

# **REPORT**

On the results of the external expert commission's assessment for compliance with the standards of specialized accreditation of the degree programs

6B07101 - Electric Power Engineering,

6B07119 - Electric Power Systems,

7M07116 - Electric Power Systems,

7M07101 - Electric Power Engineering,

8D07101 - Electric Power Engineering

Non-profit JSC «Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev» in the period of March 11-13, 2024

# INDEPENDENT AGENCY FOR ACCREDITATION AND RATING External Expert Commission

Addressed to IAAR Accreditation Council



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"March 13", 2024

# (I) LIST OF NOTATIONS AND ABBREVIATIONS

BD – basic disciplines;

UC – university component;

EC – elective component;

EC - examination committee;

AC - attestation committee;

SCES – state compulsory educational standard;

DAA - department of academic affairs

AFE - additional forms of education

ECTS – European credit transfer and accumulation system

UNT - unified national testing;

ICT - information and communication technologies;

IC - individual curriculum;

IE&GT - Institute of Energy and Green Technologies;

DLT - distance learning technology;

CTA - comprehensive testing of applicants;

CTT - credit technology of training;

CED - catalogue of elective disciplines;

MDP - modular degree program;

MC - modular curriculum;

Non-profit JSC AUPET – Non-profit joint-stock company Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev:

SR – scientific research;

SSR – Student's scientific research;

DP – degree program;

CC – compulsory component;

MD – major disciplines;

PC - personal computer;

EC - electronic catalogue;

AS – the academic staff;

WC - working curriculum;

MM - mass media;

IWS - independent work of students;

IWSUGI - independent work of students under the guidance of an instructor;

TRL - thematic research laboratories;

TC - typical curriculum;

TPD - typical program of discipline;

EAP - educational and auxiliary personnel;

EMC - educational-methodical commission;

EMCD - educational-methodical complex of discipline;

EMC DP - educational-methodical complex of degree program;

TMW - teaching and methodical work;

AMD - academic-methodical department;

AAC - academic advising center;

CC - career center.

#### (II) <u>INTRODUCTION</u>

In accordance with Order №32-24-OD dated January 31, 2024, from the Director General of the Independent Accreditation and Rating Agency, from March 11 to 13, 2024, the external expert commission conducted an assessment of compliance of degree programs: 6B07101 - Electric Power Engineering, 6B07119 - Electric Power Systems, 7M07116 - Electric Power Systems, 7M07101 - Electric Power Engineering, 8D07101 - Electric Power Engineering at Non-profit JSC "Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev" (Almaty), with the standards of specialized accreditation of educational programs of the organization of higher and postgraduate education IAAR (No. 68-18/1-OD dated May 25, 2018, edition one).

The report of the External Expert Commission (EEC) contains the assessment of the submitted degree programs against the criteria of the IAAR standards, recommendations of the EEC on further improvement of educational programs, and parameters of the profile of degree programs.

# **Composition of the EEC:**

*Chairman of the IAAR EEC* - Anatolijs Popovs, PhD, Professor, Institute of Solid State Physics, University of Latvia (Riga, Latvia).

Coordinator of the IAAR EEC - Gulfiya Rivkatovna Nazirova, Candidate of Economic Sciences, Head of the Project on IAAR Specialized and Institutional Accreditation (Astana, Republic of Kazakhstan).

*IAAR Foreign Expert* - Maria Atanasova Fartunova, Associate Professor, Doctor, St. Joan Rilski University of Mining and Geology (Astana, Republic of Kazakhstan); St. Joan of Rila (Sofia, Bulgaria).

*IAAR Foreign Expert* - Andrey Valerievich Tamyarov, Candidate of Technical Sciences, Associate Professor, FSBEI HE "Ulyanovsk State Technical University" (Ulyanovsk, Russian Federation); Category 1 Expert.

*IAAR National Expert* - Vadim Pavlovich Markovsky, Candidate of Technical Sciences, Professor, Toraigyrov University (Pavlodar, Republic of Kazakhstan),

*IAAR National Expert* - Alexandra Potapenko, PhD, Toraigyrov University (Pavlodar, Republic of Kazakhstan),

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

*IAAR National Expert* - Laura Ilyasovna Baitlesova, Candidate of chemical sciences, Associate Professor, West Kazakhstan Innovation and Technological University (Uralsk, Republic of Kazakhstan),

*IAAR National Expert* - Nazgul Bolatovna Kalieva, PhD, Associate Professor, Al-Farabi Kazakh National University (Almaty, Republic of Kazakhstan),

*IAAR National Expert* - Gulnar Bayanovna Turtkaraeva, Candidate of Pedagogical sciences, Valikhanov Kokshetau University (Kokshetau, Republic of Kazakhstan). Valikhanov Kokshetau University (Kokshetau, Republic of Kazakhstan), IAAR Category 1 Expert,

*IAAR National Expert* - Zhazira Rakhatdinovna Isayeva, PhD, Senior Lecturer, S. Seifullin Kazakh Agrotechnical University (Astana, Republic of Kazakhstan).

*Employer* - Gulmira Zeynulovna Jagiparova, Head of Commercial Block, KT Cloud lab (Almaty, Republic of Kazakhstan),

*Employer* - Azamat Serikovich Burumbaev, Chamber of Entrepreneurs "Atameken" of Aktobe region (Aktobe, Republic of Kazakhstan),

- *IAAR Student* Adelina Adelivna Rakisheva, 2nd year PhD student, East-Kazakhstan Technical University named after D. Serikbayev (Aktobe, Republic of Kazakhstan). D. Serikbayev (Ust-Kamenogorsk, Republic of Kazakhstan),
- *IAAR Student* Darmen Gabitov, 1st year Master's student, Nazarbayev University (Astana, Republic of Kazakhstan).
- *IAAR Student* Alisher Sabyrzhanuly Mukhamedjan, 3rd year student, L.N. Gumilev ENU (Astana, Republic of Kazakhstan),
- *IAAR Student* Raul Batbairuly Eserbatov, 4th year student, East Kazakhstan Technical University named after L.N. Gumilev (Astana, Republic of Kazakhstan). Serikbayev (Ust-Kamenogorsk, Republic of Kazakhstan),
- *IAAR Student* Gulnaz Zhairbaeva, 1st year PhD student, Gumilev Eurasian National University (Astana, Republic of Kazakhstan),
- *IAAR Student* Tolganay Sisenova, 2nd year Master's student, Management, Turan University (Almaty, Republic of Kazakhstan),

# (III) PRESENTATION OF THE EDUCATIONAL ORGANIZATION

Non-profit JSC "Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev" (hereinafter referred to as AUPET) has maintained a stable reputation as a prestigious specialized technical university. According to the 2007 general rating of the National Accreditation Center of the Ministry of Education and Science of the Republic of Kazakhstan, the university was ranked among the top 20 universities in Kazakhstan and secured the 3rd position among technical universities. In 2014, it further solidified its standing by entering the top five best technical universities in Kazakhstan. Over the years, AUPET has consistently excelled in its traditional educational programs in energy and telecommunications, earning recognition from employers who place it among the top ten universities in Kazakhstan.

The University actively promotes the concept of a unified educational space worldwide, aligning its curricula and programs with those of similar institutions in Europe, America, and Russia.

The management system of the university operates on a vertical principle, delineating structural distinctions based on various activity areas such as teaching and methodological, research, and educational work. At AUPET, the selection of research activities is influenced by both the demand for scientific and applied case studies from external organizations and the inherent directions of scientific research pursued by university scholars. Additionally, the university publishes the scientific journal "AUPET Bulletin."

AUPET engages in comprehensive planning at various levels, developing mechanisms for monitoring activities across different domains. Internal normative and organizational-administrative documentation facilitates operational management and the delegation of responsibilities.

The university implements degree programs (referred to as DP) of Cluster No.1, including DP 6B077101 - Electric Power Engineering, DP 6B07119 - Electric Power Systems, DP 7M07116 Electric Power Systems, and DP 8D07101 Electric Power Engineering, in accordance with the perpetual State license for educational activity AB No. 0137445 dated August 4, 2010.

The educational process for DP of Cluster №1 adheres to the State Compulsory Educational Standard (SCES), standard curricula, and programs, which are obligatory for all universities in Kazakhstan. Training within DP Cluster №1 is conducted through modular degree programs (MDP) endorsed during meetings of the Council of the Institute of Electric Power Engineering and Electrical Engineering (IEE). As of September 2023, this IEE has been restructured into the Institute of Energy and Green Technologies (IE&GT).

During 2019-2023, the graduating departments included "Power Supply and Renewable Energy Sources," "Electric Power Systems," and "Electrical Machines and Electric Drive." Presently, there are two remaining graduating chairs: "Electric Power Engineering" and "Renewable and Alternative Energy Sources."

Instruction for DP 6B07101 - Electric Power Engineering is delivered in the Kazakh, Russian, and in select groups, English languages. For DP 6B07119 - Electric Power Systems, 7M07101 Electric Power Engineering, and 7M07116 Electric Power Systems, instruction is provided in Kazakh and Russian. Doctoral program 8D07101 - Electric Power Engineering is conducted exclusively in Russian.

The bachelor's degree programs (DP 6B07101 - Electric Power Engineering and DP 6B07119 - Electric Power Systems) have varying durations based on the educational background of the students: for those with secondary education, the program lasts for 4 years; students with technical and vocational education complete the program in 3 years; those with higher education complete the program in 2 years. The master's degree programs in the scientific and pedagogical

direction (7M07116 Electric Power Systems, 7M077101 Electric Power Engineering) have a standard duration of 2 years. PhD studies (8D07101 Electric Power Engineering) typically last 3 years.

Graduates of DP Cluster No.1 receive the following academic degrees:

For DP 6B07101 - Electric Power Engineering and DP 6B07119 - Electric Power Systems: Bachelor of Engineering and Technology.

For DP 7M07116 - Electric Power Systems and DP 7M07101 Electric Power Engineering: Master of Engineering.

For DP 8D07101 - Electric Power Engineering: Doctor of Philosophy (PhD) upon successful defense of the thesis.

# (IV) DESCRIPTION OF THE PREVIOUS ACCREDITATION PROCEDURE

The University has undergone institutional and specialized accreditation by the Independent Accreditation and Rating Agency (IAAR). Specifically, degree programs 6B07101 - Electric Power Engineering, 7M07101 - Electric Power Engineering, and 8D07101 - Electric Power Engineering received accreditation from the agency for a duration of 5 years, spanning from April 5, 2019, to April 4, 2024. https://aues.edu.kz/en/site/rating.

## (V) DESCRIPTION OF THE EEC VISIT

The work of the EEC was conducted based on the approved Program of the visit of the expert commission for specialized accreditation of educational programs at Non-profit JSC "Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev" during the period from March 11 to March 13, 2024.

To facilitate coordination among EEC members, an introductory meeting was convened on March 9, 2024. During this meeting, responsibilities were allocated among commission members, the visit schedule was finalized, and consensus was reached on the selection of assessment methods.

In order to gather comprehensive and objective information regarding the quality of the degree program and the university's overall infrastructure, meetings were conducted with various stakeholders. These included the rector, vice-rectors overseeing different areas of activity, heads of structural units, institute directors, department heads, program developers, faculty members, students, employers, and graduates. However, it's noteworthy that there were no participants available for interviewing in the Learners category for DP of Cluster 1. In total, 84 representatives took part in these meetings (refer to Table 1).

Table 1 – Information about the staff and trainees who participated in meetings with the IAAR EEC:

Category of participants	Number
Rector	1
Vice-rectors	2
Heads of structural subdivisions	9
Directors of the institutes	2
Heads of Departments, DP developers	17
Teachers	26
Students	16
Employers	5
Graduates	6
Total	84

During the excursion, members of the EEC were provided with an overview of the university's material and technical infrastructure. They were introduced to various specialized laboratories, including "Industrial Sanitation and Occupational Health," "Safety of Electrical Installations," "Electrical Equipment IEK GROUP," and "Electrical Supply named after Associate Professor A.S. Markus." Additionally, they visited facilities such as "Relay Protection and Automation of Electric Power Networks," the training center "Relay Protection and Automation in Electric Power Industry," the "Laboratory of Operation Modes of Electric Power Systems," "Automated Electric Drive," and the "Laboratory of Electrical Insulation of Electrical Equipment." Furthermore, they toured the "Laboratory of High Voltage Technology named after E.G. Cherkasov," the three-dimensional dynamic simulator "Power Supply System," computer labs, and the university library.

During the accreditation period, the EEC IAAR attended various classes to gain insights into the educational process. These included:

- Class: "Electrical Installations and systems". Topic: "Principles of working with electrical grids". Level: Bachelor's degree, 3rd year. Number of attendees: 39. Lecturer: Senior Lecturer Daurenova I.M.;
- Class: "Relay Protection and Automation". Topic: "Investigation of two-stage current protection of radial network with single-sided power supply ". Level: Bachelor's degree, 3rd year. Number of attendees: 4. Lecturer: Candidate of Technical Sciences Kurpenov B.K.
- Class: "Relay protection and automation", class topic: "Principles of working with power lines". Bachelor's degree, 3rd year. Number of attendees 29). Lecturer: Candidate of Technical Sciences, Associate Professor Bashkirov M.V.

Classroom instruction involved the integration of interactive whiteboards, projectors, slides, and video lectures. Teaching sessions were characterized by a dynamic blend of oral presentations and collaborative questioning methodologies.

As part of the accreditation process, a comprehensive online questionnaire survey was administered to gather insights from both educators and students. A total of 60 teachers and 13 students participated in the survey, providing valuable feedback for evaluation purposes.

In order to confirm the information presented in the Self-Assessment Report, external experts requested and analyzed the working documentation of the university. At the same time, the experts studied the university's Internet positioning through the official website of the university (https://aues.kz/).

As part of the scheduled program, recommendations for enhancing the accredited educational programs at Non-profit JSC "Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev" were formulated by the External Expert Commission (EEC). These recommendations, derived from the expertise conducted, were presented to the university management during a meeting held on March 13, 2024.

# (VI) COMPLIANCE WITH SPECIALIZED ACCREDITATION STANDARDS

## 6.1. Standard "Degree Program Management"

- ✓ The HEI should demonstrate the development of the purpose and strategy of the DP development based on the analysis of external and internal factors with broad involvement of a variety of stakeholders.
  - ✓ Quality assurance policy should reflect the link between research, teaching and learning.
  - ✓ The HEI demonstrates the development of a quality assurance culture.
- ✓ Commitment to quality assurance should apply to any activities performed by contractors and partners (outsourcing), including in the implementation of joint/diploma education and academic mobility.
- ✓ The DP management ensures transparency of the DP development plan based on the analysis of its functioning, the real positioning of the HEI and the orientation of its activities to meet the needs of students, the state, employers and other stakeholders.
- 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.

- ✓ The DP management should involve representatives of stakeholder groups, including employers, students and faculty in the formation of the DP development plan.
- ✓ The DP management should demonstrate the individuality and uniqueness of the DP development plan, its consistency with the national development priorities and the development strategy of the educational organization.
- ✓ The HEI 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.
- ✓ The management of the DP ensures coordination of the activities of all persons involved in the development and management of the DP and its continuous implementation, as well as involves all stakeholders in this process.
- ✓ The management of the DP should ensure that the management system is transparent, that the internal quality assurance system is functioning, including its design, management and monitoring, and that appropriate decisions are taken.
  - ✓ The management of the DP should carry out risk management.
- ✓ The DP management must ensure the participation of representatives of stakeholders (employers, the academic staff, students) in the collegial management bodies of the educational program, as well as their representativeness when making decisions on the management of the educational program.
- ✓ The university should demonstrate innovation management within the framework of the DP, including the analysis and implementation of innovative proposals.
- ✓ The DP management is required to exhibit transparency and approachability towards students, academic faculty, employers, and all other stakeholders. This entails fostering an environment where communication channels are open and readily accessible, enabling constructive dialogue and collaboration among all involved parties.
- ✓ The management of the DP confirms the completion of training on educational management programs. ✓ The management of the DP should strive to ensure that the progress made since the last external quality assurance procedure is taken into account in preparation for the next procedure.

#### Evidence-based part

The University has defined priority directions in the field of education. These are quality training of specialists, increasing the competitiveness and rating of the university both at the national and international levels, successful integration into the world educational and scientific space. With the active participation of employers, the modular degree programs (MDP) on the DP of Cluster №1 are developed, which are implemented in accordance with the adopted "Development Strategy of Non-profit JSC Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev until 2030".

The objectives of DP Cluster №1 are determined by the mission and vision of the University, which are designed to provide a sustainable educational and scientific environment for the dissemination of values and development of intellectual potential for the benefit of society.

In order to ensure competitiveness, profitability and innovation management, DP Development Plans have been developed, in the development of which the preferences of applicants and their parents, the image of the University in the market of educational services and the proposals of employers, faculty and students were taken into account.

DP development plans are annually adjusted. The content of the MDP and Modular curriculum (MC) are annually agreed with JSC "Alatau Zharyk Company", JSC KazNIPIITES "Energy" and KazNII Energy named after Academician Sh.Ch.Chokin.

The implementation of the DP Development Plan is monitored by the heads of the departments of "Electric Power Engineering" and "Renewable and Alternative Energy Sources", the Directorate of IE&GT and the Department of Academic Affairs of AUPET.

AUPET systematically analyzes the state and future development of the electric power industry of the Republic of Kazakhstan in order to adjust the content of the DP and to meet the requirements of the labor market.

At the stage of planning of DPs, working curriculums (WC) are evaluated through the criteria of compliance with the requirements of the State Educational Standards of the Republic of Kazakhstan, standard curricula, recommendations of accreditation procedures and labor market demands. To assess the quality of the development of WC for disciplines the criteria of internal university requirements for the design of educational and methodological documentation are used.

The external evaluation of DPs is represented by the following procedures: attestation and accreditation of the university; rating of DPs of National Chamber of Entrepreneurs (NCE) "Atameken" and the university as a whole; survey of employers; external review of graduate works and teaching materials.

In the reporting period, the management and monitoring of accredited DPs were periodically reviewed at the Scientific Methodical Council (SMC) of the university. Currently, the SMC is simplified and its functions are assigned to the Academic Council (AC) of the University.

According to the results of monitoring in 2020, new disciplines were introduced in DP 6B07101 - Electric Power Engineering and DP 6B07119 - Electric Power Systems taking into account the recommendations of employers: computer network technologies in electric power engineering; basics of microprocessor technology; basics of building SCADA systems in electric power engineering; electric energy storage devices.

To assess the effectiveness of the accredited DP development, the mechanisms of the Quality Management System (QMS) are used annually in the form of internal and external audits, within the framework of which non-conformities are identified. If there are nonconformities, corrective actions are developed with deadlines and executors. The evaluation of the department's activity on the realization of DP is carried out through reports on the implementation of plans, consideration of problematic issues at the meetings of the Institute Council through the determination of the rating of departments and faculty. The performance of the graduating departments and the analysis of the implementation of measures for the development of DP is reflected in the annual reports on academic and educational-methodical work, research and development, etc.

In the academic year 2020/2021 new disciplines of elective component (EC) were introduced in MCs taking into account the introduction of IT technologies in pandemic conditions: "Fundamentals of building intelligent information systems", "Fundamentals of Online technologies", "Fundamentals of IP-telephony and streaming technologies", "Multimedia technologies" and "Fundamentals of algorithmization and programming".

The quality system of education at the University is realized through the following processes: planning and management; control of learning outcomes; quality of teaching; monitoring and feedback.

Reports and minutes of the meetings of the Academic Council, Rectorate, Alumni Board of Trustees on the DP management are posted on the AUPET website and are available to all users (There is an external website https://aues.edu.kz, and an internal website http://info.aues.kz/).

