



«АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТІҢ  
ТӨҮЕЛСІЗ АГЕНТТІГІ» КЕМ  
НУ «НЕЗАВИСИМОЕ АГЕНТСТВО  
АККРЕДИТАЦИИ И РЕЙТИНГА»  
INDEPENDENT AGENCY FOR  
ACCREDITATION AND RATING

# REPORT

**on the work results of the external expert evaluation committee for  
compliance with software accreditation standards of Educational  
Programme 640200 – "Electric Power Engineering and Electrical  
Engineering" of Osh Technological University  
named after Academician M.M. Adyshev  
Site visit days: from “02” to “04” May, 2018**

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

*Addressed  
to the Accreditation  
Council of IAAR*



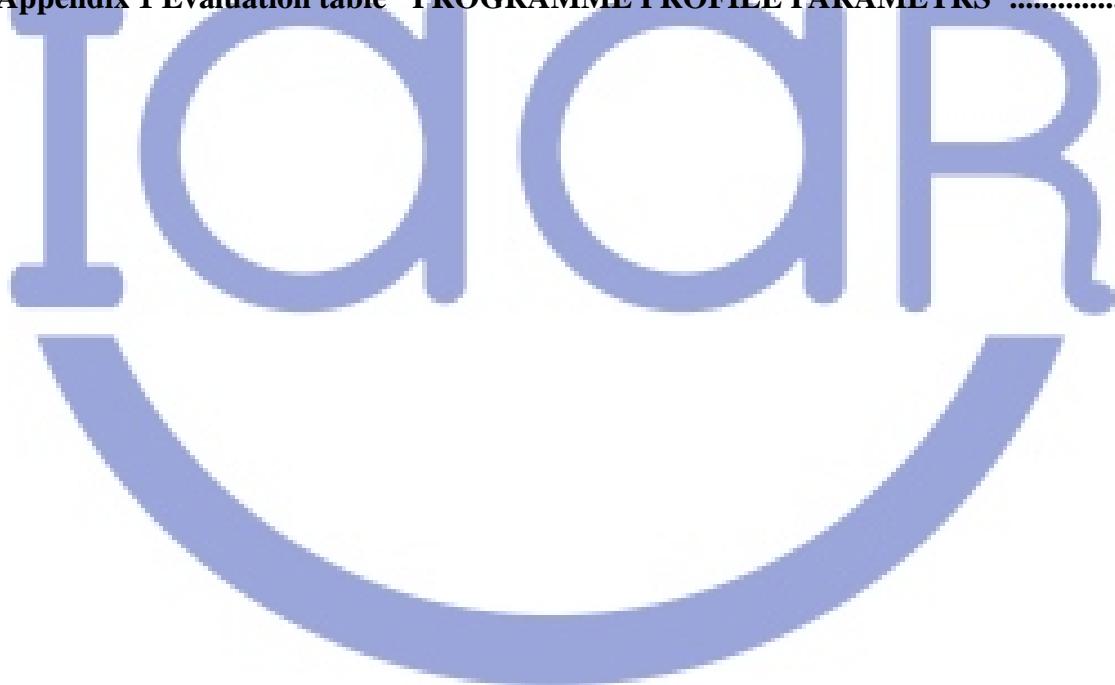
**REPORT**  
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Site visit days: from “02” to “04” May, 2018

Osh, , 2018

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## I LIST OF SYMBOLS AND ABBREVIATIONS

- EEC** - external expert commission  
**HEI** - higher educational institution  
**SEC** - State Examination Commission  
**ME SKR** - Ministry of education and science of the Kyrgyz Republic  
**NAS KR** - National academy of sciences of the Kyrgyz Republic  
**IAAR** – Independent agency for accreditation and rating  
**R D** - research and development work  
**SRW** - student research work  
**EP** - educational program  
**OshTU** - Osh Technological University  
**TS** – teaching staff  
**IWS** - independent work of students  
**TMC** - training and methodology complex



## II INTRODUCTION

In the period of 2-4 May 2018, the External Expert Commission carried out an external quality assessment of Osh Technological University named after M.M. Adyshev in accordance with the standards of the Independent Accreditation Agency and Rating. External expert assessment of the educational programme carried out of compliance Standards for program accreditation of basic educational programs of the higher education institutions (approved and put into effect by the order of the Director of the Non-Profit Institution "Independent Agency for Accreditation and Rating" as of October 17, 2016 No. 39-16-1-OD).

