on the AUPET website https://AUPET.kz. The Quality Assurance Policy is reviewed at the university-wide meetings of the teaching staff at the beginning of the academic year.

DPs submitted for accreditation fulfill the requirements of the state obligatory standard of education of the Republic of Kazakhstan. Higher education. Master's degree. Doctoral studies. Education on degree programs (DP) is carried out in JSCO "AUPET" named after G. Daukeyev (AUPET), according to the license: series KZ80LAA00018161 from 05.05.2020.

Within the quality assurance policy at the DPs, there is a relationship between research, teaching and learning of all represented DPs in the cluster.

The quality assurance policy is also reflected in the "DP Development Plan", which is approved by the Scientific and Methodological Council of the Institute. The presented Development Plan of DP 8D07104 "Instrumentation" for 2023-2025 reflects the analytical justification of the program, which includes information about the degree program, students, internal conditions for the development of the DP, information about the faculty; characteristics of the problems, which the DP development plan is aimed at solving; main goals and objectives; measures to reduce the impact of risks for the DP; list of measures; implementation mechanism; assessment of socio-economic efficiency of the development plan and the model of the graduate of the DP. The representatives of the department and employers took part in the development of the Development Plan.

Development plan of DP 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies" for 2023-2028, approved by the Director of the Institute, reflects the directions of DP activities, with the indication of specific activities, responsible persons and implementation mechanism. Possible risks and measures for their elimination are also given. The participation of faculty, stakeholders, students and other stakeholders in the development of the DP Development Plan is not shown.

The submitted DP development plans do not show target indicators and timeframes for plan implementation. Also, the process of plan revision and monitoring of its implementation is not shown.

DP management considers possible risks associated with DP training. The procedure "Risk Management" has been developed. Annually, within the framework of the QMS of the Institute, the program of risk management of the DP is considered. Negative factors are analyzed and ways to eliminate them. The solution of risk management issues is reflected in the DP development plan, plans for retraining and advanced training of teaching staff, plans for research and development of the department.

The system of DP management is transparent and open, guiding and regulatory documents on DP management are freely available on the university website, the analysis of the DP management system work is considered at the meetings of the cluster 5 departments and other collegial bodies of the university. Documents on the involvement of employers in the collegial bodies of DP management are presented. There are expert opinions on DPs 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies" from employers.

Management and developers of DP cluster 5 Orazalieva S.K., Utelieva N.K. were trained in education management programs in 2021, 2022.

In order to analyze the performance and improvement of the Management and Quality System (QMS) in AUPET, the order No. 111 dated 20.10.2021 was issued. On conducting an internal audit of QMS . The report presents the plan-schedule of internal audit of structural units for the academic year 2022-2023.

The results of the external and internal audit of DPs are taken into account in the work of existing DPs by making changes in the educational process: MDP, DP passport and CED, as well as in the development of future DPs.

Analytical part

Analysis of the information provided and supporting documents for this standard leads to the following conclusions.

The University demonstrates management of degree programs in the context of implementation of strategic documents. The management of the DP demonstrates the consistency of the DP with the national development priorities and the development strategy of the educational organization. The university presents the Quality Assurance Policy, generally reflecting the interaction between the business community, the scientific community and the teaching staff.

Employers are involved in the development and implementation of DP development plans. In the course of interviews with employers, it was confirmed the introduction of elective disciplines in the variable part of degree programs according to their recommendations.

The experts, during their visit to the university, verified the published and implemented quality assurance policy, which reflects the link between research, teaching and learning.

The university management demonstrated openness in communication with students and faculty, which is also confirmed by the results of the questionnaire.

The experts were presented with the DP development plans, however, they do not specify the mechanism for monitoring of the DP implementation, deadlines and target indicators.

Identification of those responsible for business processes within the cluster DP, distribution of staff job responsibilities, delineation of functions of collegial bodies is demonstrated.

Management of degree programs during their implementation is transparent in the HEI (there are representatives of employers, faculty, students and other stakeholders in the collegial management bodies of DP).

Management and developers of cluster 5 DPs were trained in education management programs in 2021, 2022.

The results of the external and internal audit of DPs are taken into account in the work of existing DPs by making changes in the educational process: MUP, DP passport and CED, as well as in the development of future DPs.

Strengths/best practices:

have not been observed.

EEC recommendations for 8D07104 Instrumentation, 7M07107 Space Engineering and Technologies, 8D07105 Space Engineering and Technologies:

1. The DP management should update the Strategic Development Plan on the University website. *Deadline - May 2024.*

2. The management of the DP needs to revise the development of the DP development plan with the definition of specific target, time indicators of achievement, with the identification of those responsible for their achievement with the participation of external stakeholders in the discussion. *Deadline - September 2024.*

EEC conclusions on the standard "Management of degree program" disclosed 17 criteria, of which: 16 criteria have a satisfactory position, 1 criterion - requires improvement.

6.2 Standard " Information Management and Reporting "

- ✓ *The university should ensure the functioning of the system of collection, analysis and management of information based on the use of modern information and communication technologies and software tools.*
- ✓ *DP management must demonstrate the systematic use of processed, adequate information to improve the internal quality assurance system.*
- ✓ *There should be a system of regular reporting within the DP, reflecting all levels of the structure, including the evaluation of the effectiveness and efficiency of the activities of units and departments, scientific research.*
- ✓ *The university should establish the periodicity, forms and methods of evaluation of the DP management, activities of collegial bodies and structural units, top management, implementation of scientific projects.*
- ✓ *The university must demonstrate the definition of the order and ensuring the protection of information, including the identification of responsible persons for the reliability and timeliness of information analysis and data provision.*
- ✓ *An important factor is the involvement of students, employees and faculty in the processes of collecting and analyzing information, as well as making decisions based on them.*
- ✓ *The DP management must demonstrate that there is a mechanism for communication with learners, employees and other stakeholders, including mechanisms for conflict resolution.*
- ✓ *The HEI must provide measurement of the degree of satisfaction of the needs of the teaching staff, staff and learners within the framework of the DP and demonstrate evidence of eliminating the identified shortcomings.*
- ✓ *The university should assess the effectiveness and efficiency of activity, including in the context of DPs.*
- ✓ *The information collected and analyzed by the HEI within the framework of the DP should take into account:*
- ✓ *key performance indicators;*
- ✓ *dynamics of the contingent of students in the context of forms and types;*
- ✓ *grade level, student achievement and retention;*
- ✓ *satisfaction of students with the implementation of the degree program and the quality of education at the university;*
- ✓ *accessibility of educational resources and support systems for learners;*
- ✓ *employment and career development of graduates.*
- ✓ *Students, employees and faculty members must document their consent to the processing of personal data.*
- ✓ *The management of the DP should help to ensure that all necessary information is available in the relevant fields of science.*

Evidentiary part

Information is collected, disseminated and used through the document management systems implemented in AUPET - Thesis, Platonus, the official website of the university https://www.AUPET.kz, Corporate E-mail, Electronic Library, etc. The information is disseminated through social networks Instagram, Telegram channel, etc. Social networks Instagram, Telegram channel, etc. are used to disseminate current information. The main information flows can be divided into the following groups: general information about the university, content of the DP, information about students, information about employees.

General information about the university and the DP is available on the internet resources of the university. These include the official website of the university https://www.AUPET.kz, as well as the internal website https://info.AUPET.kz. On the official website, students, academic staff and interested parties can find information about the structure, mission, strategy, events in the scientific, academic, social life of the university, class schedule, as well as information on degree programs, in particular, information about the department, studied compulsory and elective disciplines, competencies obtained by the graduate, teaching methods, faculty, etc. It should also be noted that the external site includes such parameters as the schedule of students, teachers and classroom occupancy.

The AUPET internal website https://info.AUPET.kz is available for internal use only, access is strictly by corporate access.

In addition, the internal website provides access to all the necessary documentation of the university: QMS documents, normative and legal acts, educational and methodological literature, catalogs of elective disciplines, methodological developments of teaching staff, to the electronic library of the university.

The AUPET internal website is created for the convenience of the employees, it contains information that does not need to be placed on the external website, for example, the University telephone directory, including internal numbers, minutes of the Academic Council and Rectorate, strictly internal information that is not subject to wide use.

All department documents are executed, recorded and controlled in accordance with the requirements of the standard "Development, Documentation, Implementation, Maintenance and Continuous Improvement of Quality Management System" (ISO 9001-2015).

Teaching materials (lecture notes, presentations, methodological guidelines) are included in the teaching and learning materials of disciplines, as well as entered by teachers themselves through personal accounts in the "Platonus" system. Employees of the library and the Department of Information Technologies ensure the availability of educational and methodological literature in the library and on the internal website of the university.

The automated collection of information on the quality of the university's activities involves departments, ICCI, AD (Administrative Department), Department of Academic Affairs, Department of International Cooperation and Academic Mobility. Reports on academic, scientific and administrative aspects are provided for collegial meetings (UMC, RS, Institute Council) in order to improve the efficiency of management processes. Department of Analysis and Development Strategy.

Statistics on the contingent of students and graduates, information on available resources, staffing, scientific and international activities and other areas are used in the management processes of the DP in the planning of teaching load of teaching staff, preparation of the classroom fund for the new academic year, taking into account the contingent of students and in the planning of internal and external academic mobility. At the beginning of the academic year there is an adjustment of the teaching load of teaching staff taking into account the enrollment of students, which is fixed in the minutes of the department meeting, orders.

Access to the information available in the Platonus system is restricted through login with a username and password. Faculty and staff have different capabilities and functions in these systems. Access to the University website is free. Access to the documentation of the DP at the department have faculty members and teaching and support staff of the department. Regular internal audits are carried out by the Department of Academic Affairs and the QMS department, during which the availability and maintenance of the department's documentation are checked, and corrective actions are taken on identified inconsistencies.

The analysis of information is carried out at the meetings of the department by hearing or presenting written reports of the responsible persons: the head of the department - on the implementation of the annual plan of the department, plans for the release of educational and methodical literature, the results of mutual visits to the classes of faculty members, the results of examination sessions, employment of graduates; teachers - on the implementation of the teaching load and individual plans, the plan of research work and NIRO, the results of research practice, the progress of master's and doctoral dissertations.

The University has an anonymous compliance service for students, faculty and staff of the University.

University employees and students give written consent to the collection and processing of his/her personal data, when concluding an employment contract and an agreement for the provision of educational services.

Analytical part

Information management at the University is the collection, analysis and further dissemination of information to improve the quality of services provided, including the management of educational, teaching, research, educational, financial and other processes. *IAAR EEC members note* that the University provides information management and reporting on the basis of modern information and communication technologies and software tools. Since the departments are the providers of educational services, the effectiveness and efficiency of their activities in the implementation of the DP is reflected in the annual reports on the main activities: teaching and methodological work, research, educational work, etc., considered at the meetings of the department, Faculty Council, UMC, NTS, Academic Council. To assess the effectiveness and efficiency of the DP, external experts (National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken", Independent Accreditation Agencies, etc.) are also involved, which make the rating of the DP. Thus, the University provides information management and regular reporting at the required level.

Strengths/best practices:
have not been observed.

EEC recommendations for DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies":
is not available.

EEC Conclusions: 17 criteria were disclosed for the Information Governance and Reporting standard, of which all 17 criteria have a satisfactory position.

6.3 Standard "Development and Approval of Educational Program"

- ✓ *The HEI should define and document the procedures for the development of DPs and their approval at the institutional level.*
- ✓ *The DP management should ensure that the developed DPs are fit for purpose, including the intended learning outcomes.*
- ✓ *The DP management should ensure that there are developed models of the DP graduate describing learning outcomes and personal qualities.*
- ✓ *DP management must demonstrate that external examinations of DPs have been conducted.*
- ✓ *The qualification obtained upon completion of the DP should be clearly defined, explained and aligned with the defined NSC level.*
- ✓ *The DP management should determine the influence of disciplines and professional practices on the formation of learning outcomes.*
- ✓ *An important factor is the ability to prepare trainees for professional certification.*
- ✓ *The DP management should provide evidence of the participation of students, faculty and other stakeholders in the development of DPs, ensuring their quality.*
- ✓ *The labor intensity of the DP should be clearly defined in Kazakhstani credits and ECTS.*
- ✓ *The DP management should ensure the content of academic disciplines and learning outcomes of the level of study (bachelor's, master's, doctoral).*
- ✓ *The structure of the DP should provide for different types of activities corresponding to the learning outcomes.*
- ✓ *An important factor is the existence of joint DPs with foreign educational organizations.*

Evidentiary part

Degree programs submitted for accreditation are developed and approved on the basis of the laws of RK and the following normative documents: State obligatory standard of postgraduate education (Resolution of the Government of RK from 23.08.2012 №1080), Model rules of activity of the organization of higher and postgraduate education (Resolution of the Government of RK from 17.05.2013 № 499), Rules of organization of educational process on

credit Technologies of education (Order of MES RK from 20.04.2011 №152). The list of degree programs within the specialties is established by the Academic Council of AUPET and approved by the Rector. The process of developing degree programs is strictly regulated (the Regulation on the development of DPs of higher and postgraduate education approved by the Rector from 24.02.2020) and consists of the following technological chain: graduating department - Institute Council - EMS - Academic Council of AUPET. The process of creating an educational program, including the development, content, changes and additions to it, is coordinated with the DAA and QMS of the AUPET Rectorate. Degree programs of the cluster are developed taking into account the recommendations of employers and approved by the UMC.

The decision on the adjustment of curricula is made by the EMS of the university, the decision on the adjustment of the content of syllabuses is made by the graduating departments and the council of the institute. These decisions are recorded in the minutes of the meetings of the departments and the EMS of the university.

The principle of determining the labor intensity of academic disciplines of DP is reflected according to the established norms in the Kazakhstan and European systems of higher education, which are specified in the modular curriculum in ECTS and hours, in the Passport of DP, syllabuses and working programs of disciplines.

Both external and internal stakeholders are involved in the development of DP 5 of the cluster: representatives of: JSC NCSRT - Deputy Chairman of the Board A. Bibosinov, Chairman of the Board M. Nurguzhin; Saiman Corporation - Head of IT Department K.E. Zikirbai.

On DP 8D07105 "Space Engineering and Technologies" and 7M07107 "Space Engineering and Technologies" received positive expert opinions from the employer Leading Researcher of JSC NCSRT Ospanov S.S.

Cluster 5 DPs are developed, approved at the institutional level and registered in the EHEA DP Registry. The DPs have clearly defined objectives that are in line with the AUPET mission. The aim of the DPs is to acquire competencies, knowledge, skills and abilities in issues related to the areas of professional activity, to the requirements of employers and labor functions.

The distinction between Bachelor's, Master's and Doctoral programs is expressed through learning outcomes defined on the basis of Dublin descriptors of Level 1 (Bachelor's degree), Level 2 (Master's degree), Level 3 (Doctoral degree) and a set of competencies defined for the program. Learning outcomes are formulated both at the level of the whole program and at the level of a module, a separate discipline.