To ensure quality, the necessary conditions are created and the necessary resources are allocated to achieve the set quality objectives. These include educational and methodological support, material base, quality composition of the academic staff, preparedness of students and information service of the University.

DP management identifies, analyzes and assesses potential risks, both for the University as a whole and for individual activities.

Education Management Program is designed to form and expand knowledge and competence in the theory and practice of management of educational institutions and their units in the conditions of modernization of the system of general and professional education.

A manager in education is a multi-disciplinary manager responsible for personnel, accountability, regularity of the pedagogical process, quality of educational services and competitiveness of the educational institution.

Developer of DP 6B07119 Electric Power Systems, DP 7M07116 Electric Power Systems, DP 7M07101 Electric Power Engineering, Candidate of Technical Sciences, Associate Professor E.K. Umbetkulov, actively contributes to the advancement of educational programs in the field. Notably, Umbetkulov participated in the Republican methodological seminar of the Bologna

Process titled "Innovative educational programs: experience of development and implementation" held from September 14 to September 17, 2022. For his valuable contributions, Umbetkulov received a Letter of Gratitude from the organizing committee.

Furthermore, on May 18, 2023, at the Forum of the Kazakhstan Electrical Engineering Association (KEA), Umbetkulov delivered a report titled "Features of the development of educational programs for the energy industry." The significant outcomes of this forum were published in the newspaper "EGEMEN QAZAQSTAN" № 97 (30576) on May 25, 2023. These engagements underscore Umbetkulov's dedication to enhancing educational initiatives within the energy sector.

# Analytical part

In general, the activities of accredited DPs are harmonized with the strategy, mission, vision and values of the HEI. The management and planning of DPs are aimed at their successful implementation. The HEI has developed Academic Policy, which, reflects the link between research, teaching and learning.

EEC notes that the management needs to ensure transparency and accessibility of information about the management system of the educational program for all stakeholders and regularly inform the stakeholders about the changes made.

On the basis of meetings, conversations and interviewing of vice-rectors in the areas of activity, directors of institutes and heads of departments, heads and employees of structural units, the academic staff, students, EEC IAAR notes that the university has appointed those responsible for business processes, distributed the job responsibilities of staff and delineated the functions of collegial bodies involved in the implementation of the DP.

The University monitors the risks, but the <u>EEC was not fully provided with the documents</u> concerning the availability of the process of determining the risks to which the implemented <u>DPs</u> may be exposed and the mechanism for mitigating the impact of all risks.

# Strengths/best practices:

Not observed.

EEC recommendations for DP 6B07101-Electrical Power Engineering, 6B07119-Electrical Power Systems, 7M07116-Electrical Power Systems, 7M07101-Electrical Power Engineering, 8D07101-Electrical Power Engineering:

1. In 2024-2025 academic year, the DP management should develop a Roadmap (Plan) to reduce the impact of risks associated with the design and implementation of the DP (including staffing, contingent formation, etc.), or introduce appropriate measures into the existing DP development plans with the indication of specific indicators, deadlines and responsible for implementation; systematically analyze risk management at the level of the structural unit and the DP.

#### **EEC Conclusions:**

17 criteria are disclosed for the standard "Management of degree program", of which for DP 6B07101- Electric power engineering, 6B07119 - Electric power systems, 7M07116 - Electric power systems, 7M07101 - Electric power engineering, 8D07101 - Electric power engineering: 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 on the basis of modern information and communication technologies and software tools.
- ✓ The DP management demonstrates the systematic use of processed, adequate information to improve the internal quality assurance system.

- ✓ The DP Management demonstrates the availability of the reporting system reflecting the activities of all structural units and departments within the framework of the DP, including the assessment of their performance.
- ✓ The University is obliged to determine the frequency, forms and methods of evaluation of the DP management, activities of collegial bodies and structural units, top management.
- ✓ The University is obliged to demonstrate the mechanism of information protection, including the identification of responsible persons for the reliability and timeliness of information analysis and data submission.
- ✓ 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.
- ✓ The management of the DP should demonstrate the presence of mechanisms of communication with students, employees and other stakeholders, including conflict resolution.
- ✓ The University is obliged to provide measurement of the degree of satisfaction of the needs of students, academic staff and administrative staff within the framework of the DP and demonstrate evidence of eliminating the identified shortcomings.
  - ✓ The University is obliged to assess the effectiveness and efficiency of activities in the context of the DP.
- ✓ 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;

level of academic performance, students' achievements and expulsion;

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

availability of educational resources and support systems for students;

employment and career development of graduates.

- ✓ Students, administrative and academic staff members should document their consent to the processing of personal data.
- ✓ The management of the DP should facilitate the provision of necessary information in the relevant fields of sciences.

# Evidence-based part

The university has implemented information management processes, including its collection and analysis. The provided materials demonstrated the presence of the use of information collection and analysis system in the DP management processes. Management decision-making is based on the analysis of facts. The university ensures timeliness, reliability, completeness of information and its safety, functioning of the information and feedback system oriented to students, employees and stakeholders.

The AUPET uses AIS PLATONUS as a tool for collecting and analyzing information, which provides information for operational and strategic management of the university. For timely input of reliable data into PLATONUS for the purpose of subsequent formation of reporting information, the university has identified responsible people. The main information flows used to improve the quality of services provided, as well as management of educational, financial, etc. processes can be conditionally grouped into the following groups: students; employees; general information about the university.

All forms of information flows are used in AUPET: horizontal, downward and upward. Information exchange takes place with the help of the ICTs described above. The University's external website https://aues.edu.kz provides information in the following tabs: "About Us", "Education", "Science", International Cooperation", "To the Enrollees", "Alumni", "Rector's Blog". The website presents AUPET history, strategy, policy, goals, structure, electronic library, university rating.

The processes of collection, storage and processing of personal information at the University are built in accordance with the norms of the legislation of the Republic of Kazakhstan. University employees who process personnel data observe the regime of secrecy (confidentiality) of personal data of the academic staff. The University uses adequate, stored types of data technical means to protect against unauthorized access to collected, stored and processed personal data of employees. Data is stored on secure servers, direct access to which is strictly limited both physically and via the Internet.

AUPET has formed a system for handling conflict situations between students and teachers. Students can apply to the head of the department or to the compliance service of the university.

Control over the effectiveness of the quality assurance system is carried out through internal audits, examination of methodological support, evaluation of activities and consideration of issues at the meetings of collegial management bodies - the meeting of departments, the Council of the Institute and the University Council. Within the framework of these mechanisms, the effectiveness and efficiency of the fulfillment of goals and objectives are determined, deviations from the set goals are identified.

Analysis of the changes efficiency is provided by compiling the database of DPs of Cluster №1 on various types of activities: research work, students' research work and development, academic mobility, scientific and methodological, educational and methodological support of DPs and other information coming from the university departments.

In order to assess and forecast the possible development of the competitive environment in the university systematically collects and analyzes information from the media, Internet resources. Internal information is represented by operational data, which includes various kinds of information and is recorded by primary documents:

-information about the contingent of students: the order of enrollment, reinstatement, expulsion, as well as the appointment of scholarships, personal cards of students, reports on their academic performance, statements, certificates of employment of graduates;

-information about teachers: applications, orders and orders on personnel transfer, information on professional development, teaching load of the academic staff, data on scientific activity and international cooperation;

Systematic discussion and analysis of the results of academic performance, passing all types of professional practice, the level of residual knowledge, the quality of diploma works and state examinations at the meetings of the departments and other units determine the evaluation of the effectiveness of the DP of the department. The minutes of the department meetings, annual reports reflect the results of analyzing the achievement of the goals of accredited DPs, as well as ways to improve their effectiveness. Storage of the department's documentation is carried out in accordance with the requirements of the university's nomenclature of files.

The planning system ensures the realization of the strategic goals of the department. There are annual plans of the department, individual plans of teachers. They reflect all areas of work of the department. Within the framework of realization of the plan of improvement of educational, educational-methodical, research activities of students and teachers, the university management holds regular meetings.

The fulfillment of the adopted decisions is considered at the meetings of the department in the middle and at the end of the academic year. Plans and reports for the reporting period are available, minutes are kept in accordance with the established requirements of the nomenclature of cases.

The results of the analysis of the achievement of the goals of DP Cluster №1 and ways to improve their effectiveness are reflected in the minutes of the department meetings, annual reports of the department.

Access to foreign citation databases Web of Science and Scopus provides information needs of the DP in domestic and foreign publications and is of interest in terms of obtaining macro-indicators at the level of the country, the world, as well as to assess the contribution of scientists to the world progress on the basis of citation analysis.

The university organizes curatorial hours, individual and group conversations, "Clean Session" actions, a trust box is placed, the rector's blog functions on the university website, in social networks, etc. https://aues.edu.kz/en/site/blog-rektora.

#### Analytical part

The University has demonstrated the existence of a system of collection, analysis and

management of information based on the use of modern information and communication technologies and software tools and that it uses a variety of methods to collect and analyze information in the context of the DP.

EEC notes that in the information to be collected and analyzed in the framework of the DP, the key performance indicators, the dynamics of the contingent of students in the context of forms and types, the level of performance, achievements of students and dropout, student satisfaction with the implementation of the DP and the quality of learning at the university, the availability of educational resources and support systems for students are taken into account.

All divisions of the university keep records in accordance with the approved nomenclature of cases, ensure the safety and archiving of documents. Operational familiarization of executors with the information is carried out electronically through targeted distribution in the electronic document management system.

### **Strengths/best practices:**

Not observed.

EEC recommendations for DP 6B07101-Electrical Power Engineering, 6B07119-Electrical Power Systems, 7M07116-Electrical Power Systems, 7M07101-Electrical Power Engineering, 8D07101-Electrical Power Engineering:

There are no

#### **EEC** Conclusions:

There are 17 criteria disclosed for the Information Governance and Reporting standard, of which all 17 criteria have a satisfactory position.

# 6.3. Standard "Degree Program Development and Approval"

- ✓ The University is obliged to demonstrate the existence of a documented procedure of the DP development and its approval at the institutional level.
- ✓ The University is obliged to demonstrate the compliance of the developed DP with the established objectives and planned learning outcomes.
- ✓ The DP management must determine the influence of disciplines and professional practices on the formation of learning outcomes.
- ✓ The university can demonstrate the availability of the DP graduate model describing learning outcomes and personal qualities.
- ✓ The qualification awarded upon completion of the DP should be clearly defined, explained and correspond to a certain level of NSC, QF-EHEA.
- ✓ 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 the orientation on the achievement of planned learning outcomes by each graduate.
- ✓ The DP management must ensure the compliance of the content of academic disciplines and learning outcomes with each other and with the level of study (Bachelor's, Master's, PhD studies).
  - ✓ The DP management must demonstrate that external examinations of the DP have been carried out.
- ✓ The DP management should provide evidence of the participation of learners, academic staff and other stakeholders in the development and quality assurance of the DP.
- ✓ The DP management should demonstrate the uniqueness of the degree program, its positioning in the educational market (regional/national/international).
  - ✓ An important factor is the possibility to prepare students for professional certification.
  - ✓ An important factor is the availability of double-diploma DP and/or joint DPs with foreign universities.

## Evidence-based part

AUPET has a well-established procedure for the development, evaluation and approval of degree programs, as well as the system of quality assessment of Bachelor's, Master's and PhD degree programs has been formed and successfully applied.

The source documents for the development of the DPs of Cluster No.1 were the State Educational Standards and model curricula of the relevant levels of education, NSC and OCR, professional standards (PS), as well as normative legal acts of the authorized body in the field of education, regulating the process of educational activities.

The adoption of the PS as a basis marks the active phase of implementing the competency-based approach in Kazakhstan's education system. Concentrating on competencies in modern professional education practices worldwide is associated with a paradigm shift from teacher-centered to student-centered learning. This educational model is prioritized by countries participating in the Bologna Process for building the European professional education space.

In this understanding, new approaches to the development of DPs imply thorough work of educational organizations together with social partners on: labor market analysis, formulation of competencies, learning outcomes and criteria, as well as linking innovative learning technologies and learning outcomes assessment tools to them.

External examination of DPs is also carried out taking into account the involvement of interested employers in assessing the quality of degree programs. Employers participate in the process of development and implementation of degree programs through the formation of professional competencies, within the selected specialty; organization and conduct of professional practices; conducting training sessions, guest lectures, round tables; participation in the final certification; joint participation, In order to control the quality of development of DP of Cluster №1, the program undergoes an evaluation procedure within the educational organization. In addition, the DP is sent for external expertise to representatives of employers, the public and the academic environment.

As part of the internal quality assurance system in the educational organization, a plan and tools for monitoring, evaluation and revision of the DP during its implementation are developed.

DP - 6B07101 Electric Power Engineering and DP 6B07119 - Electric Power Systems were developed based on the analysis of labor functions of PS in the field of electric power engineering for the 6th level of qualification (bachelor, practical experience), and DP 7M07116 Electric Power Systems and DP 7M07101 Electric Power Engineering - for the 7th level of qualification (master's degree). The passports of these DPs reflect the objectives, level of education and qualification, areas of labor and professional activity.

DP of Cluster №1 takes into account the application of individual approach to students and ensures the transformation of professional competencies from PS and qualification standards into learning outcomes. Based on the DP of Cluster №1, the university develops working curricula and programs with the use of appropriate working educational and methodological documentation.

When forming the DP, science-based approaches to planning, methodological support and teaching technologies are used. AUPET has developed the "Algorithm for compiling a modular degree program (MDP), including a passport and a modular curriculum (MC)". This helps to maintain the continuity of the state standard, model program, and educational-methodical complexes of the educational program. According to the "Regulations on the organization of educational process on credit technology", from the WC students can choose disciplines among the course of elective disciplines, taking into account personal needs and opportunities.

Accredited DPs of Cluster 1 include:

- 1) theoretical training, including the study of cycles of basic and major disciplines;
- 2) practice: academic, professional practice industrial and pre-diploma;
- 3) additional types of training;
- 4) intermediate and final certification. Each of the cycles of disciplines consists of compulsory and elective components in the proportions established by the State Educational Standards of the Republic of Kazakhstan.

The distribution of responsibility and authority is determined by the internal regulatory documents of the quality management system (QMS), university plans, rector's orders, job descriptions and regulations on subdivisions. The documents defining the authority and responsibility of the personnel involved in the implementation of the DP are necessarily brought to the attention of interested parties. Interaction between structural units and employees of the university is defined in the current organizational structure. The structure of the university subdivisions is defined in the regulations of the respective subdivisions. The employers' opinion is reflected in the development of the catalogue of elective disciplines, which serves as a basis for the formation of an individual educational plan of the student. For example, based on the results of monitoring, a profile of competencies was compiled and in the MC 2019/2020. DP 6B07101 - Electric Power Engineering and DP 6B07119 - Electric Power Systems new IT disciplines were introduced: Computer network technologies in electric power engineering; Fundamentals of microprocessor technology; Fundamentals of building SCADA systems in electric power engineering; Electricity storage devices.

AUPET has developed the Regulations on the development of degree programs of higher and postgraduate education (approved by the Rector of the University on 24.02.202), which regulates the planning, design, development of structural elements and quality assessment of the DP development <a href="https://aues.edu.kz/ru/pages/index?id=9">https://aues.edu.kz/ru/pages/index?id=9</a>.

An obligatory stage of mastering the degree program is the passage of a professional internship, which allows students to form the necessary professional competencies, as well as to consolidate the results of a theoretical training. There are existing contracts on an internship with the basic enterprises of Kazakhstan and Almaty, where the material and technical base fully meets the requirements for practical work and industrial (professional) training. There are methodical instructions for all types of training. Students and master's students of accredited programs undergo an internship at the leading domestic and foreign companies in the field of electric power systems JSC "Alatau Zharyk Company", branches of JSC "KEGOS", JSC "ALES", JSC "Atyrau Zharyk", MAEK-Kazatomprom LLP, Kentau Transformer Plant JSC, Kaz NIPII TPP Energia JSC, Almaty Electromechanical Plant LLP, Schneider Electric LLP, Kazselenergoproekt Institute LLP, ABB, Siemens LLP (Almaty). Almaty).

# Analytical part

The developed DPs reflect the information about the definition of the content, scope, logic of building an individual educational trajectory, taking into account the personal needs and capabilities of students. The DPs are considered at the meeting of the educational-methodical commission of the Institute and approved by the Academic Council of the University.

The members of the EEC note that the accredited DPs are provided with IC, catalogue of elective disciplines (CED), syllabuses, teaching methodical complexes (TMC), which are compiled in accordance with the normative documents and meet the specifics of the accredited DP. The set of CED disciplines, the choice of enterprises for an industrial internship contributes to the formation of professional competencies of students.

The most important factor in improving the efficiency of the Program is the external expertise. External experts are managers of various companies, who have extensive experience in the specialty and have made a significant contribution to the development of the relevant industry of RK.

The Commission notes that students, Master's and PhD students are not always involved in the process of formation of the degree program and its subsequent management (no evidence is provided).

EEC notes the need to introduce a more active practice of implementation of practiceoriented and dual training, which at the meeting with EEC was also noted by employers and representatives of internship bases.

The Commission notes that there are no joint degree programs with domestic and foreign educational organizations for accredited DPs. The University maintains close ties with Kazakhstani and foreign universities, research centers on accredited DPs, which contributes to the creation of joint DPs with them.

The submitted report does not reflect the issues of availability of joint degree programs with Kazakhstani and foreign educational organizations, does not reflect the activities planned in this direction.

#### Strengths/best practices:

Not observed.

EEC recommendations for DP 6B07101-Electric Power Engineering, 6B07119-Electric Power Systems, 7M07116-Electric Power Systems, 7M07101-Electric Power Engineering, 8D07101-Electric Power Engineering:

- 1. It is necessary for the DP management to ensure the participation of students in the procedure of DP development, ensuring their quality. Term annually.
- 2. It is necessary to consider the possibility of including the measures for the implementation of dual training system in the development plans of each DP. Term -2024-2025 academic year.
- 3. The management of DPs should develop projects of joint degree programs with domestic or foreign universities. Deadline by the beginning of the 2025-2026 academic year.

#### EEC conclusions:

According to the standard "Development and approval of degree program" 12 criteria are disclosed, of which 11 criteria have a satisfactory position, 1 criterion - requires improvement.

## 6.4. Standard "Ongoing Monitoring and Periodic Evaluation of Degree Programs"

- ✓ The University is obliged to ensure the reconsideration of the structure and content of the DP taking into account the changes in the labor market, employers' requirements and social demand of the society.
- ✓ The University is obliged to demonstrate the existence of a documented procedure for monitoring and periodic evaluation in order to achieve the objective of the DP and continuous improvement of the DP.
  - ✓ Monitoring and periodic evaluation of the DP should consider:

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

changes in the needs of society and professional environment;

the workload, progress and graduation of students;

the effectiveness of evaluation procedures for students;

the needs and satisfaction of students;

compliance of the educational environment and support services with the objectives of the DP.

- ✓ All stakeholders must be informed of any planned or undertaken actions within the DP. All changes made to the DP should be publicized.
- ✓ Support services should identify the needs of different groups of learners and the degree of their satisfaction with the organization of learning, teaching, assessment, learning of the DP as a whole.

#### Evidence-based part

AUPET monitors and periodically evaluates the DP in order to ensure that it achieves its goal and meets the needs of students and society.

Monitoring of the DP Development Plan of Cluster No.1 includes: review of the DP Development Plan at the Institute Council; assessment of teaching quality during mutual visits of teachers to each other; verification of compliance of the teaching process organization during internal audits; strictly regulated procedure of students' evaluation and ensuring transparency of results; monitoring of the DP mastering results; analysis of the DP Development Plan results and elaboration of recommendations for its improvement.