By the objects of evaluation the main processes of the university, the management system; the educational process, the quality of teaching and assessment of progress, the activity of the university in admitting students; employment and demand for graduates in the labor market; qualitative and quantitative indicators of the faculty; research work of faculty and students at the time of accreditation and in the dynamics over the past 3 years were identified.

The external evaluation of the quality of educational services was carried out in accordance with the program developed by the IAAR together with the chairman of the expert group and coordinated with the university administration.

The EEC is approved by the Order of the IAAR Director No. 21-18-OD April 1, 2018 as the following:

1. *Chairman* - Shunkeev Kuanyshbek Shunkeevich, Doctor of Physics and Mathematics, Professor, First Category IAAR Expert, First Vice Rector of Aktobe Regional State University named after K. Zhubanov (Aktobe, Kazakhstan).

2. *Observer* - Niyazova Guliyash Balkenovna, project manager for institutional and specialized accreditation of universities (Astana, Republic of Kazakhstan).

3. *Observer* of the Education and Science Ministry of the Kyrgyz Republic - Altybaeva Meilikan, director of the accreditation and quality department of education at Osh State University (Osh, Kyrgyz Republic).

4. *Foreign expert* - German Andrei Evgenievich, Ph.D., associate professor, dean of the Faculty of Physics and Technology, Grodno State University named after Yanka Kupala (Grodny, Belarus).

5. *Foreign expert* - Adlet Zhunusovich Toybaev, Ph.D., Vice-Rector of the Kazakhstan University of Engineering and Technology (Almaty, Republic of Kazakhstan).

6. *National expert* - Tayirov Mitalip Muratovich, Doctor of Physics and Mathematics, Professor of Batken State University (Kyzyl-Kiya, Kyrgyz Republic).

7. *National expert* - Botobekov Arstanaly Botobekovich, head of the accounting department of the Kyrgyz National University named after Zhusup Balasagyn (Bishkek, Kyrgyz Republic).

8. *Employer* - Shonoev Mirlan Kurmanbekovich, Director of the Osh branch of OJSC Halyk Bank Kyrgyzstan in the city of Osh (the city Osh, the Kyrgyz Republic).

9. *Student* - Asanov Maksatbek Turdumamatovich, 4-year student of the specialty "Information Technology" of the Kyrgyz-Uzbek University (Osh, Kyrgyz Republic).

According to the site visit programme, a meeting of experts of the IAAR was held with the administration of Osh Technological University, rector and vice-rectors, heads of departments (department of educational process management and quality management, department of educational work and social development, department of language training and international educational programs, institute of advanced training, Applied Sciences, Center for International Cooperation, Information Technology Department, Career Guidance and Pre-University Training Department, Masters' Department, postgraduate and doctoral studies department, graduate department, library, accounting, human resources, executive secretary of the selection committee, and others.). Meetings were also held with the deans of the faculties in accredited

specialties, heads of departments, a team of teachers and students of the university, as well as employers. A questionnaire event was held for students and teachers.

A visual inspection of the material and technical base of the university, infrastructure facilities and collective basis was carried out.

The experts inspected the educational and laboratory facilities, discussed the basic educational process and logistics problems of the organization.

In the frame of the audit, they were presented with the leading practice bases on accredited educational programs, where meetings were held with the leadership of the regional leading enterprises, the practice advisors from enterprises, and the workplaces at which the students' practice was organized.

Recommendations for improving the university's activities, developed by the EEC on the basis of the examination in the frame of the planned program were presented at a meeting with the administration on May 4, 2018.