For individualization of training in the accredited DP a significant number of elective disciplines are provided, which gives the opportunity to undergraduate students to form professional skills taking into account their interests in the future profession. The list and summary of disciplines can be found on the University website, in the AIS "Platonus" in the sections "Curriculum" and "Catalogs of disciplines", as well as in the Register of EPHE EEIHE of the Ministry of Education and Science of the Republic of Kazakhstan.

In DP 7M07107 - Space Engineering and Technologies: The cycle of basic disciplines (BD (BC)) consists of 32 ECTS credits. The cycle of profiling disciplines (PD (KV)) consists of 45 ECTS credits. Research practice - 11 credits, Pedagogical practice - 4 ECTS credits, NIRM - 24 credits (including 11 cr. internships, the terms of internship not less than 30 calendar days, determined by receiving an invitation from the host country and obtaining a visa), IA (Writing and defense of Master's thesis) - 12 ECTS credits.

In DP 8D07104 - Instrumentation cluster: the cycle of basic disciplines (BD (BC)) consists of 8 ECTS credits. The cycle of profile disciplines (PD (VC)) consists of 17 ECTS credits. Additional types of training are 155 ECTS credits: Research Practice - 10 credits, Pedagogical Practice - 10 ECTS credits, NIRD - 123 credits (including 8 cr. internships, the terms of internship not less than 30 calendar days, determined by receiving an invitation from the host country and obtaining a visa), IA (Writing and defense of doctoral dissertation) - 12 ECTS

credits. Final Attestation is the completion of training on the DP. It includes writing and defense of the doctoral dissertation. Regulations on the execution of the doctoral dissertation.

In DP 8D07105 - Space Engineering and Technologies Cluster 5 the cycle of basic disciplines (BD (VC)) consists of 8 ECTS credits. The cycle of profile disciplines (PD (KV)) consists of 17 ECTS credits. Additional types of training are 155 ECTS credits: Research practice - 10 credits, Pedagogical practice - 10 ECTS credits, NIRD - 123 credits (including 8 cr. internships, the terms of internship not less than 30 calendar days, determined by receiving an invitation from the host country and obtaining a visa), IA (Writing and defense of doctoral dissertation) - 12 ECTS credits.

Persons who have fully completed the scope of the DP of cluster 5 are awarded academic degrees of Master and Doctor of Engineering and Technologies, corresponding to the established levels of the National Qualification Framework of the Republic of Kazakhstan and included in the list of specialties of the Qualification Framework of the European Higher Education Area (ENEA).

Qualifications and positions are determined in accordance with the "Classifier of specialties of higher and postgraduate education of the Republic of Kazakhstan", approved by the Committee on Technical Regulation and Metrology of the Ministry of Industry and Trade of the Republic of Kazakhstan from 17.10.2018, No. 17564.

Doctoral students and master's students of the program undergo foreign internships in partner universities that train specialists in the relevant areas, such as: Moscow Power Engineering Institute, Russia; Tomsk Polytechnic University, Russia; Vinnytsia National Technical University, Russia; Izhevsk State Technical University named after M.T. Kalashnikov, Russia; Samara State Aerospace University named after Academician S.P. Korolev (SSAU), Russia; St. Petersburg State University named after M.A. Bonch-Bruevich State University, Russia; Siauliai University, Siauliai, Lithuania; Riga Technical University, Riga, Latvia; Angel Kynchev University of Ruse, Ruse; Bialystok Technical University, Bialystok, Poland; Technical University of Varna, Varna, Bulgaria; Berlin University of Technologies, Berlin, Poland; University of Varna, Bulgaria. Varna, Bulgaria; Technical University of Berlin, Germany, Berlin.

The cluster's DPs participate in the Erasmus Plus program "Applied Curriculum for Space Exploration and Intelligent Robotic Systems".

Analytical part

IAAR EEC members note that the University defines goals for each developed and approved program, the basis of which are the State Educational Standards, normative acts of the Republic of Kazakhstan and labor market needs.

Recommendations and suggestions from employers are taken into account when determining the contribution of disciplines to the process of determining learning outcomes.

The qualification obtained upon completion of the study program is determined based on the requirements of professional standards, it corresponds to the State obligatory standard of higher education and postgraduate education, National Qualifications Framework, Sectoral Qualifications Framework.

The DP graduate model is developed and the labor intensity of the DP in ECTS and in hours is clearly defined.

The passports of DPs, MUPs and CEDs of Master's and Doctoral level clearly reflect the competencies of graduates.

In the Master's degree program "Space Engineering and Technologies" in the cycle of BDE "Spacecraft Design" is presented discipline called "Spacecraft Design". In the doctoral program in the cycle of the PD TQ, the corresponding discipline is called "Spacecraft Design". It is necessary to clarify the name of these disciplines taking into account their content.

EEC members note the need to introduce the practice of dual training, which at the meeting with the EEC was also noted by groups of students, graduates, employers, heads of practice

bases. It was noted that the university has a branch of the department in NCSRT and, in general, is ready to start a targeted work on large-scale practice-oriented training. It is necessary to bring to the practice bases, branches of departments not only professional practices, but also to conduct practical, laboratory and lecture classes in the framework of full-fledged disciplines, with the preparation of official schedules at the bases of enterprises (not only guest or excursion classes).

It is also necessary to strengthen the work on the development of internal and external academic mobility.

Strengths/best practices:
have not been observed.

EEC recommendations for DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies":

1. It is necessary to include measures to introduce dual training system in the development plans of each DP and start their implementation. *Deadline - until 2025.*
2. To include in the development plans of DP 7M07107 "Space Engineering and Technologies" and 8D07105 "Space Engineering and Technologies" the activities on creation of joint degree programs with foreign universities. *Deadline - until 2025.*
3. To analyze similar DPs of Kazakhstani and foreign universities and modernize the titles and content of disciplines. *Deadline - by the beginning of 2024-2025 academic year.*

EEC conclusions: 12 criteria are disclosed under the standard "Development and approval of degree programs", of which 10 criteria have a satisfactory position, 2 criteria - require improvement.

6.4 Standard "Continuous Monitoring and Periodic Evaluation of Degree programs"

- ✓ *The HEI should monitor and periodically evaluate the DP in order to ensure the achievement of the goal and meet the needs of students and society. The results of these processes are aimed at continuous improvement of the DP.*
- ✓ *Monitoring and periodic evaluation of the DP should consider:*
- ✓ *Program content in light of the latest advances in discipline-specific science to ensure the relevance of the discipline being taught;*
- ✓ *Changes in the needs of society and the professional environment;*
- ✓ *The workload, performance and graduation of learners;*
- ✓ *Effectiveness of student assessment procedures;*
- ✓ *Learners' expectations, needs and satisfaction;*
- ✓ *The educational environment and support services and their relevance to the objectives of the DP.*
- ✓ *The HEI and the management of the DP should provide evidence of the participation of learners, employers and other stakeholders in the revision of the DP.*
- ✓ *All interested parties should be informed of any planned or undertaken actions with respect to the RP. All changes made to the RP shall be publicized.*
- ✓ *The DP management should ensure the revision of the content and structure of the DP taking into account the changes in the labor market, employers' requirements and social demand of the society.*

Evidentiary part

Monitoring and evaluation of the DP is carried out at the graduating departments, where an annual report on the implementation of the DP is prepared, where self-assessment and analysis of the success of the DP development strategy on quantitative and qualitative indicators is carried out, the report is based on the analysis of the main problems identified as a result of monitoring of the scientific and educational process and evaluation of external and internal factors. The main criterion of success in the implementation of the DP is the percentage of employment of

graduates on this DP and employers' feedback on the university graduates and their academic performance.

In the rating of higher education institutions of RK for 2020-2021, 2021-2022, conducted by the Independent Agency for Accreditation and Rating, which determines the National Rating of demand for higher education institutions of RK by directions and levels of training of specialists awarded first and second places

https://atameken.kz/ru/university_ratings

The university has implemented the following mechanisms for collecting, storing and analyzing information on the implementation of degree programs:

- a system for monitoring the implementation of plans for the development of degree programs;
- Different forms of self-assessment;
- Self-evaluation of programs in preparation for state certification of MNVOs;
- self-assessment of the DP in the course of preparation for institutional and programmatic accreditation;
- self-assessment of DPs for compliance with the criteria of rating agencies; annually reviewed programs participate in the rating of the Center for Bologna Process and Academic Mobility of INVO;
- annual self-assessment of the processes ensuring the implementation of the DP.

The contract with the closed joint-stock company "Antiplagiat" (license agreement No. 259) has been concluded. Antiplagiar provides DP with the following monitoring capabilities: checking of bachelor's theses; checking of master's thesis; checking of doctoral students' theses; checking of articles by young scientists, as well as faculty members; checking of methodological guidelines, manuals and textbooks.

To be admitted to the defense of a Master's thesis, the level of originality must be at least 60%, and for a doctoral thesis this indicator must be at least 80%. It is important to note that both Master's and Doctoral theses are checked for plagiarism in the JSC "National Center for State Scientific and Technical Expertise".

AIS "Platonus" provides the DP with opportunities to monitor: the characteristics of the contingent; criteria characterizing the educational activity, necessary for the management of the DP; the educational process: the formation of statements, recording the results of control rating and intermediate (attestations, examinations, coursework and course projects), as well as the final control of students (defense of master's theses); the formation of curricula and modular DP; various resources for the implementation of the DP; planning and implementation of classroom and extracurricular pedagogy; and the development of the educational process.

Access to the electronic journal is available to each teacher in his/her disciplines and to students in all disciplines studied. Thus, the principle of transparency and access to information about the results of control is achieved. The effectiveness of the procedures for evaluating the student is evidenced by the statistical analysis of students' progress.

The content and form of the DP is annually revised taking into account the proposals and recommendations of the faculty, enterprises and organizations involved in the process of selection and formation of the list of elective disciplines on the DP and working in close contact with the heads of the DP.

To control the quality of degree programs and the achievement of their goals the following methods are used: questionnaire survey of applicants (entering the Master's program), survey of students and faculty, analysis of feedback from employers, evaluation of practice results, as well as the proposals of the GAC.

The student who does not agree with the results of the evaluation of the exam, has the right to appeal. In some cases (due to illness, family circumstances, other objective reasons), the dean's office may allow the student to pass the examination session individually.

The educational environment and support services correspond to the objectives of the DP, so the educational process of accredited programs is implemented in specialized classrooms and training laboratories equipped with the necessary equipment and software.

Analytical part

Monitoring of DPs, requirements to it are presented in the Academic Policy of the university. The University has organized continuous monitoring and periodic evaluation of all the DPs of the cluster. Data on the educational process of master's and doctoral students, results of training by semesters, academic years; results of various practices; results of graduates' achievements are collected and analyzed. Students, faculty, employers are surveyed on various issues and criteria.

However, the Commission notes that the participation of students in the development of the DP is not shown.

The University has an official website. However, EEC members note that the DP management should develop, implement and DP further keep up-to-date the procedure of informing stakeholders about changes in accredited Ds, including the identification of the most effective mechanisms of informing.

The EEC experts would like to draw the attention of the university management to the results of the questionnaire survey of the teaching staff (Appendix 3 of this report), which have unsatisfactory answers on the following points:

- Involvement of teaching staff in the process of making managerial and strategic decisions - not satisfied - 18.5% of teaching staff, adequacy of recognition by the university administration of the potential and abilities of teachers - not satisfied - 18.5% of teaching staff, work on the organization of academic mobility - not satisfied - 26.2% of teaching staff, the possibility for faculty members to combine teaching with research and practical activities - not satisfied with 21.5% of faculty members, the perception of the university management and administration of criticism in their address - not satisfied with 32.6% of faculty members, teaching load meets expectations and opportunities - not satisfied with 20% of faculty members, the organization and quality of catering in the university - not satisfied with 20% of faculty members.

- face problems (often, sometimes) - lack of classrooms (60 % of teaching staff), unbalanced teaching load by semesters (58,3 % of teaching staff), unavailability of necessary literature in the library (53,3 % of teaching staff), overcrowding of study groups (too many students in a group) (55 % of teaching staff), inconvenient schedule (48,3 % of teaching staff), inappropriate conditions for classes in classrooms (66,7 % of teaching staff), lack of Internet access/weak Internet (76,7 % of teaching staff), students' lack of interest in learning (61,7 % of teaching staff), late receipt of information about events (38,3 % of teaching staff), lack of technical means of training in classrooms (75 % of teaching staff).

- Faculty members *note "Equipment of lecture halls, lack of projectors; inadequate number of sockets in the auditorium. Lack of technical provision of lecture rooms; problems with the Internet; low wages...".*

Strengths / Best Practices:

are not observed

EEC recommendations for 8D07104 Instrumentation, 7M07107 Space Engineering and Technologies, 8D07105 Space Engineering and Technologies:

1. The DP management should develop, implement and further keep up-to-date the procedure of informing stakeholders about changes in accredited DPs, including identification of the most effective mechanisms of informing. *Deadline - from the beginning of the 2024-2025 academic year and to be continued on an ongoing basis.*

Conclusions of EEC on the standard "Continuous monitoring and periodic evaluation of degree programs" disclosed 10 criteria, of which: 9 - have a satisfactory position, 1 criterion - requires improvement.

6.5 Standard "Student-Centered Learning, Teaching, and Assessment of Learning"

- ✓ *The management of the DP should ensure respect and attention to different groups of learners and their needs, providing them with flexible learning paths.*
- ✓ *DP management should ensure that a variety of teaching and learning modalities and methods are utilized.*
- ✓ *An important factor is the availability of own research in the field of teaching methodology of DP academic disciplines.*
- ✓ *DP management must demonstrate that there is a system of feedback on the use of different teaching methods and assessment of learning outcomes.*
- ✓ *DP leadership must demonstrate support for learner autonomy while being guided and assisted by the instructor.*
- ✓ *DP management must demonstrate that there is a procedure in place for responding to learner complaints.*
- ✓ *The HEI must ensure consistency, transparency and objectivity of the mechanism of assessment of learning outcomes for each DP, including appeal.*
- ✓ *The University is obliged to ensure that the procedures for assessing the learning outcomes of DP students correspond to the planned learning outcomes and objectives of the program. Criteria and methods of assessment within the framework of the DP should be published in advance.*
- ✓ *The HEI should determine the mechanisms of ensuring the mastery of learning outcomes by each graduate of the DP and ensure the completeness of their formation.*
- ✓ *Evaluators should be proficient in modern methods of assessing learning outcomes and regularly upgrade their skills in this area.*

Evidentiary part

The student-centered approach is at the heart of the design of DP Cluster 5, which involves the use of categories such as individual learning trajectory, academic mobility, internships, competencies, learning outcomes, ECTS, etc.

To choose and implement an individual educational trajectory of training, as well as to ensure the mobility and flexibility of curricula in the credit system of training in higher education institutions is organized to identify the needs of students is implemented on the basis of the work of departments. Individual educational plan determines the educational trajectory of each student separately and is formed in accordance with the WC and CED for each academic year personally by students. The DP also indicates the disciplines of the student's academic debt for the previous academic year or the difference in the curriculum, arising in the transfer or reinstatement and the terms of their study.

Formation of the DP is preceded by the record to study disciplines. For this purpose, students with the help of a supervisor fill out a special form, which includes compulsory and elective disciplines selected from the CED, as well as the names of teachers.

