



«АККРЕДИТЕУ ЖӘНЕ РЕЙТИНГТІҢ  
ТӘУЕЛСІЗ АГЕНТТІГІ» КЕМ

НУ «НЕЗАВИСИМОЕ АГЕНТСТВО  
АККРЕДИТАЦИИ И РЕЙТИНГА»

INDEPENDENT AGENCY FOR  
ACCREDITATION AND RATING

## **REPORT**

**on the results of the work of the external expert evaluation committee  
for compliance with the requirements of the standards of specialised accreditation of  
educational programmes "5B071800 Electrical power engineering", "6M071800 Electrical  
power engineering", "6D071800 Electrical power engineering",  
"5B081200 Energy supply of agriculture", "5B070200 Automation and control",  
"6M070200 Automation and control"**

**Non-profit JSC "Almaty University of Power Engineering and Telecommunications"**

**From 4 to 7 of March, 2019**

**Almaty city**

**March 7, 2019**

**INDEPENDENT AGENCY FOR ACCREDITATION AND RATING**  
*External expert committee*

*Addressed  
by the Accreditation Council  
IAAR*



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## **I LIST OF SYMBOLS AND ABBREVIATIONS**

DB – data base  
PRS - point and rating system  
SAUD - external evaluation of educational achievements  
SOES - state obligatory education standard  
CTO - credit technology training  
MES RK - Ministry of Education and Science of the Republic of Kazakhstan  
AUPET – Almaty University of Power Engineering and Telecommunications  
ИСУИТ-Институт систем управления и информационных технологий  
IMSIT-Institute of Management Systems and Information Technology  
ИЭЭЭТ – институт электроэнергетики и электротехники  
IEPE - Institute of Electric and Power Engineering  
EP - educational programme  
RK - Republic of Kazakhstan  
QMS - quality management system  
IWS - independent work of the student  
IWST - independent work of students under the guidance of a teacher  
TSO - technical learning tools  
CSS - University Academic Council  
UMC - University Educational and Methodical Council  
УМКД – учебно-методический комплекс дисциплины  
EMCD – educational- methodical complex of the discipline  
CED - catalog of elective disciplines  
MEP - modular educational programme  
MC - modular curriculum  
WC - working curriculum  
SEC - State Examination Commission

## II INTRODUCTION

In accordance with the order number 7-19-CA from January 24, 2019, the Independent Agency for Accreditation and Rating from March 4 to March 7, 2019 at the Almaty University of Energy and Communications, an external expert committee assessed the compliance of the university's activities with the requirements of the specialised accreditation standards of the IAAR (from February 24, 2017, No. 10-17-CA, Fifth Edition).

The report of the external expert commission (EEC) contains an assessment of the compliance of the university's activities within the framework of specialised accreditation with the criteria of the IAAR, recommendations of the EEC to further improve the parameters of educational programmes and profile parameters of educational programmes.

The composition of the EEC:

Chairman - Shunkeev Kuanyshebek Shunkeevich, Doctor of Physics and Mathematics, Professor, First Vice-Rector of Aktope Regional State University named after K.Zhubanova;

Foreign expert - Zarginava Tamar Tengizovna, Vice-Rector for International Relations of the EurEpean University (Tbilisi, Republic of Georgia);

Foreign expert - Tairov Mitalip Muratovich, Doctor of Physics and Mathematics, Professor of Batken State University (Kyzyl-Kiya, Kyrgyz Republic);

Foreign expert - Alexander Luschnik, Doctor of Physics and Mathematics, Professor, Head of the Laboratory of Ion Crystal Physics, Institute of Physics, University of Tartu (Tartu, Estonia);

National expert - Movkebaeva Galiya Akhmetvalievna, Professor of the Department of International Relations and World Economy of the Kazakh National University named after Al-Farabi (Almaty);

National expert - Kulzhumieva Aiman Amangeldinovna, Candidate of Physics and Mathematics, associate professor of the Department of Mathematics, West Kazakhstan University named after M. Utemisov (Uralsk);

National expert - Urmashev Baydaulet Amantaevich, Candidate of Physics and Mathematics, associate professor, head of the department of Informatics of the Kazakh National University named after Al-Farabi (Almaty);

National expert - Alexander Baklanov, Candidate of Physics and Mathematics, head of the department of instrument making and process automation, East Kazakhstan State Technical University named after D. Serikbaeva (Ust-Kamenogorsk);

National expert - Chidunchi Irina Yuryevna, PhD, senior teacher of the department of vocational training and environmental protection at Pavlodar State University named after S.Toraigyrova, Chairman of the Council of Young Scientists of Pavlodar Region (Pavlodar);

National expert - Alimgazin Altay Shurumbayevich, Doctor of Technical Sciences, Professor of the Department of Thermal Power Engineering of the Eurasian National University named after L.N.Gumilyov (Astana);

National expert – Jumazhanov Serik Karataevich, Candidate of Technical Sciences, teacher of the electrical equipment EPeration department of the Kazakh Agrotechnical University named after S.Seifullin (Astana);

National expert - Markovsky Vadim Pavlovich, Candidate of Technical Sciences, associate professor, head of the department of electric power industry of Pavlodar State University named after S.Toraigyrov (Pavlodar);

Employer - Nurusheva Aliya Zinedenovna, expert of the 1st category of the human capital develEPment department of the Chamber of Entrepreneurs of Almaty;

Student - Imangazy Yermurat Sakhatuly, 4 courses of specialty “5B075200 Engineering systems and networks” of the Kazakh Leading Academy of Architecture and Construction, a member of the Alliance of Students of Kazakhstan (Almaty);

Student i- Kasymkhan Aizada Aydinkyzy, 3 courses of the specialty “5B070400

Computing Equipment and Software” of the Kazakh National University. Al-Farabi (Almaty);

Student - Kuyshybayeva Roza Maratkizi, master student of the 1st course of the specialty "6M070200 Automation and Control" of the Kazakh National Technical University named after K.I. Satpayev (Almaty);

The IAAR Observer - Niyazova Guliyash Balkenovna, the project manager for the institutional and specialised accreditation of universities of the IAAR.

### **III PRESENTATION OF EDUCATION ORGANISATION**

Educational establishment "Almaty University of Power Engineering and Telecommunications" (hereinafter - the University) was established in 1975 in Almaty.

The structure of the University includes 4 institutes, 19 departments, 4 laboratory buildings, 4 dormitories, sports facilities, as part of the existing housing stock the work of the following departments is implemented: 82 laboratories, 3 business incubators, 39 computer classes, 6 television lecture laboratories, AUPET College, Office of commercialization, Institute for Advanced Studies, School of Robotics DAU KEY, Entel Youth Center, Cisco Regional Academy, D-link Training Center, Kaspersky Lab, Oracle Academy, Microsoft Regional Academy.

The university provides training for specialists in 12 areas of undergraduate, 8 specialties of master programmes and 3 areas of doctoral studies.

The contingent of students in cluster 5 on February 1, 2019 amounted to 1960 peEPl. On the grant - 1293, on a contractual basis 667 students.

Undergraduate contingent - 1831 (of which 1225 on a grant).

Postgraduates contingent - 118 (of them on the grant - 57).

The contingent of doctoral students - 11 peEPl, all are trained in state. grant

The University has foreign students from Central Asia.

The educational process on cluster 5 serves the faculty in the amount of 218 peEPl, of which 98 are undergraduates.

Degree on cluster 5 of the university is - 62.4%.

Of the teaching staff, 14 teachers won the Republican contest "The Best Teacher".

The university carries out educational activities on the basis of the State license of the Ministry of Education and Science of the Republic of Kazakhstan series AB No.0137445 dated August 4, 2010 to engage in educational activities with a validity period - without restriction.

The assessment of the effectiveness of the University's mission is carried out by comparing the results of work with the objectives and is used as a feedback mechanism for making management decisions and analyzing the functioning of the quality management system (hereinafter referred to as QMS) within the received certificate for compliance with the requirements of ISO 9001 - 2015 international standards. confirmed by the numerous participation of the university in accreditation in various rating agencies and the occupation of fairly high positions in 2018 6th place out of 15 in the IQAA agency, 7th place out of 10 in the IAAR agency, 4th place out of 10 in the RPA agency.

### **IV DESCRIPTION OF PREVIOUS ACCREDITATION PROCEDURE**

The previous accreditation was carried out by IQAA in 2014.



## V DESCRIPTION OF EEC VISIT

The visit of the external expert commission to the University was organized in accordance with the programme agreed in advance with the Chairman of the EEC from 4.03.2019 to 7.03.2019.

In order to coordinate the work of the EEC on 03/04/2019, an orientation meeting was held, during which powers were distributed among the members of the commission, the schedule of the visit was specified, and agreement was reached on the choice of examination methods.

In order to obtain objective information on the evaluation of the university, the members of the EEC used such methods as visual inspection, observation, interviewing employees of various departments, teachers, students, graduates and employers, survey of faculty members, students.

The meetings of the EEC with the target groups were held in accordance with the updated programme of the visit, in compliance with the established time period. On the part of the University team, the presence of all persons indicated in the visit programme was ensured.