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

Osh Technological University named after the academician M.M. Adyshev is a higher professional educational institution. In its activities, OshTU is guided by the Constitution of the Kyrgyz Republic, the Law of the Kyrgyz Republic "On Education", Decrees of the Kyrgyz Republic, Decrees and Decisions of the Government of the Kyrgyz Republic, other normative legal acts of the Ministry of Education and Science of the Kyrgyz Republic and the Charter of Osh Technological University.

The university was founded on the basis of the Frunze Polytechnic Institute by order of the Minister of Higher and Secondary Special Education of the Kyrgyz SSR in 1963 (in the city of Osh the evening general technical department of the Frunze Polytechnic Institute was opened). January 21, 1991 Decree of the Council of Ministers of the Kirghiz SSR for number 17 on the basis of the evening general technical faculty of the Frunze Polytechnic Institute established the Osh Technological College. February 24, 1996 by the Decree of the President of the Kyrgyz Republic No. 21 of Osh Technological College was transformed into the Osh Technological University. By the order of the Minister of Education and Culture of the Kyrgyz Republic No. 57/1 dated January 23, 2004, the Osh Technological University was named after academician Musa Murzapayazovich Adyshev.

Currently, Osh Technological University includes: 3 institutes (Institute for Advanced Studies and Retraining; Institute of Applied Sciences; Institute for Language Training and International Educational Programs); 7 faculties (road transport; energy (specialty energy department 640200 - "Electricity and Electrical Engineering" subject to current accreditation); architectural and construction, cybernetics and information technology; economics and management; technology and environmental management; natural and technical), as well as 2 colleges (Technological College, Uzgen College of Technology and Education named after Academician B. Murzubraimov). OshTU also includes a center for vocational guidance and pre-university training, as well as a lyceum.

The priority research areas of Osh Technological University are: information and telecommunication technologies and new materials; energy and transport (including alternative energy sources and road safety issues); construction, design, architecture and mining; machine science, chemical technologies in agriculture and biotechnology; problems of environmental protection, nature management and biodiversity conservation; integrated development of mineral resources; technologies for processing agricultural raw materials; economic problems of Kyrgyzstan in the conditions of transition to market relations; linguistic and methodological problems of describing foreign languages for educational purposes and the development of new technologies for their learning; environmental and biotechnological problems in the highlands of the southern region of Kyrgyzstan.

Osh Technological University is a member of the Russian-Kyrgyz consortium and

cooperates with more than one hundred and fifty educational institutions in the countries of the near and far abroad, students are exchanged under international programs. Teachers and graduate students undergo internships abroad.

Osh Technological University implements educational programs: bachelor degree - 30 directions; Magistracy - 13 directions. The total contingent of students is 8850 (of them, full-time education - 4874, on a grant - 696). Foreign students - 88. Contingent of undergraduates - 186; PPP - 435, of which regular - 406; Doctors of sciences - 19, of them regular - 12. Candidates of sciences - 106, of them regular - 98; masters - 46. Presence of accreditation of programs - AAOP 2018 (certificate No. VU180000022) Official website of Osh Technological University is: [www.oshtu.kg](http://www.oshtu.kg), E-mail: [oshtu.adyshev@mail.ru](mailto:oshtu.adyshev@mail.ru)

The total number of OshTU employees in the 2017-18 school year was 767 people. Teaching staff - 408 people, of them the full-time teachers are - 389; part-17; administrative and management personnel - 108 people. The total number of employees of the Uzgen Institute of Technology and Education is 76 people.

Of the 408 members of the faculty - 11 doctors of science, professors, 96 candidates of science, associate professors. Teaching staff with experience in the university for more than 10 years is 72%.

The university has: 1 Honored Scientist of the Kyrgyz Republic, academician of the National Academy of Sciences of the Kyrgyz Republic; 2 honored educators of the Kyrgyz Republic; 2 honored workers of the geological service of the Kyrgyz Republic; 9 academicians and corresponding members of branch academies; more than 80 teachers who received the badge "Excellence in Public Education of the Kyrgyz Republic".