Mastering all disciplines of general education, basic and professional cycle, as well as additional types of training (research and pedagogical practices,) reflect the qualification that the student receives at the end of training.

To determine the academic load of teaching staff for the academic year, the department of DAA organizes the record of students for academic disciplines, according to the documented procedure "Record for academic discipline", which describes the order of implementation and recommendations for the organization and implementation of activities. The practice of realization and observance of the record in the university is carried out online since 2010. Recording for academic disciplines is carried out twice. The

preliminary record is held in March-April, on which the main load of departments and students for the next academic year is determined and the final (corrective) in the first week of the beginning of the academic year, together with the contingent of the 1st year.

The adopted system of evaluation of students' knowledge at the university corresponds to the Model Rules of current control of academic progress, interim and final attestation of students, approved by the order of the Ministry of Education and Science of the Republic of Kazakhstan from 18.11.08, № 125 (with amendments and additions).

The academic achievements of students on all types of academic assignments and tasks are evaluated according to the point-rating letter system of knowledge assessment in accordance with the State Standards for the Control and Assessment of Knowledge in Higher Education Institutions.

Description of the process of current and interim attestation is given in the documented procedures "Knowledge Assessment", "Testing" according to which interim attestation, current and final control are carried out in accordance with the working curriculum, academic calendar and working training programs of disciplines. These internal normative documents contain the measuring instruments, evaluation procedure and criteria for assessing the knowledge of students.

A 6-week summer semester is organized to meet the needs for additional training, to eliminate academic arrears or differences in curricula, to study courses and credits taken by students at other universities with mandatory re-crediting at their own university, to increase the grade point average (GPA). Enrollment and completion of courses in the summer semester are described in the documented procedure "Debt Elimination".

Criteria and methods of evaluation of students' knowledge, providing for the procedure of current, interim and final knowledge control, final attestation, the current methodology of evaluation of students' performance for rating grades for disciplines are presented in the academic calendar for the corresponding academic year, which establishes the terms of all types of control, on the University website.

From the student's page on the University website each student can view the schedule of classes and exams, current and interim progress, get acquainted with the established transfer points from course to course, with the catalog of elective disciplines, course enrollment and other necessary information.

DP management provides equal opportunities for students, including regardless of the language of instruction, to form an individual degree program aimed at the formation of professional competence. Students are given the opportunity to independently form an educational trajectory and make a choice of disciplines for the next academic year from several proposed. For this purpose, before the determination of students, under the guidance of the department, faculty members meet with them to present presentation material on their disciplines.

The University improves the methods of training and development of professional potential of the teaching staff through the Institute of Professional Development, as well as by sending the academic staff to advanced training courses in foreign universities and enterprises in the profile of the specialty.

Analytical part

The university uses student-centered approach in the basis of the DP, applies various forms and methods of teaching and learning. However, own research in the field of teaching methodology has not been presented.

Master's and doctoral students have the opportunity to choose an individual educational trajectory. The DP modules consist of compulsory (university) and variable component. Learning outcomes after studying a module can vary depending on the chosen variable module. The variable part represents the possibility of changing the trajectory DP

to the choice of specialization modules. This scheme of formation of the degree program gives masters and doctoral students the freedom of choice of disciplines listed in the CED and modular curriculum, as well as personal participation of each student in the formation of their individual curriculum and involvement in the educational process of academic advisors who help with the choice of educational trajectory.

Students have the opportunity to familiarize themselves with the results of interim control, final grades, exam results. Students have access to all kinds of information developed by the faculty (MUP, CED, syllabuses, EMCD, lecture notes, etc.).

The innovative discipline "Organization and Management of Public Procurement" has been introduced in all Master's degree programs.

At the same time, the experts are not shown examples of their own developed teaching methods and the existence of a feedback mechanism on the use of different teaching methods and assessment of learning outcomes.

Strengths / Best Practices:
have not been observed.

Recommendations of the EEC for DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies":

1. Management of DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies" shall continuously monitor the applied methods of teaching specialized disciplines in order to improve the quality of teaching and provide forms of motivation for teaching staff. *Deadline - from the beginning of 2024-2025 academic year.*
2. In the development plans to include activities on the development and implementation in the educational process of own research of academic staff in the field of teaching methods of academic disciplines. Provide for training seminars and professional development courses for teaching staff in this area. *Deadline - until 2025.*
3. Strengthen the work on the implementation of internal and external academic mobility of academic staff and students. *Deadline - annually.*

EEC Conclusions:

There are 10 criteria disclosed on the standard "Student Centered Learning, Teaching and Assessment of Learning", of which: all 10 criteria have a satisfactory position.

6.6 Standard "Learners"

- ✓ *The university must demonstrate the policy of forming the contingent of students in the context of the DP from admission to graduation and ensure the transparency of its procedures. The procedures regulating the life cycle of students (from admission to graduation) should be defined, approved and published.*
- ✓ *The DP management should demonstrate the implementation of special adaptation and support programs for new entrants and international learners.*
- ✓ *The HEI must demonstrate that its actions are in line with the Lisbon Recognition Convention.*
- ✓ *The HEI 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.*

✓ *The management of the DP should demonstrate the existence and application of a mechanism to recognize the results of academic mobility of students, as well as the results of additional, formal and informal learning.*

✓ *The HEI should provide opportunities for external and internal mobility of DP students, as well as assist them in obtaining external grants for training.*

✓ *The management of the DP should make maximum efforts to provide students with internship places, to promote employment of graduates, to keep in touch with them.*

✓ *The HEI must provide the graduates of the DP with documents confirming the obtained qualification, including the achieved learning outcomes, as well as the context, content and status of the obtained education and evidence of its completion.*

✓ *An important factor is the monitoring of employment and professional activity of DP graduates.*

✓ *The management of the DP should actively encourage students to self-education and development outside the main program (extracurricular activities).*

✓ *An important factor is the existence of an active alumni association/association.*

✓ *An important factor is the existence of a support mechanism for gifted learners.*

Evidentiary part

DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies" demonstrate the policy of forming the contingent of students from admission to graduation and ensures the transparency of its procedures. The procedures regulating the life cycle of students are approved and published. The issues of contingent formation and the results of admission are considered at the meetings of departments, educational and methodical commission of the Institute, Academic Council of the University.

Contingent of students enrolled in degree programs of Master's and Doctoral studies of cluster 5 full-time education in the context of specialties of DP for 2020-2024:

- DP "8D07104 - Instrumentation", 6 doctoral students are studying;
- DP "7M07107" - Space Engineering and Technologies - 39 undergraduates;
- DP "8D07105"- Space Engineering and Technologies - 10 doctoral students.

Tables 2 and 3 present the contingent enrollment by years and the dynamics of the contingent of students in the context of DPs for the last 5 years.

Table 2 - Enrollment of the contingent of students in the context of DPs.

Acamedic year	Degree program "8D07104 - Instrumentation."		
	total	kaz	russ
2020-2021	1	-	1
2021-2022	1	-	1
2022-2023	3	-	3
2023-2024	1	-	1

Acamedic year	Degree program "7M07107" - Space Engineering and Technologies		
	Total	kaz	russ
2020-2021	20	-	20
2021-2022	16	2	14
2022-2023	19	3	16
2023-2024	10	3	7

Acamedic year	Degree program "8D07105" - Space Engineering and Technologies		
	Total	kaz	russ

2020-2021	10	5	5
2021-2022	7	2	5
2022-2023	2	-	2
2023-2024	-	-	-

Table 3 - Contingent of students of DP 5 cluster.

Academic year	Total students
DP "8D07104 - Instrumentation"	
2019-2020	1
2020-2021	2
2021-2022	3
2022-2023	5
2023-2024	4
DP "7M07107" - Space Engineering and Technologies	
2019-2020	14
2019-2020	23
2020-2021	23
2021-2022	22
2022-2023	17
2023-2024	20
DP "8D07105" - Space Engineering and Technologies	
2019-2020	3
2020-2021	10
2021-2022	13
2022-2023	10
2023-2024	6

In order to familiarize the incoming students with the processes of the university, an orientation week is held to familiarize them with the educational and methodological documentation. On the basis of the received information, students form the DP, build educational trajectories, using the opportunity to choose both the teacher and the academic discipline, taking into account their needs in obtaining the relevant competencies within the selected program.

Students and visitors of the official website of the University can familiarize themselves with the rules of admission; transfer from course to course, from other universities, the order of credit transfer, credits mastered in other universities, expulsion, etc.

The organization of academic mobility in NPJCo AUPET is regulated by the Law of RK "On Education", normative documents of the Ministry of Education and Science of the Republic of Kazakhstan, rules for the organization of the educational process on credit Technologies of education. Academic exchanges are implemented in accordance with agreements between NPJCo AUPET and partner universities, agreements with international companies, foundations and other organizations. For students participating in the academic mobility program, an individual study plan is formed by agreement of the parties. The individual study plan is the basis for the procedure of preliminary academic recognition, which, in turn, is a guarantee that this training will be credited towards the future qualification.

Financing of academic mobility is carried out at the expense of the national budget; extra-budgetary funds of the university; grants of national companies, social partners, international funds; personal funds of students.

Documents on education issued by foreign educational organizations shall undergo the procedure of nostrification in the order established by the legislation after enrollment of persons during the first semester of study.

Kenzhegarayeva A. had an internship from March 31 to June 1, 2022 in LATMOS (France), Azilkiyasheva M.M. had a scientific internship from April 11 to April 22, 2022 in "Falam" LLP (Astana), Kenzhegarayeva A. participated in the winter school from January 25 to

February 3, 2022. in Reshetnev University (Russia), Saurova K. had an internship in Yeditepe University (Turkey) from July 8 to 28, 2022 and other internships of doctoral students of DP 5 cluster are shown in Table 3.

Information about doctoral students' internships for the academic years 2021-2023.

№	NAME	Place and period of training	Name of organization	Purpose of travel
1	Әcilhan Әdilhan Dosmakhanbetuly	America, 2022	American Museum of Natural History	Internship
2	Yeldos Nurlanovich Korabaev	Izmir, Turkey, 2022	Yasar University	Internship
3	Ibraim Merey Satypaldyuly	Tokyo, Japan, 2023	Nihon University-UNISEC, AOTS	Internship
4	Kozhabek Zhandos Aydynuly	USA, State of Georgia, Columbus, 2023	Columbus State University	Internship

№	NAME	Place and period of training	Name of organization	Number of hours	Form of Completion
1	Tip Әygerim Berikkyzyzy.	Almaty January 23 - February 13, 2021	Bauman Moscow State Technical University Engineering Room	72 ч	Certificate
		Almaty January 25 - February 12, 2021	Bauman Moscow State Technical University Engineering Room	72ч	Certificate
		Almaty, 2021	AUPET, Institute of Professional Development	72	Certificate
		KRASNOYARSK RUSSIA, 2022	RESHETNEV UNIVERSITY	72	Certificate
		Astana, 2022	Galam LLP	72	Internship
		ISTANBUL, TURKEY, 2022	YEDITEPE UNIVERSITY	72	Internship Certificate
2	Saurova Kamila Serikbayevna	Almaty, 2021	AUPET, Institute of Professional Development	72	Certificate
		Almaty, 2021	Engineering MSTU named after Bauman, MSTUB-2021005	72	Certificate
		Almaty, 2021	Engineering MGTUB-2021029	72	Certificate
		KRASNOYARSK RUSSIA, 2022	RESHETNEV UNIVERSITY	72	Certificate
		Astana, 2022	Galam LLP	72	Internship
		ISTANBUL, TURKEY, 2022	YEDITEPE UNIVERSITY	72	Internship Certificate
		Almaty, 2023	JSC NCSRT	72	Certificate
		Almaty, 2023	JSC NCSRT and the Aerospace Committee	72	Certificate
3	Kenzhegaraeva Asaghan Darkhankyzyzy	Almaty, C 25.01 - 12.02.2021	Bauman Moscow State Technical University,	72	Certificate
		Almaty, C 23.01-	Bauman Moscow State Technical	72	Certificate

		13.02.2021	University,		
		Almaty, 01.01-23.01.2021	AUPET, Institute for Professional Development	72	Certificate
		KRASNOYARSK RUSSIA, 2022	RESHETNEV UNIVERSITY	72	Certificate
		FRANCE, PARIS, 2022	UNIVERSITÉ VERSAILLES	72	Certificate
		Almaty, 2023	JSC NCSRT	72	Certificate
		Almaty, 2023	JSC NCSRT and the Aerospace Committee	72	Certificate
4	Azilkiyasheva Marzhan Mukhtarbekovna	Almaty, 2021	AUPET, Institute of Professional Development	72	Certificate
		Almaty, 2021	Engineering MSTU named after Bauman, MSTUB-2021004	72	Certificate
		Turkestan, 2021 August	A. Yassawi University #02601	72	Certificate
		Astana, 2022	Galam LLP	72	Internship
		Almaty, 2023	JSC NCSRT	72	Certificate
		Almaty, 2023	JSC NCSRT and the Aerospace Committee	72	Certificate
5	Әsilkhan Әdilkhan Dosmakhanbetuly	Almaty, 2021	AUPET, Institute of Professional Development	72	Certificate
		Almaty, 2021	Engineering MSTU named after Bauman, MSTUB-2021056	72	Certificate
		KRASNOYARSK RUSSIA, 2022	RESHETNEV UNIVERSITY	72	Certificate
6	Әden Alisher Yerboluly	Almaty January 23 - February 13, 2021	Engineering of the Bauman Moscow State Technical University	72ч	Certificate
		Almaty January 25 - February 12, 2021	Bauman Moscow State Technical University Engineering Room	72ч	Certificate
		KRASNOYARSK RUSSIA, 2022	RESHETNEV UNIVERSITY	72	Certificate
7	Myrzabekov Kenzhebek	Almaty, 2023	JSC NCSRT	72	Certificate
		Almaty, 2023	JSC NCSRT and the Aerospace Committee	72	Certificate

Experts note very weak implementation of the program of "academic mobility of students".

The University has a University Career Center. Its main tasks are: interaction with employers on the issues of internship, internships, employer participation in the organization of the educational process; organization of consulting activities on career guidance and employment issues; organization of activities that promote the subsequent successful employment of graduates; organization of activities to study and disseminate the best practices of career guidance work among students and employment of graduates.

The University has the opportunity to support students with high academic performance and active research work with the help of such academic incentives as personal scholarships, grants of the rector, benefits provided by the social package for students, diplomas and letters of appreciation. The departments pay attention to the gifted master students and take into account and support their interests, wishes, ideas, projects.

All types of professional practices are planned and conducted in accordance with the academic calendar of the university and working curricula, for which the working programs and methodological guidelines are drawn DP and approved, containing a detailed list of tasks for students, requirements for the practice, the content of the practice, types of reporting documentation, samples of registration of reporting documents, etc. The departments have concluded long-term agreements with leading companies to provide places of practical training, which also subsequently contributes to the employment of graduates. The departments are constantly searching for new partners for the organization of internship bases.