Information about employees and students  
participated in meetings with the EEC

Category of participants	Quantity
Rector	1
President of AUPET	1
Vice Rector	3
Heads of structural units	22
Directors of institutions	4
Heads of departments	12
Teachers	25
Students	31
Graduates	116
Employers	93
Total	<b>308</b>

The experts visited the laboratories of the accredited EPs, research laboratories, a library, an assembly hall, sports and exercise halls, a student canteen and a cafeteria. During the visit, members of the EEC on March 5 attended training sessions on accredited educational programmes. Attended classes in the discipline "Electric Power supply" (group-Ea-16-5, teacher Asanova K.M.), laboratory work "Study of EPerating modes of asynchronous motors and improving co-supplying networks", "Study of processes during direct start of the motor load" the lesson was an experiment, with the removal of characteristics, then the output data for the report were calculated and the students were preparing to defend the laboratory work; a lecture on the subject of "Energy Discipline: Fundamentals of Relay Protection in Electric Power Systems" (Ea-16-7, lecturer Zavadsky V.A.). The lecture was accompanied by slides with the use of technical means of teaching, the teacher stated the material clearly with accessible language for students; lesson on the tEPic "Thyristor Converter for DC Motor" in the discipline "Electric" (group-EEK-16-2 (2), teacher Chnybaeva D.M.). At the lesson, experiments were carried out with taking characteristics in different modes of EPeration of a DC motor.

As part of the planned programme, recommendations for improving the university's activities, developed by the EEC on the basis of the examination, were presented at a meeting with the management on March 7, 2019.

## VI CONFORMITY TO SPECIALISED ACCREDITATION STANDARDS

### *6.1 Standard "Management of the educational programme"*

#### *Evidence part*

In AUPET, the training of specialists in educational programmes of higher education "5B071800 Electrical power engineering", "6M071800 Electrical power engineering", "6D071800 Electrical power engineering", "5B081200 Energy supply of agriculture", "5B070200 Automation and control", "6M070200 Automation and control" MES RK series AB No. 0137445 dated August 4, 2010 for engaging in educational activities with a validity period - without limitation (<https://aues.kz/>).

Education in the magistracy is carried out in full-time form with a duration of 1-1.5 years - for the profile direction and 2 years - for the scientific and pedagogical direction. Awarded academic degree - Master of Engineering and Technology.

Training of specialists is carried out according to the Classifier of specialties of higher and postgraduate education of the Republic of Kazakhstan on full-time and part-time education. Language of instruction - State, Russian, English.

AUPET has demonstrated the existence of a policy on the quality of education, which is posted on the University website [www.aues.kz/](http://www.aues.kz/) and is publicly available for review.

The policy of quality assurance EP "5B071800 Electrical power engineering", "6M071800 Electrical power engineering", "6D071800 Electrical power engineering", "5B081200 Energy supply of agriculture", "5B070200 Automation and control", "6M070200 Automation and control" is confirmed: University development strategy <https://aues.kz/wp-content/uploads/2018/08/jpg2pdf-6.pdf>, Academic policy <https://aues.kz/wp-content/uploads/2019/02/ScanПолитика-и-цели-АУЭС-на-2018-2019.pdf>, the Regulation on the modular construction of educational programmes <https://aues.kz/wp-content/uploads/2018/12/методические-рекомендации.pdf>, , [https://aues.kz/?page\\_id=20524](https://aues.kz/?page_id=20524).

The implementation and development of accredited educational programmes is determined by the strategy, policy, goal of the university, as well as Plans for the development of educational programmes.

The quality policy reflects the link between research, teaching and learning and plays a key role.

The effectiveness of the development plan of the EP is ensured by the joint efforts of the faculty, students and employers in achieving the end results, due to a clear delegation and separation of powers.

For the qualified development of the EP, the following employees were trained in educational management programmes: M. Bashkirov, S. Sagyndykova. On February 12, 2018 at a seminar organized by the World Bank "Developing educational programmes based on a competence-based and student-centered approach", in addition, A. Zheldikbayeva, Rakhimova R.M. completed advanced training courses on the subject of Electrical Engineering at Kentausky Transformer Plant, and also Dyusenova S. underwent an internship at Almaty Power Plants JSC.

#### *Analytical part*

The university provides the transparency of the educational programme management system. So, on the website of the university in the sections "Strategy. Politics. Objectives.", "Management", "Structure", "Infrastructure" provides information on the management of the university (rector, vice-rector of relevant areas, directors of institutes, heads of graduating departments). In the rector's blog, you can directly ask him questions. Students, employees and interested persons can personally contact the rector. The heads of departments take in the prescribed time frame, according to the schedule. The university has a published quality assurance policy that reflects the link between research, teaching and learning. EP management has demonstrated the functioning of mechanisms for the formation and regular review of the EP development plan and monitoring its implementation, evaluation of the achievement of learning



objectives, compliance with the needs of students, employers and society, decision-making aimed at continuous improvement of EP, as well. individuality and uniqueness of the EP development plan, its consistency with national development priorities and the development strategy of the organization of education.

During the writing of the report on self-assessment, interviews with the leadership of the EP and heads of departments, familiarity with internal documents, the leadership of the EP documented a systematic approach to how the university analyzes and implements innovative proposals.

During the interviewing of heads of departments, structural subdivisions, the successful functioning of the internal quality assurance system of the EP, including its design, management and monitoring, their improvement, making decisions based on facts, was not revealed.

The results of meetings in students, teaching staff, employers showed their high interest in the formation of plans and content of EP.

According to the results of the teaching staff survey:

- 5.1% of faculty members rate the possibility of combining teaching with scientific research “relatively poorly”;
- 5.9% of faculty members rate the possibility of combining teaching with applied activity “relatively poorly”.

According to the results of the survey, the level of accessibility and responsiveness of the university management is “fully satisfied” - 58.8%, “partially satisfied” - 33.8% of students.

The heads of the study programme clearly defined the goals, objectives and results of the preparation process, which is stated by the high level of training of students, there is a coordinated work with employers and a high level of employment.

According to the EP of the cluster, IT technologies were introduced, which had a positive effect on the process of preparing students.

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

- the university has a published quality policy;
- The quality assurance policy reflects the link between research, teaching and learning;
- EP management has demonstrated the functioning of the mechanisms for the formation and regular review of the EP development plan and monitoring its implementation, evaluation of the achievement of learning goals, meeting the needs of students, employers and society, making decisions aimed at continuous improvement of EP;
- EP management should involve representatives of groups of stakeholders, including employers, students and faculty members in the formation of EP development plan;
- The EP management has demonstrated the individuality and uniqueness of the EP development plan, its consistency with the national development priorities and the development strategy of the educational organization;
- The EP's management ensured the participation of representatives of stakeholders (employers, teaching staff, students) in the collegial bodies of the educational programme management, as well as their representativeness in making decisions on the management of the educational programme;
- The university should have demonstrated innovation management in the framework of the EP, including the analysis and implementation of innovative proposals.

#### ***EEC recommendations***

EP management to ensure the successful functioning of the internal quality system of the EP, including its design, management and monitoring, their improvement, making decisions based on facts.

***Conclusions of the EEC by the criteria of the standard “Management of the educational programme” by 7 criteria of this standard have strong positions, 9 are satisfactory positions and by 1 criterion improvement is expected.***

## **6.2 Standard "Information management and reporting"**

### ***Evidence part***

AUPET has implemented information management processes, including processes for collecting and analyzing information. There is a department of analysis and development strategy which, together with the management of academic activities and other departments, provides information and technical support to the accredited EPs.

Dissemination of information and receiving feedback is carried out through meetings of collective bodies, working groups created to solve actual problems.

The following information technologies have been introduced in the management of AUPET: the university's information site ([www.aues.kz](http://www.aues.kz)), the Platonus automated information management system, the Electronic Schedule for students of EP, the distance learning system, the university's electronic library, information systems and library resources. complex.

At the departments, office work is carried out in accordance with the approved nomenclature of affairs, the safety and archiving of documents has been ensured, and work has been carried out on the transition to electronic document flow. EP operators are promptly informed of information in electronic form via address distribution in the electronic document management system in the local network.

For the timely input of reliable data in the AIS "Platonus" and the subsequent formation of reporting information at the university responsible persons are identified. The frequency of entry and accuracy of information in the AIS "Platonus" is governed by university regulations.

For conducting online lectures to students of distance learning, the Moodle programme is installed. The recording of video lectures by teachers on all readable undergraduate disciplines of accredited EP, which are located in the distance learning system, was organized.

All the processes of implementation of the credit technology of education are automated using the capabilities of the university's corporate computer network. The presence of an internal information and educational portal, an extensive corporate network that allows access to all information resources from any computer, creates the necessary conditions for high-quality training of specialists and the development of faculty.

The system for monitoring the implementation of plans for the development of the educational programme of the cluster includes the following mechanisms: annual reports of graduating departments and institutes; internal audits; consideration of the development of different areas of training specialists on collegial bodies.

AUPET is *collecting, analyzing and processing information on the contingent of students, as well as information on the level of student achievement*. Assessment of the dynamics of the contingent of students and their performance is a continuous process and is held at meetings of the Academic Council, institute and departments, is made in the form of protocols.

Feedback has been established with the students, which allows to identify their satisfaction with the quality of the EP implemented. In the course of the conversation with the students, they noted that there was an opportunity to address the management with various problems.

As shown by the selective acquaintance with the personal affairs of faculty, staff and students, students, staff and faculty of the University draw up agreements for the processing of their personal data, which confirms the legitimacy of AUPET in accordance with the Law of the Republic of Kazakhstan "On Personal Data and Protection" 2013 No. 94-V).

### ***Analytical part***

Data is stored in electronic and paper format in accordance with the nomenclature. AUPET clearly defines the procedure and the provision of information security, including those responsible for the accuracy and timeliness of information analysis and data provision.

The databases available at the university allow forming a variety of analytical reports.

Regular surveys of students, staff, teaching staff, employers are conducted, the results of which take appropriate measures to eliminate deficiencies and improve the EP.