The average age of doctors of science and professors is 55 years old, candidates of science, professors are 52 years old, candidates of science, associate professors are 40 years old.

The scientific activity of OshTU is coordinated by the department of science of OshTU and is implemented in the following divisions: Institute of Applied Sciences, 2 scientific laboratories, departments and faculties, scientific and technical council. There is an Interstate Departmental Dissertation Council, departments of magistracy, postgraduate and doctoral studies.

Educational buildings of the university occupy 24513m<sup>2</sup> and meet the requirements for premises educational purposes.

OshTU mission: 1) Providing high-quality and affordable education using the latest educational technologies and innovations. 2) All-round support for the rise and development of the economy and production, technology in the republic through the training of highly qualified specialists of the new formation, prepared on the principles of the competence-based approach and capable of practical implementation of the knowledge gained in science, industry, business. 3) Achievement of international recognition.

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

Osh University of Technology is undergoing accreditation in the IAAR for the first time. In 2006, Osh Technological University named after Acad. M.M. Adyshev was accredited / certified, as a result of which a certificate No. SF 160000073 was issued, confirming the status of a higher education institution (HEI) implementing higher professional education programmes (undergraduate programs) with the right to award academic degrees in training areas according to the annex with issuance of state diplomas. (Order of the Ministry of Education and Science of the Kyrgyz Republic No. 369\1 dated March 28, 2016).

In 2017, Osh Technological University passed independent accreditation in areas/specialties in accordance with Appendix: Certificate No. VU180000022, in 2017 (order of the agency for accreditation of educational programs and organizations No. 3004 dated December 27, 2017).

For the educational programme 640200 – "Electric Power Engineering and Electrical Engineering" the procedure accreditation was first time.

## V DESCRIPTION OF THE EEC VISIT

In the period from May 2 to May 4, 2018, an external evaluation of the IAAR expert group was conducted for the educational program 640200- "Electric Power Engineering and Electrical Engineering".

A questionnaire event was held for students and teachers.

Meetings were also held with the rector, vice rector deans of the faculties in accredited specialty, heads of departments, a team of teachers and students of the university, as well as employers. A questionnaire event was held for students and teachers.

Table 1. Information about staff and students who took part in meetings with EEC IAAR

Category of participants	Q-ty
Rector	1
Vice Rector	3
Directors of Departments, Institutes	23
Deans	8
Department Heads	25
Academic staff	97
Students	20
Graduates	20
Employers	10
Total	207

The educational process according to the accredited EP is provided by three departments: "Power supply", "Power engineering", "Electrical equipment and thermal power engineering". Training of specialists on the accredited educational programme 640200 - "Electric Power Engineering and Electrical Engineering" has been carried out in Osh Technological University since September 1, 2012. Training is conducted in accordance with the State license for the right of conducting educational activities, and applications to the license issued by the decision of the State Inspection on Licensing and Certification of Educational Institutions of the Kyrgyz Republic, ZhB Series No. 55, No. III-107, Minutes No. 20 \ 20 dated November 23, 2012 (until November 23, 2017, with a contingent of 200 students, and for the termless license No. LD170000223, dated February 28, 2017, with a contingent of 200 students. Graduates of the educational program are awarded an academic bachelor's degree - engineer. Duration of education: 4 years on the basis of general secondary education; 3 years on the basis of secondary vocational education. The teaching is carried out in Russian language.

The main processes of the university and the faculty of energy were subjected to audit: a management system; the educational process, the quality of teaching and assessment of progress, the activity of the university in admitting students; employment and demand for graduates in the labor market; qualitative and quantitative indicators of the faculty; research work of faculty and students at the time of accreditation and in the dynamics over the past 3 years.

Meetings were also held with the deans of the faculties for accredited specialties, heads of departments, a team of teachers and students of the university, as well as employers. A survey of students and teachers was held.

A visual inspection of the material and technical base of the university, infrastructure facilities and collective use was carried out.

The experts conducted an inspection of the educational and laboratory facilities,

discussed the main problems of the organization of the educational process and logistics.