To date, there is a list of practice bases, with which agreements on professional practice of students are concluded. students have practice in the following companies: "Saiman Corporation" LLP, "Ghalam" LLP, RSE on PCV "Institute of Mechanics and Machine Science named after Academician U.A. Joldasbekov", JSC "Kazakhstan Farysh Sapary", JSC "National Center for Space Research and Technologies", etc.

In the implementation of the program special attention is paid to the involvement of students in the implementation of research and development. Master and doctoral students are actively involved in the implementation of scientific, grant projects and projects of program-target financing.

In order to provide assistance in employment, the AUPET organizes job fairs twice a year. More than 50 enterprises of different forms of ownership take part in the job fairs. AUPET students can directly interview specialists present at the fair, as well as view vacancies available in the companies of the university's partners.

Since 2009, the work of the Alumni Association, which is headed by the Board of Trustee Alumni, has been intensified. The main functions of the Association are: to organize interaction with employers within the framework of adaptation of the educational process to the market requirements; involvement of graduates in the implementation of degree programs as thesis supervisors, reviewers, Chairmen and members of certification commissions; to organize practical training and employment of students; image support of graduates; formation of corporate culture of graduates; organization of patronage and support of socially vulnerable groups of students. On the website of the University there is a page "Association of graduates of JSCO AUPET" with its regulation on the Alumni Association of Almaty University of Power Engineering and Telecommunication (AUPET), approved by the order of the Rector of AUPET № 147 from "October 14", 2015. The Alumni Association meets once a year. Members of the Alumni Association annually participate in the event "Graduate Day" of the University, take part in the meetings of the commission on employment of graduates and other events held by the University.

Analytical part

The university has demonstrated the policy of forming the contingent of students. The current model of formation of the contingent of students corresponds to the legislation of RK, is based on the principle of transparency, unity, systematic. The university regulates the procedures that ensure the life cycle of students (from enrollment to completion).

The DP management demonstrated effective interaction with the practice bases, which resulted in the opening of a branch of the department at the enterprise.

The university provides the opportunity for external and internal mobility of DP students. For the development of interaction between internal and external mobility memorandums and agreements are concluded.

EEC experts note the need to develop the implementation of the program "Academic mobility of students" and foreign scientific internships within the framework of the 5th cluster.

In the course of interviews with graduates of accredited DPs, low awareness of the University Alumni Association activities was established.

Questioning of students showed that only 53.8% of students are fully satisfied with the availability of academic advising; 92.3% express full satisfaction with the quality of academic programs of the DP; 84.6% of students express full satisfaction with the quality of services provided in libraries and reading rooms.

Strengths / Best Practices:

Not observed.

EEC recommendations for DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies":

1. Continue the work on involvement of master's and doctoral students in the implementation of contractual and state budget funded research projects. *Deadline - annually.*

2. To increase the academic mobility of students within the framework of the program by increasing the number of domestic and foreign partner universities. *Deadline - from the beginning of 2024-2025 academic year.*

EEC Conclusions:

12 criteria are disclosed for the standard "Learners", of which for DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies": all 12 criteria have a satisfactory position.

6.7 "Faculty" Standard

- ✓ *The HEI should have an objective and transparent personnel policy, including in the context of DPs, including recruitment, professional growth and development of staff, ensuring professional competence of the entire staff.*
- ✓ *The HEI should demonstrate the compliance of the staff potential of the academic staff with the HEI development strategy and the specifics of the DP.*
- ✓ *The management of the DP should demonstrate an awareness of responsibility for its employees and ensuring a favorable working environment for them.*
- ✓ *DP leadership must demonstrate a change in the role of the instructor due to the shift to student-centered learning.*
- ✓ *The university should determine the contribution of the teaching staff of the DP to the implementation of the university development strategy, and other strategic documents.*
- ✓ *The university should provide opportunities for career growth and professional development of the teaching staff.*
- ✓ *The DP management should involve practitioners of relevant industries in teaching.*
- ✓ *The DP leadership should ensure that there is a focused effort to develop young faculty members.*
- ✓ *The university should demonstrate the motivation of professional and personal development of the teachers of the DP, including the encouragement of both the integration of scientific activity and education, and the application of innovative teaching methods.*
- ✓ *An important factor is the active application of information and communication technologies in the educational process (e.g., on-line learning, e-portfolio, MDP, etc.).*
- ✓ *An important factor is the development of academic mobility within the framework of the DP, attracting the best foreign and domestic teachers.*
- ✓ *An important factor is the involvement of the teaching staff of the DP in the life of society (the role of teaching staff in the education system, in the development of science, the region, the creation of a cultural environment, participation in exhibitions, creative competitions, charity programs, etc.).*

Evidentiary part

Degree programs of cluster 5 have an objective and transparent objective and transparent personnel policy, including recruitment, professional growth and development of personnel, ensuring professional competence of the entire staff. The AUPET HR policy is developed in accordance with the university development strategy, provisions of the JSCO AUPET HR policy, and represents the main directions and approaches of HR management for the realization of the mission and strategic goals stated by AUPET.

The personnel policy is reflected in the following documents of the University: Development Strategy of Almaty University of Power Engineering and Telecommunications AUPET named after G.Daukeyev, Internal Labor Regulations of Almaty University of Power Engineering and Telecommunications named after G.Daukeyev, Collective Agreement between the employer (AUPET) and the RPC, Rules of competitive replacement of positions of academic staff and researchers, Regulations on election to the position of Acting Associate Professor, Acting Professor of AUPET, Instruction on the procedure of imposing disciplinary sanctions on employees, Methodology for determining allowances.

The management of the DP has demonstrated the compliance of the qualitative composition with the established qualification requirements of the university strategy and development. Teachers have the necessary qualifications and experience related to the accredited degree programs, which guarantees a high level of teaching quality.

The University attracts specialists from industry for teaching and scientific supervision of master's and doctoral students. Among the attracted specialists are Nurguzhin M.R. - PhD, Professor Chairman of the Board of JSC "National Center for Space Research and Technologies; Bibosinov A.J. - PhD, Associate ProfessorDeputy Chairman of the Science Committee; Ospanov S.S. - PhD, Associate Professor of VNS, JSC "National Center for Space Research and Technologies; Bekmukhametov B.E. - PhD, Associate Professor, Director of the Department of Earth Remote Sensing, JSC "National Center for Space Research and Technologies; Ongarbaeva M.M. - Master, Senior Lecturer, NS, Institute of Space Engineering and Technologies; Moldabekov M.M. - Doctor of Science, Professor, GNS, Institute of Space Engineering and Technologies; Rakhym N. - Master, Senior Lecturer, NS, Institute of Combustion Problems; Askaruly K. - Master, Senior Lecturer, NS, PCV "Institute of Combustion Problems".

The number of regular academic staff in 2023-2024 academic year, leading classes in the specialty DP 7M07107 "Space Engineering and Technologies" is 16 teachers, 9 of them have a scientific degree.

The staff schedule of the faculty of the Department of EI is determined from the total amount of hours and the average annual load of academic work for one staff unit in the amount of 680 hours. According to the staff schedule for the 2023/2024 academic year was planned 18 units of faculty members, including: head of the department, associate professor PhD - 1, professor, Ph. PhD - 2, Associate Professors, Candidate of Technical Sciences - 1, Associate Professors of AUPET - 1, Senior Lecturers - 4, Lecturers - 3. The average age of all faculty members of the Department of EI is 40 years, the average age of regular faculty members is 43 years. And the average age of tenured full-time faculty members is 50 years old. All teachers of the department have basic education, corresponding to the profile of the department. The main composition of the faculty of the department is stable and the vast majority of teachers have been working at the university for many years.

The required level of faculty competence is determined by the volume of scientific production, the number of publications, including those in rating journals with non-zero impact factor, in CCSN journals, publications in foreign and domestic editions, participation of faculty in conferences of foreign and neighboring countries, published monographs, textbooks and teaching aids, etc. The level of competence of faculty members is determined by the number of publications.

The University management pursues a transparent, democratic policy towards the teachers, aimed at creating a favorable atmosphere for fruitful labor activity ("Collective Agreement"). According to the Regulations on Bonuses and payment of additional allowances for employees of AUPET named after G. Daukeyev for conscientious performance of functional duties, continuous impeccable work, innovation in labor and for other achievements, employees are encouraged: issuing bonuses, providing financial assistance, awarding a certificate of merit, submission for the title "Honorary Worker of Education of the Republic of Kazakhstan", "Best Teacher of the University". For example, candidate of technical sciences, associate professor Baikenov B. S., in 2023 was awarded a medal.

Social support of the employees is provided by the management of the DP through the Trade Union of AUPET employees named after G. Daukeyev. The trade union provides financial assistance to the teaching staff for the organization of general cultural events, as well as for other university events. The members of the trade union of the university are provided with financial assistance (in case of treatment in health centers, jubilees - 65 years old and older, difficult family situation associated with the illness of the employee, for funerals of close relatives, etc.). During winter and summer vacations, the University employees are provided with preferential vouchers for sanatorium-resort treatment within Kazakhstan.

Auditorium load in the total volume is approximately 60-80% of the total load for the year. Fulfillment of the Planned annual and semester load of teachers is recorded by each teacher in the "Journal" section of Platonus, The quality of filling out the journal, completeness and accuracy of the workload performed and recorded in the journal is checked by the head of the department, the Department of Academic Affairs and the office-registrar.

The departments of EI, CI develop plans for professional development of teaching staff for each academic year, which is recorded in the work plans of the departments. Training and professional development of teaching staff is carried out through short-term seminars, courses and internships at leading universities and enterprises in Kazakhstan and abroad. Experts note the stable professional development of the academic staff of the 5th cluster within the MOS profile disciplines, which is confirmed by certificates.

The academic staff of DP 5 cluster have international certificates confirming their knowledge of English: Seisenova D. - TOEFL ibt 73; Kadyrzhan K.. - TOEFL ibt 79; Karimoldanova M. - TOEFL ibt 73; - Zhetenbaev N. - TOEFL ibt 79.

Support for research and consulting activities is provided by the Center for Scientific Research and Technologies Development under the guidance of the Vice-Rector for Research and Innovation. This center considers applications of scientific groups for participation in R&D, provides information on the demanded topics of R&D, helps in processing applications for participation in commercial R&D. The issues on R&D are considered at the Academic Council of the University. The degree programs of the 5th cluster are implemented 7 scientific projects, including grant projects for 2021-2023, the program "Zhas Falym" for 2022-2024 and contractual projects. The teaching staff of degree programs of cluster 5 received 18 patents and 1 copyright certificate.

For the period 2021-2024. Faculty members of the Department of EI were published 16 publications in international peer-reviewed scientific journals with a CiteScore of at least 35 in the Scopus database. And also 17 publications in journals recommended by COCNVO. 3 faculty members have good h-index in SCEPUS/WoS database (Zhauyt A. - 6, Orazalieva S. - 5, Yusupova S. - 3). 4 textbooks and 10 methodical instructions for laboratory works were published in Russian, Kazakh and English languages.

For the period of 2021 - 2024. Faculty members of the Department of KI were published 27 publications in the journals indexed by Scopus database, 26 publications in the proceedings of international conferences and 45 articles in the journals recommended by KOCNVO. 5 faculty members have a good h-index in the SCEPUS/WoS database (Tolandiuli S. - 4, Ivanov K.S. - 5, Ismail E.E. - 3, Kosbolov S. - 3, Askaruly K. -5). 4 monographs, 20 textbooks and more than 50 methodological developments were published.

Analytical part

Analysis of the qualitative state of human resources in different years demonstrates its stability. The University actively carries out systematic work on training and professional development of academc staff. One of the key aspects of staff formation is the maintenance of academic continuity, which implies the training of its own staff by studying at master's and PhD programs, as well as their subsequent involvement in scientific and pedagogical activities.

To stimulate faculty members in academic mobility programs, foreign internships, joint scientific research with foreign partners and international projects, there is the GNI. At the same time, the EEC notes the need to strengthen the implementation of the program of outgoing - external and internal academic mobility of the academic staff.

The university actively practices the system of supervisory visits to classes by representatives of the department.

The university implements a policy of maintaining professional standards and ethics through regulations.

The analysis of qualitative and quantitative composition of academic staff on training allows us to draw the following conclusions: PPPs of DP 5 cluster actively conduct research and development activities. Moreover, their active participation in research activities contributes not only to the expansion of knowledge and experience, but also to the application of the results obtained in the educational process.

Strengths / Best Practices:

1. Notobserved

6.8 Standard "Educational Resources and Student Support Systems"

- ✓ *The DP management must demonstrate the adequacy of logistical resources and infrastructure.*
- ✓ *The DP management must demonstrate the availability of support procedures for different groups of learners, including information and counseling.*
- ✓ *The DP management must demonstrate the relevance of information resources to the specifics of the DP, including compliance:*
- ✓ *Technologies support for students and academic staff in accordance with the degree programs (e.g., online learning, modeling, databases, data analysis programs);*
- ✓ *library resources, including the fund of educational, methodological and scientific literature on general education, basic and specialized disciplines in paper and electronic media, periodicals, access to scientific databases;*
- ✓ *examination of the results of Scientific Research, graduate works, dissertations for plagiarism;*
- ✓ *access to educational Internet resources;*
- ✓ *functioning of WI-FI on the territory of the educational organization.*
- ✓ *The university must strive to ensure that the educational equipment and software tools used to master degree programs are similar to those used in the relevant industries.*
- ✓ *The University is obliged to ensure compliance with safety requirements in the learning process.*
- ✓ *The University is obliged to strive to take into account the needs of different groups of students in the context of DP (adults, working, foreign students, as well as students with disabilities).*
- ✓

Evidentiary part

Training laboratories of DP 8D07104 "Instrumenation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies" have the necessary equipment for the implementation of degree programs, which was demonstrated during the visit to the laboratories and departments of cluster 5. It should be noted that the material and technical resources of DP cluster 5 are the basis for ensuring the quality of training and fully comply with the educational standards.

Evidence was presented that the DP management annually plans and allocates significant financial resources to modernize and strengthen the existing material and technical base of teaching and research laboratories.

The department of "Electronic Engineering" for the quality conduct of classes on the DP has: 8 educational laboratories.

Laboratory "Instrumentation and automation" B-419, equipped with stands "Pneumatics (Comozzi)" and controllers SIEMENS, for the study of control and control measurement devices and automation of their control in the subjects "Fundamentals of automatic control", a new stand, "Industrial controllers in hydraulic drive systems".

Laboratory "Programmable logic controllers and SCADA-systems" B-419a, equipped with SIEMENS stands, industrial controllers SIEMENS S300, S1500, for studying subjects "Industrial controllers" "Theory of computer-aided design".

Laboratory "Measurement Technologies" B-422, equipped with a stand on "Modern means of measurement of physical quantities" and computers with software LabView 7.5, for conducting classes on the subjects "Fundamentals of measurement theory", "Measurement theory", "Measurement of electrical quantities", "Measurement Technologies", "Probability theory in instrumentation", "Probabilistic and statistical methods in instrumentation", "Fundamentals of modeling devices in LabVIEW".

Laboratory "Microcontrollers and signal microprocessors" B-424, equipped with stands "Texsas instruments" and computers to study the basics of programming microcontrollers and signal microprocessors.