Quality control is carried out through internal audits, examination of methodological support, evaluation of the development plan implementation.

Monitoring and evaluation of the efficiency of the DP of Cluster No.1 is carried out as a single process of DP management in the following sequence:

- -forming the content and structure of the DP;
- selection of training approaches, evaluation methods and implementation of the DP;
- evaluation and improvement based on feedback;
- analyzing the needs and expectations of stakeholders;
- establishing the goals and objectives of the DP;
- formation of the graduate model through competencies and expected learning outcomes.

The content of the curricula of Cluster No.1 is set by the relevant State Educational Standards and is implemented through curricula and study programs. Curricula are developed in three forms: standard curricula; working curricula; individual curricula.

All forms of curricula use a unified system of coding of disciplines, which provides for the assignment of a corresponding code in alphabetic and numeric symbols to each academic discipline of the curriculum.

The volume of students' workload is measured in credits and in academic hours, mastered during the academic year for each DP. The workload of the student is reflected in the individual curriculum (IC), which determines the educational trajectory of each student separately, and is formed according to the established form for each academic year personally by the student with the help of an adviser. The student's IC reflects the exact sequence of study of compulsory and elective disciplines, the latter is formed by the catalogue of elective disciplines.

The procedure for evaluating students and scoring policy is detailed in the syllabus of disciplines and posted on the university website. The maximum evaluation points are given on condition of rhythmic performance and high quality of work. Test and lecture attendance grades are assigned depending on the number of correct answers and the number of missed lectures. Advisors regularly remind the first-year students about the grading procedure. Practice has shown that the most successful students have learned the scoring policy well and are actively guided by it. Students are evaluated in all types of classes. If there is a shortage of classroom time, materials are reviewed at the IWSUGI (independent work of students under the guidance of an instructor). For the active position of the learner is evaluated by points given in the syllabuses.

Amendments to the developed DPs of Cluster №1 are made as necessary in accordance with the requirements of legislative and regulatory documents of the Republic of Kazakhstan in the field of higher professional education and modern needs of society and labor market development.

Analysis of the disciplines' content compliance with the current trends of science development is carried out by reviewing the DPs and CEDs by employers. The content of disciplines and possible corrections are discussed at the meetings of departments according to the results of traditional ratings of teachers through the students' evaluation. In addition, any interested person can make suggestions on the university website, where these documents are exhibited.

The developed DPs of Cluster №1 are adjusted in accordance with the changes in the labor market. The necessity of abolition of elective disciplines that have lost their relevance or introduction of new elective disciplines is considered at the meeting of the teaching and methodological section of the department and institute. All changes are reflected in the catalogues of elective disciplines, which are annually approved by the methodological council.

Formation of an individual learning trajectory is carried out by enrolling students in elective disciplines, the choice of teachers and disciplines of the curriculum. To form an individual learning trajectory, students can also use the academic mobility program, choosing not only a foreign university, but also academic disciplines. Based on the IC and the competence model of the graduate, annual working curricula of the specialty are formed taking into account the requirements of employers.

The development of individual abilities of students is promoted by hobby groups, seminars, sports sections, scientific and technical conferences. Taking advantage of this, many students achieve success in sports, amateur art or are engaged in research activities. For example, PhD students of DP 8D07101 Electric Power Murat A.K., Bektemirov A.T. and Baimakhanov O.D. took an active part in SSR (student's scientific research), further (in the master's program) they were involved in the implementation of SR (scientific research). Later the same experience (bachelor's, master's and PhD studies) was taken by PhD students of DP 8D07101 Electric Power Engineering Gunin A.M., Aman A.B. and Kenesov E.K.. Currently, the above mentioned young teachers perform scientific works in the Scientific and Technical Center of AUPET "Smart Power Grid".

Electronic textbooks, educational literature and EMCD on electronic and magnetic media and other modern teaching technologies are used in the educational process. The department uses the general laboratory technical base of the university and laboratories of the specialized department. Computer classes, lecture halls with interactive and multimedia equipment, library. Students have the opportunity to participate in educational activities. They have access to sports sections, the club of cheerful and resourceful, debate club. Students annually participate in national subject Olympiads.

Monitoring of DP realization and their periodic evaluation guarantee the achievement of learning objectives, compliance with the needs of students, employers and society. Based on the results of monitoring and evaluation, decisions are made aimed at continuous improvement of the DP. The procedure for monitoring the achievement of learning objectives is conducted through questionnaires and surveys of students and employers to assess satisfaction with the competencies and qualifications obtained and acquired.

# Analytical part

The university determines the format of monitoring and periodic assessment, as well as support services to ensure that the needs of students are identified and met.

The control of knowledge, skills and competencies of graduates is carried out during their final attestation. Final attestation of graduates is held in the terms provided by the academic calendar and curricula of the DP.

Informing about changes in DP B07101 - Electric Power Engineering, 6B07119 - Electric Power Systems, 7M07116 - Electric Power Systems, 7M077101 - Electric Power Engineering, 8D07101 - Electric Power Engineering is carried out at the meetings of the department, educational and methodical commissions, Academic Council of the university. Also, interested persons are informed about the upcoming meetings on the review of educational programs by means of communication (mobile communication/email/WhatsApp). The departments have accounts in social networks (Instagram, Facebook), through which they inform all interested parties about the events held in the departments and in the university. *However, the HEI website does not sufficiently reflect the information* on how stakeholders are informed about the planned or undertaken activities in relation to the DP. Also, there are no specific examples of review and expertise of catalogues of elective disciplines and curricula.

<u>The EEC experts note</u> the absence of a mechanism for informing all stakeholders about any planned or undertaken actions in relation to the DP on the university website. The University <u>does not publish</u> information about the changes made in the DP, DP Development Plans.

In order to assess the satisfaction with the DP among the students and academic staff, the university conducts a questionnaire survey.

<u>The questionnaire survey of the academic staff (Annex 3)</u>, conducted during the IAAR EEC visit, showed the following results, which require improvement:

- The academic staff face problems (often, sometimes) lack of classrooms (often 10%; sometimes 50%), unbalanced teaching load by semesters (often 10%; sometimes 48,3%), unavailability of necessary literature in the library (sometimes 53,3%), overcrowding of study groups (too many students in a group) (often 16,7%; sometimes 38,3%), inconvenient schedule (often 8,3%; sometimes 40%), inadequate classroom conditions (often 15%; sometimes 51,7%), lack of Internet access/weak Internet (often 21,7%; sometimes 55%), students' lack of interest in learning (often 5%; sometimes -56,7%), late receipt of information about events (38,3%), lack of technical means of learning in classrooms (often 15%; sometimes 60%).
- The academic staff members note: "There is no time to issue an article", "Equipping of lecture rooms, lack of projectors", "No internet, b218 No Electricity", "Inadequate number of outlets in the classroom", "Lack of technical provision of lecture rooms, shortage of classroom fund", "It is necessary to take into account co-authorship in articles of Scopus journals not only in the order of 1 order of priority (1 author, 2 co-authors, 3 co-authors, etc.), but all participants should be equally considered since it is quite difficult to be the 1<sup>st</sup> author, mostly 1-2 authors go to the defense of dissertations. 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", "at 8:00 The toilets are out of order, they're being cleaned", "Problems with the Internet".

## Strengths/best practices:

Not observed.

EEC recommendations for DP 6B07101-Electric Power Engineering, 6B07119-Electric Power Systems, 7M07116-Electric Power Systems, 7M07101-Electric Power Engineering, 8D07101-Electric Power Engineering:

It is recommended that DP management ensures stakeholders are informed of all actions planned or taken with respect to accredited DPs: 6B07101 - Electrical Power Systems, 6B07119 - Electrical Power Systems, 7M07116 - Electrical Power Systems, 7M07101 - Electrical Power Systems, 8D07101 - Electrical Power Systems.

Regarding the results of revisions and the introduction of changes in accredited DPs, it is imperative to consistently ensure the publication of the results of the introduced changes on the university website. Deadline: within 10 days after making the relevant changes.

It is necessary for university management to conduct an additional anonymous questionnaire survey of the students and academic staff regarding the quality of the educational process. The results of the survey should be discussed at the Academic Council of AUPET in order to identify problems and develop a plan of corrective and preventive actions. Deadline: before the beginning of the 2024-2025 academic year.

#### **EEC Conclusions:**

According to the standard "Continuous monitoring and periodic evaluation of educational programs" disclosed 10 criteria, of which: 9 criteria have a satisfactory position, 1 criterion - requires improvement.

## 6.5. Standard "Student-Centered Training, Teaching and Learning Assessment"

- ✓ The DP management should ensure respect and attention to different groups of students and their needs, providing them with flexible learning trajectories.
- ✓ The DP management must ensure teaching based on modern achievements of the world science and practice in the field of training, the use of various modern methods of teaching and evaluation of learning outcomes, ensuring the achievement of DP objectives, including competencies, skills to perform scientific work at the required level.

- ✓ 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.
- ✓ An important factor is the availability of own research in the field of teaching methodology of DP disciplines.
- ✓ The university is obliged to ensure the compliance of the procedures for assessment of learning outcomes with the planned results and objectives of the DP.
- ✓ The University is obliged to ensure consistency, transparency and objectivity of the mechanism of assessment of learning outcomes of the DP. Criteria and methods of assessment of learning outcomes should be published in advance.
- ✓ Evaluators must be familiar with modern methods of assessment of learning outcomes and regularly improve their qualification in this area. Evaluators must be familiar with modern methods of assessment of learning outcomes and regularly improve their qualification in this area.
- ✓ The DP management must demonstrate a system of feedback on the use of different teaching methods and assessment of learning outcomes.
- ✓ The DP management must demonstrate support for learner autonomy while being guided and assisted by the trainer.
  - ✓ The DP management must demonstrate that there is a procedure for responding to learner complaints

# Evidence-based part

Implementation of the student-centered approach to learning at AUPET implies the following:

- 1) the teacher becomes an assistant, both the teacher and the learner are responsible for learning;
- 2) learners are considered as individuals their experience, peculiarities, perception abilities, interests and needs are taken into account;
  - 3) the learner is involved in the process of choosing what to learn;
- 4) the learning process is not only a transfer of knowledge, but also a deeper understanding and formation of critical thinking.

Professional roles of students within the framework of the considered DPs are determined by general and specialized knowledge, skills and abilities, as well as competencies acquired during the development of relevant educational programs.

The effectiveness of learning outcomes is achieved by following an integrated approach, when both the DPs, curricula and academic disciplines are formed according to the modular principle.

AUPET has adopted the modular-type DPs, where disciplines are divided into the following types of modules: general education (compulsory) modules, compulsory modules in the specialty, modules of choice for the specialty and modules of advanced mastering of qualifications.

The content and volume of each module vary depending on didactic objectives, profile and level differentiation of students and the whole training program is structured into autonomous organizational and methodological modules.

Social training of the student includes the following competences typical for all DPs of the cluster: organizational and managerial, personal, socio-ethical competences: to possess ethical and legal norms of behavior; to be tolerant to the traditions and culture of other peoples of the world; to be able to work in a team; to defend one's point of view correctly; to offer non-standard solutions; to be able to find compromises; to be able to make expedient decisions; to develop managerial decisions, etc., formed during the study of disciplines of the general education cycle (GED).

An important component of professional competence is the ability to independently acquire new knowledge and skills, as well as to use them in practical activities. For this purpose, the study of elective courses was included in the modular curricula of all specialties.

Students have the opportunity to familiarize themselves with their future profession at the initial stage of university studies in the process of choosing an educational trajectory, which describe the expected results and professional competencies in the chosen specialty.

Modular DP allows the student to choose an individual educational trajectory of study. This scheme of degree program formation gives the student freedom in choosing the disciplines listed in the catalogue of elective disciplines and the basic curriculum, personal participation of each student in the formation of his/her individual curriculum, involvement in the educational process of academic advisors, assisting students in the choice of educational trajectory.

The management of DP Cluster №1 provides equal opportunities for students regardless of the language of instruction to form an individual educational trajectory, which consists of compulsory, variable, remedial and organizational parts.

The compulsory part includes the main modules to be studied, which correspond to the standard curriculum of the DP of Cluster No.1.

The variable part includes a set of modules and their components, which the student chooses to study depending on the areas of study he/she is interested in.

The compulsory and variable parts are aimed at determining the content of training.

In 2020, changes were made in DP 6B07101 - Electric Power Engineering and DP 6B07119 - Electric Power Systems with the prospect of expanding the students' competences in the field of IT-technologies: in the 3rd year the discipline "Computer Network Technologies in Electric Power Engineering" was introduced, and in the 4th year - "Fundamentals of SCADA Construction in Electric Power Engineering". These disciplines were approved by both students and employers. Research works with the application of IT-technologies are carried out in Master's and PhD programs. Efficiency and effectiveness of innovations implementation is positively reflected in employment.

DP of Cluster №1 of students is formed on the basis of the working curriculum, which in Kazakh, Russian and English languages are uploaded to the system "RLATONUS".

The university education system uses mainly traditional teaching methods, the most obvious of which in the considered DPs are active and innovative teaching methods.

During the first year of study active teaching methods with explanatory-illustrative support is more often used (for example, in the disciplines "Physics", "Engineering Graphics", "Basics of specialty", etc.). At the same time, the knowledge check is more often carried out by testing, i.e. the method known to students from school.

In order to adapt students to the educational environment of AUPET, the "Guidebook" is constantly updated, containing systematized information about the internal rules, organizational and procedural norms of the educational process (http://info.aues.kz/info/sp.pdf). The document contains brief information about the University and its subdivisions, the order of management of the educational process, the system of control and evaluation of knowledge, rights and obligations, liquidation of academic debts, rules of transfer and reinstatement of students.

The computer programs Rasr Win and TKZ are actively used for calculation graphic work and course papers within the framework of the Bachelor's degree program. When performing laboratory works in the Master's program on the discipline "Wave Processes" the program complex "KVL - Computer High Voltage Laboratory" is used. PS CAD and Rasr Win programs are more often used for modeling of electric power systems in Master's and PhD studies.

Lecture classes of graduate departments are held in the form of presentation of materials in classrooms equipped with multimedia projectors or television.

Since 2024, the University has been operating the Academic Advising Center (AAC), which helps students in solving various issues.

In order to provide social support for students, the work on social support is organized - material support for orphans and children without parental care, material support for students from low-income and socially vulnerable families (educational scholarship named after the first rector of Non-profit AUPET G. Daukeyev. The University supports talented young people.

Monitoring of students' progress on the educational trajectory and the achievements of students is carried out through the AIS "Platonus" system, in which the results of current control are reflected weekly, and the results of interim certification - after passing the current exams.

The university has established a transfer coefficient GPA (transfer from course to course). According to the results of annual ratings of students (annual GPA) the best student of the institute is determined. At the end of the annual rankings, the results of the average GPA for the group are displayed and the best group of the year is determined. All student accomplishments are reflected on the transcript. Students who have fully completed all the requirements of the curriculum and study programs are admitted to final certification.

In case of controversial issues, in case of disagreement with the result with the assessment of knowledge, choice of answer option, students can appeal. To resolve such cases of prompt decision-making on appeal materials created an appeal committee of teachers. The application for appeal shall be submitted within the next working day after the examination results are posted in the system Platonus to the Chairman of the Appeal Commission.

#### Analytical part

The management of DPs provides respect and attention to students and their needs, flexible learning paths are presented.

The academic staff of accredited DPs use traditional and interactive teaching methods in the educational process. IAAR EEC members note that within the educational process in the training of students of DP 6B07101 - Electric Power Engineering, 6B07119 - Electric Power Systems, 7M07116 - Electric Power Systems, 7M07101 - Electric Power Engineering, 8D07101 - Electric Power Engineering innovative methods are used using discussions or business games.

The university applies generally accepted assessment criteria and provides timely information about the assessment strategy used. The transparency of assessment procedures and feedback from students is also ensured.

At the same time, the experts were not shown examples of own developments of the department's academic staff in the field of teaching methods of specialized academic disciplines of accredited DPs. The management of the accredited DPs did not demonstrate the professional development of the academic staff in the field of modern methods of assessment of learning outcomes.

#### Strengths/best practices:

Not observed.

EEC recommendations for DP 6B07101-Electric Power Engineering, 6B07119-Electric Power Systems, 7M07116-Electric Power Systems, 7M07101-Electric Power Engineering, 8D07101-Electric Power Engineering:

- 1. The management of the degree program should monitor the applied methods of teaching specialized disciplines, practice holding on a regular basis methodological conferences/seminars on modern methods of teaching specialized disciplines in order to improve the quality of teaching. Deadline annually.
- 2. The DP management should develop a plan and ensure the professional development of academic staff in the field of modern methods of assessing the learning outcomes of students. Term -2024-2025 academic year.

#### **EEC Conclusions:**

There are 10 criteria disclosed for the standard "Student Centered Learning, Teaching and Assessment of Learning" of which 9 criteria have a satisfactory position, 1 criterion requires improvement.

#### 6.6. Standard "Students"

- ✓ The HEI must demonstrate the policy of forming the contingent of students and ensure the transparency of its procedures. Procedures regulating the life cycle of students (from admission to completion) should be defined, approved, published.
- $\checkmark$  The management of the DP should provide for special adaptation and support programs for newly enrolled and foreign learners.
- ✓ The HEI is obliged to 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 informal learning.
- ✓ The University is obliged to provide the opportunity for external and internal academic mobility of students, as well as to assist them in obtaining external scholarships for training.
- ✓ The university should actively encourage students to self-education and development outside the main program (extracurricular activities).
  - ✓ An important factor is the existence of a mechanism to support gifted students.
- ✓ The university is obliged to demonstrate cooperation with other educational organizations and national centers of "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 HEI is obliged to provide students with internship places, demonstrate the procedure for promoting employment of graduates, maintaining contact with them.
- ✓ The HEI is obliged to demonstrate the procedure of issuing to graduates the documents confirming the obtained qualification, including the achieved learning outcomes.
- The DP management must demonstrate that the graduates of the program possess skills that are in demand on the labor market and that these skills are actually in demand on the labor market.
- The DP management must demonstrate that there is a mechanism for monitoring the employment and professional activity of the graduates.
  - ✓ An important factor is the existence of an active alumni association.

# Evidence-based part

The policy of forming the contingent of students of Cluster No.1 is to admit to the university the persons who are the most prepared to study at the university, who have consciously chosen a specialty in the electric power industry and who have scored the required number of points according to the results of UNT of general secondary school graduates and according to the results of CTA of college graduates.

In order to attract the most prepared candidates to study at AUPET, vocational guidance activities are carried out additionally and in advance. In order to implement a systematic policy of forming the contingent of students, a set of activities is carried out to ensure the image of the University in the region and the republic as a whole. The current management system is reflected in the strategic development plan of the University and is based on continuous monitoring in order to improve the quality of the educational process.

AUPET admits applicants having general secondary, technical and vocational, post-secondary, higher and postgraduate education. Admission of applicants entering AUPET is carried out through the placement of educational grant of higher education, at the expense of the republican budget or local budget, as well as payment of tuition at the expense of the student's own funds and other sources. The right for foreigners to receive higher education on a competitive basis in accordance with the state educational order is determined by international treaties of the Republic of Kazakhstan.