Feedback has been established with the students, which allows to identify their satisfaction with the quality of the EP implemented. In the course of the conversation with the students, they noted that there was an opportunity to address the management with various problems. The information collected and analyzed by the university takes into account: key performance indicators, the dynamics of the contingent of students in the context of forms and types, level of academic achievement, student achievement and deduction, accessibility of educational resources and support systems for students, employment and career development of graduates, as well as EP management helps to provide all the necessary information in the relevant fields of science.

Interviews with teachers and students showed that suggestions and recommendations from stakeholders find a response in management decisions.

According to the results of the survey, 44.1% responded to the question about the assessment of the involvement of teaching staff in the process of making managerial and strategic decisions, "very good" - 44.9%, "relatively bad" - 8.5%, and "bad" – 0.8%.

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

- AUPET provides the system for collecting, analyzing and managing information through the use of modern information and communication technologies and software;
- AUES demonstrated the determination of the order and ensuring the protection of information, including the identification of responsible persons for the accuracy and timeliness of the analysis of information and the provision of data;
- AUPET assesses the effectiveness and efficiency of activities, including in the context of the EP;
- information collected and analyzed by the university, effectively takes into account key performance indicators, the dynamics of the contingent of students in the context of forms and types, level of academic achievement, student achievement and deduction, availability of educational resources and support systems for students, employment and career growth of graduates;
- EP management actively promotes the provision of all necessary information in relevant fields of science.

***Conclusions of the EEC on the criteria for the standard "Information Management and Reporting" on 9 criteria of this standard have strong positions, 8 - satisfactory positions.***

### ***6.3 Standard "Development and approval of the educational programme"***

#### ***Evidence part***

The development and approval of educational programmes at the University is carried out in accordance with the provisions of the regulatory acts in the field of higher and postgraduate education, as well as the documentation developed by the University to ensure the transparency and clarity of the implementation of the development strategy directions.

Accredited EP 5 Cluster of EP "5B071800 Electrical power engineering", "6M071800 Electrical power engineering", "6D071800 Electrical power engineering", "5B081200 Energy supply of agriculture", "5B070200 Automation and control", "6M070200 Automation and control" AUES provided with a training template. requirements: state compulsory education standards; typical and working curricula of specialties; typical and working educational programmes of disciplines.

The content and structure of the accredited EPs are formed in accordance with the requirements of the Model Rules for the Activities of Organizations of Higher and Postgraduate Education, approved by the Government of the Republic of Kazakhstan dated May 17, 2013 No. 499, the State Educational Standard of the Republic of Kazakhstan, approved by the Government Decree of the Republic of Kazakhstan No. 1080 dated August 23, 2012, and process of credit technology training, approved by the Order of the Minister of Education and Science №152 dated 04/20/2011 with corresponding amendments to them.



Formation of individual educational trajectories of the student is carried out with the help of an adviser for each academic year on the basis of SES RK, TUPov, IUPov.

On the basis of the EP, working curricula and catalogs of elective disciplines (CED) are compiled annually and approved. The CED contains a brief description of the disciplines, indicating the prerequisites and post requisites of the discipline. CED is available in the departments and on the educational portal.

In MEP, there is a logical sequence of learning cycles, disciplines, practices, final certification, and defense of the thesis, ensuring the formation of general and special competencies. The labor intensity of cycles disciplines in Kazakhstan and ECTS credits, as well as in hours, highlighting lectures, practical (seminar) classes, independent work of students under the guidance of a teacher and independent work of a student, all types of professional practice, intermediate certification are indicated.

The graduating department developed programmes of all kinds of practices. The University has concluded permanent contracts with large companies for the passage of all types of practices for students accredited by the EP.

In order to identify the degree of satisfaction of employers with the quality of training of graduates and their compliance with the requirements of the department, they conduct regular surveys and meetings with graduates and employers.

The various types of knowledge control included in the UMCD make it possible to assess the effectiveness of mastering the students' professional competencies.

Employers are involved in the process of designing and implementing EP, forming the required competencies of graduates to the Academic Council of EP.

According to EP Cluster 5 EP "5B071800 Electrical power engineering", "6M071800 Electrical power engineering", "6D071800 Electrical power engineering", "5B081200 Energy supply of agriculture", "5B070200 Automation and control", "6M070200 Automation and control" employers were recruited and positive feedback was received for modules Siemens, Saiman LLP, Alatau Zharyk Company JSC, Deutsches GeoForschungsZentrum, Thomas J. Watson of Engineering and Applied Science Department of Electrical and Computer Engineering, Rochester Institute of Technology Engineering, Tallinn University of Technology, Department of Electrical Engineering and Mechatronics, etc.

An important role in the training of specialists, namely in the development of their professional competencies, is played by various types of practices envisaged by the PMU. At the university, at the end of the internship, students submit to the department a report and diary signed by the head of the internship base.

The complexity of academic disciplines is determined in Kazakhstan credits and ECTS based on the "Rules for the organization of the educational process on credit technology of education", approved by the order of the MES of RK dated April 20, 2011 No. 152, and is enshrined in the position of the university.

In all disciplines of the EP specialties of the cluster, there are materials for students of distance learning.

### ***Analytical part***

Analysis of accredited EPs for compliance with the criteria of the "Development and Approval of the Educational Programme" standard shows that the content of educational programmes, the sequence of their implementation, the depth of development in all specialties of training meet regulatory requirements and are approved at the institutional level. Academic councils of educational programmes have been created, which include faculty members, employers, students; issues, design, development and approval of educational programmes and other issues of the educational process are discussed at the meetings. Also, for each EP, the head of the EP was appointed and working groups were formed by specialties for the development of the EP. Qualifications obtained at the end of the EP are clearly defined, explained and correspond to a certain level of the NSC. The university demonstrated the presence of the developed models of the graduate EP.

The work on registration of students' professional achievements is well established, which certifies that the graduate has the competences recognized in the professional community as necessary to perform certain professional functions, however, the work on preparing students for professional certification in the context of EP at the graduating departments is not very active.

When interviewing heads of educational institutions, academic staff of educational institutions and when studying documentation in departments, a good quality level of the content of educational programmes with similar educational programmes of leading foreign educational organizations was found.

In order to integrate the education system into the international educational space, to better meet the educational needs of students, the university management has carried out work in this direction: agreements on mutual coEPeration with other Kazakhstan and foreign universities have been concluded, an academic mobility of students in foreign universities in an insignificant number of students is carried out. The question of academic mobility of teaching staff and students in higher educational institutions of the near and far abroad is very poorly posed, there are no joint educational programmes of EP with foreign educational organizations.,

On accredited EP there is no joint EP that is actually implemented with foreign universities. However, the University is negotiating with universities in EurEPean countries in this direction.

A survey of students, conducted during the visit of the EAP NAAR, showed that:

- the level of responsiveness to feedback from teachers regarding the educational process fully satisfies - 75.7%; partially - 19.1%; partially dissatisfied - 5.1%.

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

- AUPET has clearly defined and documented the procedures for the develEPment of EPs and their approval at the institutional level;

- EP management ensured the compliance of the develepedEP with the established goals, including the expected learning outcomes;

- EP management ensured the availability of develepedgraduate models of EP, describing learning outcomes and personal qualities;

- The administration of the EP has demonstrated external examinations of the EP;

- qualifications obtained at the end of the EP, clearly defined, explained and correspond to a certain level of the NSC;

- The management of EP determined the influence of disciplines and professional practices on the formation of learning outcomes.

#### ***EEC recommendations***

1. To carry out work on the preparation of students for professional certification in the context of the EP at the graduating departments;

2. Consider the possibility of develEPing joint educational programmes with foreign educational organizations.

***Conclusions of the EEC on the criteria of the standard "DevelEPment and approval of the educational programme" on 6 criteria of this standard have strong positions, 6 - satisfactory positions.***

### ***6.4 Standard "Continuous monitoring and periodic evaluation of educational programmes"***

#### ***Evidence part***

The management of the EP conducts continuous monitoring and periodic evaluation of the EP, uses a feedback mechanism (survey, interview, questioning of students, key employers). Monitoring and periodic evaluation of the EP Cluster is carried out by the departments, institute and department of academic issues and the department of economic planning. The procedure for planning, develEPing and approving, introducing changes and further improving the EP corresponds to the regulatory documents governing the implementation of educational programmes and is available to all participants in the educational process - faculty, employers,

students.

To determine the level of satisfaction of students, the planning and monitoring department of the educational process, the university's quality control department organizes and conducts student surveys every academic period. The following types of monitoring and questioning were conducted at the University:

- questioning on the official website for students, teaching staff;
- monitoring of graduates' employment;
- monitoring the structure and content of EP by employers on the basis of the expertise of the modules, MCs, and CEDs;
- questioning the satisfaction of students with the organization regarding: education at the University and the improvement of the educational process;
- the quality of work of the dean's office and institute; organization of work practices, prevention of anti-corruption at the university;
- monitoring the activities of the University for the past academic year in the form of a report;

Monitoring of the workload, academic performance and the results of assessing the quality of students and graduates is being monitored, as evidenced by the protocols of meetings of the SEC, protocols of meetings of the departments.

All activities to control the quality of the educational process, held at different levels, are recorded in the form of records, acts, certificates, reports, etc., and are discussed at the meetings of departments, on the board of the institute, on the Academic Council of the university. Based on the analysis and evaluation of monitoring indicators, measures are being developed to improve the quality of EP implementation.

The development of educational programmes is carried out taking into account the proposals of employers, interested persons, students involved in the selection process and the formation of a list of elective disciplines, the development of topics for graduation works, as well as the opinions and suggestions of students and employers on the basis of professional practices, proposals of the chairmen of the SSC.