Laboratory "Microelectronics" B-421, equipped with stands of the company "DEGEM SYSTEM with a set of boards for practical and laboratory classes", oscilloscopes, multimeters and computers to study the basics of electronics, analog and digital circuitry, microelectronic

elements and systems.

Laboratory “Modeling of devices and systems” B-426, equipped with FPGA stands and computers to work on the subjects of “Modeling of devices and systems”, “Modeling of robotic systems”, “Basics of CAD in instrumentation”,

Demo versions of the following programs are installed on all computers for laboratory works: ProteusVSM, MathCad, MatLab, DOS-box, SimaticManager (Step7), SimaticWinCCflexible 2008, ICCV7 forAVR, AVRStudio 4, TIAPortalV11 and others.

Laboratory B-427, NIRS - equipped with soldering stations, forced extraction, oscilloscopes, a set of tools, etc. Milling and engraving machine - 1 unit in a set with computers - Designed for the manufacture of electronic boards and other products Laser machines -2 pcs. equipped with 3D printers - 4 units Laboratory B-428 - laboratory “Robotics and Mechatronics” - equipped with a model block 3D printers - 1 unit. computer.

Department of “Space Engineering” has: 4 educational laboratories.

Laboratory “Computer and 3D modeling” A-418 and A-420. In the computer laboratories of the Department of Space Engineering the students perform SRS and laboratory works, including virtual ones. Licensed software AutoCad, Solidworks, applied training program on space exploration and intelligent robotic systems are installed.

Laboratory of means of orientation and navigation of aircraft. A-419 and A-421, is equipped with the following stands: Inertial navigation, geomagnetic navigation, solar panel orientation systems-solar sensor, star sensor, microsatellite orientation system, sensors for determining the position in space.

AUPET computer and logistical resources consist of: 37 computer classrooms for 456 workplaces; 3 lecture multimedia classrooms for 250 workplaces; 2 lecture auditoriums for 220 workplaces; 3 language laboratories for 84 workplaces; 7 interactive classrooms for 120 workplaces; 5 TV classrooms for 550 workplaces.

A video surveillance system has been implemented in buildings A, B, D, as well as in all dormitories to ensure the safety of students and academic staff.

However, based on interviews with the academic staff and students of all clusters during the accreditation procedure, EEC experts note the need to pay special attention to the issue of providing coverage of all areas of the university with high-speed Internet and access to Wi-Fi.

The University Library provides 6 points of library and information service for students - a subscription, three specialized reading rooms, a hall of electronic resources “Mediatheque” and a reading room for extracurricular activities in dormitory No. 1. The total area of the Library premises is 1078.9m2 and 226 seats. The library has 31 computers connected to the Internet, four scanners, two MFPs and two printers, a projector, barcode equipment.

The total library fund of the library is 598454 copies, including 217278 copies in Kazakh language, 1928 copies in foreign languages. A significant share of the library fund is represented by own editions of the works of the academic staff , which are presented both in traditional (paper) and electronic form.

Library processes are organized with the help of the automated integrated library system (AIBS) “Mega Pro”.

Financing of Degree programs is made in a timely manner, both at the expense of budgetary funding and from the income from the provision of paid educational services. Every year the academic staff participates in competitions of research or other works organized by the Committee of JSC “Science Fund” Ministry of Science and Higher Education of the Republic of Kazakhstan.

University management pays great attention to the observance of safety rules and labor protection, sanitary and technical measures to improve working conditions and safety in order to bring workplaces in compliance with the requirements of current regulations on labor protection and safety.

Safety requirements for the operation of equipment at the university are determined by the Operation and Maintenance Service. Safety requirements are regulated by safety and fire

safety instructions approved by the service and the Vice-Rector. These instructions are posted in specialized laboratories on stands and on the internal website of the University.

Identification of students' needs is carried out in accordance with the Law of RK on Education and are met through their choice of subjects, academic and elective courses, extracurricular activities and associations in the system of additional education. The University takes into account the needs of different groups of students, such as working, international students, students with disabilities and gifted students.

Analytical part

Experts note the sufficiency of the material and technical base, resources and infrastructure of the departments to ensure the quality of training of students at various levels and support systems for students, including the competence of the involved staff. Graduating departments of the considered DP have a sufficient number of classrooms equipped with modern technical means of education, including teaching and research laboratories. The Commission notes the sufficiency of the created conditions of the learning environment, reflecting the specificity of the DP.

The AIS “Platonus” is used to manage the educational process. For the examination of the results of research and development, dissertations, the mandatory plagiarism check is used. The Institute of Space Engineering and Telecommunication provides safety conditions for students and the academic staff in educational buildings and dormitories.

The library fund in the Kazakh language for DP of cluster 5 is annually replenished through the publication of own literature by the university’s academic staff. However, this approach is considered insufficient.

At the meeting with all target groups, the problem of unstable work of Wi-Fi network in the university, organization of catering in all buildings of AUPET was unanimously voiced.

Strengths / best practices:

1. Sufficiency and high level of logistical equipment of program facilities that meets modern standards.

EEC recommendations for DP 8D07104 “Instrumentation”, 7M07107 “Space Engineering and Technologies”, 8D07105 “Space Engineering and Technologies”:

1. To strengthen the work on support and development of the library book fund in the state language for DP 8D07104 “Instrumentation”, 7M07107 “Space Engineering and Technologies”, 8D07105 “Space Engineering and Technologies”. Term - from the beginning of 2024-2025 academic year and continue on a permanent basis.

2. The university management should ensure the functioning of Wi-Fi on the territory of the university. Deadline - September 2024.

3. The university management should analyze the available resources and organize the expansion of recreation areas for students. Deadline - September 2024.

EEC conclusions:

According to the standard “Educational Resources and Student Support Systems” 13 criteria are disclosed, of which for 8D07104 “Instrumentation ”, 7M07107 “Space Engineering and Technologies”, 8D07105 “Space Engineering and Technologies”: 1 criterion has a strong position, 10 criteria have a satisfactory position, 2 positions require improvement.

6.9 Standard "Public Information"

- ✓ *Information published by the HEI within the framework of the DP must be accurate, objective, up-to-date and must include:*
- ✓ *programs being implemented, indicating the expected learning outcomes;*
- ✓ *information on the possibility of awarding qualifications upon completion of the DP;*
- ✓ *information about teaching, learning, assessment procedures;*
- ✓ *information on passing grades and learning opportunities provided to students;*
- ✓ *information on employment opportunities for graduates.*
- ✓ *The management of the DP should use a variety of means of information dissemination, including mass media, information networks to inform the general public and stakeholders.*
- ✓ *Informing the public should provide support and explanation of the national development programs of the country and the system of higher and postgraduate education.*
- ✓ *The University is obliged to publish on its own web resource audited financial statements, including in the context of the DP.*
- ✓ *The university must demonstrate the reflection on the web resource of information characterizing the university as a whole and in the context of degree programs.*
- ✓ *An important factor is the availability of adequate and objective information about the academic staff of DP, in the context of personalities.*
- ✓ *An important factor is informing the public about cooperation and interaction with partners within the framework of the DP, including scientific/consulting organizations, business partners, social partners and educational organizations.*
- ✓ *The HEI should place information and links to external resources on the results of external evaluation procedures.*
- ✓ *An important factor is the participation of the HEI and the implemented Programms in various external evaluation procedures*

Evidentiary part

NJSCo AUPET has implemented principles of competent content management, focused on the target audience of Kazakh-, Russian- and English-language versions of the site in order to expand the geography of representation of the University, create a favorable marketing environment, optimize communication costs and develop a system of relationships with partners. The site provides detailed background information about the university, institutes and departments that implement DP of this cluster, where interested parties can find answers to their questions on educational resources and other activities of the university.

The information is published on the website (https://AUPET.kz/) and in social networks telegram, contact, youtube and Instagram.

Information for the public about the University's DP is also available through booklets, information stands, banners, advertising and image articles in the media. In social networks Instagram and telegram the university pages are open, where the latest relevant information about the events held at the university and the events in which the university participates is posted.

The website regularly posts information on academic mobility, on competitions for various scholarships, grants, on enrollment in language courses, etc. The information on the University's Internet resources is prepared by the structural units concerned.

Preparation of information for posting on the Internet resources of the University, except for the information posted by academic departments and teachers on the educational portal, is carried out by the interested structural units. The information is presented in three language versions: Kazakh, Russian and English.

For applicants are placed programs of study, conditions of admission, deadlines for admission of documents in the admission committee, a list of required documents, contacts of the admission committee. Students and the academic staff receive information about events taking place at the university, dormitories, access to the educational portal.

On the page https://AUPET.kz/?page_id=13296 there are published syllabuses for all

disciplines of DP in three languages, where the content, plan and methodology of evaluation of students' work are described.

On the page of the Department of Practice and Employment https://AUPET.kz/?page_id=4580 various vacancies of partner companies are presented, where interaction with employers takes place.

Communication with alumni is maintained in different ways: through the alumni association, meetings, telephone communication, e-mail, use of powerful social networking opportunities.

External evaluation of the quality of HEI activity and satisfaction of consumers of educational services is carried out through attestation, certification and accreditation of HEI and degree programs and participation in ratings. Participation of the HEI in the ratings is a guarantee of sustainable quality.

Analytical part

The website of the university contains links to significant information resources of the university, full-text electronic information systems and other resources useful for the educational and scientific process. The AUPET website publishes reliable, objective, up-to-date information about the considered DP, which reflects the expected learning outcomes of the implemented DP; qualification and (or) qualifications to be awarded upon completion of the degree program; teaching, learning approaches, as well as the system (procedures, methods and forms) of evaluation; information about the passing grades and learning opportunities provided to students; information about employment opportunities for graduates.

The DP management provides various ways of information dissemination, including mass media, information networks to inform the general public and interested parties, however, the university management needs to take targeted actions to improve the filling of relevant information within the departments and on the specifics of the DP, the implementation of the DP on the website of the university, as the web page of the department has tabs on the direction of activity, which contain outdated information.

In addition, it is noted that there is no publication of reliable information about the academic staff in terms of personalities on open resources. The information about the academic staff is available only on a closed intra-university portal.

Strengths / best practices:

None observed.

EEC recommendations for DP 8D07104 “Instrumentation”, 7M07107 “Space Engineering and Technologies”, 8D07105 “Space Engineering and Technologies”:

1. It is recommended to the DP management to conduct a systematic internal monitoring of the university website and to assess to what extent the available information resource meets modern requirements, goals and objectives of the university as a whole and in the context of degree programs. Term - on a permanent basis.

2. It is recommended that the DP management should ensure regular and timely updating of information on changes in DP programs, research projects, publications and information about the staff on the university website. Term - on a permanent basis.

EEC Conclusions:

12 criteria are disclosed for the standard “Public Awareness”, of which for DP 8D07104 “Instrumentation”, 7M07107 “Space Engineering and Technologies”, 8D07105 “Space Engineering and Technologies”: 10 criteria have a satisfactory position, 2 positions - require improvement.

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

Standard "Degree Program Management"
not observed.

Standard "Information Management and Reporting"
not observed.

Standard "Development and approval of degree programs"
not observed.

The standard "Continuous monitoring and periodic evaluation of educational programs"
not observed.

The standard "Student-Centered Learning, Teaching, and Assessment of Learning"
not observed.

The standard "Learners"
not observed.

The standard "Academic Staff"
not observed.

The standard "Educational Resources and Student Support Systems"
1. Sufficiency and high level of program facilities that meet current standards.

The standard "Public Awareness"
not observed.

(VIII)REVIEW OF QUALITY IMPROVEMENT RECOMMENDATIONS FOR EACH STANDARD

For the standard "Degree Program Management":

EEC recommendations for 8D07104 Instrumentation , 7M07107 Space Engineering and Technologies, and 8D07105 Space Engineering and Technologies:

1. The DP management should update the Strategic Development Plan on the University website. The deadline is May 2024.

2. The DP management should revise the elaboration of the DP development plan with the definition of specific target, time indicators of achievement, with the definition of those responsible for their achievement with the participation of external stakeholders in the discussion. Deadline - September 2024.

According to the standard "Information Management and Reporting":

EEC Recommendations:
not available

For the standard "Development and approval of degree program":

EEC recommendations for DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies":

1. It is necessary to include measures on introduction of dual training system into the development plans of each DP and start their realization. The deadline is till 2025.

2. To include in the development plans of DP 7M07107 "Space Engineering and Technologies" and 8D07105 "Space Engineering and Technologies" the measures on creation of joint degree programs with foreign universities. Deadline - until 2025.

3. To analyze similar degree programs of Kazakhstan and foreign universities and modernize the titles and content of disciplines. Deadline - by the beginning of 2024-2025 academic year.

According to the Standard "Continuous monitoring and periodic evaluation of degree programs":

EEC recommendations for 8D07104 Instrumentation , 7M07107 Space Engineering and Technologies, 8D07105 Space Engineering and Technologies:

1. The DP management should develop, implement and further keep up-to-date the procedure for informing stakeholders about changes in accredited DPs, including identification of the most effective mechanisms of informing. Deadline - from the beginning of the 2024-2025 academic year and to be continued on an ongoing basis.

On the Standard "Student-Centered Learning, Teaching and Assessment of Learning":

EEC recommendations for DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies":

1. The management of DP 8D07104 "Instrumentation", 7M07107 "Space Engineering

and Technologies", 8D07105 "Space Engineering and Technologies" should continuously monitor the applied methods of teaching specialized disciplines in order to improve the quality of teaching and provide forms of motivation for teaching staff. Deadline - from the beginning of 2024-2025 academic year.

2. Include in the development plans the activities on the development and implementation of the academic staff's own research in the field of teaching methods of teaching disciplines. Provide for training seminars and professional development courses for the academic staff in this area. Deadline - until 2025.

3. Strengthen the work on the realization of internal and external academic mobility of academic staff and students. Deadline - annually

According to the Standard "Learners":

EEC recommendations for DP 8D07104 Instrumentation, 7M07107 Space Engineering and Technologies, 8D07105 Space Engineering and Technologies:

1. To continue the work on attraction of master's and doctoral students in fulfillment of contractual and state-budget financed for scientific research . Deadline - annually.

2. To increase the academic mobility of students within the framework of the program by increasing the number of domestic and foreign partner universities. Term - from the beginning of 2024-2025 academic year.

According to the Standard "The Academic staff ":

EEC recommendations for DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies":

1. It is recommended to include in the degree program development plans the activities on attracting foreign faculty members for conducting classes and for implementation of joint research projects. Term - from the beginning of 2024-2025 academic year.

According to the Standard "Educational Resources and Student Support Systems":

EEC recommendations for DP 8D07104 "Instrumentation ", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies":

1. To strengthen the work on support and development of the library book fund in the state language for DP 8D07104 "Instrumentation", 7M07107 "Space Engineering and Technologies", 8D07105 "Space Engineering and Technologies". Term - from the beginning of 2024-2025 academic year and continue on a permanent basis.
2. 2. The university management should ensure the functioning of Wi-Fi on the territory of the university. Deadline - September 2024.
3. 3. The university management should analyze the available resources and organize the expansion of recreation areas for students. Deadline - September 2024.