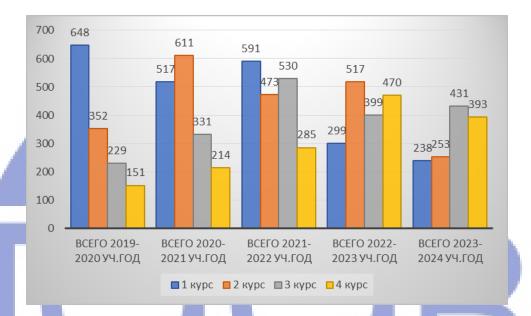
The process of managing the movement of contingent of students includes the following procedures:

- 1) enrollment of students is carried out on the basis of the approved Rules of admission to the University;
- 2) groups of students are formed on the basis of the order of the Director of the Institute, groups are combined into streams, the number of students on which should not exceed the possibility of lecture halls of the University;

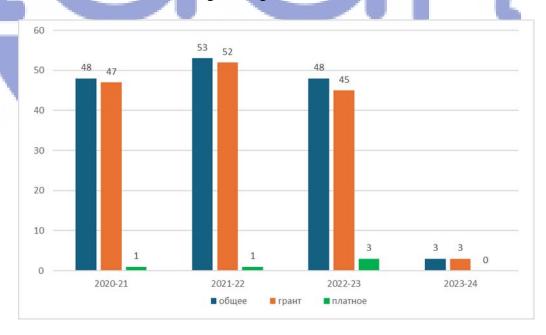
- 3) formation of groups of students is made by the registration department in AIS "Platonus";
- 4) within two weeks after the issuance of the order on enrollment of students in the first year, the admission committee transfers the personal files of students to the registration office of the university.

Since 2017, the career guidance work has been organized and conducted by a special Center of Marketing and Vocational Guidance (CMVG) of the university, where the staff members are professional marketers.

The bachelor's studies contingent of the DP 6B07101 – Electric Power Engineering, 6B07119 - Electric Power Systems for the reporting period is shown in Pictures 1 and 2.

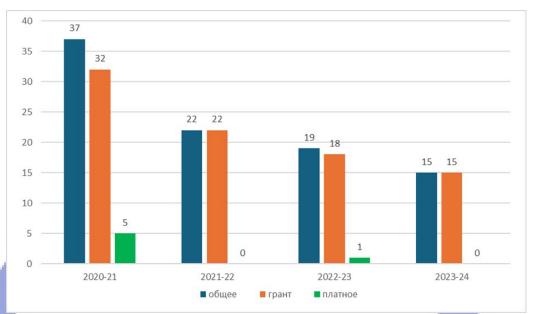


Picture 1 - The bachelor's studies contingent on the DP 6B07101 – Electric Power Engineering in 2019-2023



Picture 2 - The bachelor's studies contingent on the DP 6B07119 - Electric Power Systems in 2020-2023.

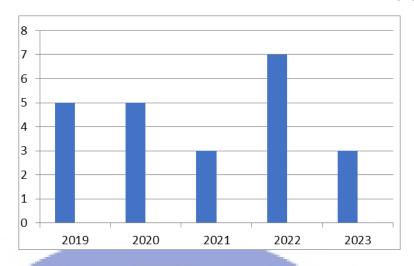
Pictures 3, 4, and 5 show the graphs of the master's students contingent on the DP 7M07101 - Electric Power Engineering, 7M07116 - Electric Power Systems and 8D07101 - Electric Power Engineering.



Picture 3 – the master's studies contingent on the DP 7M07101 - Electric Power Engineering, in 2020-2023



Picture 4 – the master's studies contingent on the DP 7M07116 - Electric Power Systems in 2021-2023



Picture 5 – the PhD studies contingent on the DP D07101- Electric power Engineering in 2019-2023

Experts note a decrease in the enrollment of students and master's students in accredited bachelor's and master's studies programs, especially (by more than 10 times) in the DP 6B07119 – Electric Power Systems in 2023 (Picture 2).

Students of all forms and levels of training are provided with access to AUPET electronic resources: the electronic library, curricula, academic calendar, and catalogue of elective disciplines.

University students at the Academic Consulting Center (ACC) can familiarize themselves with the rules for admission, transfer from course to course, from other universities, the procedure for transferring credits acquired at different universities, expulsion, etc. ACC specialists provide consulting assistance if necessary.

When the first-year students are enrolled, the Freshman Decade is held for them. During the Freshman Decade, the following events are held to introduce the new intake of students and explain the regulations on the university activities.

To implement the credit education system at the university, there is a special department - the office recorder. Teachers of the graduating departments assist students in choosing and implementing their educational trajectories and provide assistance in mastering academic disciplines. For master's and PhD students, assistance in mastering the DP is provided by: the Department of Postgraduate Training, the directorate of the institute, and graduating departments.

DAA, guided by approved individual curricula and official information about the student contingent, forms academic streams, study groups, and subgroups. The subsequent progress of students is monitored by institutes and departments: (attendance monitoring, academic performance, payment of economic contracts, results of examination sessions, and analysis of the adaptation period of students).

The management of the DP Cluster No1 pays proper attention to the extracurricular activities of the students. To satisfy these issues, the following services operate for the AUPED students: a student dormitory, a medical center, a dining room, and an assembly hall with 280 seats for general university events equipped with multimedia equipment and sound equipment. In 2018, the LED screen (5x3 meters) was installed in the assembly hall.

Bachelor's DP includes theoretical training, additional types of training (physical education, military training), various types of professional training (educational, industrial, prediploma), and mid-term and final certification.

The DP of master's and doctoral studies of PhD includes theoretical education, teaching and research training, research work, and mid-term and final certification. At the same time, doctoral students undergo a theoretical course of study and teaching training only in the 1st term, and the rest of the time is devoted to research work, scientific internships abroad, and

participation in international conferences, as well as preparation and publication of articles in journals with an impact factor.

Doctoral students of the DP 8D07101 – Electric Power Engineering: Zharkymbekova M.B., Chnybaeva D.M., Darkenbaeva E.B., Kenesov E.K. and Gunin A.M. became co-authors of patents for utility models over the years of their study, as well as doctoral student Omirzakov N. T. is a co-author of the Patent for the invention "Combined device for identifying a damaged feeder during single-phase ground faults in electrical networks" №34854 dated January 22, 2021 and co-author of the Eurasian Patent for the invention "Protection device against single-phase ground faults in electrical networks" №038734 dated October 10, 2021.

For external academic mobility, students of the DP Cluster №1 traveled to foreign universities with which there are agreements on joint training of specialists.

During the reporting period, students of the DP 6B07101 – Electric Power Engineering were sent to study abroad through outgoing academic mobility:

- Muratov I.M. the 3rd course student, group 99a -19-31; Berdaliev A. the 2nd course student, group  $99\kappa$  -20-5; Absat A. the 2nd course student, group  $99\kappa$  -20-1 at the expense of the Ministry of Education and Science of the Republic of Kazakhstan which is allocated for academic mobility for a period of one semester from 01.10. 2021 till 28.02.2022 at the Polytechnic University of Lublin (Poland).
- Serikkalieva M.S. the 1st course student, group ЭЭн-21-1, at the expense of the Erasmus+ academic mobility program, for a period of one semester from 01.02.2022 till 30.06.2022, at Altinbas University (Turkey).
- Ismoilov M.I. the 3rd year student, group  $\Im$ -20-14 at the expense of the Ministry of Education and Science of the Republic of Kazakhstan allocated for academic mobility, for a period of one semester from 01.02.2023 till 30.06.2023, at Kadir Has University (Turkey, Istanbul).

Master's students Aman A.B. and Shantuov D.B., from group МЭЭ(ЭСС)н-19-3, completed their studies under the Erasmus+ academic mobility program at the Anhalt University of Applied Sciences (Germany) and successfully defended their master's theses;

During the period from 01.09.2023 till 31.03.2024 at the University of Applied Sciences Anhalt (Germany, Köthen), master's students of the DP Electric Power Engineering Abatov Maksat Kanagatuly, Rakhmatulin Nizhat Malikzhanovich are studying under the double degree program.

During the period from 01.09.2023-01.02.2024, master's degree students of the DP Electric Power Engineering Manatov Kanat Azatuly and Ushurova Ilinur Ibrayimzhankyzy studied at Kadir Has University (Istanbul, Turkey) for academic mobility.

During the period from 01.02.2023Γ. till 30.06.2023At Kadir Has University (Istanbul, Turkey), a master's student of the Electric Power Engineering Orazali Kanat studied for academic mobility.

Table 1 presents a list of doctoral students (DP - 8D07101 Electric Power Engineering) who completed scientific internships during the reporting period.

Table 1 – Scientific internships of PhD students

	_	11000	
Full name	Specialty	Direction	Period
Chnybaeva Danna Maksutkanovna	Electric Power Engineering ДЭЭ(ЭАТК)- 19-2	Kazakh Research Institute of Energy named after. Academician Sh. Ch. Chokin (KazRIE), Almaty	1.11.2021- 30.11.2021.
Zharkymbekova Makpal Beksultanovna	Electric Power Engineering ДЭЭ(ЭАТК)- 19-2	Kazakh Research Institute of Energy named after. Academician Sh. Ch. Chokin (KazRIE), Almaty	1.11.2021- 30.11.2021

Darkenbaeva Elmira Bayzhumaevna	Electric Power Engineering ДЭЭ(ЭАТК)- 19-2	National Research Tomsk Polytechnic University, Russia	10.05.2022 27.05.2022		
Besterekova Altyn Nurmoldaevna	Electric Power Engineering ДЭЭ(ЭАТК)- 20-2	Magnitogorsk State Technical University named after. G.I. Nosova, Russia, Magnitogorsk	16.04- 16.05.2023		
Amanbek Duman Shaimuratovich	Electric Power Engineering ДЭЭ(ЭАТК)- 20-2	ineering named after B. N. Yeltsin, (OATK)- Russia.			
Askanbai Gauhar Tileuberdikyzy	Electric Power Engineering ДЭЭ(ВИЭ)-20-1	South Ural State Agrarian University, Chelyabinsk, Russia	04.04.2022 - 22.04.2022		
Dzhakanova (Zhetpispaeva) Gaukhar Talgatovna	Electric Power Engineering ДЭЭ(ВИЭ)-20-1	South Ural State Agrarian University, Chelyabinsk, Russia	04.04.2022 - 22.04.2022		
Gunin Alexander Mikhailovich	Electric Power Engineering ДЭЭ(ЭСС)-21-1	Marmara University, Turkey	29.08.2022- 11.09.2022		
Sakitzhanov Markhabat Shakhmaranovich	Electric Power Engineering ДЭЭ(ЭАТК)- 22-3	Berlin School of Economics and Law, Germany	18.12.2023- 17.01.2024		

Several doctoral students of the DP - 8D07101 Electric Power Engineering spent internships abroad to coordinate and carry out their research work:

- Bektimirov A.T. traveled to the University of Calgary (Calgary, Canada) from May 5, 2019 to May 15, 2019 to study the issues of oscillatory stability and setting the parameters of the PSS system stabilizer;
- during the period from 15.01.2020 to 5.02.2020, doctoral student Baimakhanov O.D. traveled to Kadir Has University to develop and verify a flow distribution calculation model in MATLAB;
- during the period from 10.05.19 to 25.05.19, doctoral student Murat A.K. completed an internship at the NRU «Moscow Energy Institute» on modeling ferromagnetic devices and controlled reactors in the NRAST software environment.

Data on the academic mobility of students on the DP 6B07101 – Electric Power Engineering is presented. There is no information about academic mobility, both incoming and outgoing, according to the DP 6B07119 – Electric Power Systems. Thus, experts note the insufficient implementation of the "academic mobility of students" program.

The most important part of the department's research work is the research work of students (RWS), which is carried out under the annual and long-term plans of the AUPET Academic Council, the Council of Young Scientists, the institute, and the department. Every year, student work is prepared for a university scientific and practical competition.

The university has developed a Regulation on supporting gifted students. The task of the university staff is to create favorable conditions for each student to realize their intellectual abilities and participate in research activities.

A significant part of students receive certificates and diplomas by mastering computer programs (Autocad, Rastr Win, PS CAD, DigSILENT Power Factory, etc.) and participating in national and international competitions. For example, master's student DP 6M071800 "Electric Power Engineering" Rashidov Sh.U. received a certificate from the Russian International Competition (May 25, 2021) on the topic "Study of the effectiveness of system stabilizers in the Software and Hardware system RTDS using the example of the Almaty energy hub" (Appendix 1.12).

Students of the DP 6B07101 - Electrical Power Engineering and 6B07119 - Electrical Power Systems regularly participate in research work of students, student scientific conferences, republican competitions, and Olympiads.

On April 24-26, 2019, the Republican Student Subject Olympiad the DP 6B07101 – Electric Power Engineering was held at Pavlodar State University named after S. Toraigyrov, where the AUPET team took the first place. In the personal championship, students of the DP 6B07101 - Electric Power Engineering Shishkin G.V. took the second place, and Yuferova K.R. and Kuzhambetova A.S. - the third place.

On May 5, 2020, the XII students' subject Olympiad on the DP - Electric Power Engineering was held online on the BigBlueButton platform based on the North Kazakhstan State University named after Manash Kozybayev. Based on the results of the Olympics, Tsarev D.V. and Shcherbakova M.D. took the 2nd place in the individual competition.

On April 28, 2021, at the XIII Republican Subject Olympiad on the DP - 6B07101 - Electric Power Engineering (at Toraigyrov University), student Tsarev D.V. took the 1st place.

In 2022, students of the DP 6B07101-Electric Power Engineering were awarded: A.I. Tynymgereeva - I degree Diploma of the Ministry of Education and Science of the Republic of Kazakhstan, A.A. Muradilova, M. Kazbek and T. Bilyanova - III degree Diploma of the Ministry of Education and Science of the Republic of Kazakhstan.

From April 27 to April 28, 2023, at the XV Republican Students' Subject Olympiad the DP 6B07106 - Electric Power Engineering students Muratov Isabek (group ЭЭСк -19-31) took the 2nd place, Arslanbaev A.M. and Naumenko I. took the 3rd place.

In 2021, at the Republican Olympiad of JSC «Samruk-Energy» in the discipline "Theoretical Fundamentals of Electrical Engineering" Muratov Isabek took the 1st place. The following students were awarded diplomas: Amirbek E.Zh. (group ЭЭСк -19-8) and Aldongarov F.U. (group ЭЭСк -19-8).

"Solar Soul" teams about the work done for the period "1.10-31.10.2022" within the framework of the intellectual team competition "Student Energy Challenge" for the DP 7M07101- "Electric Power Engineering" - master's students Baidullina Akzhaina Erlankyzy, Smailova Asel Kairatkyzy won 1.2 million tenge.

The departments are working to maintain contact with graduates of past years, for which the public association "Association of AUPET Alumni" has been created.

Members of the alumni association annually take part in the University's "Graduate Day" event, as chairmen and members of certification commissions, and take part in resolving issues related to the organization and conduct of professional practices, the process of organizing the design of final works, etc. "Graduate Day" takes place every year on the last Saturday of May.

The university works with gifted students as well. To support gifted students, the departments carry out work in the following areas: attracting gifted youth to research, experimental, and creative activities: holding Olympiads, creative competitions, scientific defense competitions, tournaments, and festivals, ensuring the participation of gifted youth in international intellectual and creative competitions; involvement of gifted students in scientific circles; in-depth study of foreign languages and the use of new information and communication technologies in the educational process.

## Analytical part

Analyzing the standard "Students", the members of the EEC came to a conclusion that the university demonstrated its policy of forming a student population, and the transparency of its procedures, and the compliance of its actions with the Lisbon Recognition Convention. The management of the DP demonstrated the implementation of special adaptation and support programs for foreign students and the first-year students.

The management of the DP demonstrated its readiness to provide students with internship places.

The university provides the opportunity for external and internal mobility of the DP students. To develop interaction between internal and external mobility, memorandums have been concluded and agreements have been drawn up with partner universities. However, EEC experts note the need for further development of the implementation of the "Academic Mobility of Students" program; special attention must be paid to the criterion of incoming (external and internal) mobility of students in the accredited DP.

It is noted that students are involved in carrying out research work together with the teaching staff. A motivation system has been formed to attract students to research work. Students who have won intra-university research competitions, conferences, Olympiads, round tables, etc. are awarded diplomas, certificates, letters of gratitude, and valuable gifts.

The university has created an Association of Alumni of AUPET, however, during interviews with graduates, employers, and experts, it was noted that this organization is not very active, it acts formally, without having a significant impact on improving the educational process. The website also does not contain any information about the activities of the Alumni Association.

## Strengths/Best Practices:

Not observed.

EEC recommendations for the DP 6B07101 - Electric Power Engineering, 6B07119 - Electric Power Systems, 7M07116 - Electric Power Systems, 7M07101 - Electric Power Engineering, 8D07101 - Electric Power Engineering:

- 1. To the management of the DP 6B07101 Electric Power Engineering, 6B07119 Electric Power Systems, 7M07116 Electric Power Systems, 7M07101 Electric Power Engineering, 8D07101 Electric Power Engineering plan and achieve indicative indicators in the Development Plans of educational programs of the item "Activation of the process of academic mobility of students both in the country and abroad" to carry out work in this direction on a systematic basis. Deadline: annually.
- 2. To the university management intensify the activities of the «AUPET Alumni Association» and ensure that stakeholders are informed about its activities. The deadline is constant.

#### **EEC** conclusions:

According to the standard "Students", 12 criteria are disclosed, of which all 12 criteria have a satisfactory position.

# 6.7. Standard "The academic staff"

- ✓ The university must have an objective and transparent personnel policy in the context of DP, including recruitment (including invited academic staff), professional growth and development of personnel, ensuring the professional competence of all staff.
- ✓ The university must demonstrate compliance of the qualitative composition of the academic staff with the established qualification requirements, the strategy of the university, and the goals of the DP.
- ✓ The management of the DP must demonstrate a change in the role of the teacher in connection with the transition to student-centered learning and teaching.

- ✓ The university must provide opportunities for career growth and professional development of academic staff, including young teachers.
- ✓ The university must attract teaching specialists from relevant industries who have professional competencies that meet the requirements of the DP.
- ✓ The university must demonstrate the presence of a mechanism for motivating the professional and personal development of academic staff.
- ✓ The university must demonstrate the academic staff's widespread use of information and communication technologies and software in the educational process (for example, on-line learning, e-portfolios, MOOCs, etc.)
- ✓ The university must demonstrate a focus on developing academic mobility and attracting the best foreign and domestic teachers.
- ✓ The university must demonstrate the involvement of each teacher in promoting a culture of quality and academic integrity at the university, determine the contribution of academic staff, including invited ones, in achieving the goals of the DP.
- ✓ An important factor is the involvement of academic staff in the development of the economy, education, science, and culture of the region and country.

## Evidence-based part

The personnel policy at the university is carried out under the main priorities of the University Development Strategy and corresponds to modern trends in the field of working with human resources. The current procedure at the university ensures the transparency of personnel policy, since all decisions are announced at the Academic Council, the Council of Institutes, and department meetings, thus, are available to the academic staff.

When hiring teachers, they undergo competition for the position they occupy. First, a competition for vacant positions is announced, which is announced in the media. Submission of documents is carried out online through the kkk.aues.kz platform. The procedure for holding a competition for filling vacant positions is regulated by the regulatory documents of the Ministry of Education and Science of the Republic of Kazakhstan and the Regulations on the competition developed at AUPET

(https://aues.edu.kz/admin/web/uploads/personal-documents/1651645168\_u4K1X0.pdf).

Staff promotion primarily depends on the individual rating of the teacher, as well as the degree of professional development. The scientific and academic staff is developed by attracting young specialists, and graduates of master's and doctoral studies.

The quantitative and qualitative composition of academic staff is determined by standard indicators of the ratio of the proportion of full-time teachers to their total number, the proportion of teachers with academic degrees and titles from the number of full-time academic staff.

Currently, the academic staff meets the qualification requirements for licensing educational activities. The share of teachers with academic degrees and academic titles from the number of full-time academic staff in the DP of Cluster №1:

- 6B07101 Electric Power Engineering 50%;
- 6B07119 *Electric Power Systems* 52%;
- 7M07116 *Electric Power Systems* 92%;
- 7M07101 *Electric Power Engineering* 100%;
- 8D07101 *Electric Power Engineering* 100%.