For each EP, an Academic Council was established, which included employers, teaching staff and students to discuss, approve and revise the EP.

EP is updated in connection with the change of state mandatory standards of higher education, the introduction of new directions and elective courses.

EP renewal is made in accordance with the requests of employers, which is reflected in the catalog of elective disciplines for the corresponding academic year and is approved by the Academic Council of the university.

The university management has demonstrated its openness and accessibility for students, teaching staff, employers: there is access to management at any level of management on personal matters, meetings with the rector are held on a systematic basis.

### ***Analytical part***

The EEC confirms that the university continuously monitors, periodically evaluates and revises educational programmes for the effective implementation of the educational process and is working to create a favorable learning environment for students. Monitoring and periodic evaluation of the study programme examines: the content of the programmes in the light of the latest achievements of science in a particular discipline to ensure the relevance of the discipline being taught; changes in the needs of society and the professional environment; workload, performance and graduation of students; educational environment and support services and their compliance with the objectives of the EP.

Employers are involved in the process of designing, developing and implementing, as well as revising the EP, for conducting classes, reviewing graduation projects, are members of the state attestation commission.



The university management has demonstrated its openness and accessibility for students, faculty members, employers: reception hours for personal matters have been determined, meetings with the rector are held on a systematic basis.

Employers take part in the development of EP by making their proposals for new elective disciplines. The University has feedback from employers on the modules of EP, MCs, CEDs, models of graduates.

The university annually participates in the SAUD conducted by the MES of the RK among graduate students. The SAUD is a mandatory procedure and includes independent testing of students in 4 specialised disciplines.

According to the results of the survey, the level of accessibility of students' guidance was rated as "very good" by 63.6%, "good" by 33.9% of students. The availability of teachers' guidance was rated as "very good" by 71.2%, "good" - 27.1% of teaching staff.

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

- The university regularly monitors and periodically evaluates the EP in order to achieve the goal and meet the needs of students and society;

- Monitoring and periodic assessment of the EP consider: the content of programmes in the light of the latest achievements of science in a particular discipline to ensure the relevance of the discipline being taught; changes in the needs of society and the professional environment; workload, performance and graduation of students; educational environment and support services and their compliance with the objectives of the EP;

- The management of the EP provides a review of the content and structure of the EP, taking into account changes in the labor market, the requirements of employers and the social demand of society

***Conclusions of the EEC on the criteria of the standard "Continuous monitoring and periodic evaluation of educational programmes" on 6 criteria of this standard have strong positions, 4 - satisfactory positions.***

### ***6.5 Standard "Student-centered learning, teaching and assessment of progress"***

#### ***Evidence part***

University leadership provides equal opportunities for students, regardless of the language of instruction. Training takes place in the state and Russian languages. For each academic year, MCs and CEDs are formed, which characterize educational trajectories. Students have the opportunity to choose elective disciplines and teachers for the next academic year.

Students receive information about the possibilities of forming an individual educational trajectory with the help of advisors. Monitoring the progress of students on the educational trajectory is carried out on the basis of a system for evaluating the results of students.

Trainees are provided with syllabuses, teaching and learning materials, educational and scientific literature, ISW, ISWT, consultations and information resources. Chairs provide a harmonious development of students, taking into account their individual characteristics.

In the conditions of digitalization in the University, innovative teaching methods are applied: multimedia complexes, including a PC, a multimedia projector and a portable screen. The following types of software have been introduced into the educational process: In order to introduce innovative technologies, IT technologies are used in the educational process in the form of software products with tasks.

The EP management conducts active work on maintaining the autonomy of students in academic disciplines, through the use of interactive teaching methods, in particular, these are guest and problem lectures with the participation of leading practitioners, simulation methods of active learning, creative learning, innovative educational project activities, lecture-conversation and t.d

Students have the opportunity to realize leadership and creativity.

Procedures for assessing the level of knowledge of students at the University are consistent with the planned learning outcomes and objectives of the EP. Assessment of

knowledge, skills and professional competencies, students of the credit technology of training, is carried out on a 100-point scale with the conversion of the final result into alphabetic and digital equivalent. The final assessment of the discipline includes the assessment of the rating of admission and final control. All information on the assessment of students, including current, intermediate, final control is available in the AIS Platonus.

The EP management ensures the availability and effectiveness of the collective appeal mechanism (appeal), the transparency of the criteria and assessment tools.

The University has established a procedure for responding to students' complaints. There is a feedback that is implemented in the form of the functioning of the blog of the rector ([https://aues.kz/?page\\_id=4500](https://aues.kz/?page_id=4500)).

Mechanisms to identify conflicts are the statements of students, a personal appeal to the supervisor or the call center, to leave online a complaint or anonymous addresses.

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

The Commission notes that the University seeks to develop objective tools for assessing students' knowledge, using the recommendations of the latest version of ECTS and a clear anti-corruption policy.

Students enrolled in accredited undergraduate and undergraduate programmes participate in the procedures for independent assessment of learning outcomes. The management of EP provides respect and attention to various groups of students and their needs, providing them with flexible learning paths

The Commission of the EEC during the interviewing of students was convinced that, according to the accredited EP, specialists - practitioners are involved in the educational process.

On the basis of scientific centers, students of an accredited educational programme acquire practical skills and abilities, as well as implement the results of scientific research in the process of performing diploma theses, master's theses, scientific research work, scientific research work, and others.

The Commission of the EEC during the interviews with the teaching staff determined that the teaching staff of the educational programme produce various educational and training materials on their readable disciplines, but there is no own research of teaching staff on teaching methods.

#### ***Strengths / best practice:***

- The EP's management ensures respect and attention to various groups of students and their needs, providing them with flexible learning paths.

#### ***EEC recommendations***

To continue the work on conducting our own research in the field of teaching disciplines in the context of EP.

***Conclusions of the EEC on the criteria of the standard "Student-centered learning, teaching and assessment of progress" on 1 criterion of this standard have strong positions, 9 - satisfactory positions.***

### ***6.6 Standard "Students"***

#### ***Evidence part***

EP management demonstrates the policy of forming a contingent of students of EP from admission to graduation and provides transparency of its procedures. To form a contingent of students, the University holds an EPen Day, Excursions for Schoolchildren, Subject Olympiad and other events for pupils in Almaty and other regions of Kazakhstan, where reference books, university booklets, information about educational programmes are distributed.

There is a department for the admission of applicants - the Department of Marketing.

An adaptation week organized by the efforts of academic advisors has been organized for newly enrolled students.

The University has a President and a Department for Development Analysis and Strategy, which is responsible for the academic mobility process.

The analysis of the contingent of students on "5B071800 Electrical power engineering", "6M071800 Electrical power engineering", "6D071800 Electrical power engineering", "5B081200 Energy supply of agriculture", "5B070200 Automation and control", "6M070200 Automation and control" for the last 3 academic years shows the growth of students in the school. The contingent of students on EP cluster are presented in table 1.

Table 1 - The contingent of students on the EP cluster

EP	2015-2016.	2016-2017.	2017-2018.	2018-2019.
Electrical power engineering BA	950	959	1049	1055
Electrical power engineering MA	37	46	79	80
Electrical power engineering PhD	5	5	10	11
Energy supply of agriculture BA	172	165	141	140
Automation and control BA	436	486	631	636
Automation and control MA	12	20	41	38

As can be seen from table 1, the contingent of students on the EP for the considered 4 academic years tends to increase.

The dynamics of admission to the accredited EP cluster is shown in Table 2.

Table 2 - Dynamics of admission to the EP cluster

EP	2015-2016.	2016-2017.	2017-2018.	2018-2019.
Electrical power engineering BA	220	171	232	349
Electrical power engineering MA	19	17	29	45
Electrical power engineering PhD	1	3	2	4
Energy supply of agriculture BA	35	31	31	21
Automation and control BA	106	148	134	240
Automation and control MA	10	6	14	22

According to the EP cluster observed by the admission of applicants has a steady growth trend.

In general, there is a positive trend in performance over the past three academic years.

The university has created and successfully operates to provide students with places of practice, as well as to employ graduates of accredited EP.

This is confirmed by a sufficiently large list of practice databases provided in the self-assessment report, and confirmed by the demonstration of documents when visiting departments and in the process of a tour of the practice databases.

For the passage of industrial and pre-diploma practice, the University has concluded contracts with practice bases for various periods with coverage of all specialties in accordance with the form of a model contract for professional practice.

Information about the employment of graduates is given in Table 3.

Table 3 - Employment of graduates of EP

Qty Graduates	Empl oyed	% of employ ment	Qty Graduates	Empl oyed	% of employ ment	Qty Graduates	Empl oyed	% of employ ment
2015-2016			2016-2017			2017-2018		
EP 5B071800 «Electrical power engineering»								
424	405	95%	299	251	83%	239	209	87%
EP 6M071800 «Electrical power engineering»								
36	36	100%	19	19	100%	17	16	94%
EP 6J071800 «Electrical power engineering»								
			1	1	100%	1	1	100%
EP 5B081200 «Energy supply of agriculture»								
50	39	78%	37	23	62%	44	35	80%
EP 5B070200 «Automation and control»								
107	63	59%	72	70	97%	103	77	75%
EP 5M070200 «Automation and control»								
8	8	100%	6	6	100%	5	5	100%

Analysis of the employment of graduates as shown in Table 3 indicates a high level of their employment, which is more than 80%. However, the level of this indicator for the 2018-2019 school year for all EPs, compared to previous years, is oscillatory in the region of 80%. According to EP "5M070200 Automation and Control", the graduates' employment for the period under review was 100%.