According to the Standard " Public Awareness":

EEC recommendations for DP 8D07104 Instrumentation , 7M07107 Space Engineering and Technologies, 8D07105 Space Engineering and Technologies:

1. It is recommended to the DP management to conduct a systematic internal monitoring of the university website and to assess to what extent the available information resource meets modern requirements, goals and objectives of the university as a whole and in the context of degree programs. Term - on a permanent basis.

2. It is recommended that the DP management should ensure regular and timely updating of information on changes in DP, research projects, publications and information about the academic staff on the university website. Term - on a permanent basis.

(IX) RECOMMENDATIONS TO THE ACCREDITATION COUNCIL

Annex 1: Evaluation table "PARAMETERS OF SPECIALIZED PROFILE"

п\п	\п	Evaluation criteria	Position of the educational organization			
			Strong	Satisfactory	Assumes improvement	Unsatisfactory
Standard "Degree Program Management"						
1	1.	The university should demonstrate the development of the goal and strategy of the DP development based on the analysis of external and internal factors with wide involvement of various stakeholders		+		
2	2.	Quality assurance policies should reflect the link between research, teaching and learning		+		
3	3.	The university demonstrates the development of a quality assurance culture		+		
4	4.	Commitment to quality assurance should apply to all activities carried out by contractors and partners (outsourcing), including in the implementation of joint/bilateral education and academic mobility		+		
5	5.	The management of the DP ensures the transparency of the development plan of the DP based on the analysis of its functioning, the real positioning of the university and the orientation of its activities to meet the needs of the state, employers, stakeholders and students		+		
6	6.	The DP management demonstrates the functioning of mechanisms of formation and regular revision of the DP development plan and monitoring of its implementation, assessment of the achievement of learning objectives, compliance with the needs of students, employers and society, decision-making aimed at continuous improvement of the DP		+		
7	7.	The DP management should involve representatives of stakeholder groups, including employers, students and academic staff in the formation of the DP development plan		+		
8	8.	The management of the DP should demonstrate the individuality and uniqueness of the DP development plan, its alignment with national development priorities and the development strategy of the educational organization			+	
9	9.	The university should demonstrate a clear definition of those responsible for business processes within the DP, distribution of staff job responsibilities, delineation of functions of collegial bodies		+		
10	10.	The management of the DP ensures that the activities of all persons involved in the development and management of the DP are coordinated and continuously implemented, and that all stakeholders are involved in the process		+		
11	11.	The management of the DP should ensure transparency of the management system, functioning of the internal quality assurance system, including its design, management and		+		

		monitoring, and appropriate decision making				
12	12.	The management of the DP should carry out risk management		+		
13	13.	The DP management should ensure the participation of representatives of stakeholders (employers, faculty, students) in the collegial management bodies of the degree program, as well as their representativeness in decision-making on issues of degree program management		+		
14	14.	The university must demonstrate innovation management within the DP, including the analysis and implementation of innovative proposals		+		
15	15.	The management of the DP should demonstrate its openness and accessibility for students, employers and other stakeholders		+		
16	16.	The management of the DP confirms the completion of training on education management programs		+		
17	17.	The management of the DP should endeavor to ensure that the progress made since the last external quality assurance procedure is taken into account in preparation for the next procedure		+		
Total standard			**0**	**16**	**1**	**0**
Standard "Information Management and Reporting"						
18	1.	The university should ensure the functioning of the system of collection, analysis and management of information on the basis of modern information and communication technologies and software tools		+		
19	2.	DP management demonstrates systematic use of processed, adequate information to improve the internal quality assurance system		+		
20	3.	The management of the DP demonstrates the existence of a reporting system reflecting the activities of all structural units and departments within the framework of the DP, including an assessment of their performance		+		
21	4.	The university should determine the periodicity, forms and methods of evaluation of the DP management, activities of collegial bodies and structural subdivisions, top management		+		
22	5.	The university must demonstrate the mechanism for ensuring information protection, including identification of responsible persons for the reliability and timeliness of information analysis and data provision		+		
23	6.	The university demonstrates the involvement of students, employees and academic staff in the processes of collecting and analyzing information, as well as decision-making on their basis		+		
24	7.	The management of the DP should demonstrate that mechanisms for communication with learners, employees and other stakeholders, including conflict resolution		+		
25	8.	The university is obliged to ensure measurement of the degree of satisfaction of the needs of the academic staff, staff and students within the framework of the DP and demonstrate evidence of elimination of the detected deficiencies		+		
26	9.	The university should assess the effectiveness and efficiency of activities, including in the context of DP.		+		
		The information collected and analyzed by the HEI within the framework of the DP should take into account:		+		
27	10.	key performance indicators		+		
28	11.	the dynamics of the contingent of students in terms of forms and types		+		

29	12.	level of academic performance, students' achievements and expulsions		+		
30	13.	students' satisfaction with the implementation of the degree program and the quality of education at the university		+		
31	14.	Accessibility of educational resources and support systems for learners		+		
32	15.	employment and career development of graduates		+		
33	16.	Students, staff and academic staff must document their consent to the processing of personal data		+		
34	17.	The management of the DP should help to ensure that all necessary information is available in the relevant fields of sciences		+		
Total standard			**0**	**17**	**0**	**0**
Standard "Development and Approval of Degree Program»						
35	1.	The university should demonstrate the existence of a documented procedure for the development of the DP and its approval at the institutional level		+		
36	2.	The university must demonstrate compliance of the developed DP with the established objectives and planned learning outcomes		+		
37	3.	The DP management should determine the influence of disciplines and professional practices on the formation of learning outcomes		+		
38	4.	The university can demonstrate the existence of an DP graduate model describing learning outcomes and personal qualities		+		
39	5.	The qualifications awarded upon completion of the DP should be clearly defined, explained and aligned with the defined level of the NSC, QF-EHEA		+		
40	6.	The DP management should demonstrate the modular structure of the program based on the European Credit Transfer and Accumulation System (ECTS), ensure that the DP, its modules (in terms of content and structure) correspond to the set objectives with orientation on achieving the planned learning outcomes		+		
41	7.	The DP management should ensure that the content of academic disciplines and learning outcomes correspond to each other and to the level of study (bachelor's, master's, doctoral studies)		+		
42	8.	The management of the DP should demonstrate the conduct of external reviews of the DP		+		
43	9.	The management of the DP should provide evidence of the participation of learners, faculty and other stakeholders in the development of the DP, ensuring its quality		+		
44	10.	The management of the DP should demonstrate the positioning of the DP in the educational market, (regional/national/international), its uniqueness			+	
45	11.	An important factor is the ability to prepare trainees for professional certification		+		
46	12.	An important factor is the availability of double degree programs and/or joint programs with foreign universities			+	
Total standard			**0**	**10**	2	0
Standard "Ongoing monitoring and periodic evaluation of degree programs"						

47	1.	The university should ensure the revision of the content and structure of the DP taking into account the changes in the labor market, the requirements of employers and the social demand of society		+		
48	2.	The University is obliged to demonstrate the existence of a documented procedure for monitoring and periodic evaluation of the DP to achieve the objective of the DP. The results of these procedures are aimed at continuous improvement of the DP		+		
		Monitoring and periodic evaluation of the DP should consider:		+		
49	3.	program content in the context of the latest advances in science and Technologies in a particular discipline		+		
50	4.	the changing needs of society and the professional environment		+		
51	5.	the workload, progress and graduation of students		+		
52	6.	effectiveness of student assessment procedures		+		
53	7.	needs and degree of satisfaction of learners		+		
54	8.	Compliance of the educational environment and the activities of support services with the objectives of the DP		+		
55	9.	All interested parties shall be informed of any planned or undertaken actions with respect to the DP. All changes made to the DP shall be published			+	
56	10.	Support services should identify the needs of different groups of students and the degree of their satisfaction with the organization of training, teaching, assessment, mastering the DP as a whole		+		
		Total standard	**0**	**9**	**1**	**0**
Student-Centered Learning, Teaching, and Assessment of Learning standard						
57	1.	The management of the DP should ensure respect and attention to different groups of learners and their needs, providing them with flexible learning trajectories		+		
58	2.	DP management should ensure teaching based on modern achievements of world science and practice in the field of training, the use of various modern methods of teaching and assessment of learning outcomes, ensuring the achievement of DP objectives, including competencies, skills to perform scientific work at the required level		+		
59	3.	The management of the DP should determine the mechanisms of distribution of the study load of students between theory and practice within the framework of the DP, ensuring the mastering of the content and achievement of the DP goals by each graduate		+		
60	4.	An important factor is the availability of own research in the field of teaching methodology of DP disciplines		+		
61	5.	The university should ensure that the procedures of assessment of learning outcomes correspond to the planned results and objectives of the DP		+		
62	6.	The University is obliged to ensure consistency, transparency and objectivity of the mechanism of assessment of learning outcomes of DP. Criteria and methods of assessment of learning outcomes should be published in advance		+		

63	7.	Evaluators should be familiar with modern methods of assessing learning outcomes and regularly upgrade their skills in this area		+		
64	8.	DP management should demonstrate a system of feedback on the use of different teaching methodologies and assessment of learning outcomes		+		
65	9.	The DP leadership must demonstrate support for learner autonomy while being guided and assisted by the instructor		+		
66	10.	DP management must demonstrate that there is a procedure in place for responding to learner complaints		+		
		Total standard	**0**	**10**	0	0
The "Learners" standard						
67	1.	The university must demonstrate the policy of forming the contingent of students and ensure the transparency of its procedures. The procedures regulating the life cycle of students (from enrollment to completion) should be defined, approved, published		+		
68	2.	The management of the DP should provide for special adaptation and support programs for new entrants and international students		+		
69	3.	The university must demonstrate compliance of its actions with the Lisbon Recognition Convention, including the existence and application of a mechanism to recognize the results of academic mobility of students, as well as the results of additional, formal and non-formal education		+		
70	4.	The university should provide opportunities for external and internal academic mobility of students, as well as assist them in obtaining external grants for studies		+		
71	5.	The university should actively encourage students to self-education and development outside the main program (extracurricular activities)		+		
72	6.	An important factor is the existence of a support mechanism for gifted students		+		
73	7.	The university must demonstrate cooperation with other educational organizations and national centers of the "European Network of National Information Centers for Academic Recognition and Mobility/National Academic Recognition Information Centers" ENIC/NARIC in order to ensure comparable recognition of qualifications		+		
74	8.	The university should provide students with internship places, demonstrate the procedure for promoting employment of graduates, maintaining contact with them		+		
75	9.	The university is obliged to demonstrate the procedure of issuing to graduates the documents confirming the obtained qualification, including the achieved learning outcomes		+		
76	10.	The DP management should demonstrate that the program graduates have skills in demand on the labor market and that these skills are indeed in demand on the labor market		+		
77	11.	The management of the DP should demonstrate the existence of a mechanism for monitoring the employment and professional activities of graduates		+		
78	12.	An important factor is the existence of an active alumni association/association		+		
		Total standard	**0**	**12**	0	0
Standard " The academic staff "						
79	1.	The university should have an objective and transparent personnel policy in the context of DP, including recruitment		+		

		(including invited the academic staff), professional growth and development of staff, ensuring professional competence of the entire staff				
80	2.	The university should demonstrate the compliance of the qualitative composition of the academic staff with the established qualification requirements, the university's strategy, and the objectives of the DP		+		
81	3.	The management of the DP must demonstrate a change in the role of the teacher due to the shift to student-centered learning and teaching		+		
82	4.	The university should provide opportunities for career growth and professional development of the academic staff, including young teachers		+		
83	5.	The university should involve in teaching the specialists of relevant industries, who have professional competencies, corresponding to the requirements of the DP		+		
84	6.	The university should demonstrate the existence of a mechanism of motivation for professional and personal development of the academic staff		+		
85	7.	The university should demonstrate a wide application of information and communication technologies and software tools in the educational process (e.g. on-line learning, e-portfolios, MOOCs, etc.).		+		
86	8.	The university should demonstrate the focus of activities on the development of academic mobility, attracting the best foreign and domestic teachers			+	
87	9.	The university should demonstrate the involvement of each faculty member in promoting the culture of quality and academic honesty in the university, determine the contribution of the academic staff, including invited ones, to the achievement of the objectives of the DP		+		
88	10.	An important factor is the involvement of the academic staff in the development of the economy, education, science and culture of the region and the country		+		
		Total standard	**0**	**9**	1	0
Standard "Educational Resources and Student Support Systems"						
89	1.	The university should guarantee the compliance of educational resources, including material and technical, and infrastructure with the objectives of the degree program		+		
90	2.	The DP management should demonstrate the availability of classrooms, laboratories and other facilities equipped with modern equipment and ensuring the achievement of DP objectives	+			
		The university should demonstrate the compliance of information resources with the needs of the university and the implemented OPs, including the following areas:				
91	3.	technological support for students and the academic staff in accordance with degree programs (e.g., online learning, modeling, databases, data analysis programs)		+		
92	4.	Library resources, including the collection of educational, methodological and scientific literature on general education, basic and specialized disciplines on paper and electronic media, periodicals, access to scientific databases			+	
93	5.	examination of the results of scientific research and development, graduate works, dissertations for plagiarism		+		

94	6.	access to educational Internet resources		+		
95	7.	operation of WI-FI on its territory			+	
96	8.	The university should demonstrate that it creates conditions for conducting scientific research, integration of science and education, publication of the results of research work of the academic staff, employees and students		+		
97	9.	The university should strive to ensure that the educational equipment and software tools used for mastering degree programs are similar to those used in the relevant sectors of the economy		+		
98	10.	The management of the DP must demonstrate that procedures are in place to support different groups of learners, including information and counseling		+		
99	11.	The management of the OP must show the presence of conditions for the advancement of the student on an individual educational trajectory		+		
100	12.	The university should take into account the needs of different groups of students (adults, working, foreign students, as well as students with special educational needs)		+		
101	13	The HEI should ensure that the infrastructure meets security requirements		+		
		Total standard	1	10	2»	0
Public Awareness Standard						
102	1.	The information published by the university should be accurate, objective, relevant and reflect all areas of the university's activities within the framework of the degree program.			+	
103	2.	Public information should support and explain the national development programs of the country and the higher and postgraduate education system		+		
104	3.	The university management should use a variety of information dissemination methods (including mass media, web resources, information networks, etc.) to inform the general public and stakeholders.		+		
		Information published by the university about the degree program should be objective and up-to-date and include:		+		
105	4.	purpose and planned results of the DP, qualification to be awarded		+		
106	5.	information and system of evaluation of students' educational achievements		+		
107	6.	information on academic mobility programs and other forms of cooperation with partner universities and employers		+		
108	7.	information on opportunities for the development of personal and professional competencies of students and employment		+		
109	8.	data reflecting the positioning of the DP in the market of educational services (at regional, national, international levels)		+		
110	9.	An important factor is the publication on open resources of reliable information about the academic staff, in terms of personalities			+	
111	10.	The university should publish audited financial statements on the DP on its own web resource		+		
11	11.	The university should place information and links to external		+		

2		resources on the results of external evaluation procedures				
113	12.	An important factor is to post information on cooperation and collaboration with partners, including scientific/consulting organizations, business partners, social partners, and educational organizations		+		
		Total standard	0	10	2	
		TOTAL	1	102	10	

Annex 2. PROGRAM OF THE VISIT TO THE EDUCATIONAL ORGANIZATION

AGREED
Rector of NJSC "Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev"
_____ Syzdykov M.K.
«___» _____ 2024 г.