Indicators for the qualitative and quantitative composition of the academic staff of graduating departments are given in Tables 2 and 3.

Picture 2 – The qualitative and quantitative composition of the academic staff of the department «Electric Power Engineering»

Total number of academic staff	Of which doctors of science are	Of which candidates of science are	Of which PhD doctors are	Of which with master's degree	Of which without a degree are
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	quant.	in %	quant.	in %	quant.	in %	quant.	in %	quant.	in %
24	1	4,2	8	33,3	5	20,8	10	41,7	2	8,2

Таблица 3 - The qualitative and quantitative composition of the academic staff of the department «Renewable and alternative energy sources»

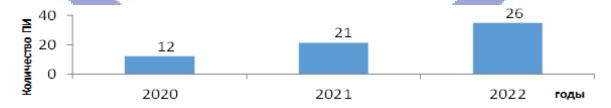
Total number of academic staff	Of wh doctor science	s of	Of which candidates of science are  Of which PhD doctors are		Of which with master's degree		Of which without a degree are			
	quant.	in %	quant.	in	quant.	in %	quant.	in	quant.	in
				%				%		%
44	3	6,8	11	25	5	11,4	21	47,7	4	9,1

The given indicators for the qualitative and quantitative composition of academic staff confirm the availability of human resources necessary to implement the entire range of DP subjects and meet the qualification requirements for licensing educational activities.

Non-commercial JSC AUPET is responsible for its employees and provides them with favorable working conditions. The university's activities in this direction are reflected in the AUPET Charter (<a href="https://aues.edu.kz/admin/web/uploads/personal-documents/1629863377\_2B6Ebv.pdf">https://aues.edu.kz/admin/web/uploads/personal-documents/1629863377\_2B6Ebv.pdf</a>), and the AUPET collective agreement. According to the collective agreement, AUPET undertakes to implement social guarantees, finance measures for occupational health, safety, and industrial sanitation, and improve the working and living conditions of employees (the list of activities is given in Appendix 4 of the collective agreement). AUPET provides a discount on tuition for employees' children. Employees are also given a discount (up to 50%) on vouchers to holiday homes and sanatoriums, as well as children of employees to health and sports camps.

It should also be noted that one of the important aspects of the professional development of teachers of accredited programs is their participation in research work, in particular, in participation in the topics of grant financing and contractual projects.

One of the objectives of this strategy is to train teacher-researchers who participate in the implementation of grant and contractual financing projects and introduce research results into the educational process. The number of such teachers is growing every year (Table 6).



Picture 6 – The number of teacher-researchers on DP of Cluster №1

In July 2021, the research on the Grant Project of the Ministry of Education and Science of the Republic of Kazakhstan and the World Bank for Reconstruction and Development for 2018-2021 "Technological Modernization and innovative development of the Energy Industry of Kazakhstan" (337 million tenge) was completed.

In December 2022, research work on the Grant Project of the Ministry of Education and Science of the Republic of Kazakhstan (for young scientists) for 2020-2022: "Optimization of planning and control of electrical modes in Smart Grid systems" was completed successfully.

In 2022, the following grant funding projects of the Ministry of Education and Science of the Republic of Kazakhstan were won:

- Grant from the Ministry of Education and Science of the Republic of Kazakhstan (2022-2024) for the project: "Intelligent system for monitoring and predicting operational reliability of electrical networks of oil and gas complexes, including autonomous systems with renewable energy sources" (Scientific supervisor, Ph.D., Professor Tokhtibakiev K.K.) in the amount of 72 million tenge;
- Grant from the Ministry of Education and Science of the Republic of Kazakhstan (for 2022-2024) for the project "Research and development of an energy-efficient object-oriented electric drive of centrifugal mechanisms" (Scientific supervisor, PhD Almuratova N.K.) for 68 million tenge.

During the reporting period, contractual research work was carried out with large energy companies, the most significant of which are:

- Development of a preliminary feasibility study for the project «Integration of the energy system of Western Kazakhstan with the EES of Kazakhstan». Customer JSC KEGOC». 2021-2022 (68 million tenge);
- Development of a joint Concept for the EEC development of Kazakhstan and the Unified Energy System of Central Asia. Customer CDC "Energia" (Uzbekistan, Tashkent). 2021-2023 (215 million tenge);
- Study of solar power plants on the roofs of buildings in Almaty. Client USAID Company. 2022-2024 (55 million tenge).

To support the research activities of academic staff, the University has created the Center for Scientific Research and Technology Development (CSRTD), whose functional responsibilities include coordinating and informing about scientific work, holding conferences, seminars, and so on. All necessary information about CSRTD is displayed on the AUPET website in the "News" and "Science" tabs.

Based on the results of 2019, the title of "Best University Teacher" was awarded to teachers Sagyndikova A.Zh. and Almuratova N.K.

Teachers have a high publication activity by publishing the results of their research. Publications are published both in publications of the Republic of Kazakhstan as well as in near and far abroad.

To conduct lectures and practical lessons on the DP 6B07101 Electric Power Engineering and DP 6B07119 Electric Power Systems, experienced teachers with experience in production are involved. Thus, to conduct classes in specialized disciplines (Transient processes in the electric power industry and Diagnostics of electrical equipment), the former director of the Department for Operating Modes of Electric Networks of JSC "ALC" Kubegenov M.E. is invited. Since 2022, the university has decided to include production specialists in the AC (at least 50% of the AC composition).

To support young teachers, departments are working to create a personnel reserve and provide financial support for scientific research and internships. Young teachers who are actively engaged in scientific research and who demonstrate themselves as creative individuals with an active life position are sent to doctoral studies.

In case of admission to doctoral studies, the university, to support the professional development of young full-time teachers, provides social support and accepts them part-time at 0.5 rates.

Material incentives include a system of bonuses for teachers and staff for personal contribution and achieved results in their work activities. Bonuses are awarded to employees based on the results of work during the academic year, the successful completion of the admissions campaign, certification, accreditation, scientific results, birthdays and anniversaries, and official public holidays. Other mechanisms for motivating employees to work more efficiently and creatively are sending them to courses, seminars, conferences, and internships, including in foreign countries.

The university allocates funds for the publication of textbooks, teaching aids, and monographs of its teachers.

# Analytical part

All the academic staff of the Republic of Kazakhstan "On Education". The main indicator of the success of the implementation of the personnel policy is the improvement of the quality level of the academic staff. In this direction, the university carries out targeted work, which is evidenced by the stable qualitative growth of the academic staff.

The management of the university has developed a mechanism and systematically works on the motivation of professional and personal development of the DP teachers. One of the tools of such promotion is the system of payment categories, which takes into account the publication activity of university students and teachers. However, <u>experts note</u> that when promoting the academic staff, which have publications in scientific journals of the international databases Web of Science, Scopus category Q1, Q2, it is necessary to encourage not only the first two authors but also other co-authors, who are teachers and employees of AUPET. <u>The academic staff of the university expressed their desire to revise the motivation mechanism during the meeting with the EEC, as well as in the questionnaires</u>.

The departments pay attention to the use of information technologies in the educational process. However, <u>EEC experts note</u> that within the framework of the development of distance educational technologies, the faculty of the department must develop the skills of using information and communication technologies and software tools in the educational process, <u>developing mass open online courses</u> and placing them on the university website

#### Strengths/best practices:

Not observed.

EEK recommendations for the DP 6B07101- Electric Power Engineering, 6B07119 – Electric Power Systems, 7M07116 – Electric Power Systems, 7M07101 – Electric Power Systems, 8D07101 – Electric Power Engineering:

- 1 To the university management revise the mechanism of motivation and promotion of the academic staff who are authors of scientific articles published in rating journals of the international databases Web of Science, Scopus. *Deadline 2024-2025 academic year*.
- 2. To the university management of the university develop normative requirements for the academic staff application of the information and communication technologies and software in the educational process, the use of mass open online courses, develop and ensure the implementation of advanced training of the academic staff according to the accredited DPs in the field of use of information and communication technologies in the educational process. *Deadline 2024-2025 academic year.*

#### Conclusion of the EEC:

According to the standard "Academic staff" for the DP 6B07101- Electric Power Engineering, 6B07119 – Electric Power Systems, 7M07116 – Electric Power Systems, 7M07101 – Electric Power Systems, 8D07101 – Electric Power Engineering, 10 criteria are revealed, of which 9 - have a satisfactory position, 1 - suggests improvement.

#### 6.8. Standard "Educational Resources and Student Support Systems"

- ✓ The university must guarantee the adequacy of educational resources, including material and technical, and infrastructure for the educational program
- ✓ Management of the DP must demonstrate the presence of classrooms, laboratories, and other facilities equipped with modern equipment and ensure the achievement of the objectives of the DP
- ✓ The university must demonstrate the correspondence of information resources to the needs of the university and implemented DPs, including in the following areas:

- technological support of students and the academic staff under educational programs (for example, online training, modeling, databases, data analysis programs)
- library resources, including a fund of educational, methodical, and scientific literature on general education, basic and profiling disciplines on paper and electronic media, periodicals, access to scientific databases
- examination of the results of scientific research, graduation papers, dissertations on plagiarism
- access to educational Internet resources
- operation of WI-FI on the territory
- ✓ The university must demonstrate that it creates conditions for conducting scientific research, integrating science and education, publishing the results of research work of academic staff, employees, and students
- ✓ The university should strive to ensure that the educational equipment and software used for the development of educational programs are similar to those used in the relevant sectors of the economy.
- ✓ the DP guidance must demonstrate the existence of procedures for supporting various groups of students, including information and consultation
- ✓ the DP guidance must show the availability of conditions for the student's progress along an individual educational trajectory
- ✓ The university must take into account the needs of different groups of students (adults, working people, foreign students, as well as students with special educational needs)
- ✓ The university must ensure compliance with infrastructure requirements for security

# Evidence-based part

The university has a material and technical base that provides all types of practical training and research work of students, provided by the educational programs of the university and corresponding to the current sanitary-epidemiological and fire prevention norms and rules. Auditorium and laboratory base, classrooms, sports facilities comply with the established norms and rules. The university has 3 teaching-laboratory buildings with an area of 29473m2, 3 dormitories - 1611 beds, 3 business incubators, sports facilities - 4410m2, 82 laboratories, youth center "Entel" - 700m2.

AUPET consists of three buildings located close to each other. The buildings are called "Corps A" (more south) and "Corps B" (more north), respectively, and "Corps D" built-in 2010 is located between them. For convenience, all cases are connected by transitions.

The sports base of the university includes 5 indoor halls. In the building "A" there is an aerobics hall of 54 m2, an athletics hall of 72 m2, a wrestling hall of 72 m2, a volleyball and basketball hall of 112 m2, a tennis hall of 280 m2, men's and women's showers and locker rooms. There is an open sports field with football, volleyball, and basketball fields, and a running track around the sports field on the territory of the university.

There is a large classroom for 100 people and a small hall for 20 people for various events.

To meet the educational, personal, and career needs of students studying at AUPET, there are services for students: a student dormitory, a medical center, a canteen, an assembly hall with 280 seats, equipped with multimedia equipment and sound equipment, which allows conducting general university events. In 2018, the LED screen (5x3 meters) was installed in the auditorium.

The university provides free access to the use of Internet resources for all students in computer classes of the university. The university has a subscription department for free access, a reading room, a multimedia room, periodicals, and an information and bibliographic department. There is an electronic library which reflects the electronic resources of the university on the website of AUPET <a href="https://www.aues.edu.kz">www.aues.edu.kz</a>.

There is a library and an equipped electronic reading room in the building of the main building of AUPET. Students have free access to computers. There is a reading room, and a computer room (with Internet access).

Electronic library, including electronic literature on disciplines of the department. All educational-methodical complex of discipline (EMKD) is 100% electronically posted on the university portal www.aues.edu.kz, to which every student has access through his account.

In the institute, IEE computer classes are used for conducting virtual laboratory classes (with the use of MatLab, MathCad, Electronik Workbench), the technical design of course and diploma works, as well as for acquiring computer skills.

Table 4 presents a list of certified laboratories under consideration of the DP of Cluster  $N_{2}$ 1.

Table 4 - List of	certified labor	ratories used in	the DP of	f Cluster №1

$N_{\underline{0}}$	Name of laboratory	Specialization of	Document	Place of registration and
p/p		the DP		issuance
1	technical means	The DP 6B07101- Electric Power Engineering, The DP 6B07119 – Electric Power Systems	Certificate №6763	Registered in the register of the state system for ensuring the unity of measurements RK № KZ 02.02.02283 002036
2	compatibility Non-	Electric Power Systems, 7M07116 – Electric	Certificate accreditation № KZ.И.02.1701	Registered in the register of accreditation subjects. National Accreditation Center 000584
3	Testing laboratory of	DP 7M07116 –	Certificate	Registered in the register
1	technical means JSC "AUPET"		accreditation № KZ.T.02.1592	of accreditation subjects. National Accreditation Center 001933

Due to cooperation with the USAID company, in 2022, a solar power plant with a capacity of 10 kW was assembled on the roof of the educational Building A, and a wind turbine with a capacity of 5 kW was installed on the territory of the university.

According to the results of the 19th International Exhibition «Energy, Electrical Engineering and Power Engineering» POWEREXPO ALMATY DP «Electric Power Systems» was awarded the 1st-degree diploma in the nomination of «Educational Stands. Kazakhstan» on October 27-29, 2021.

In the framework of the DP Cluster No.1, close cooperation is carried out with leading companies in equipping the training and laboratory base. On February 26, 2019, the company "IEK" opened a study room (Room 338A) «Modern components of the electric supply system» at the Department of Renewable and Alternative Sources of Energy.

The number of computer classes, multimedia classrooms, language classrooms, television classrooms, and interactive classrooms correspond to the modern needs of the educational process and research activities of the academic staff and students.

Computer and material-technical resources of AUPET consist of:

- 35 computer classes for 430 workplaces;
- 3 multimedia lecture halls for 250 workplaces;
- 2 sound-equipped lecture halls for 220 seats;
- 7 interactive study rooms for 120 workplaces;
- 10 television auditoriums for 840 workplaces.

The university library is the part of the information-educational environment of the university, its task is to accumulate and provide various information resources aimed at supporting the educational process.

For students, the library has 6 points of library and information service - a subscription, three specialized reading rooms, a hall of electronic resources "Media library" and a reading room for extracurricular activities in dormitory №1.

The total area of the library premises is 1117m2 and 275 seats.

The total number of users of the library is 8437 people.

The general stock of the library is 600,778 copies, including 225,631 copies in the Kazakh language and 6,755 copies in foreign languages.

"Herald AUPET", which is published four times a year, is available in all reading rooms and has special attention and demand.

Students and academic staff can access electronic information resources from any computer at the university, in the Media Library, as well as from home on the university website <a href="https://aues.edu.kz/ru/site/library">https://aues.edu.kz/ru/site/library</a>.

The printing house with a production area on which printing equipment is installed, equipped with the necessary equipment operates in AUPET for publishing teaching aids, books, visual aids, and advertising material

The University has a well-organized system of food and household services for students. Dining rooms are located on the first floor of three buildings A, B, D. A commission was created to monitor the work of catering establishments and the provision of services for employees and students of the university, which at least once a semester controls the quality of food preparation, sanitary and fireproof conditions of premises in catering establishments and the provision of services, with the mandatory preparation of a protocol, reflecting the results of the inspection, with the provision of inspection materials to the employees' union committee and the students' union committee. There is also a medical center. The employee of the medical center is assigned the responsibility of monitoring the state of sanitary and hygienic requirements of the university canteen and the quality of food, as well as the organization of sanitary and educational work and the promotion of a healthy lifestyle. A psychological support service for students has been established at the university.

Foreign students are fully provided with places in the dormitory. Students are engaged in sports and gyms of the university in their free and study time.

For the social support of students, the university has an educational grant and a scholarship named after the First Rector G.Zh. Daukeyev.

To ensure the sufficiency and planning of the development of material resources to support the educational process, questions are heard about the provision of educational activities with the necessary resources annually at the meetings of the department, the councils of the institute, the academic council, and the university administration. On the basis of requests for the purchase of resources submitted by the leaders at the meeting of the academic council, the Plan for the modernization of the department is approved.

#### Analytical part

As a result of the inspection of the objects of the material base, the members of the EEC note that the university has all the necessary resources to ensure the educational process. Buildings and facilities of the university comply with current sanitary standards and fire safety requirements. Various educational resources and student support services are available at the university. The university has a sufficient amount of computer equipment and software.

The management of the DP together with the management of the university on a regular basis create conditions for ensuring the sufficiency of material resources and infrastructure for carrying out scientific research, providing basic practices, integrating science into the educational process, and publishing the results of scientific research work of students. At the same time, *it should be noted that the university needs to quantitatively expand* the library fund by acquiring specialized literature in the state and English languages; including electronic textbooks. The lack of specialized literature in Kazakh and English was expressed by *stakeholders during the interview*.

At the meeting with all target groups, <u>the problem of unstable operation</u> of the Wi-Fi network at the university <u>was announced</u>.

#### Strengths/best practices:

According to the accredited DP, the university demonstrated the presence of classrooms, laboratories and other facilities equipped with modern equipment and ensuring the achievement of the objectives of the DP.

EEC recommendations for DP 6B07101- Electric Power Engineering, 6B07119 – Electric Power Systems, 7M07116 – Electric Power Systems, 7M07101 – Electric Power Systems, 8D07101 – Electric Power Engineering:

- 1. To the university management conduct an analysis of Wi-Fi functioning in university buildings, based on the results of the analysis, determine the allocation of necessary funding for the improvement of Wi-Fi in its territory by the beginning of the 2024-2025 academic year
- 2. To the management of the DP strengthen work on the development, publication and acquisition of specialized literature in English and state languages; electronic textbooks, including own developments. *Deadline:* 2024-2025 academic year.

#### **EEC** conclusions:

According to the standard «Educational resources and student support systems» for DP 6B07101- Electric Power Engineering, 6B07119 – Electric Power Systems, 7M07116 – Electric Power Systems, 7M07101 – Electric Power Systems, 8D07101 – Electric Power Engineering 13 criteria are disclosed, of which 1 criterion has a strong position, 10 criteria - have a satisfactory position, 2 criteria - suggest improvement.

#### 6.9. Standard "Public Awareness"

- ✓ The information published by the university should be accurate, objective, relevant and reflect all directions of the university's activities within the framework of the educational program.
- ✓ Informing the public should include support and clarification of national programs for the development of the country and the system of higher and postgraduate education.
- The management of the university should use various methods of information dissemination (including mass media, web resources, information networks, etc.) to inform the general public and interested parties.
- ✓ Information published by the university about the educational program should be objective and relevant and include:
- the goal and planned results of the DP, assigned qualification
- information and system of evaluation of educational achievements of students
- information about academic mobility programs and other forms of cooperation with university partners and employers
- information on opportunities for the development of personal and professional competencies of students and employment
- data reflecting DP's positioning on the market of educational services (at regional, national, and international levels)
- ✓ An important factor is the publication of open resources of reliable information about the academic staff, in terms of personnel
- ✓ The university must publish the audited financial statements of DP on its web resource
- ✓ The university must post information and links to external resources based on the results of external evaluation procedures
- ✓ An important factor is the placement of information about cooperation and interaction with partners, including scientific/consulting organizations, business partners, social partners, and educational organizations.

#### Evidence-based part

Based on the principle of transparency, the University provides the public with information about its activities, including implemented programs, expected learning outcomes of these programs, awarded qualifications, teaching, learning, evaluation procedures, passing grades, and educational opportunities provided to students, as well as information about employment opportunities of graduates.