Graduates of the university are provided with a diploma supplement in accordance with the requirements of the state sample of the Republic of Kazakhstan, indicating the disciplines studied, the volume of laboriousness of the material studied in the loans of the Republic of Kazakhstan and in the ECTS system in 3 languages.

The university students take an active part in large-scale events dedicated to the celebration of anniversaries of the history of the state: Victory Day, Day of State Symbols, Constitution Day, Independence Day. It has also become a tradition to celebrate the Day of Older Persons, to organize holiday concerts on Teacher's Day, International Women's Day, March 8.

As part of the clubs, students are engaged in research, participate in student conferences. Students have the opportunity to communicate outside the classroom in the assembly hall, library, sports complex, dining room.

Examination sessions are traditionally held within the deadlines set by the academic calendar of the university. The preparation of the sessions was carried out in accordance with the complex of measures for the organization and conduct of the session by the structural units responsible for the organization of the educational process.

#### **Analytical part**

At the same time, the commission notes that the university has developed an academic policy containing the main issues of students' educational and organizational activities.

The University is working on the academic mobility of students, which is mainly carried out within the country, although there are isolated examples of external academic mobility in foreign countries. In order to integrate the education system, the international educational space needs to be strengthened and a long-term plan for incoming and outgoing academic mobility of students both inside and outside the country should be drawn up. During meetings with students,



it was found that the measures taken by the university management to assist in obtaining external grants for training are insignificant.

As a result of the survey, the availability of academic counseling was fully satisfied (58.8%); accessibility of health services (67.6%); availability of library resources (84.6%); existing educational resources (73.5%); overall quality of curricula (81.6%); the ratio between student and teacher (78.7%).

#### **EEC recommendations**

Consider the possibilities of providing external and internal (inbound and outbound) academic mobility of students from various sources in online or offline learning modes.

**Conclusions EEC on the criteria of the standard "Students" on the 12 criteria of this standard have a satisfactory position.**

### **6.7 Standard "Teaching Staff"**

#### **Evidence part**

The "University" EP operates personnel policy accessible to faculty and staff, which is one of the strategic priorities of the university's development, aimed at ensuring the qualification requirements for the implementation of educational programmes, preserving the professional potential of faculty members, creating conditions for increasing professional motivation and psychological climate in the team. It is carried out in accordance with the main priorities of the university strategy.

Recruitment for teaching staff is carried out on a competitive basis in accordance with the Rules for Competitive Replacement of Positions approved by the Ministry of Education and Science of the Republic of Kazakhstan and the internal rules of the university. The formation of the faculty is based on the needs for the effective implementation of the EP, as well as taking into account the total amount of training load.

The staffing capacity of the faculty is consistent with the development strategy of the university and the specifics of the EP.

All Regulations of the University are freely available for review by faculty members. The formation of the personnel policy of the EP cluster is carried out in accordance with the strategy and objectives of the university, with the policies and plans in the field of ensuring the quality of training of specialists. Information about personnel potential, providing EP cluster is posted on the website of the university. For the 2018-2019 academic year, the quantitative and qualitative composition is given in table 4.

**Table 4 - Personnel capacity in the EP at the issuing departments**

EP	2015-2016		2016-2017		2017-2018		2018-2019	
	total	PhD degree, %	total	PhD degree, %	total	PhD degree, %	total	PhD degree, %
Electrical power engineering BA	75	58%	73	93%	88	62,5%	88	62,5%
Electrical power engineering MA	75	58%	73	93%	88	62,5%	88	62,5%
Electrical power engineering PhD	75	58%	73	93%	88	62,5%	88	62,5%
Energy supply of agriculture BA	21	57%	20	60%	17	94%	18	78%
Automation and control BA	26	65%	30	93%	51	56%	51	56%
Automation and control MA	26	65%	30	93%	51	56%	51	56%

The management of the EP cluster demonstrates an awareness of responsibility for their employees and providing them with favorable working conditions, contributing to the professional growth and creativity of employees, as well as increasing productivity.

Monitoring the activities of faculty, as well as a comprehensive assessment of the quality of teaching and assessment of the competence of the faculty is carried out by: organizing an annual internal university certification; organization of mutual visits; systematic questioning of students; conducting a survey of employers.

The portfolio of teachers is based on the AIS "Platonus" University.

Educational and methodical complexes have been developed in all disciplines of study programmes for undergraduate and graduate and doctoral studies.

Monographs, textbooks and teaching aids have been published and scientific articles have been published on the research conducted by the faculty.

Also, within the framework of the practice orientation for students, the teachers are teachers who have practical experience.

According to the results of master's theses there are acts of implementation at the enterprises, and also some of them are made at the request of employers.

It may be noted well-established system of advanced training of teaching staff. So, the teaching staff of the EP underwent various advanced training courses and retraining of personnel according to the profile of the subjects taught.

The teaching staff of the EP Cluster take an active part in competitions for receiving scholarships and grants, there are owners of the title "The best teacher of the university".

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

During the visit, experts of the EEC of the IAAR notes that the university has an objective and transparent personnel policy, including recruitment, professional growth and staff development, ensuring the professional competence of the entire state; The leadership of EP attracts practitioners from relevant industries to teaching and provides targeted actions for the development of young teachers.

The university should demonstrate the motivation of professional and personal development of teachers of EI, including the promotion of both the integration of scientific activities and education, and the use of innovative teaching methods.

According to the cluster, there is a low level of external and internal academic mobility and the attraction of the best foreign and domestic teachers.

In this regard, the management of accredited EPs should increase the participation of teachers in academic mobility programmes; expand opportunities for international cooperation and exchange of experience with foreign and domestic colleagues.

The departments have funded and contractual R&D on the specifics of the accredited EP.

The action of the teaching staff regarding the educational process takes place in accordance with the development plans of the EP.

The survey of the faculty confirmed the high interest in achieving the plans of the EP, as well as the creation of favorable conditions for work. It is important that the management developed the most important criteria for the work of the university, which received support from the faculty.

The faculty members are actively involved in the public life of the university, they manage scientific and artistic circles. Students actively participate in contests and win prizes.

When conducting classes, faculty members widely use technical means to ensure interactivity of the learning process.

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

AUPET has an objective and transparent personnel policy, including recruitment, professional growth and staff development, ensuring the professional competence of the entire state;



- the staff potential of the teaching staff corresponds to the development strategy of the university and the specifics of the EP;
- AUPET clearly defined the contribution of the teaching staff of the EP to the implementation of the development strategy of the university, and other strategic documents;
- AUPET provides opportunities for career growth and professional development of teaching staff of the EP;
- involvement of practitioners of relevant branches in the accredited EP;
- The leadership of the EP provides targeted actions for the development of young teachers;
- AUPET demonstrated the motivation of professional and personal development of teachers of EP, including the promotion of both the integration of science and education, and the use of innovative teaching methods;
- teaching staff actively apply information and communication technologies in the educational process;
- teaching staff of EP actively participate in the life of society.

#### ***EEC recommendations***

To continue work on the implementation of the plan for the development of academic mobility in the framework of the EP and the involvement of leading lecturers from foreign universities.

***Conclusions of the EEC on the criteria of the standard "Teaching staff" on 9 criteria of this standard have strong positions, 3 - satisfactory positions.***

### ***6.8 Standard "Educational resources and student support systems"***

#### ***Evidence part***

During the work of the EEC, experts made sure that the university has the material, information and library resources used to organize the process of training and educating students and implementing the mission, goals and objectives of AUPET.

An important factor in ensuring the quality of education and guaranteeing the sustainable development of a university is the continuous improvement of material, technical and human resources. The Academy has created conditions for teaching students, conducting research, publishing the results of research and teaching staff, staff and students.

There is a student support system, a medical office, recreation areas, food areas, a gym, a library, and a hostel.

All classrooms used in the educational process of the EP cluster are connected to the global Internet and the local network of the university. Audiences are decorated by stands educational materials. interactive boards, projectors. Students of the EP cluster use the computer rooms of the university connected to the local network and having a connection to broadband Internet access.

All buildings in which classes are held comply with sanitary standards, fire safety requirements and the requirements of state obligatory standards of implemented specialties.

Students have access to external electronic resources, licensed international, national, intercollegiate educational library platforms. Access to foreign databases is provided.

All electrical appliances and office equipment meet safety requirements.

All computer classes are equipped with computers of the new generation, are united in a local network and connected to the Internet, the services of which all employees and students use for free and without time limit.

The hostel has a reading room, equipped with computers with access to the global Internet, a recreation room, a kitchen and a household room, equipped with necessary electrical appliances.

The workplaces of the faculty and staff are provided with everything necessary - comfortable furniture, modern office equipment. In accordance with the development strategy of the university and the planned modernization of the IT infrastructure of the university, all the

necessary resources of the departments are modernized.

The logistical, informational and library resources used to organize the process of training and education are sufficient to fulfill the stated mission, goals and objectives and meet the requirements of the accredited educational programmes.

For each EP there are research laboratories that are equipped with a projector, PC, board, etc.

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

The EEC confirms the availability of student support systems, including support through the university site. During meetings with trainees and teaching staff, it was revealed that the majority of peEPle do not have financial EPportunities to attend training, internships, and advanced training at leading universities in the world, therefore it is advisable to involve students and teaching staff in the best online courses more widely.

As a result of the visual inspection of objects of the material base, the members of the EEC are convinced that the university has the necessary educational and material assets to ensure the educational process of the educational programmes being accredited. The buildings and facilities of the university comply with current sanitary standards and fire safety requirements.

When interviewing, students expressed their EPinion about the lack of good functioning of WI-FI on the territory of the university.