APPROVE
General Director of non-profit institution "Independent Agency for Accreditation and Rating"

_____ Zhumagulova A.B.
«____» _____ 2024 г.

PROGRAMME
VISIT OF THE EXTERNAL EXPERT COMMISSION
OF INDEPENDENT ACCREDITATION AND RATING AGENCY (IAAR) NJSC
"ALMATY UNIVERSITY OF POWER ENGINEERING AND TELECOMMUNICATIONS"

1 STAGE SPECIALIZED ACCREDITATION
Date of the visit: March 11-13, 2024

Date and time	Work of EEC with target groups	Position and Surname, First Name, Patronymic of the participants of the focus groups	Contact form
March 9, 2024			
15.00-16.00 *Astana time*	Preliminary EEC meeting	*External experts of IAAR*	Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference identifier: 681 303 2588
March 10, 2024			
On	*Arrival of the members of the External Review Panel*		

schedule during the day			
20.00	*Dinner*	*External experts of IAAR*	
Day 1: March 11, 2024			
08.10-09.00	Transfer from the hotel to the University	HEI Coordinator - Azhar Yerlanovna Mankhanova (Director of Academic Affairs Department) 87772983128	
09.00-09.15	Distribution of experts' responsibilities, solution of organizational issues	*External experts of IAAR*	*Connect to the Zoom conference https://us02web.zoom.us/j/6813032588* *Conference ID: 681 303 2588*
09.15-09.45	Interview with Rector	***Rector - Murat Kanatovich Syzdykov***	Auditorium No 213 A of the building Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
09.45-10.00	Technical break		
10.00-10.40	Interviews with vice-rectors	Vice-rector for academic work - Sarenova Aigul Saparbekovna, Vice-rector for social and educational work - Kadylbekov Ermek Kamalbekuly, Rector's Chief of Staff - Esimzhanov Zhanat Kuanyshevich Esimzhanov	Auditorium No. 213 A of the building Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
10.40-10.50	Technical break		
10.50-11.30	Interviews with heads of structural subdivisions of public organizations	Digital Officer - Urazakov Margulan Maksutovich, Head of Registrar's Office - Neledva Vera Vasilievna, Financial Director - Gulziya Salatovna Rakhmetova, Director of Academic Affairs - Mankhanova Azhar Erlanovna, Head of the center of academic counseling - Kudaibergen Zhuldyz M.	Auditorium No. 213 A of the building Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588

		Kudaibergen, Director of the Department of Youth Policy - Kabi Elikbai Kasenkhanuly, Chief librarian - Natalya Stepanovna Netesova, Executive Secretary of the Admissions Committee - Almuratova Kamshat Bimuratovna.	
11.30-11.45	Exchange of views of the members of the external expert committee		Auditorium No. 210 A of the building Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
11.45-12.30	Interviews with Heads of Departments and Heads of GEP	SUPERINTENDENTS: Department of IT Engineering - Laila Muratbekovna Tukenova, Chair of Electric Power Engineering - Yernar Tanibergenovich Әmitov, Chair of Renewable and Alternative Energy Sources - Shynybai Zhandos Sapargalievich, Chair of Ecology and Management in Engineering - Abikenova Asel Amangeldievna, Chair of Space Engineering - Tolendiuly Sanat, Department of Electronic Engineering - Orazalieva Sandugash Kudaibergenovna, DEVELOPERS OF OP: DP Entrepreneurship in Engineering - head Nurmuratova Laura Syreuovna, DP Life Safety and Environmental Protection - Elena Tyshchenko, Electric Power Engineering - Bashkirov Mikhail Vladimirovich, Electric Power Systems - Yertugan Kozhagulovich Umbetkulov, Electric power systems - Lyazzat Shynbolatovna Uteshkalieva, Computer Science and Software - A.U. Utegenova, Renewable energy technologies - Soltanaev A., Automated electromechanical systems - N.K. Almuratova, Modern innovative technologies of renewable energy - Tergemes K.T. Instrumentation - Yusupova S.A.	Auditorium No. 213 A of the building
12.30-13.00	Work of the EEC	*External experts of IAAR*	Auditorium No 213 A of the building . Connect to the Zoom conference

			https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
13.00-14.00	Lunch		
14.00-14.15	Exchange of views of the members of the external expert committee		Auditorium No 213 A of the building Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
14.15-15.00	Interviews with BEP the academic staff	*Annex 1*	Auditorium No 213 A of the building Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
15.00-15.15	Technical break		
15.00-16.00	Questionnaire survey of academic staff (in parallel)	*Annex 1*	The link is sent to the faculty member's e-mail address personally
15.15-16.00	Interviews with BEP learners	*Annex 2*	Auditorium No 213 Building A Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
16.00-17.00	Questioning of students (in parallel)	*Annex 2*	The link is sent to the e-mail address of the trainee personally
16.15-18.00	Visual inspection of the GE and material-technical and training-laboratory facilities	*Itinerary* *Annex 3*	
18.00-19.00	EEC work discussion of the results of the first day	*External experts of IAAR*	Auditorium No 210 Building A Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588

19.00-20.00	*Dinner*		
Day 2: March 12, 2024			
08.10-09.00	Transfer from the hotel to the University		
09.00-09.15	Work of the EEC		Auditorium No 210 Building A Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
09.15-10.50	Attendance at scheduled classes (Appendix: links to classes)	*External IAAR experts* *Annex 4*	
10.50-11.30	Meeting with stakeholders (representatives of practice centers and employers)	*Annex 5*	Auditorium No. 213 Building A Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
11.30-11.40	Technical break		
11.40-13.00	Work with documents (documents must be uploaded to the cloud in advance)		Auditorium No. 210 Building A
13.00-14.00	Lunch		
14.00-14.15	Technical break		
14.15-15.00	Interviews with *GEP* graduates	*Annex 6*	Auditorium No.213 Building A Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588

15.00-17.00	Selective visit to the practice bases of the DP	*Annex 7*	
17.00-17.15	Technical break		
17.00-18.00	EEC work, discussion of the results of the second day and parameters of the profiles (recording is in progress)		Auditorium No 210 Building A Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
18.30-19.30	Dinner		
Day 3: March 13, 2024			
08.10-09.00	Transfer from the hotel to the University		
09.00-10.00	Work of the EEC Development and discussion of recommendations (*recorded)*	*External experts of IAAR*	Auditorium No 210 Building A Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
10.00-10.20	Technical break		
10.20-12.30	EEC work discussion, decision-making by voting (recorded)	*External experts of IAAR*	Auditorium No 210 Building A Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
12:30-13:00	Final meeting of the EEC with the university administration		Auditorium No 213 Building A Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
13.00-14.00	Lunch		
14.00-15.00	EEC work, Discussion of quality assessment	*External experts of IAAR*	Auditorium No 210 Building A Connect to the Zoom conference https://us02web.zoom.us/j/6813032588

	results		Conference ID: 681 303 2588
15.00-15.15	*Technical break*		
15.15-18.00	EEC work, Discussion of quality assessment results	*External experts of IAAR*	Auditorium No 213 Building A Connect to the Zoom conference https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588

Annex 3. RESULTS OF THE QUESTIONNAIRE SURVEY OF TEACHERS

1. Total number of questionnaires: 60

2. 3. Position

Professor	7 pers.	11,7%
Associate Professor	13 pers.	21,7%
Senior Lecturer	29 pers.	48,3%
Lecturer	9 pers.	15%
Head of the department	1 pers.	1,7%
Acting Professor	1 pers.	1,7%
Acting Assistant Professor	0 pers.	0%

4. Academic degree, academic title

Honored Worker of the Republic of Kazakhstan	0	0%
Doctor of Science (Ph D)	4 pers.	6,7%
Ph.	12 pers.	20%
Master	36 pers.	60%
PhD	8 pers.	13,3%
Professor	5 pers.	8,3%
Associate Professor	3 pers.	5%
No	1 pers.	1,7%

5. Length of service

Less than 1 year	2 pers.	3,3%
1 year - 5 years	16 pers.	26,7%
Over 5 years	42 pers.	70%

№	**Questions**	Very good	Good.	Relatively bad	Bad	Very bad	No answer
6	To what extent does the content of the degree program meet your academic and professional interests and needs?	34 pers. (56,7%)	26 pers. (43,3%)	0 pers. (0%)	0 pers. (0%)	0 pers. (0%)	-
7	How do you assess the opportunities provided by the University for the professional development of the academic staff?	22 pers. (36,7%)	34 pers. (56,7%)	4 pers. (6,7%)	0 pers. (0%)	0 pers. (0%)	-
8	How do you assess the opportunities provided by the University for career development of the faculty?	17 pers. (28,3%)	41 pers. (68,3%)	2 pers. (3,3%)	0 pers. (0%)	0 pers. (0%)	-
9	How do you assess the degree of academic freedom of the academic staff?	17 pers. (28,3%)	43 pers. (71,7%)	0 pers. (0%)	0 pers. (0%)	0 pers. (0%)	-
	The extent to which teachers can utilize their own						
10	• - Strategies	25 pers. (41,7%)	33 pers. (55%)	1 pers. (1,7%)	1 pers. (1,7%)	0 pers. (0%)	-
11	• - Methods	26 pers. (43,3%)	32 pers. (53,3%)	2 pers. (3,3%)	0 pers. (0%)	0 pers. (0%)	-
12	• - Innovation in the learning process	21 pers. (35%)	37 pers. (61,7%)	2 pers. (3,3%)	0 pers. (0%)	0 pers. (0%)	-
13	How do you evaluate the work on the organization of medical care and disease prevention at the university?	12 pers. (20%)	41 pers. (68,3%)	6 pers. (10%)	1 pers. (1,7%)	0 pers. (0%)	-
14	How much attention is paid by the institution's management to the content of the degree program?	22 pers. (36,7%)	38 pers. (63,3%)	0 pers. (0%)	0 pers. (0%)	0 pers. (0%)	-
15	How do you assess the sufficiency and availability of necessary scientific and educational literature in the library?	17 pers. (28,3%)	41 pers. (68,3%)	2 pers. (3,3%)	0 pers. (0%)	0 pers. (0%)	-

16	Evaluate the level of conditions created, taking into account the needs of different groups of learners?	11 pers. (18,3%)	43 pers. (71,7%)	6 pers. (10%)	0 pers. (0%)	0 pers. (0%)	-
	Assess the accessibility of the manual						
17	• -To students	17 pers. (28,3%)	43 pers. (71,7%)	0 pers. (0%)	0 pers. (0%)	0 pers. (0%)	-
18	• - Teachers	15 pers. (25%)	43 pers. (71,7%)	2 pers. (3,3%)	0 pers. (0%)	0 pers. (0%)	-
19	Evaluate the involvement of the academic staff in the process of making managerial and strategic decisions	9 pers. (15%)	43 pers. (71,7%)	7 pers. (11,7%)	1 pers. (1,7%)	0 pers. (0%)	-
20	How is the innovation activity of academic staff encouraged?	17 pers. (28,3%)	39 pers. (65%)	4 pers. (6,7%)	0 pers. (0%)	0 pers. (0%)	-
21	Assess the level of feedback from the academic staff to management	17 pers. (28,3%)	40 pers. (66,7%)	2 pers. (3,3%)	1 pers. (1,7%)	0 pers. (0%)	-
22	What is the level of stimulation and involvement of young professionals in the educational process?	22 pers. (36,7%)	33 pers. (55%)	5 pers. (8,3%)	0 pers. (0%)	0 pers. (0%)	-
23	Evaluate the opportunities created for professional and personal growth for each faculty and staff member	20 pers. (33,3%)	37 pers. (61,7%)	3 pers. (5%)	0 pers. (0%)	0 pers. (0%)	-
24	Assess the adequacy of recognition of teachers' potential and abilities	14 pers. (23,3%)	44 pers. (73,3%)	2 pers. (3,3%)	0 pers. (0%)	0 pers. (0%)	-
	How the work is delivered						
25	• - On academic mobility	14 pers. (23,3%)	42 pers. (70%)	3 pers. (5%)	1 pers. (1,7%)	0 pers. (0%)	-
26	• - On professional development of the academic staff	20 pers. (33,3%)	36 pers. (60%)	3 pers. (5%)	1 pers. (1,7%)	0 pers. (0%)	-
	Evaluate the support of the university and its management						
27	• - Research endeavors of the academic staff	18 pers. (30%)	38 pers. (63,3%)	3 pers. (5%)	1 pers. (1,7%)	0 pers. (0%)	-
28	• - Development of new degree programs/curricular disciplines/methods	23 pers. (38,3%)	37 pers. (61,7%)	0 pers. (0%)	0 pers. (0%)	0 pers. (0%)	-
	Assess the level of the academic staff's ability to combine teaching						
29	• - With scientific research	17 pers. (28,3%)	30 pers. (50%)	11 pers. (18,3%)	2 pers. (3,3%)	0 pers. (0%)	-
30	• - With practical activities	13 pers. (21,7%)	37 pers. (61,7%)	8 pers. (13,3%)	2 pers. (3,3%)	0 pers. (0%)	-
31	Assess the extent to which the knowledge of students received at this university corresponds to the realities of the requirements of the modern labor market	21 pers. (35 %)	37 pers. (61,7%)	2 pers. (3,3%)	0 pers. (0%)	0 pers. (0%)	-
32	How do the management and administration of the university perceive criticism?	11 pers. (18,3%)	41 pers. (68,3%)	6 pers. (10%)	1 pers. (1,7%)	1 pers. (1,7%)	-
33	Evaluate how well your study load matches your expectations and capabilities	17 pers. (28,3%)	37 pers. (61,7 %)	5 pers. (8,3%)	1 pers. (1,7%)	0 pers. (0%)	-
34	Evaluate the focus of degree programs/curricula on the formation of students' skills and abilities to analyze the situation and make forecasts	19 pers. (31,7%)	39 pers. (65%)	2 pers. (3,3%)	0 pers. (0%)	0 pers. (0%)	-
35	Why do you work at this university?	19 pers. (31,7%)	40 pers. (66,7%)	1 pers. (1,7%)	0 pers. (0%)	0 pers. (0%)	-

36.Why do you work at this university?

I am attracted by the values and objectives of this university, focused on the development of an innovative educational environment for all participants of the educational process. I am confident that my contribution to academic activities will help students to successfully achieve their educational and career goals at AUPET.
Good laboratory facilities in physics and engineering.
I am an alumna of this university Level is high
AUPET has a reputation as one of the best universities in the country.
AUPET is my first step.!