In the reporting period, the University carried out educational activities using its information platform PLATONUS. This program has a centralized database, which reflects all real learning processes. User rights and assigned roles were assigned to all academic staff and employees of the university's structural subdivisions. It should be noted that the Portal system can quickly display the current results of the educational process for all types of classes - lectures, practical classes, and laboratory work. Thus, the students and, what is very important, their parents have full information about their performance, class attendance, and so on. In addition, communication with parents is carried out by the institute (dean's office), senior advisers of courses, and advisers of study groups.

Support of various educational, scientific, methodical information on the site in the current state allows citizens to receive complete, reliable, socially significant information about the provided services and spheres of educational activity, services for applicants, students, teachers, and visitors of the site.

Interactive interaction between the university and site visitors, teachers and students, employees and students is ensured. There is an operational response of the university management to questions, and complaints of students, and teachers with the adoption of necessary measures of influence, or correction of a controversial situation.

Applicants can read about the admission rules at <a href="www.aues.edu.kz">www.aues.edu.kz</a>. The directorate and the registrar's office will find out about the transfer from course to course, from other universities, the order of transfer of credits acquired in other universities, and expulsion from the educational institution.

After the formation of the contingent, in the academic calendar for the first courses, the first week is devoted to training and informing newly admitted students about the rules of credit technology. This includes general questions about the organization of the educational process, questions about planning the individual curriculum (IC) by students, familiarization of students with a guidebook, catalogue of elective disciplines (CED) by specialty, forms of educational documentation, etc. For the implementation of the credit system of education, special academic services have been created at the university, which provide assistance to students in the selection and implementation of their educational trajectories and help in the mastering of academic disciplines. Special academic services include the registrar's office and the service of advisors who assist students in choosing an educational path.

The registrar's office, guided by approved individual study plans and official information on the contingent of students, forms academic streams, study groups, and subgroups. The directors and the graduating departments monitor the subsequent progress of the students.

The university conducts systematic work on assistance in employment. The main activity of the university for the employment of graduates in recent years is the holding of job fairs, which have become traditional. career and business center also function. This Center provides information on places of professional and research practices; information about vacancies and offers from potential employers and more.

The University has an Alumni Association, which provides sponsorship assistance to underprivileged students and provides assistance in employment.

On the university website <a href="www.aues.edu.kz">www.aues.edu.kz</a>, the press center publishes relevant, fresh information about upcoming events, conferences, and other events held by AUPET. The most interesting events of the university are covered on the pages of mass media. One of the methods is external and internal news published on the site in the "News" section, as well as in the newspaper "Bilimdi el" (https://aues.kz/?page\_id=2; https://aues.kz/?page\_id=8281).

All activities and events of the university are reflected in the mass media and in the relevant sections of the website of AUPET (applicants, students, graduates, board of trustees, academic staff, employees, partners, etc.). The university is represented in social networks Instagram, Odnaklassniki, Vkontakte, Twitter, where information about upcoming events at the university is announced and their holding is covered.

Also, AUPET has its page on Facebook, where the results of educational, scientific, and cultural activities of the university are presented. More than 2,000 subscribers have subscribed to the official Facebook page, and important information about the achievements of AUPET is reposted by university academic staff and employees (<a href="https://web.facebook.com/aueskzkz/">https://web.facebook.com/aueskzkz/</a>).

The policy is aimed at improving the web resource of AUPET, thus, both the technical functionality and the information component of the site are modified. Open access to information about the academic staff is aimed at improving the principles of transparency and openness in the organization's activities.

#### Analytical part

During the analysis of the documents and content of the website of the AUPET, the experts established that the management uses various methods of information dissemination: mass media, web resources, information networks, etc. EEC notes that in the field of information dissemination policy, the university demonstrates a policy of openness and involvement in informing the public of applicants, employers, participants in the educational process, and all interested parties. Management of the DP uses mass media, and social networks for information dissemination. Information about the activities of the university, and financial reporting is published on the website.

Based on the analysis of available information regarding the SO and the DP, the commission notes that the information on the university's website is available to interested parties in the educational process (students, teachers, employers, and the public), but it is not complete enough, nor is there a certain mechanism for its timely updating. There are no examples of how the satisfaction of interested parties in terms of the quality of the received information and its completeness is investigated. <u>Necessary refinement and regular addition of information on the main sections of the site are needed</u>: regarding the website of the department, specifics, and implementation of the DP, information about students and the academic staff, cooperation and interaction with partners, about scientific projects, about programs of academic mobility; and employment opportunities.

<u>In addition</u>, open resources provide complete and reliable <u>information about the academic staff</u>, in the <u>section</u>, the <u>personnel is not presented</u>.

#### Strengths/best practices:

Not observed.

EEC recommendations for the DP 6B07101- Electric Power Engineering, 6B07119 – Electric Power Systems, 7M07116 – Electric Power Systems, 7M07101 – Electric Power Systems, 8D07101 – Electric Power Engineering:

1. To the management of the DP - supplement and regularly update information on the university's website about the specifics of accredited DPs, to publish on the university's website the contingent of students enrolled in the accredited DPs, taking into account the dynamics; information about the system of evaluation of educational achievements of students; about the programs of academic mobility; information about cooperation and interaction with partners, information about creative activities of students and the academic staff, information about scientific projects, employment opportunities, etc. By the beginning of the 2024-2025 academic year.

2. Present on the university website the updated personal information about each teacher who implements accredited DPs during the entire period of training. *Deadline: September, 2024.* 

#### EEC conclusions:

According to the standard «Public Awareness», 12 criteria are disclosed, of which 11 have satisfactory positions, and 1 - requires improvement.

#### (VII) REVIEW OF STRENGTHS/BEST PRACTICES FOR EANCH STANDARD

## According to the Standard «Degree Program Management»

not observed.

## According to the Standard «Information Management and Reporting» not observed.

## According to the Standard «Degree Program Development and Approval» not observed.

# According to the Standard «Ongoing Monitoring and Periodic Evaluation of Degree Programs»

not observed.

# According to the Standard «Student-Centered Training, Teaching and Learning assessment»

not observed.

## According to the Standard «Students»

not observed.

#### According to the Standard «Academic Staff»

not observed.

#### According to the Standard «Educational Resources and Student Support Systems»

According to the accredited DP, the university demonstrated the presence of classrooms, laboratories, and other facilities equipped with modern equipment and ensured the achievement of the objectives of the DP.

#### According to the Standard «Public Awareness»

not observed.

#### (VIII) REVIEW OF RECOMMENDATION FOR QUALITY IMPROVEMENT

### According to the Standard «Degree Program Management»

1. To the management of the DP – develop a road map (Plan) to reduce the impact of risks associated with the design and implementation of the DP (including staffing, contingent formation, etc.), or introduce relevant measures into the existing development plans of the DP with specific indicators, deadlines and responsible people for implementation; on a systematic basis, conduct analysis of risk management at the level of structural division and the DP in the 2024-2025 academic year

## <u>According to the Standard «Information Management and Reporting»</u> not available.

#### According to the Standard «Degree Program Development and Approval»

- 1. To the management of the DP it is necessary to ensure the participation of students in the DP development procedure, ensuring their quality. *Deadline annually*.
- 2. To the management of the DP it is necessary to consider the possibility of including measures to introduce a dual education system in the development plan of each DP. *Deadline* 2024-2025 academic year.
- 3. To the management of the DP develop projects of joint educational programs with domestic or foreign universities. *Deadline the beginning of the 2025-2026 school year*.

# According to the Standard «Ongoing Monitoring and Periodic Evaluation of Degree Programs»

- 1 To the management of the DP it is recommended to inform interested parties about all planned or undertaken actions regarding the accredited DP 6B07101- Electric Power Engineering, 6B07119 Electric Power Systems, 7M07116 Electric Power Systems, 7M07101 Electric Power Systems, 8D07101 Electric Power Engineering
- 6B07101- Electric power, 6B07119 Electric power systems, 7M07116 Electric power systems, 7M07101 Electric power, 8D07101 Electric power.
- 2. Following the review and introduction of changes to the accredited DPs, constantly ensure the publication of the results of the changes made on the university website. The deadline within 10 days after making the appropriate changes.
- 3. To the university management it is necessary to conduct an additional anonymous survey of students and academic staff on the quality of the educational process, and based on the results, hold a discussion at the Academic Council of AUPET to identify problematic points, develop a plan for corrective and preventive actions. Deadline before the beginning of the 2024-2025 academic year.

# According to the Standard «Student-centered Training, Teaching and Learning Assessment»

- 1. The management of the DP conduct monitoring of the applied methodical teaching of profile disciplines, practice the holding of methodical conferences/seminars regularly devoted to modern methods of teaching the profile disciplines to improve the quality of teaching. *Deadline annually*.
- 2. The management of the DP develop a plan for the leadership of the DP and ensure the undergoing of the advanced training of the academic staff in the field of modern methods of evaluating the results of students' training. Deadline 2024-2025 academic year.

#### According to the Standard «Students»

1. The management of the DP 6B07101- Electric Power Engineering, 6B07119 – Electric Power Systems, 7M07116 – Electric Power Systems, 7M07101 – Electric Power Systems - plan and achieve indicative indicators in the Plans for the development of educational programs of the

item «Activation of the process of academic mobility of students both in the country and abroad» with the purpose to conduct work in this direction on a systemic basis. *Deadline - annually*.

2. The management of the university - intensify the activity of «Association of Alumni of AUPET», to provide information to stakeholders about its activities. *Deadline* - permanent.

#### According to the Standard «Academic Staff»

- 1. To the management of the university revise the mechanism of motivation and promotion of the academic staff who are the authors of scientific articles published in rating journals of the international databases Web of Science, Scopus. Deadline 2024-2025 academic year.
- 2. To the management of the university develop normative requirements for the academic staff in the application of information and communication technologies and software in the educational process, the use of mass open online courses, develop and ensure the implementation of advanced training of the academic staff according to accredited DPs in the field of the use of information and communication technologies in the educational process. Deadline 2024-2025 academic year.

#### According to the Standard «Educational Resources and Student Support Systems»

- 1. The management of the university conduct an analysis of Wi-Fi functioning in university buildings, based on the results of the analysis, and determine the allocation of necessary funding for the improvement of Wi-Fi operation in its territory by the beginning of the 2024-2025 academic year.
- 2. To the management of the DP strengthen the work on the development, publication and acquisition of specialized literature in English and state languages; electronic textbooks, including own developments. Deadline 2024-2025 academic year.

#### According to the Standard «Public Awareness»

- 1. To the management of the DP supplement and regularly update information on the University's website about the specifics of the accredited DPs, publish on the university's website the contingent of students studying under the accredited DPs, taking into account the dynamics; information about the system of evaluation of educational achievements of students; about the programs of academic mobility; information about cooperation and interaction with partners, information about creative activities of students and the academic staff, information about scientific projects, employment opportunities, etc. by the beginning of the 2024-2025 school year.
- 2. Present on the website of the university updated personal information about each teacher who implements the accredited DPs during the entire period of training. Deadline: September, 2024.

## (IX) REVIEW OF RECOMMENDATION FOR EDUCATIONAL ORGANIZATION DEVELOPMENT

- To the management of the university develop normative requirements for academic staff of the application of information and communication technologies and software in the educational process, the use of mass open online courses, develop and ensure the implementation of advanced training of the academic staff according to the accredited DPs in the field of use of information and communication technologies in the educational process.
- To the management of the university publish reliable information about the academic staff, in terms of personnel, on the website of the university; about the cooperation and interaction with partners, including scientific/consulting organizations, business partners, social partners, and educational organizations to inform the general public and interested persons;
- To the management of the university improve the functioning of Wi-Fi on its territory.

## (X) RECOMMENDATION TO THE ACCREDITATION COUNCIL

## Appendix 1. Assessment Table "SPECIALIZED PROFILE PARAMETER (EX-ANTE)

<b>№</b> п\п	№ п\п	Assessment criteria	t	he pos he edu organi	ıcatio	n
			Ctrong	Satisfactory	Suggests improvement	Unsatisfactory
	Stan	dard «Degree Program Management»				
1	1.	The university must demonstrate the development goals and strategies of the DP development based on the analysis of external and internal factors with the wide involvement of various stakeholders.		+		
2	2.	The quality assurance policy should reflect the relationship between research, teaching, and learning		+		
3	3.	The university demonstrates the development of a culture of quality assurance		)		
4	4.	Commitment to quality assurance should apply to any activity performed by contractors and partners (outsourcing), including the implementation of joint/double degree education and academic mobility		5		
5	5.	Management of the DP ensures transparency of the development plan of the DP based on analysis of its functioning, real positioning of the university, and orientation of its activities to meet the needs of the government, employers, interested parties, and students		t		
6	6.	The management of the DP demonstrates the functioning of mechanisms for the formation and regular revision of the DP development plan and monitoring of its implementation, assessment of the achievement of learning goals, compliance with the needs of students, employers, and society, decision-making aimed at constant improvement of the DP		+		
7	7.	The management of the DP should attract the representatives of groups of interested people, including employers, students, and academic staff to form the plan of development of the DP		+		
8	8.	The management of the DP must demonstrate the individuality and uniqueness of the DP development plan, its consistency with the national development priorities, and the development strategy of the educational organization.		+		
9	9.	The university must demonstrate a clear definition of those responsible for the business process within the framework of the DP, the distribution of responsibilities of personnel, the delineation of the functions of collegial bodies		+		
10	10.	The management of the DP ensures the coordination of the activities of all persons involved in the development and management of the DP, and its continuous implementation, and also involves all interested parties in this process		+		

11	11.	The management of DP must ensure the transparency of the management system, the functioning of the internal quality assurance system, including its design, management and monitoring, and the adoption of appropriate decisions		+		
12	12.	The management of the DP should carry out risk management			+	
13	13.	The management of the DP must ensure the participation of representatives of interested persons (employers, academic staff, students) in the collegial bodies of educational program management, as well as their representativeness when making decisions on issues of educational program management		+		
14		The university must demonstrate innovation management within the DP, including analysis and implementation of innovative proposals		+		
15	15.	The management of the DP must demonstrate its openness and accessibility to academic staff, students, employers, and other interested parties		+		
16	16.	The management of the DP confirms the passage of training in management education programs		+		
17	17.	The management of the DP should strive to ensure that the progress achieved since the last external quality assurance procedure is taken into account when preparing for the next procedure		+		
		Total according to the standard	0	16	1	0
	Stan	dard «Information Management and Reporting»		-		
18	1.	The university must ensure the functioning of the information collection, analysis, and management system based on modern information and communication technologies and software.		)		
19	2.	The management of the DP demonstrates the systematic use of processed, adequate information to improve the internal quality assurance system		7		
20	3.	The management of the DP demonstrates the availability of a reporting system that reflects the activity of all structural divisions and departments within the DP, including assessment of their performance		4		
21						
22	5.	The university must demonstrate a mechanism for ensuring the protection of information, including determining the responsible people for the reliability and timeliness of the analysis of information and the provision of data.		+		
23	6.	The university demonstrates the involvement of students, employees, and academic staff in the process of collecting and analyzing information, as well as making decisions based on it		+		
24	7.	The management of the DP should demonstrate the availability of communication mechanisms with students, employees, and other interested parties, including conflict resolution		+		
25	8.	The university must ensure the measurement of the degree of satisfaction of the needs of academic staff, personnel, and students within the framework of the DP and demonstrate evidence of the elimination of the identified deficiencies.		+		

26	9.	The university should evaluate the effectiveness and efficiency of the activity, including in the section of the DP		+		
		The information collected and analyzed by the university within the DP should take into account:				
27	10.	key performance indicators		+		
28	11.	the dynamic contingent of students in sections of forms and types		+		
29	12.	performance level, student achievement, and expel		+		
30	13.	Satisfaction of students with the implementation of DP and the quality of education at the university		+		
31	14.	availability of educational resources and support systems for students		+		
32	15.	employment and career growth of graduates		+		
33	16.	Students, employees, and academic staff must document their consent to the processing of personal data		+		
34	17.	The management of the DP should contribute to the provision of all necessary information in relevant fields of science		+		ĺ
		Total according to the standard	0	17	0	0
Stan	dard -	«Degree Program Development and Approval»				
35	1.	The university must demonstrate the existence of a documented procedure of DP development and its approval at the institutional level		+		
36	2.	The university must demonstrate compliance of the developed DP with the established goals and planned learning outcomes		7		
37	3. The management of the DP must determine the influence of disciplines and professional training on the formation of learning outcomes			+		
38	8 4. The university can demonstrate the presence of a model of the DP graduate that describes learning outcomes and personal qualities					
39						
40						
41	7.	The management of the DP must ensure that the content of academic disciplines and learning outcomes correspond to each other and the level of learning (bachelor's, master's, and doctoral)		+		
42	8.	The management of the DP must demonstrate the conduct of external examinations of the DP	+			
43	9.	The management of the DP must provide evidence of the participation of students, academic staff, and other stakeholders in the development of the DP and ensuring its quality	+			
44	10.	The management of the DP must 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 students for professional certification		+		

46	12.	An important factor is the presence of a double-degree DP and/or joint DP with foreign universities			+	
	1	Total according to the standard	0	11	1	0
Stan	dard «	«Ongoing Monitoring and Periodic Evaluation of Degree Programs»				
47	1.	The university must ensure the content review and structure of the DP, taking into account the changes in the labor market, the requirements of employers, and the social demands of society		+		
48	2.	The university must demonstrate the existence of a documented procedure of monitoring and periodically evaluating the DP to achieve the goal 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.	content of the programs in the context of the latest achievements of science and technology in a specific discipline		+		
50	4.	changes in the needs of society and the professional environment		+		
51	5.	workload, performance, and graduation of students	l.	+		
52	6.	effectiveness of student assessment procedures		+		
53	7.	needs and degree of satisfaction of students		+		
54	8.	compliance of the educational environment and the activities of support services with the goals of the DP		+		
55	9.	All interested parties must be informed of any planned or undertaken actions regarding the DP. All changes made in the DP must be published		1	+	
56	10.	Support services should identify the needs of various groups of students and the degree of their satisfaction with the organization of training, teaching, assessment, and development of DP in general		+		
		Total according to the standard	0	9	1	0
Stan	dard «	Student-Centered Training, Teaching and Learning Assessment»		7		
57	1.	The management of the DP must ensure respect and attention to different groups of students and their needs, providing them with flexible learning trajectories	7	+		
58	2.	The management of the DP must provide teaching based on modern achievements of world science and practice in the field of training, the use of various modern teaching methods, and assessment of learning outcomes that ensure the achievement of the goals of the DP, including competencies, skills in performing scientific work at the required level		+		
59	3.	The management of the DP must determine mechanisms for distributing the educational load of students between theory and practice within the DP, ensuring the mastery of the content and achievement of the goals of the DP of each graduate		+		
60	4.	An important factor is the presence of own research in the field of teaching methods of the DP disciplines			+	
61	5.	The university must ensure that the procedures for assessing learning outcomes comply with the planned results and goals of the DP		+		
62	6.	The university must ensure consistency, transparency, and objectivity in the mechanism for assessing the educational results of the DP. Criteria and methods for assessing learning outcomes should be published in		+		

		advance				
63	7.	Evaluators must be proficient in modern methods of assessing learning outcomes and regularly improve their skills in this area		+		
64	8.	The management of the DP must demonstrate the presence of a feedback system on the use of various teaching methods and evaluation of learning outcomes		+		
65	9.	The management of the DP must demonstrate autonomy support for students while simultaneously providing guidance and assistance from the teacher		+		
66	10.	The management of the DP must demonstrate the existence of a response procedure for student complaints		+		
		Total according to the standard	0	9	1	0
Stan	dard -	«Students»				
67	1.	The university must demonstrate a student enrollment policy and ensure the transparency of its procedures. Procedures regulating the life cycle of students (from admission to completion) must be defined, approved, published		+		
68	2.	The management of the DP should provide special adaptation and support programs for newly admitted and foreign students	١	+		
69	3.	The university must demonstrate compliance with its actions with the Lisbon Recognition Convention, including the presence and application of a mechanism for recognizing the results of academic mobility of		+		
		students, as well as the results of additional, formal, and informal learning		1		
70	4.	The university must provide opportunities for external and internal academic mobility of students, as well as assist them in obtaining external grants for studying		2		
71	5.	The university must actively encourage students to self-education and development outside the main program (extracurricular activities)		+		
72	6.	An important factor is the presence of a mechanism to support gifted students		+5		
73	1	The university has to 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	2.	The university has to provide with internship places, demonstrate a procedure for facilitating the graduates employment, and maintaining contact with them		+		
75	3.	The university has to demonstrate the procedure for issuing documents to graduates confirming the obtained qualifications, including the achieved learning outcomes		+		
76	4.	The DP management has to demonstrate that program graduates have skills that are in demand in the labor market and that these skills are actually in demand in the labor market		+		
77	5.	The DP management has to demonstrate the existence of a mechanism for monitoring the employment and professional activities of graduates		+		
78	6.	An important factor is the presence of an active alumni association/union		+		
	ı	Total by standard	0	12	0	0
Stan	dard "l	Faculty and teaching staff'				