According to the results of the survey, the availability of library resources was fully satisfied –84.6%, “partially satisfied” - 29.4% of students; study rooms, classrooms for large groups - 73.5% (22.1%); cabinets for small groups - 79.4% (16.9%); recreation rooms for students - 41.9% (26.5%); computer classes and Internet resources - 75.7% (16.9%) of trainees; existing computer classes - 64% (28.7%); scientific laboratories - 64% (26.5%). Full satisfaction of students with the provision of hostels is 65.4% (15.4%).

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

- a high degree of equipment with laboratory equipment and funds to support the educational process;
- EP management has demonstrated technology support for students and teaching staff in accordance with educational programmes;
- AUPET has ensured compliance with safety requirements in the learning process.

#### ***EEC recommendations***

To improve the functioning of WI-FI on the territory of the university as well as in student dormitories.

***Conclusions of the EEC on the criteria of the standard “Educational resources and student support systems” on 4 criteria of this standard have strong positions, 5 criteria of this standard have satisfactory positions and 1 criterion suggests improvements.***

### ***6.9 Standard "Public Information"***

#### ***Evidence part***

Effective feedback with students is carried out by:

- feedback service on the students' personal pages, teaching staff in the educational portal of the university AIS "Platonus", where he gets access to the academic calendar, the curriculum of his specialty and the formation of an individual curriculum (information about disciplines and teachers), information resources and databases university libraries educational materials provided by teachers in the disciplines studied. The results of the current, intermediate and final control, the student can be found in his personal account. At the end of the academic periods, the student receives full information about the progress in the studied disciplines (transcript).

- service of the official website of the university - the rector's blog.

The feedback of the university management with the public is carried out with the help of a functioning blog of the rector.

The main channel for informing the public (prospective students, their parents, students, graduates and employers) is the official website of the university. On this page there is

information about the university, faculty and departments that implement the EP of this cluster. Social networks are also actively used (Facebook, Vkontakte, Instagram, YouTube).

The media for publication has been identified - these are republican and regional newspapers and television and radio media, where all publications are informational, image, and explanatory.

The university annually holds job fairs, which allows graduates and employers to establish contact for the selection of necessary personnel.

The university takes part in the general ranking of higher educational institutions of Kazakhstan, organized by the National Accreditation Center of the MES of RK.

The University's website provides full information on the implemented modular educational programmes with the indication of the expected learning outcomes and the award of qualifications at the end of the EP; on the assignment of qualifications at the end of the EP; information about the scores and training EP opportunities provided by students. The university also posts information and provides links to external resources on the results of external assessment procedures; on external resources on the participation of implemented EPs in a variety of external assessment procedures.

For applicants are placed training programmes, admission conditions, deadlines for receiving documents in the selection committee, a list of necessary documents, contacts of the selection committee. Students and faculty receive information about events taking place at the university, dormitories, access to the repository, educational portal AIS "Platonus".

The university's website (<https://aues.kz>) provides up-to-date information on the specifics of educational programmes - description of EP levels, EP objectives, practices, assignment of qualifications, competencies formed, staff (personnel directory), QMS procedures, students' achievements, scientific activities of teaching staff of the department, data on international coEPeration, contacts.

A special section has been EPened for the media, which contains press releases about upcoming events. Potential and existing partners can find information about the faculty of the university, the administration, programmes and coEPeration conditions. For employees and potential employees, information is placed on employment, trade unions, etc.

Evaluation of satisfaction with information on the activities of the university and on the specifics and the progress of the implementation of educational programmes is carried out annually through questionnaires, surveys, feedback, as well as through the rector's blog.

The preparation of information for placement on the university's Internet resources, in addition to the information posted by the training units and teachers on the educational portal, is carried out by the structural units concerned. The information is presented in three language versions: Kazakh, Russian and English. Responsible for the publication of posting on Internet resources University approved by the rector of the university information. There is a procedure for filling information University online portal.

The university holds meetings with the rector, vice-rectors, student assets, employers, teachers and university staff, where each meeting participant can ask any question of interest to each of the leaders and get reliable information.

### ***Analytical part***

During the period from 2017 to 2018, the Department of Academic Affairs, the Department of Marketing, the Information Technology Department, carried out the following activities to refine and improve the corporate website of the University:

- up-to-date and objective information on the activities of teaching staff and educational programmes of the cluster is constantly being updated; the electronic database of educational and methodological support of the EP is updated

- there is a "feedback" section in which each site visitor can leave a message to the teacher of a different kind, character (positive comment, question, complaint, etc.).

Analysis of the information presented in the media showed a sufficient level of public awareness about the implemented EP.

Evaluation of satisfaction with information about the activities of the university, the specifics and the implementation of the EP is conducted annually through questionnaires, surveys, feedback, and also through the rector's blog.

A survey of students, conducted during the visit of the EEC of the IAAR, showed that satisfaction with students' knowledge of courses, educational programmes, and academic degrees was fully satisfied - 73.5%, partially satisfied - 19.9%, partially dissatisfied - 2.9% of students.

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

- availability of information about implemented modular educational programmes with indication of the expected learning outcomes;
- EP management actively uses various ways of disseminating information to inform the general public and stakeholders;
- The university is actively involved in a variety of external assessment procedures.

***Conclusions of the EEC on the criteria of the "Public Information" standard on 3 criteria of this standard have strong positions, 10 - satisfactory positions.***

### ***6.10. Standard "Standards in the context of individual specialties"***

#### ***Evidence part***

The educational process for accredited undergraduate and graduate programmes, doctoral studies is carried out by annually updating teaching materials, updating the tEPics of dissertations, master's and PhD theses, as well as introducing new elective disciplines with the recommendations of employers. Students have access to all library resources, which are updated and replenished annually.

In order to familiarize students with the professional environment and current issues in the field of specialization, as well as to acquire practical skills based on theoretical training, the educational programme provides for various types of practices: training, industry, and pre-diploma. All types of practices are conducted in accordance with the standard curriculum, according to the academic calendar and methodically provided. Chairs signed contracts for professional practice, which defines the duties of the department, the base enterprise and students. Students are trained in accordance with the order of the rector of a higher educational institution, which indicates the base of the practice, the terms of its passage and the leaders of the practice from the educational institution. At the end of the practice, students submit reports on the approved form.

For the purpose of employment and career guidance, the communication with graduates is maintained by advisers who periodically hold round tables, EPen doors and curator hours with undergraduate students.

The university holds annual job fairs. As a result of this preliminary work, students, even before graduation, get an idea of the labor market, existing vacancies and the requirements placed on them.

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

Based on the results of the analysis, the EEC members came to the following conclusion.

Attendance showed that the teaching of educational programmes is carried out using software products by specialty profiles, using various teaching methods. The content of the lecture material highlighted foreign best practices and gave examples of modern achievements in the relevant field. The interviewers, as a wish, confirmed the active use of interactive teaching methods.

At a meeting with experts from the IAAR, employers particularly confirmed the introduction of elements of the dual training format and the presence of practice-oriented disciplines in the educational process. The objectives and learning outcomes developed by the management of the EP are of a general professional nature, concretized in accordance with the goals and in the context of each discipline.

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



- the presence of a high level of equipment of the educational process with laboratory and other equipment, teaching staff and a well-coordinated system of training students.

***Conclusions of the EEC by the criteria of the standard “Standards in the context of individual specialties” by 5 criteria of this standard have strong positions.***



## **VII REVIEW OF STRONG PARTIES / BEST PRACTICES FOR EACH STANDARD**

### **Standard "Management of the educational programme"**

- AUPET has a published quality assurance policy;
- The quality assurance policy reflects the link between research, teaching and learning;
- EP management has demonstrated the functioning of the mechanisms for the formation and regular review of the EP development plan and monitoring its implementation, evaluation of the achievement of learning goals, meeting the needs of students, employers and society, making decisions aimed at continuous improvement of EP;
- EP management should involve representatives of groups of stakeholders, including employers, students and faculty members in the formation of EP development plan;
- The EP management has demonstrated the individuality and uniqueness of the EP development plan, its consistency with the national development priorities and the development strategy of the educational organization;
- The EP's management ensured the participation of representatives of stakeholders (employers, teaching staff, students) in the collegial bodies of the educational programme management, as well as their representativeness in making decisions on the management of the educational programme;
- The university should have demonstrated innovation management in the framework of the EP, including the analysis and implementation of innovative proposals.

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

- AUPET provides the system for collecting, analyzing and managing information through the use of modern information and communication technologies and software;
- AUPET showed the determination of the order and ensuring the protection of information, including the identification of responsible persons for the accuracy and timeliness of the analysis of information and the provision of data;
- AUPET assesses the effectiveness and efficiency of activities, including in the context of the EP;
- information collected and analyzed by the university effectively takes into account: key performance indicators, the dynamics of the contingent of students in the context of forms and types, level of academic achievement, student achievement and deduction, availability of educational resources and support systems for students, employment and career growth of graduates;
- The administration of EP actively promotes the provision of all necessary information in relevant fields of science.

### **Standard "Development and approval of the educational programme"**

- AUPET has clearly defined and documented the procedures for the development of EPs and their approval at the institutional level;
- EP management ensured the compliance of the developed EP with the established goals, including the expected learning outcomes;
- EP management ensured the availability of developed graduate models of EP, describing learning outcomes and personal qualities;
- The administration of the EP demonstrated external examinations of the EP;
- qualifications obtained at the end of the EP, clearly defined, explained and correspond to a certain level of the NSC;
- The management of EP determined the influence of disciplines and professional practices on the formation of learning outcomes.