- ✓ *Collective, one of the foremost technical universities*
- ✓ *Because I graduated this university*
- ✓ *The reason for choosing this university is that it allows young professionals to work freely.*
- ✓ *Opportunity for professional growth*
- ✓ *I GRADUATED THIS UNIVERSITY, I WANTED TO DEVELOP MY EDUCATION*
- ✓ *Because I studied at this university, I developed here*
- ✓ *Good team, fair working conditions*
- ✓ *I like this universityi*
- ✓ *Good team, fair conditions*
- ✓ *Because AUPET is one of the leading universities in the country.*
- ✓ *In technical direction the university*
- ✓ *There are many advantages in the specialty of electric power engineering*
- ✓ *AUPET is the leading university in Kazakhstan.*
- ✓ *There is an opportunity to realize your professional and personal aspirations*
- ✓ *This is one of the best universities, I like working here.*
- ✓ *I think I can contribute to the process of education, helping students to develop and achieve their goals.*
- ✓ *Like to share knowledge in the field of power engineering*
- ✓ *AUPET is one of the strongest technical universities in Kazakhstan*
- ✓ *Good university*
- ✓ *I like working here*
- ✓ *Because my pipes are appreciated here*
- ✓ *I am proud to work at AUPET*
- ✓ *Stability*
- ✓ *one of the most prestigious universities in the country in the training of specialists*
- ✓ *I like the composition of the teaching staff*
- ✓ *Here appreciate the work of faculty, clear organization and control of the educational process.*
- ✓ *As a graduate and as an employee of the university, I can say that AUPET is one of the best technical universities in Kazakhstan*
- ✓ *corresponds to my education and qualifications*
- ✓ *- The best technical university*
- ✓ *- Discipline, requirements, responsibility*
- ✓ *Excellent university according to my colleagues from other universities, friends, relatives and alumni, has an engineering direction that matches my education*
- ✓ *This is my home university*
- ✓ *I have comfortable conditions to realize my potential*
- ✓ *Favorable working conditions*
- ✓ *Because here I can apply my knowledge and skills in teaching students, I also have the opportunity to contribute to the educational process.*
- ✓ *The only university specialized in the energy sector.*
- ✓ *I started my undergraduate studies here and liked the faculty very much and when I was invited to work with them, I gladly accepted*

37. How often does your course include master classes and reading topics with practitioners?

very often	4 pers.	6,7%
often	20 pers.	33,3%
sometimes	34 pers.	56,7%
very rarely	1 pers.	1,7%
never	1 pers.	1,7%

38. How often do external guest lecturers (domestic and foreign) participate in the training process?

Very often	5 pers.	8,3%
often	16 pers.	26,7%
sometimes	32 pers.	53,3%
Very rarely	6 pers.	10%
never	1 pers.	1,7%

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

	often	sometimes	never	No answer
Lack of classrooms	6 pers. (10%)	30 pers. (50%)	24 pers. (40%)	-
Unbalanced teaching load by semesters	6 pers. (10%)	29 pers. (48,3%)	25 pers. (41,7%)	-
Inaccessibility of necessary literature in the library	0 pers. (0%)	32 pers. (53,3%)	28 pers. (46,7%)	-
Overcrowding of study groups (too many students in a group)	10 pers. (16,7%)	23 pers. (38,3%)	27 pers. (45%)	-
Uncomfortable schedule	5 pers. (8,3%)	24 pers. (40%)	31 pers. (51,7%)	-
Inadequate conditions for classrooms	9 pers. (15%)	31 pers. (51,7%)	20 pers. (33,3%)	-
No Internet access/weak Internet access	13 pers. (21,7%)	33 pers. (55%)	14 pers. (23,3%)	-
Lack of students' interest in learning	3 pers. (5%)	34 pers. (56,7%)	23 pers. (38,3%)	-
Failure to receive information on events in a timely manner	0 pers. (0%)	23 pers. (38,3%)	37 pers. (61,7%)	-
Lack of technical means in classrooms	9 pers. (15%)	36 pers. (60%)	15 pers. (25%)	-
Other issues	✔ - ✔ *no problems* ✔ ✔ *There is no time to produce an article* ✔ *Equipment of lecture halls, not enough projectors.* ✔ *I do not notice any pronounced problems* ✔ *LACK OF INTERNET.* ✔ *Inadequate number of sockets in the classroom. Lack of technical provision of lecture rooms* ✔ *deficit of the classroom fund* ✔ *1.It is necessary to take into account authorship in articles in Scopus journals not only in the order of 1 priority (1 author, 2 co-authors, 3 co-authors, etc.), because it is difficult enough to be 1 author, mostly 1-2 authors go to the defense of dissertations, but to take into account the participation of the teacher. Each such article with the name of our university "AUPET named after G. Daukeyev" is published in major publications abroad, and this is an image.* ✔ *no problems* ✔ *Lack of projectors and monitors* ✔ ✔ *None, except as noted above* ✔ *Internet quality* ✔ *Just to be honest the amount of cash in the payroll*			

40. There are many different facets and aspects of university life that affect every faculty and academic staff in one way or another. Evaluate how satisfied you are:

Question	Completely satisfied	Partially satisfied	Not satisfied	Difficult to answer
The attitude of the university administration towards you	37 pers. (61,7%)	21 pers. (35%)	0 pers. (0%)	2 pers. (3,3%)
Relationship with direct management	45 pers. (75%)	12 pers. (20%)	0 pers. (0%)	3 pers. (5%)
Relationships with colleagues in the department	55 pers. (91,7%)	5 pers. (8,3%)	0 pers. (0%)	0 pers. (0%)
Participation in management decision-making	39 pers. (65%)	14 pers. (23,3%)	3 pers. (5%)	4 pers. (6,7%)
Relationships with students	55 pers. (91,7%)	5 pers. (8,3%)	0 pers. (0%)	0 pers. (0%)
Recognition of your successes and accomplishments by the administration	41 pers. (68,3%)	15 pers. (25%)	1 pers. (1,7%)	3 pers. (5%)
Supporting your suggestions and comments	36 pers. (60%)	20 pers. (33,3%)	0 pers. (0%)	4 pers. (6,7%)

Activity of the university administration	39 pers. (65%)	3 pers. (26,7%)	2 pers. (3,3%)	3 pers. (5%)
Terms of labor remuneration	27 pers. (45%)	24 pers. (40%)	6 pers. (10%)	3 pers. (5%)
Working conditions, list and quality of services provided at the university	35 pers. (58,3%)	20 pers. (33,3%)	1 pers. (1,7%)	4 pers. (6,7%)
Occupational health and safety	44 pers. (73,3%)	14 pers. (23,3%)	1 pers. (1,7%)	1 pers. (1,7%)
Managing changes in the activities of the university	29 pers. (48,3%)	24 pers. (40%)	2 pers. (3,3%)	5 pers. (8,3%)
Provision of a social package: vacation, sanatorium treatment, etc.	22 pers. (36,7%)	21 pers. (35%)	7 pers. (11,7%)	10 pers. (16,7%)
Organization and quality of catering at the university	36 pers. (60%)	17 pers. (28,3%)	4 pers. (6,7%)	3 pers. (5%)
Organization and quality of medical care	30 pers. (50%)	21 pers. (35%)	3 pers. (5%)	6 pers. (10%)

Annex 4. RESULTS OF THE STUDENT'S SURVEY
Total number of questionnaires: 13

1. Your degree program ?

2. Gender

male	2 pers.	15,4%
female	11 pers.	84,6%

2. evaluate how satisfied you are with the following situations: (please note that you are satisfied:)

Questions	Completely satisfied	Partially satisfied	Partially unsatisfied	Not satisfied	I'm having trouble answer
1- Relationship with the dean's office	11 pers. (84,6 %)	1 pers. (7,7 %)	1 pers. (7,7%)	0 pers. (0 %)	0 pers. (0 %)
2.The level of accessibility of the dean's office	11 pers. (84,6%)	2 pers. (15,4%)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
3.Level of accessibility and responsiveness of the university management	10 pers. (76,9 %)	3 pers. (23,1%)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
4.Accessibility of academic advising to you	7 pers. (53,8 %)	6 pers. (46,2%)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
5.Support with training materials during the training process	8 pers. (61,5 %)	4 pers. (30,8%)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)
6.Accessibility of counseling on personal problems	9 pers. (69,2 %)	3 pers. (23,1 %)	0 pers. (0 %)	0 pers. (0 %)	1 pers. (7,7 %)
7.the relationship between the student and the instructor	9 pers. (69,2 %)	4 pers. (30,8 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
8.Financial and administrative services of the educational institution	8 pers. (61,5 %)	3 pers. (23,1 %)	2 pers. (15,4 %)	0 pers. (0 %)	0 pers. (0 %)
9.Accessibility of health care services	8 pers. (61,5 %)	3 pers. (23,1 %)	0 pers. (0 %)	0 pers. (0 %)	2 pers. (15,4 %)
10.Quality of medical services at the university	8 pers. (61,5 %)	2 pers. (15,4 %)	1 pers. (7,7 %)	0 pers. (0 %)	2 pers. (15,4 %)
11. Level of accessibility of library resources	10 pers. (76,9 %)	3 pers. (23,1 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
12.Quality of services provided in libraries and reading rooms	11 pers. (84,6 %)	2 pers. (15,4 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
13..Satisfaction with the existing educational resources of the university	9 pers. (69,2 %)	3 pers. (23,1 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)
14. Accessibility of computer laboratories	9 pers. (69,2 %)	3 pers. (23,1 %)	0 pers. (0 %)	1 pers. (7,7 %)	0 pers. (0 %)
15. Availability and quality of Internet resources	8 pers. (61,5 %)	5 pers. (38,5 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
16.Content and information content of the website of educational organizations in general and faculties (school) in particular	11 pers. (84,6 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)
17. Training rooms, classrooms for large groups	8 pers. (61,5 %)	2 pers. (15,4 %)	3 pers. (23,1 %)	0 pers. (0 %)	0 pers. (0 %)
18.Student's restrooms (if available)	6 pers. (46,2 %)	2 pers. (15,4 %)	1 pers. (7,7 %)	3 pers. (23,1 %)	1 pers. (7,7 %)
19. Clarity of the procedure for taking disciplinary action	9 pers. (69,2 %)	2 pers. (15,4 %)	0 pers. (0 %)	0 pers. (0 %)	2 pers. (15,4 %)
20.The quality of the degree program as a whole	9 pers. (69,2 %)	4 pers. (30,8 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
21.Quality of curricula in the OP	12 pers. (92,3 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
22.Teaching methods in general	11 pers. (84,6 %)	2 pers. (15,4 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
23. responsiveness to feedback from teachers on the learning process	9 pers.	4 pers.	0 pers.	0 pers.	0 pers.

Questions	Completely satisfied	Partially satisfied	Partially unsatisfied	Not satisfied	I'm having trouble answer
	(69,2 %)	(30,8 %)	(0 %)	(0 %)	(0 %)
24.The quality of teaching in general	10 pers. (76,9 %)	3 pers. (23,1 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
25.Academic load/student requirements	9 pers. (69,2 %)	3 pers. (23,1 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)
26.Faculty requirements for the student	11 pers. (84,6 %)	2 pers. (15,4 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
27. Information support and explanation of the rules of admission and the strategy of the educational program (specialty) before entering the university	11 pers. (84,6 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)
28.Informing of the requirements for successful completion of this educational program (specialty)	11 pers. (84,6 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)
29.Quality of exam materials (tests and exam questions, etc.)	9 pers. (69,2 %)	4 pers. (30,8 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
30.Objectivity in assessing knowledge, skills and other learning achievements	11 pers. (84,6 %)	2 pers. (15,4 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
31.Available computer labs	11 pers. (84,6 %)	2 pers. (15,4 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
32.Available scientific laboratories	11 pers. (84,6 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)
33.Objectivity and fairness of teachers	11 pers. (84,6 %)	2 pers. (15,4 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)
34.Informing students about courses, degree programs and the academic degree they are receiving	10 pers. (76,9 %)	2 pers. (15,4 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)
35..Providing students with dormitory accommodation	9 pers. (69,2 %)	2 pers. (15,4 %)	0 pers. (0 %)	0 pers. (0 %)	2 pers. (15,4 %)

4.Evaluate how much you agree

Approval	Full consent	I agree	I partially agree	I don't agree	Total disagreement	No answer
1. The course program was clearly presented	10 pers. (76,9 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	-
2.The course content is well structured	8 pers. (61,5 %)	3 pers. (23,1 %)	2 pers. (15,4 %)	0 pers. (0 %)	0 pers. (0 %)	-
3. The key terms are sufficiently explained	9 pers. (69,2 %)	3 pers. (23,1 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
4. The material proposed by the teacher is relevant and reflects the latest achievements of science and practice	9 pers. (69,2 %)	4 pers. (30,8 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)	-
5. The instructor utilizes effective teaching methods	8 pers. (61,5 %)	4 pers. (30,8 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
6. The teacher knows the material to be taught	10 pers. (76,9 %)	2 pers. (15,4 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
7. The instructor's presentation is clear	8 pers. (61,5 %)	4 pers. (30,8 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
8. The instructor presents the material in an interesting way	8 pers. (61,5 %)	3 pers. (23,1 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	-
9. Objectivity in assessing knowledge, skills and other learning achievements	8 pers. (61,5 %)	3 pers. (23,1 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	-
10. Timeliness of assessment of students' academic achievements	8 pers. (61,5 %)	3 pers. (23,1 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	-
11. The instructor fulfills my personal development and	7 pers.	4 pers.	2 pers.	0 pers.	0 pers.	-

professional formation requirements	(53,8 %)	(30,8 %)	(15,4 %)	(0 %)	(0 %)	
12. The instructor stimulates the students' activity	7 pers. (53,8 %)	4 pers. (30,8 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	-
13. The instructor stimulates students' creative thinking	7 pers. (53,8 %)	4 pers. (30,8 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
14. Appearance and mannerisms of the teacher are adequate	11 pers. (84,6 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
15. The instructor displays a positive attitude toward students	9 pers. (69,2 %)	3 pers. (23,1 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
16. The system of assessment of learning achievements (seminars, tests, questionnaires, etc.) reflects the course content	8 pers. (61,5 %)	3 pers. (23,1 %)	2 pers. (15,4 %)	0 pers. (0 %)	0 pers. (0 %)	-
17. The evaluation criteria used by the instructor are clear	9 pers. (69,2 %)	3 pers. (23,1 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
18. The instructor objectively evaluates students' accomplishments	9 pers. (69,2 %)	3 pers. (23,1 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
19. The teacher speaks professional language	8 pers. (61,5 %)	4 pers. (30,8 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
20. The organization of education provides sufficient opportunity for sports and other leisure activities	11 pers. (84,6 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
21. Facilities and equipment for students are safe, comfortable and up-to-date	9 pers. (69,2 %)	3 pers. (23,1 %)	1 pers. (7,7 %)	0 pers. (0 %)	0 pers. (0 %)	-
22. The library is well equipped and has a reasonably good collection of books	9 pers. (69,2 %)	2 pers. (15,4 %)	1 pers. (7,7 %)	1 pers. (7,7 %)	0 pers. (0 %)	-
23. Equal opportunities are provided for all learners	9 pers. (69,2 %)	4 pers. (30,8 %)	0 pers. (0 %)	0 pers. (0 %)	0 pers. (0 %)	-

5. Other concerns regarding the quality of teaching : 0 responses