79	1.	The university has to have an objective and transparent personnel policy in the context of the DP, including recruitment (including invited teaching staff), professional growth and personnel development, ensuring the professional competence of the entire staff  The university has to demonstrate compliance of the qualitative +							
80	2.	composition of the teaching staff with the established qualification requirements, the strategy of the university, and the goals of the DP							
81	3.	The leadership of the DP has to demonstrate a change in the role of the teacher in connection with the transition to student-centered learning and teaching		+					
82	4.	The university has to provide opportunities for teaching staff's career growth and professional development, including young teachers		+					
83	5.	The university has to involve in teaching specialists from relevant industries who have professional competencies that meet the requirements of the DP		+					
84	6.	The university has to demonstrate the presence of a mechanism for motivating the professional and personal development of teaching staff		+					
85	7.	The university has to demonstrate the widespread use of information and communication technologies and software in the educational process by teaching staff (for example, on-line learning, e-portfolios, MOOCs, etc.)	_		+				
86	8.	The university has to demonstrate a focus on developing academic mobility and attracting the best foreign and domestic teachers		+					
87	9.	The university has to demonstrate the involvement of each teacher in promoting a culture of quality and academic integrity at the university, determine the contribution of teaching staff, including invited ones, in achieving the goals of the DP		+					
88	10.	An important factor is the involvement of teaching staff in the development of the economy, education, science and culture of the region and country		2					
		Total by standard	0	9	1	0			
Stan	dard '	Educational Resources and Student Support Systems"		6					
89	-	The university has to guarantee the educational resources compliance with the objectives of the DP, including material and technical resources and infrastructure		+					
90	2.	The DP management has to must demonstrate the availability of classrooms, laboratories and other facilities equipped with modern equipment and ensuring the achievement of the DP objectives.	4						
		The university has to demonstrate the compliance of information resources with the needs of the university and implemented DP, including in the following areas:							
91	3.	technological support for students and teaching staff in accordance with degree programs (for example, online learning, modeling, databases, data analysis programs)		+					
92	4.	library resources, including a fund of educational, methodological and scientific literature on general education, basic and major disciplines on paper and electronic media, periodicals, access to scientific databases			+				
93	5.	examination of research results, graduation works, dissertations for plagiarism		+					
94	6.	access to educational Internet resources		+					
95	7.	functioning of WI-FI on own territory			+				

		TOTAL	1	104	8	0
		Total by standard	0	11	1	0
113	12.	interaction with partners, including scientific/consulting organizations, business partners, social partners and educational organizations		Г		
113	12.	based on the external assessment procedures results  An important factor is the information placement about cooperation and		+		
112	11.	its own website  The university has to post information and links to external resources		+		
111	10.	teaching staff on open resources, in the context of personalities  The university has to publish audited financial statements for the DP on		+		
110	9.	(at the regional, national, international levels)  An important factor is the publication a reliable information about			+	
109	8.	competencies of students and employment data reflecting the positioning of DP in the educational services market		+		
108	7.	cooperation with partner universities and employers information about opportunities for developing personal and professional		+		
107	6.	information about academic mobility programs and other forms of		+		
106	5.	information and system for assessing educational achievements of		+		
105	4.	purpose and planned results of the DP, assigned qualifications		+		
•		Information published by the university about the degree program must be objective and relevant and include:		l		
		dissemination methods (including the media, web resources, information networks, etc.) to inform the general public and interested parties		2		
104	3.	University management has to use a variety of information	-	+		
103	2.	Public information should include support and explanation of the country's national development programs and the system of higher and postgraduate education		+		
102	1.	The information published by the university must be accurate, objective, relevant and reflect all areas of the university's activities within the DP		+		
		informing the Public"				
<u> </u>	1 1 11 7	Total by standard	1	10	2	0
101	13	The university has to ensure that the infrastructure meets security requirements		+		
100	12.	The university has to take into account the needs of different groups of students (adults, working people, foreign students, as well as students with special educational needs)		+		
99	11.	The DP management has to show the existence of conditions for the student's advancement along an individual educational path		+		
98	10.	The DP management has to demonstrate the availability of procedures to support various groups of students, including information and consultation		+		
97	9.	The university should strive to ensure that the educational equipment and software used to master degree programs are similar to those used in the relevant sectors of the economy		+		
96	8.	The university has to demonstrate that it creates conditions for conducting scientific research, integrating science and education, publishing the results of staff and students research work		+		

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



#### **AGREED**

the day

Rector of the NJSC Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev

Syzdykov M.K.

« » 2024 г.

	АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТІН ТӘУЕЛСІЗ АГЕНТТІГІ
<b>I</b> aar	НЕЗАВИСИМОЕ АГЕНТСТВО АККРЕДИТАЦИИ И РЕЙТИНГА
	INDEPENDENT AGENCY FOR ACCREDITATION AND RATING

#### **APPROVED**

General Director of the SU "Independent Agency for Accreditation and Rating"

Zhumagulova A.B.

«\_\_\_\_\_ » \_\_\_\_\_ 2024 Γ.

# PROGRAM VISIT OF AN EXTERNAL EXPERT COMMISSION INDEPENDENT ACCREDITATION AND RATING AGENCY (IAAR) AT NJSC "ALMATY UNIVERSITY OF POWER ENGINEERING AND TELECOMMUNICATIONS"

## STAGE 1 SPECIALIZED ACCREDITATION

**Date of visit: March 11-13, 2024** Date and **EEC** work with target Position and Surname, First Name, Patronymic of target group **Contact form** time participants groups March 9, 2024 15.00-16.00 **EEC Preliminary meeting** External IAAR experts Join a Zoom meeting According https://us02web.zoom.us/j/6813032588 to Astana Conference ID: 681 303 2588 time March 10, 2024 Asscheduled The External Expert Commission members arrival throughout

20.00	Dinner	IAAR External Experts	
20.00		•	
		Day 1: March 11, 2024	
08.10-09.00	Transfer from the hotel to the University	University coordinator - Azhar Erlanovna Mankhanova (Director of the Department of Academic Affairs) 87772983128	
09.00-09.15	Experts responsibilities distribution, organizational issues resolution	IAAR External Experts	Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
09.15-09.45	Interview with the rector	Rector - Syzdykov Murat Kanatovich	Auditorium No. 213 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
09.45-10.00	Technical break		
10.00-10.40	Interview with vice-rectors	Vice-Rector for Academic Affairs – Aigul Saparbekovna Sarenova, Vice-Rector for Social and Educational Work - Ermek Kamalbekuly Kadylbekov, Head of the Rector's Office – Yesimzhanov Zhanat Kuanyshevich	Auditorium No. 213 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
10.40-10.50	Technical break		
10.50-11.30	Interview with heads of structural divisions of PO	Digital officer – Urazakov Margulan Maksutovich, Head of the registrar's office – Vera Vasilievna Neledva, Financial Director - Gulziya Salatovna Rakhmetova, Director of the Department of Academic Affairs - Mankhanova Azhar Erlanovna, Head of the Academic Counseling Center – Kudaibergen Zhuldyz Malikkyzy, Director of the Department of Youth Policy – Kabi Elikbay Kasenkhanuly, Chief librarian - Natalya StDPanovna Netesova, The executive secretary of the admissions committee is Almuratova Kamshat Bimuratovna.	Auditorium No. 213 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
11.30-11.45	Exchange of views among	Tamona Dimuratovita.	Auditorium No. 210 A building

**Unofficial Translation** 

	members of the external		Join a Zoom meeting
	expert commission		https://us02web.zoom.us/j/6813032588
	-	Heads of Departments:	https://usozweo.zoom.us/j/0015052500
11.45-12.30	Interview with Department heads and DP leaders	Heads of Departments: Department of IT Engineering - Tukenova Laila Muratbekovna, Department of Electric Power Engineering - Ernar Tanibergenovich Amitoy, Department of Renewable and Alternative Energy Sources - Shynybai Zhandos Sapargalievich, Department of Ecology and Management in Engineering - Abikenova Asel Amangeldievna, Department of Space Engineering - Tolendiuly Sanat, Department of Electronic Engineering - Sandugash Kudaibergenovna Orazalieva, DP DEVELOPERS: DP Entrepreneurship in Engineering - head Nurmuratova Laura Syreuovna, DP Life safety and environmental protection - Elena Mikhailovna Tyshchenko, Electric power industry - Mikhail Vladimirovich Bashkirov, Electric power systems - Umbetkulov Ertugan Kozhagulovich, Electrical power systems - Uteshkalieva Lyazzat Shynbolatovna, Computer technology and software; - Utegenova A.U., Renewable energy technologies - Soltanaev A., Automated electromechanical systems - Almuratova N.K., Modern innovative technologies of renewable energy - Tergemes K.T. Instrumentation - Yusupova S.A.	Conference ID: 681 303 2588 Auditorium No. 213 A building
12.30-13.00	Work of the EEC	IAAR external experts	Auditorium No. 210 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building
13.00-14.00	Dinner		3
14.00-14.15	Exchange of views among members of the external		Auditorium No. 210 A building Join a Zoom meeting

**Unofficial Translation** 

Expert commission				Ununcial translation
Interview with teaching staff of the DP  Appendix 1  The link is sent to the teacher's e-mail personally  Interviews with DP students  Appendix 2  Appendix 3  Appendix 2  Appendix 2  Appendix 2  Appendix 3  Appendix 2  Appendix 2  Appendix 3  Appendix 3  Additorium No. 213 A building Join a Zoom meeting https://usoQueb.zoom.us/jo6813032588 Conference ID: 681 303 2588 Auditorium No. 210 A building Join a Zoom meeting https://usoQueb.zoom.us/jo6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building Join a Zoom meeting https://usoQueb.zoom.us/jo6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building Join a Zoom meeting https://usoQueb.zoom.us/jo6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building Join a Zoom meeting https://usoQueb.zoom.us/jo6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building Interview Join a Zoom meeting https://usoQueb.zoom.us/jo6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building Interview Join a Zoom meeting https://usoQueb.zoom.us/jo6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building Interview Join a Zoom meeting https://usoQueb.zoom.us/jo6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building Interview Join a Zoom meeting https://usoQueb.zoom.us/jo6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building Interview Join a Zoom meeting https://usoQueb.zoom.us/jo6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building Interview		expert commission		https://us02web.zoom.us/j/6813032588
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Technical break   Faculty survey (in parallel)   Appendix 1   The link is sent to the teacher's e-mail personally			Аррениих 1	
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15.15-16.00  15.15-16.00  Appendix 2  The link is sent to the student's e-mail personally  Visual inspection of the facility and material, technical and educational laboratory base  The EEC discussion work of the results of the first day  IAAR external experts  Day 2: March 12, 2024  Transfer from the hotel to the University  Op.00-09.15  Work of the EEC  Auditorium No. 210 A building  Appendix 3  Auditorium No. 213 A building  Appendix 3  Auditorium No. 213 A building  Auditorium No. 213 A building  Auditorium No. 213 A building  Appendix 3			Tippenaix 1	personally
15.15-16.00    Appendix 2		Interviews with DP students		Auditorium No. 210 A building
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Tonference ID: 681 303 2588 Auditorium No. 213 A building  16.00-17.00  Students survey (in parallel)  Appendix 2  Visual inspection of the facility and material, technical and educational laboratory base  18.00-19.00  Itinerary Appendix 3  Auditorium No. 210 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building  19.00-20.00  Dinner  Day 2: March 12, 2024  Work of the EEC  Auditorium No. 210 A building  Auditorium No. 210 A building  Auditorium No. 213 A building	15.15-16.00		Appendix 2	
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the EEC discussion work of the results of the first day  18.00-19.00  18.00-19.00  18.00-19.00  19.00-20.00	16.15-18.00			
the EEC discussion work of the results of the first day  IAAR external experts  Auditorium No. 210 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building  19.00-20.00 Dinner  Day 2: March 12, 2024  08.10-09.00 Transfer from the hotel to the University  O9.00-09.15 Work of the EEC  Auditorium No. 210 A building			Appenaix 3	
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			https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
09.15-10.50	Attendance at scheduled classes (Appendix: links to classes)	IAAR external experts Appendix 4	
10.50-11.30	Meeting with stakeholders (representatives of practice bases and employers)	Appendix 5	Auditorium No. 210 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588 Auditorium No. 213 A building
11.30-11.40	Technical break		
11.40-13.00	Work with documents (documents should be uploaded to the cloud in advance)		Auditorium No. 210 A building
13.00-14.00	Dinner		
14.00-14.15	Technical break		
14.15-15.00	Interview with ODP graduates	Appendix 6	Auditorium No. 210 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
15.00-17.00	Selective visits to DP practice sites	Appendix 7	
17.00-17.15	Technical break		
17.00-18.00	Work of the EEC, discussion of the results of the second day and profile parameters (recording is being carried out)		Auditorium No. 210 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588

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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)	IAAR external experts	Auditorium No. 210 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
10.00-10.20	Technical break		
10.20-12.30	Work of the EEC, discussion, decision-making by voting (recorded)	IAAR external experts	Auditorium No. 210 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
12:30-13:00	the EEC final meeting with the university management	U	Auditorium No. 210 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
13.00-14.00	Dinner		
14.00-15.00	Work of the EEC, the quality assessment results discussion	IAAR external experts	Auditorium No. 210 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588
15.00-15.15	Technical break		
15.15-18.00	Work of the EEC, the quality assessment results discussion	IAAR external experts	Auditorium No. 213 A building Join a Zoom meeting https://us02web.zoom.us/j/6813032588 Conference ID: 681 303 2588

## **Appendix 3. THE ACADEMIC STAFF SURVEY RESULTS**

# Results of an anonymous survey of the academic staff of the Almaty University of Power Engineering and Telecommunications

## 1. Total number of surveys: 60

#### 2. 3. Position

Professor	7 people	11,7%
Associate professor	13 people	21,7%
Senior Lecturer	29 people	48,3%
Teacher	9 people	15%
Head of Department	1 person	1,7%
Acting professor	1 person	1,7%
Acting associate professor	0 person	0%

#### 4. Academic degree, academic title

Honored Worker of the Republic of	0 person	0%
Kazakhstan		0,70
Doctor of Science	4 people	6,7%
Candidate of Sciences	12 people	20%
Master	36 people	60%
PhD	8 people	13,3%
Professor	5 people	8,3%
Associate Professor	3 people	5%
No	1 person	1,7%

#### 5. Work experience

Less than 1 year	2 people	3,3%
1 year – 5 years	16 people	26,7%
Over 5 years	42 people	70%

№	Questions	Very good	Dood	Relativ ely bad	Bad	Very bad	Didn't respond
6	To what extent does the content of the educational program meet your scientific and professional interests and needs?	34 people (56,7%)	26 people (43,3%)	0 person (0%)	0 person (0%)	0 person (0%)	ı
7	How do you assess the opportunities provided by the University for the professional development of academic staff?	22 people (36,7%)	34 people (56,7%)	4 people (6,7%)	0 person (0%)	0 person (0%)	-
8	How do you assess the opportunities provided by the University for career growth of academic staff?	17 people (28,3%)	41 people (68,3%)	2 people (3,3%)	0 person (0%)	0 person (0%)	-

9	How do you assess the degree of academic freedom of the academic staff?	17 people (28,3%)	43 people (71,7%)	0 person (0%)	0 person (0%)	0 person (0%)	-
	To what extent can teachers use their own						
10	• Strategies	25 people (41,7%)	33 people (55%)	1 person (1,7%)	1 person (1,7%)	0 person (0%)	-
11	Methods	26 people (43,3%)	32 people (53,3%)	2 people (3,3%)	0 person (0%)	0 person (0%)	-
12	• Innovation in the learning process	21 people (35%)	37 people (61,7%)	2 people (3,3%)	0 person (0%)	0 person (0%)	-
13	How do you evaluate the work on organizing medical care and preventing diseases at the university?	12 people (20%)	41 people (68,3%)	6 people (10%)	1 person (1,7%)	0 person (0%)	-
14	How much attention is paid by the management of the institution to the content of the degree program?	22 people (36,7%)	38 people (63,3%)	0 person (0%)	0 person (0%)	0 person (0%)	-
15	How do you assess the sufficiency and accessibility of the necessary scientific and educational literature in the library?	17 people (28,3%)	41 people (68,3%)	2 people (3,3%)	0 person (0%)	0 person (0%)	-
16	Assess the level of conditions created that take into account the needs of different groups of students?  Evaluate the accessibility	11 people (18,3%)	43 people (71,7%)	6 people (10%)	0 person (0%)	0 person (0%)	-
	of the manual						
17	• For students	17 people (28,3%)	43 people (71,7%)	0 person (0%)	0 person (0%)	0 person (0%)	-
18	• For teachers	15 people (25%)	43 people (71,7%)	2 people (3,3%)	0 person (0%)	0 person (0%)	-
19	Assess the involvement of academic staff in the process of making management and strategic decisions	9 people (15%)	43 people (71,7%)	7 people (11,7%	1 person (1,7%)	0 person (0%)	-
20	How are innovative activities of academic staff encouraged?	17 people (28,3%)	39 people (65%)	4 people (6,7%)	0 person (0%)	0 person (0%)	-