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

- AUPET regularly monitors and periodically evaluates the EP in order to ensure the achievement of the goal and meet the needs of students and society;



- monitoring and periodic evaluation of EP consider: the content of programmes in the light of the latest achievements of science in a particular discipline to ensure the relevance of the taught discipline; changes in the needs of society and the professional environment; workload, performance and graduation of students; educational environment and support services and their compliance with the objectives of the EP;

- The management of the EP provides a review of the content and structure of the EP, taking into account changes in the labor market, the requirements of employers and the social demand of society

#### **Standard " Student-centered Learning, Teaching, and Performance Assessment"**

- The EP's management ensures respect and attention to various groups of students and their needs, providing them with flexible learning paths.

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

- AUPET has an objective and transparent personnel policy, including recruitment, professional growth and staff development, ensuring the professional competence of the entire state;

- the staff potential of the faculty is consistent with the development strategy of the university and the specifics of the EP;

- AUPET clearly defined the contribution of the teaching staff of the EP to the implementation of the development strategy of the university, and other strategic documents;

- AUPET provides opportunities for career growth and professional development of teaching staff of the EP;

- involvement of practitioners of relevant branches in the accredited EP;

- The leadership of the EP provides targeted actions for the development of young teachers;

- AUPET demonstrated the motivation of professional and personal development of teachers of EP, including the promotion of both the integration of science and education, and the use of innovative teaching methods;

- teaching staff actively apply information and communication technologies in the educational process;

- Teaching staff EP actively participate in society.

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

- a high degree of equipment with laboratory equipment and funds to support the educational process;

- EP management has demonstrated technology support for students and teaching staff in accordance with educational programmes;

- The university has ensured compliance with safety requirements in the learning process.

##### **Standard "Public Information"**

- availability of information about implemented modular educational programmes with indication of the expected learning outcomes;

- EP management actively uses various ways of disseminating information to inform the general public and stakeholders;

- The university is actively involved in a variety of external assessment procedures.

##### **Standard "Standards in the context of individual specialties"**

- the presence of a high level of equipment of the educational process with laboratory and other equipment, teaching staff and a well-coordinated system of training students.

## VIII REVIEW OF RECOMMENDATION TO IMPROVE QUALITY

### **Standard "Management of the educational programme"**

EP management to ensure the successful functioning of the internal quality system of the EP, including its design, management and monitoring, their improvement, making decisions based on facts.

### **Standard "Development and approval of the educational programme"**

To carry out work on the preparation of students for professional certification in the context of the EP at the graduating departments;

Consider the possibility of developing joint educational programmes with foreign educational organizations.

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

To continue the work on conducting our own research in the field of teaching disciplines in the context of EP.

### **Standard "Students"**

To consider the possibilities of providing external and internal (inbound and outbound) academic mobility of students from various sources in online or offline learning modes.

### **Standard "Teaching stuff"**

To continue work on the implementation of the plan for the development of academic mobility in the framework of the EP and the involvement of leading lecturers from foreign universities.

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

To improve the functioning of WI-FI on the territory of the university as well as in student dormitories.

## Appendix 1. Evaluation Table "SPECIALISED PROFILE PARAMETERS"

**for evaluation of educational programmes "5B071800 Electrical power engineering",  
"6M071800 Electrical power engineering", "6D071800 Electrical power engineering",  
"5B081200 Energy supply of agriculture", "5B070200 Automation and control",  
"6M070200 Automation and control" of the Non-Profit JSC "Almaty University of Power  
Engineering and Communications"**

№	№	Criteria for evaluation	Position of the organisation of education			
			Strong	Satisfactory	Suggests improvement	Unsatisfactory
Standard "Management of the educational programme"						
1	1.	The university must have a published quality assurance policy.	+			
2	2.	The quality assurance policy should reflect the link between research, teaching and learning.	+			
3	3.	The university should demonstrate the development of a culture of quality assurance, including in the context of the EP.		+		
4	4.	Commitment to quality assurance should relate to any activity performed by contractors and partners (outsourcing), including in the implementation of joint / two-diploma education and academic mobility.		+		
5	5.	The EP's management ensures the transparency of the development plan of the EP based on the analysis of its functioning, the real positioning of the university and the focus of its activities on meeting the needs of the state, employers, stakeholders and students.		+		
6	6.	The EP's management demonstrates the functioning of the formation mechanisms and regular review of the EP development plan and monitoring its implementation, assessing the achievement of learning objectives, meeting the needs of students, employers and society, making decisions aimed at continuous improvement of the EP.	+			
7	7.	EP management should involve representatives of groups of stakeholders, including employers, students and teaching staff in the development of EP development plans.	+			
8	8.	EP management must demonstrate the individuality and uniqueness of the EP development plan, its consistency with the national development priorities and the development strategy of the educational organization.	+			
9	9.	The university should demonstrate a clear definition of those responsible for the business processes within the EP, the unambiguous distribution of staff duties, the delineation of the functions of collegial bodies.		+		
10	10.	EP management must provide evidence of the transparency of the educational programme management system.		+		
11	11.	EP management must demonstrate the successful functioning of the internal quality assurance system of the EP, including its design, management and monitoring, their improvement,			+	

		making decisions based on facts.				
12	12.	EP management should implement risk management.		+		
13	13.	EP management should ensure the participation of representatives of interested parties (employers, teaching staff, students) in the collegial bodies of the educational programme management, as well as their representativeness in making decisions on the management of the educational programme.	+			
14	14.	The university should demonstrate the management of innovation in the framework of the EP, including the analysis and implementation of innovative prEPosals.	+			
15	15.	EP management must demonstrate evidence of EPenness and accessibility for students, teaching staff, employers and other interested parties.		+		
16	16.	EP management must be trained in educational management programmes.		+		
17	17.	The EP management must strive to ensure that the progress made since the last external quality assurance procedure was taken into account in preparing for the next procedure.		+		
<b>Total standard</b>			<b>7</b>	<b>9</b>	<b>1</b>	<b>0</b>
<b>Standard "Information management and reporting"</b>						
18	1.	The university should ensure the functioning of the system for collecting, analyzing and managing information through the use of modern information and communication technologies and software.	+			
19	2.	EP management must demonstrate the systematic use of the processed, adequate information to improve the internal quality assurance system.		+		
20	3.	Within the EP there should be a system of regular reporting, reflecting all levels of the structure, including an assessment of the effectiveness and efficiency of the activities of departments and departments, and research.		+		
21	4.	The university should establish the frequency, forms and methods of evaluating the management of EP, the activities of collegial bodies and structural divisions, senior management, the implementation of research projects.		+		
22	5.	The university must demonstrate how to determine the order and ensure the protection of information, including determining those responsible for the accuracy and timeliness of information analysis and data provision.	+			
23	6.	An important factor is the involvement of students, employees and teaching staff in the process of collecting and analyzing information, as well as making decisions based on them.		+		
24	7.	EP management must demonstrate the presence of a communication mechanism with students, employees and other stakeholders, including the availability of conflict resolution mechanisms.		+		
25	8.	The university should provide a measure of the degree of satisfaction of the needs of faculty, staff and students in the framework of the EP and demonstrate evidence to eliminate the detected deficiencies.		+		
26	9.	The university should evaluate the effectiveness and efficiency of activities, including in the context of the EP.	+			
		Information collected and analyzed by the university should take into account:				
27	10.	key performance indicators;	+			

28	11.	the dynamics of the contingent of students in the context of forms and types;	+			
29	12.	level of performance, student achievement and expulsion;	+			
30	13.	students' satisfaction with the implementation of the EP and the quality of education at the university;		+		
31	14.	availability of educational resources and support systems for students;	+			
32	15.	Employment and career growth of graduates.	+			
33	16.	Trainees, employees and teaching staff must document their consent to the processing of personal data.		+		
34	17.	EP management should contribute to the provision of all necessary information in relevant fields of science.	+			
<b>Total standard</b>			<b>9</b>	<b>8</b>	<b>0</b>	<b>0</b>
<b>Standard "Development and approval of the educational programme"</b>						
35	1.	The university should determine and document the procedures for the development of EP and their approval at the institutional level.	+			
36	2.	EP management must ensure that the developed EPs comply with the established goals, including the expected learning outcomes.	+			
37	3.	The management of EP must ensure the availability of developed models of graduate EP, describing learning outcomes and personal qualities.	+			
38	4.	The management of the EP must demonstrate that external examinations of the EP	+			
39	5.	Qualifications obtained at the end of the EP should be clearly defined, explained and correspond to a certain level of the NSC.	+			
40	6.	The management of EP should determine the influence of disciplines and professional practices on the formation of learning outcomes.	+			
41	7.	An important factor is the possibility of preparing students for professional certification.		+		
42	8.	EP management must provide evidence of the participation of students, faculty and other stakeholders in the development of EP, ensuring their quality.		+		
43	9.	The complexity of the EP should be clearly defined in Kazakhstan loans and ECTS.		+		
44	10.	The management of EP must provide the content of academic disciplines and learning outcomes to the level of education (bachelor, master, doctoral).		+		
45	11.	The structure of the EP should provide for various types of activities corresponding to the learning outcomes.		+		
46	12.	An important factor is the presence of joint EPs with foreign educational organizations.		+		
<b>Total standard</b>			<b>6</b>	<b>6</b>	<b>0</b>	<b>0</b>