21	Assess the level of	17	40	2	1	0	
	feedback from academic	people	people	people	person	person	-
	staff to management	(28,3%)	(66,7%)	(3,3%)	(1,7%)	(0%)	
22	What is the level of						
	stimulation and	22	33	5	0	0	
	involvement of young	people	people	people	person	person	-
	specialists in the	(36,7%)	(55%)	(8,3%)	(0%)	(0%)	
	educational process?						
23	Evaluate the created			_	_	_	
	opportunities for	20	37	3	0	0	
	professional and personal	people	people	people	person	person	_
	growth for each teacher	(33,3%)	(61,7%)	(5%)	(0%)	(0%)	
2.4	and staff member	1.4	4.4	2	0	0	
24	Assess the adequacy of	14	44	2	0	0	_
	teachers' potential and	people	people	people	person	person	
	abilities recognition  How is the work	(23,3%)	(73,3%)	(3,3%)	(0%)	(0%)	
	delivered?						
25	Academic mobility	14	42	3	1	0	
	J	people	people	people	person	person	-
		(23,3%)	(70%)	(5%)	(1,7%)	(0%)	
26	On professional	20	36	3	1	0	
	development of academic	people	people	people	person	person	-
	staff	(33,3%)	(60%)	(5%)	(1,7%)	(0%)	
	Rate the support of the						
	university and its						
	leadership	10	•				
27	• Research initiatives of	18	38	3	1	0	_
	academic staff	people	people	people	person	person	_
20	771 1	(30%)	(63,3%)	(5%)	(1,7%)	(0%)	
28	• The new degree	23	37	0	0	0	
	programs/academic	people	people	person	person	person	-
	disciplines/methods development	(38,3%)	(61,7%)	(0%)	(0%)	(0%)	
	Assess the level of ability						
	of academic staff to						
	combine teaching						
29	• With scientific research		20	11	_		
		17	30	people	2	0	
		people	people	(18,3%	people	person	-
		(28,3%)	(50%)	)	(3,3%)	(0%)	
30	With practical activities	13	37	8	2	0	
		people	people	people	people	person	_
		(21,7%)	(61,7%)	(13,3%	(3,3%)	(0%)	_
21	Accord how wall the	(=1,770)	(01,770)	)	(5,570)	(0/0)	
31	Assess how well the						
	students' knowledge	21	37	2	0	0	
	acquired at this university corresponds to	people					
	the realities of the	(35 %)	people (61,7%)	people (3,3%)	person (0%)	person (0%)	-
	modern labor market	(33 /0)	(01,7/0)	(3,3/0)	(070)	(0/0)	
	requirements						
	requirements				<u> </u>	<u> </u>	

32	How do the management and administration of the university perceive criticism addressed to them?	11 people (18,3%)	41 people (68,3%)	6 people (10%)	1 person (1,7%)	1 person (1,7%)	-
33	Assess how well your workload meets your expectations and capabilities	17 people (28,3%)	37 people (61,7 %)	5 people (8,3%)	1 person (1,7%)	0 person (0%)	-
34	Assess the focus of degree programs/curricula on developing students' skills and abilities to analyze the situation and make forecasts	19 people (31,7%)	39 people (65%)	2 people (3,3%)	0 person (0%)	0 person (0%)	-
35	Assess how well the degree program meets the expectations of the labor market and employers in terms of content and quality of implementation	19 people (31,7%)	40 people (66,7%)	1 person (1,7%)	0 person (0%)	0 person (0%)	-

#### 36. Why do you work at this particularly university?

- ✓ I am attracted by the values and objectives of this university, focused on the development of an innovative educational environment for all participants in the educational process. I am confident that my contribution to educational activities will help students successfully achieve their educational and career goals at AUPET.
  - Good laboratory facilities for physics and engineering
  - I am a graduate of this university
  - ✓ High level
  - ✓ AUPET has a reputation as one of the best universities in the country.
  - ✓ AUPET is my first step!
  - ✓ Team, one of the most advanced technical universities
  - ✓ Because I graduated here
  - ✓ The reason for choosing this university is that it allows young professionals to work freely.
  - ✓ Only here there is a direction of renewable energy sources
  - ✓ I am a graduate of Energo, in the future I want to invest in my Energo
  - ✓ I am a graduate of AUPET
  - ✓ Opportunity for professional growth
  - ✓ I graduated from this university, I want to further develop my education
  - ✓ Graduated from this university
  - ✓ Because I studied at this higher educational institution and developed here
  - ✓ No corruption
  - ✓ Good staff, fair working conditions
  - ✓ I like this University
  - ✓ a graduate of this educational institution
  - ✓ Because AUPET is one of the leading universities in the country
  - ✓ *In the technical direction of the university*

- ✓ Due to the fact that I am a graduate of AUPET and have many advantages in the field of electric power engineering
- ✓ AUPET is the leading university of the Republic of Kazakhstan. There is an opportunity to realize your professional and personal aspirations
- ✓ There is a match for my profession
- ✓ This is one of the best universities, I like working here
- ✓ I think that I can contribute to the educational process by helping students develop and achieve their goals
- ✓ I would say that it is one of the best and unique educational institutions in technical direction
- ✓ Likes to share knowledge in the field of energy
- ✓ AUPET is one of the strongest technical universities in Kazakhstan
- ✓ Having a Department related to my specialty
- ✓ A good university
- ✓ I like to work here
- ✓ Because my work is appreciated here
- ✓ I am proud to work at AUPET named after Gumarbek Daukeyev
- ✓ Stability
- ✓ It is one of the most prestigious universities in the country for training specialists
- ✓ I like the composition of academic staff
- They appreciate the work of academic staff, clear organization and control of the educational process.
- ✓ I think that it has its own place among universities
- 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, demand, responsibility
- According to the reviews of my colleagues from other universities, friends, relatives and graduates, an excellent university has an engineering Department that corresponds to my education
- ✓ This is my native university
- ✓ This is my home university
- ✓ Comfortable conditions have been created for me 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.
- ✓ To educate the youth
- ✓ The only university specialized in Power engineering
- ✓ I started my studies here with a bachelor's degree, and I liked the teaching staff very much, and when I was offered to work with them, I happily agreed.

37. As part of your course, how often are master classes and lectures with the participation of experts-practitioners held?

Very often	4	6.70/
	people	6,7%
Often	20	33,3%
	people	33,370
Sometimes	34	56 70/
	people	56,7%

Very rarely	1 person	1,7%
Never	1 person	1,7%

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

process.		
Very often	5	8,3%
	people	0,370
Often	16	26,7%
	people	20,7%
Sometimes	32	53,3%
	people	33,3%
Very rarely	6	10%
	people	10%
Never	1	1 70/

person

# 39. How often do you encounter the following problems in your work: (please answer on each line)

1,7%

each file)	Often	Sometimes	Never	No			
	Orten	Sometimes	Never				
				answer			
Lack of classrooms	6 people	30 person	24 people	-			
	(10%)	(50%)	(40%)				
Unbalanced study load by	6 people	29 people	25 people	-			
semester	(10%)	(48,3%)	(41,7%)				
Necessary literature is not	0 person	32 people	28 people	-			
available in the library	(0%)	(53,3%)	(46,7%)				
Overcrowding of study	10 person	23 people	27 people	-			
groups (too many students in	(16,7%)	(38,3%)	(45%)				
a group)							
Inconvenient schedule	5 people	24 people	31 people	-			
	(8,3%)	(40%)	(51,7%)				
Inappropriate conditions for	9 people	31 people	20 people	-			
classes in classrooms	(15%)	(51,7%)	(33,3%)				
No Internet access/weak	13 people	33 people	14 people	-			
Internet	(21,7%)	(55%)	(23,3%)				
Absence of students' interest	3 people	34 people	23 people	-			
in learning	(5%)	(56,7%)	(38,3%)				
Getting information about	0 person	23 people	37 people	-			
events in a timely manner	(0%)	(38,3%)	(61,7%)				
Absence of technical means	9 people	36 people	15 people	-			
in classrooms	(15%)	(60%)	(25%)				
Other problems	<b>/</b> -						
_	✓ No						
	✓ there is n	no problem					
	✓ There is	no time left to	publish the a	rticle			
	✓ Equipping of lecture halls, not enough						
	projector						
	✓ I don't n	otice any obvid	ous problems				

- ✓ No internet. Electricity is not connected to b 218
- ✓ None
- ✓ Insufficient number of sockets in the classroom. Lack of technical support for lecture halls
- ✓ None
- **✓** *Deficit of classroom fund*
- ✓ 1. It is necessary to take into account coauthorship in articles in Scopus journals not only in the order of 1st priority (1st author, 2nd co-author, 3rd co-author, etc.), since it is quite difficult to be the 1st author, there are usually 1-2 authors to defend dissertations, but take into account the very participation of the teacher. Each such article with the name of our university "AUPET named after G. Daukeyev" published in major publications abroad is an image.
- **✓** No problem
- **✓** No problem
- ✓ Lack of projectors and monitors
- ✓ no problem
- ✓ no
- ✓ The toilet is not working or cleaning at 8:00 in the morning
- ✓ Not available, except for those listed above
- ✓ Internet quality
- ✓ There were no problems
- ✓ Internet problems
- ✓ Only if the amount of legal money in wages is honest

# 40. There are many different sides and aspects in the life of the university, which in one way or another affect every teacher and employee. Rate how satisfied you are:

Question	Fully satisfied	Partially satisfied	Not satisfied	I find it difficult to answer
The attitude of the university administration towards you	37 people (61,7%)	21 people (35%)	0 person (0%)	2 people (3,3%)
Relationships with immediate management	45 people (75%)	12 people (20%)	0 person (0%)	3 people (5%)
Relationships with colleagues in the Department	55 people (91,7%)	5 people (8,3%)	0 person (0%)	0 person (0%)
Participation in management decision making	39 people (65%)	14 people (23,3%)	3 people (5%)	4 people (6,7%)
Relationships with Students	55 people (91,7%)	5 people (8,3%)	0 person (0%)	0 person (0%)
Recognition of your successes	41 people	15 people	1 person	3 people

and achievements by the administration	(68,3%)	(25%)	(1,7%)	(5%)
Support for your proposals and comments	36 people (60%)	20 people (33,3%)	0 person (0%)	4 people (6,7%)
The activities of the university administration	39 people (65%)	3 people (26,7%)	2 people (3,3%)	3 people (5%)
Terms of payment	27 people (45%)	24 people (40%)	6 people (10%)	3 people (5%)
Working conditions, list and quality of services provided at the university	35 people (58,3%)	20 person (33,3%)	1 person (1,7%)	4 people (6,7%)
Labor protection and safety	44 people (73,3%)	14 people (23,3%)	1 person (1,7%)	1 person (1,7%)
Management of changes in university activities	29 people (48,3%)	24 people (40%)	2 people (3,3%)	5 people (8,3%)
Providing a social package: rest, sanatorium treatment, etc.	22 people (36,7%)	21 people (35%)	7 people (11,7%)	10 person (16,7%)
Organization and quality of catering at the university	36 people (60%)	17 people (28,3%)	4 people (6,7%)	3 people (5%)
Organization and quality of medical services	30 people (50%)	21 person (35%)	3 people (5%)	6 people (10%)

# Appendix 4. THE STUDENT SURVEY RESULTS The anonymous student survey results

**Almaty University of Power Engineering and Telecommunications** 

Total number of profiles: 13

1. What is your degree program?

2. Gender

Male	2 people	15,4%
Female	11 people	84,6%

1. Rate how satisfied you are with the following situations:

Question	Fully	Partially	Not	I find it	Question
	satisfied	satisfied	satisfied	difficult	
				to	
				answer	
1. Relations with dean	11	1	1	0	0
	people	1 person	1 person	-	0 person
	(84,6 %)	(7,7 %)	(7,7%)	(0 %)	(0 %)
2. The level of accessibility of the dean's	11	2 noonlo	Operson	Operson	Operson
office	people (84,6%)	2 people (15,4%)	0 person (0 %)	0 person (0 %)	0 person (0 %)
	(84,6%)	(13,4%)	(0 %)	(0 %)	(0 %)

Question	Fully satisfied	Partially satisfied	Not satisfied	I find it difficult to answer	Question
3. The level of accessibility and responsiveness of the university management	10 people (76,9 %)	3 people (23,1%)	0 person (0 %)	0 person (0 %)	0 person (0 %)
4. Academic counseling availability	7 people (53,8 %)	6 people (46,2%)	0 person (0 %)	0 person (0 %)	0 person (0 %)
5. Supporting with educational materials during training	8 people (61,5 %)	4 people (30,8%)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)
6. Availability of counseling on personal problems	9 people (69,2 %)	3 people (23,1 %)	0 person (0 %)	0 person (0 %)	1 person (7,7 %)
7. Relations between the student and the teacher	9 people (69,2 %)	4 people (30,8 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
8. Financial and administrative services of the university	8 people (61,5 %)	3 people (23,1 %)	2 people (15,4 %)	0 person (0 %)	0 person (0 %)
9. Availability of healthcare services	8 people (61,5 %)	3 people (23,1 %)	0 person (0 %)	0 person (0 %)	2 people (15,4 %)
10. Quality of medical care at the university	8 people (61,5 %)	2 people (15,4 %)	1 person (7,7 %)	0 person (0 %)	2 people (15,4 %)
11. Level of library resources availability	10 people (76,9 %)	3 people (23,1 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
12. Quality of services provided in libraries and reading rooms	11 people (84,6 %)	2 people (15,4 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
13. Satisfaction with the existing educational resources of the university	9 people (69,2 %)	3 people (23,1 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)
14. Computer classes availability	9 people (69,2 %)	3 people (23,1 %)	0 person (0 %)	1 person (7,7 %)	0 person (0 %)
15. Internet resources availability and quality	8 people (61,5 %)	5 people (38,5 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
16. The content and information content of the website of educational organizations in general and faculties (schools) in particular	11 people (84,6 %)	1 person (7,7 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)
17. Study rooms, auditoriums for large groups	8 people (61,5 %)	2 people (15,4 %)	3 people (23,1 %)	0 person (0 %)	0 person (0 %)
18. Rest rooms for students (if available)	6 people (46,2 %)	2 people (15,4 %)	1 person (7,7 %)	3 people (23,1 %)	1 people (7,7 %)
19. Clarity of procedures for the adoption of disciplinary measures	9 people (69,2 %)	2 people (15,4 %)	0 person (0 %)	0 person (0 %)	2 people (15,4 %)
20. The quality of the educational program as a whole	9 people (69,2 %)	4 people (30,8 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
21. Quality of degree programs in DP	12 people (92,3 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
22. Teaching methods as a whole	11	2 people	0 person	0 person	0 person

Question	Fully satisfied	Partially satisfied	Not satisfied	I find it difficult to answer	Question
	people (84,6 %)	(15,4 %)	(0 %)	(0 %)	(0 %)
23. Quick response to feedback from teachers regarding the educational process	9 people (69,2 %)	4 people (30,8 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
24. The quality of teaching in general	10 person (76,9 %)	3 people (23,1 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
25. Academic load/requirements for the student	9 people (69,2 %)	3 people (23,1 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)
26. Requirements of academic staff to students	11 people (84,6 %)	2 people (15,4 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
27. Information support and explanation before entering the university of the rules of admission and the strategy of the degree program (specialty)	11 people (84,6 %)	1 person (7,7 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)
28. Informing the requirements in order to successfully complete this degree program (specialty)	11 people (84,6 %)	1 person (7,7 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)
29. The quality of examination materials (tests and examination questions, etc.)	9 people (69,2 %)	4 people (30,8 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
30. Objective assessment of knowledge, skills and other educational achievements	11 people (84,6 %)	2 people (15,4 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
31. Available computer classes	11 people (84,6 %)	2 people (15,4 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
32. Available scientific laboratories	11 people (84,6 %)	1 person (7,7 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)
33. Objectivity and fairness of teachers	11 people (84,6 %)	2 people (15,4 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)
34. Informing students about courses, degree programs and academic degrees received	10 person (76,9 %)	2 people (15,4 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)
35. Providing students with a hostel	9 people (69,2 %)	2 people (15,4 %)	0 person (0 %)	0 person (0 %)	2 people (15,4 %)

4. Rate your level of agreement:

Statement	Full agreement	Agree	Partially agree	disagree	Complete disagreem ent	Didn't respond
-----------	-------------------	-------	--------------------	----------	------------------------------	-------------------

1 The course program was alearly	10					
1. The course program was clearly	10	1	1	1	0	
presented	people	person	person	person	person	_
	(76,9	(7,7 %)	(7,7 %)	-	(0 %)	
	%)	, , ,	, , ,	( , , ,	( ,	
2. Course content is well structured	8	3	2	0	0	
	people	people	people	person	person	_
	(61,5	(23,1	(15,4	-	-	_
	%)	%)	%)	(0 %)	(0 %)	
3. Key terms are sufficiently explained	9	3	1	0	0	
	people	people	1	0	0	
	(69,2	(23,1	person	person	person	-
	%)	%)	(7,7 %)	(0 %)	(0 %)	
4. The material proposed by the teacher is	9	4				
1		=	0	0	0	
relevant and reflects the latest	people	people	person	person	person	_
achievements of science and practice	(69,2	(30,8	(0 %)	(0 %)	(0 %)	
	%)	%)	(0 /0)	(0 /0)	(0 ,0)	
5. The teacher uses effective teaching	8	4	1	0	0	
methods	people	people	_			
	(61,5	(30,8	person	person	person	-
	%)	%)	(7,7 %)	(0 %)	(0 %)	
6. The teacher knows the material being	10	2				
taught.	person	people	1	0	0	
tuught.	(76,9	(15,4	person	person	person	-
	, .		(7,7 %)	(0 %)	(0 %)	
7 Th. 4 1 2 4 1 1	%) 8	%)				
7. The teacher's presentation is clear	_	4	1	0	0	
	people	people	person	person	person	_
	(61,5	(30,8	(7,7 %)	-	(0 %)	
	%)	%)	(1,1170)	(0 /0)	(0 ,0)	
8. The teacher presents the material in an	8	3	1	1	0	
interesting way.	people	people	_	_		
	(61,5	(23,1	person	_	person	-
	%)	%)	(7,7 %)	(7,7 %)	(0 %)	
9. Objectivity in assessing knowledge,	8	3				
skills and other educational achievements	people	people	1	1	0	
skins and other educational demovements	(61,5	(23,1	person	person	person	-
	` '	-	(7,7 %)	(7,7 %)	(0 %)	
10 Timely assessment of students?	%) 8	%)				
10. Timely assessment of students'	-	_	1	1	0	
educational achievements	people	people	person	person	person	_
	(61,5	(23,1	(7,7 %)	1 -	(0 %)	
	%)	%)	, , ,	(1,1 /0)	(0 /0)	
11. The teacher satisfies my requirements	7	4	2	0	0	
for personal development and professional	people	people	people	_		
formation	(53,8	(30,8	(15,4	person	person	_
	%)	%)	%)	(0 %)	(0 %)	
12. The teacher stimulates student activity	7	4				
	people	people	1	1	0	
	(53,8	(30,8	person	people	person	-
	%)	(30,6	(7,7 %)	(7,7 %)	(0 %)	
12 The teacher stimulates areative thirting		4				
13. The teacher stimulates creative thinking	,	=	1	0	0	
of students	people	people	person	person	person	-
	(53,8	(30,8	(7,7 %)	(0 %)	(0 %)	
	%)	%)	(.,. /0)	(3,0)	(3,0)	

14. The appearance and manners of the teacher are adequate	11 people (84,6 %)	1 person (7,7 %)	1 person (7,7 %)	_	0 person (0 %)	-
15. The teacher shows a positive attitude towards students	9 people (69,2 %)	3 people (23,1 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)	1
16. The system for assessing educational achievements (seminars, tests, questionnaires, etc.) reflects the content of the course	8 people (61,5 %)	3 people (23,1 %)	2 people (15,4 %)	0 person (0 %)	0 person (0 %)	-
17. The assessment criteria used by the teacher are clear	9 people (69,2 %)	3 people (23,1 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)	-
18. The teacher objectively evaluates student achievements	9 people (69,2 %)	3 people (23,1 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)	-
19. The teacher speaks a professional language	8 people (61,5 %)	4 people (30,8 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)	ı
20. The organization of education provides sufficient opportunity for sports and other leisure activities	11 people (84,6 %)	1 person (7,7 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)	ı
21. Facilities and equipment for students are safe, comfortable and modern	9 people (69,2 %)	3 people (23,1 %)	1 person (7,7 %)	0 person (0 %)	0 person (0 %)	ı
22. The library is well equipped and has a fairly good collection of books	9 people (69,2 %)	2 people (15,4 %)	1 person (7,7 %)	1 person (7,7 %)	0 person (0 %)	-
23. Equal opportunities are provided to all students	9 people (69,2 %)	4 people (30,8 %)	0 person (0 %)	0 person (0 %)	0 person (0 %)	-

5. Other concerns regarding teaching quality: 0 replies.