<b>Standard "Continuous monitoring and periodic evaluation of educational programmes"</b>						
47	1.	The university should monitor and periodically evaluate the EP in order to achieve the goal and meet the needs of students and society. The results of these processes are aimed at continuous improvement of the EP.	+			
		<i>Monitoring and periodic evaluation of an EP should consider:</i>				
48	2.	the content of programmes in the light of the latest achievements of science in a particular discipline to ensure the relevance of the discipline being taught;	+			
49	3.	changes in the needs of society and the professional environment;	+			
50	4.	workload, performance and graduation of students;	+			
51	5.	the effectiveness of student assessment procedures;		+		
52	6.	expectations, needs and satisfaction of students with EP training;		+		
53	7.	educational environment and support services and their compliance with the objectives of the EP.	+			
54	8.	The university and the administration of the EP must provide evidence of the participation of students, employers and other stakeholders in the revision of the EP.		+		
55	9.	All interested parties should be informed of any actions planned or taken in relation to the EP. All changes made to the EP should be published.		+		
56	10.	EP management must ensure a review of the content and structure of the EP, taking into account changes in the labor market, employers' requirements and social demands of the society	+			
<b>Total standard</b>			<b>6</b>	<b>4</b>	<b>0</b>	<b>0</b>
<b>Standard " Student-centered Learning, Teaching, and Performance Assessment "</b>						
57	1.	EP management must ensure respect and attention to different groups of students and their needs, providing them with flexible learning paths.	+			
58	2.	EP management must ensure the use of various forms and methods of teaching and learning.		+		
59	3.	An important factor is the availability of own research in the field of teaching methods of academic disciplines EP.		+		
60	4.	EP management must demonstrate the presence of a feedback system on the use of various teaching methods and evaluation of learning outcomes.		+		
61	5.	The management of the EP should demonstrate support for the autonomy of students with simultaneous guidance and assistance from the teacher.		+		
62	6.	The EP's management must demonstrate the availability of a procedure for responding to students' complaints.		+		
63	7.	The university should ensure consistency, transparency and objectivity of the mechanism for assessing the results of training for each EP, including the appeal.		+		
64	8.	The university must ensure that the procedures for evaluating the results of the training of students in EP correspond to the		+		



		planned learning outcomes and the objectives of the programme. Criteria and assessment methods in the framework of the EP should be published in advance.				
65	9.	In a higher education institution, mechanisms should be defined to ensure that each graduate from the EP study results and ensure the completeness of their formation.		+		
66	10.	Assessors should possess modern methods of assessing learning outcomes and regularly improve their skills in this area.		+		
<b>Total standard</b>			<b>1</b>	<b>9</b>		
<b>Standard "Students"</b>						
67	1.	The university should demonstrate the policy of forming a contingent of students from admission to graduation and ensure the transparency of its procedures. The procedures governing the life cycle of students (from admission to completion) must be defined, approved, published.		+		
68	2.	The EP's management should demonstrate the implementation of special adaptation and support programmes for new-comers and foreign students.		+		
69	3.	The university must demonstrate the compliance of its actions with the Lisbon Recognition Convention.		+		
70	4.	The university should coEPerate with other educational organizations and national centers of the EurEPean Network of National Information Centers for Academic Recognition and Mobility / National Academic Information Recognition Centers ENIC / NARIC to ensure comparable recognition of qualifications.		+		
71	5.	EP management must demonstrate the presence and application of a mechanism to recognize the results of academic mobility of students, as well as the results of additional, formal and non-formal education.		+		
72	6.	The university should provide an EPportunity for external and internal mobility of students of EP, as well as assist them in obtaining external grants for training.		+		
73	7.	The management of EP should make the maximum amount of effort to provide students with places of practice, to facilitate the employment of graduates, to maintain communication with them.		+		
74	8.	The university must provide graduates of EP with documents confirming their qualifications, including the achieved learning outcomes, as well as the context, content and status of the education received and evidence of its completion.		+		
75	9.	An important factor is the monitoring of employment and professional activities of graduates of EP.		+		
76	10.	EP management should actively encourage students to self-education and deveEPment outside the main programme (extracurricular activities).		+		
77	11.	An important factor is the existence of a valid alumni association / association.		+		
78	12.	An important factor is the availability of a support mechanism for gifted students.		+		
<b>Total standard</b>			<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>
<b>Standard "Teaching Staff"</b>						
79	1.	The university should have an objective and transparent personnel policy, including recruitment, professional growth	+			

		and staff development, ensuring the professional competence of the entire state.				
80	2.	The university should demonstrate the compliance of the staff potential of the faculty with the development strategy of the university and the specifics of the EP.	+			
81	3.	EP management must demonstrate an awareness of responsibility for its employees and ensuring favorable working conditions for them.		+		
82	4.	The management of EP should demonstrate a change in the role of the teacher in connection with the transition to student-centered learning.		+		
83	5.	The university should determine the contribution of teaching staff to the implementation of the university's development strategy, and other strategic documents.	+			
84	6.	The university should provide opportunities for career growth and professional development of teaching staff of the EP.	+			
85	7.	EP management should involve practitioners in relevant fields in teaching.	+			
86	8.	The management of EP should provide targeted actions for the development of young teachers.	+			
87	9.	The university should demonstrate the motivation of professional and personal development of teachers of EP, including the promotion of both the integration of scientific activities and education, and the use of innovative teaching methods.	+			
88	10.	An important factor is the active use of information and communication technologies in the educational process (for example, on-line training, e-portfolio, MEP, etc.).	+			
89	11.	An important factor is the development of academic mobility in the framework of the EP, attracting the best foreign and domestic teachers.		+		
90	12.	An important factor is the involvement of teaching staff in the community (the role of teaching staff in the education system, in the development of science, the region, creating a cultural environment, participation in exhibitions, creative competitions, charity programmes, etc.).	+			
<b>Total standard</b>			<b>9</b>	<b>3</b>	<b>0</b>	<b>0</b>
<b>Standard "Educational resources and student support systems"</b>						
91	1.	EP management must demonstrate the adequacy of material and technical resources and infrastructure.	+			
92	2.	EP management must demonstrate the availability of support procedures for various groups of students, including information and counseling.		+		
		<i>EP management must demonstrate the compliance of information resources with the specifics of the EP, including compliance with:</i>				
93	3.	technological support for students and teaching staff in accordance with educational programmes (for example, online training, modeling, databases, data analysis programmes);	+			
94	4.	library resources, including the fund of educational, methodical and scientific literature on general educational, basic and major disciplines on paper and electronic media, periodicals, access to scientific databases;		+		

95	5.	Access to educational online resources;		+		
96	6.	examination of the results of research, final works, dissertations on plagiarism;		+		
97	7.	WI-FI functioning on the territory of the organization of education.			+	
98	8.	The university should strive to ensure that the training equipment and software used for the development of EP, were similar to those used in their respective industries.	+			
99	9.	The university must ensure compliance with safety requirements in the learning process.	+			
100	10.	The university should strive to take into account the needs of various groups of students in the context of EP (adults, workers, foreign students, and students with disabilities).		+		
<b>Total standard</b>			<b>4</b>	<b>5</b>	<b>1</b>	<b>0</b>
<b>Standard "Public Information"</b>						
		<i>The information published by the university within the EP should be accurate, objective, relevant and should include:</i>				
101	1.	implemented programmes, indicating the expected learning outcomes;	+			
102	2.	information about the possibility of assigning qualifications at the end of the EP;		+		
103	3.	information about teaching, learning, assessment procedures;		+		
104	4.	information about the scores and training opportunities provided by students;		+		
105	5.	information about graduate employment opportunities.		+		
106	6.	EP management should use a variety of ways to disseminate information (including the media, web resources, other information networks) to inform the general public and stakeholders.	+			
107	7.	Public awareness should include support and clarification of national development programmes of the country and the system of higher and postgraduate education.		+		
108	8.	The university should publish audited financial statements on its own web resource.		+		
109	9.	The university should demonstrate the information on the web resource describing the university as a whole and in the context of the EP.		+		
110	10.	An important factor is the availability of adequate and objective information about the teaching staff of the EP, in the context of personalities.		+		
111	11.	An important factor is informing the public about cooperation and interaction with partners in the framework of EP, including with scientific / consulting organizations, business partners, social partners and educational organizations.		+		
112	12.	The university should post information and links to external resources on the results of external assessment procedures.		+		
113	13.	An important factor is the participation of the university and the EP implemented in a variety of external assessment procedures.	+			
<b>Total standard</b>			<b>3</b>	<b>10</b>	<b>0</b>	<b>0</b>
<b>NATURAL SCIENCES, AGRICULTURAL SCIENCES, TECHNICAL SCIENCES, AND TECHNOLOGIES</b>						
		Educational programmes in the areas of "Natural Sciences",				

		"Engineering Sciences and Technology", such as "Mathematics", "Physics", "Information Systems", etc., must meet the following requirements:				
114	1.	In order to familiarize students with the professional environment and current issues in the field of specialization, as well as to acquire skills based on theoretical training, the education programme should include disciplines and activities aimed at gaining practical experience and skills in the specialty in general and the major disciplines in particular - excursions to enterprises in the field of specialization (factories, workshEPs, research institutes, laboratories, educational and experimental farms, etc.), - carrying out separate occupations or the whole disciplines at the enterprise of specialization, - holding seminars to solve practical problems that are relevant to enterprises in the field of specialization, etc.	+			
115	2.	The faculty involved in the education programme should include full-time teachers with long-term experience as a staff member in enterprises in the field of specialization of the education programme.	+			
116	3.	The content of all disciplines of the EP should be based in one way or another and include a clear relationship with the content of the fundamental natural sciences, such as mathematics, chemistry, physics.	+			
117	4.	The management of the EP should provide measures to enhance practical training in the field of specialization.	+			
118	5.	The management of EP should provide training for students in the application of modern information technologies.	+			
<b>Total standard</b>			<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>			<b>53</b>	<b>63</b>	<b>2</b>	<b>0</b>