In the framework of the visit, they familiarized themselves with the leading practice bases on accredited educational programs, during which they held meetings with the leadership of the leading enterprises of the region, heads of internships from enterprises, examined workplaces, at which students practices were organized.

On accredited specialty expert German A.E., attended a lecture by Murzakulov N.A., on discipline "Electro-Power Engineering" laboratory work of Kachkenbaeva B.O. on the discipline "Untraditional and Renewable energy sources" on theme "Solar Energy. Photoelectric converters" (in 2groups, total quantity of the students - 40).

During lectures, modern teaching methods were used, including information technology, multimedia and presentation equipment. Classes are held at a fairly high methodical level and attendance is good. The languages of classes are Russian, English.

According to the results of the visit, suggestions were made to improve some areas of work of the university in the framework of the educational program being accredited.

As part of the visit's program, recommendations on how to improve the activities of the university, developed by the EEC based on the results of the examination, were presented at a meeting with the leadership on May 4, 2018.

## **VI CONFORMITY TO STANDARDS OF SPECIALIZED ACCREDITATION**

### **6.1 Standard "Management of the Educational Programme"**

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

OshTU has a strategy, mission, and vision. Information on implementation of the educational program is published in periodicals available to students and university staff. There are electronic information resources of the university, which are accessible to all interested parties. It was noted that the implementation of the educational program is fully consistent with the legislation of the Kyrgyz Republic in the field of education.

According to the criteria for evaluating the standard, Osh Technological University has a quality assurance policy. The quality assurance policy of Osh Technological University reflects the link between research, teaching and training of students, as well as the interaction between the business community, the scientific community, faculty and students.

The university is working on development of a quality management system for education, including in the context of the program being accredited. OshTU has a quality assurance system, which includes educational standards, a training system, an information system, a structural system for managing the educational process, a system for evaluating, analyzing and monitoring learning outcomes.

OshTU quality assurance refers to any activity performed by contractors and partners. The university ensures the transparency of the development plan for the educational program based on an analysis of its functioning, the real positioning of the university and the focus of its activities on meeting the needs of major clients.

The university is working to continuously improve the management system, monitor the implementation of the development plan of the educational program and effectiveness of its implementation. The results of the effectiveness evaluation of the plan implementation and the current monitoring are used to develop corrective actions and make changes to the plan.

Based on assessment of customer satisfaction, an analysis of the real positioning of the university and the educational program is carried out, the results of which are discussed and used in the planning of activities. Analysis of the university is carried out in all major areas, according to the developed quality criteria.

The procedure for planning an educational program is transparent. Stakeholders from the staff and clients of Osh Technological University take part in the preparation and formation of a development plan. It is important that interested persons have the opportunity to influence the content of the development plan of the educational program, and also to accept or not to accept

the plan by voting. The management of the educational program is carried out by the department, faculty, university, among which there are representatives of employers, students, teachers, employees. They are selected and appointed to participate in these bodies with the right to vote.

The OshTU leadership demonstrates the working mechanisms for the formation and regular review of the development plan for the main educational program and monitoring its implementation for compliance with the development plan with educational policies. The analysis of the compliance of the development plan with national priorities and the strategy of the university is carried out. Strategic documents (presented the strategic plan of the university and the Faculty of Energy) correspond to national priorities.

#### *Analytical part*

OshTU provides a clear definition of those responsible for business processes, an unambiguous distribution of responsibilities and job responsibilities of staff, the division of functions of collegial bodies.

Osh Technological University has a database of internal and external regulations that govern all business processes, including management of educational activities. The system of internal regulatory documents is constantly subject to changes and improvements.

The university has built an information system that provides transparent information to consumers of educational services and employees about management activities. There is a privacy policy.

OshTU has a quality assurance system, risk management is used. Based on the analysis of information, risks are identified and predicted. In order to manage risks, improve the efficiency of the internal university quality assurance system, a risk assessment is being conducted; measures are being taken to minimize them.

OshTU ensures the stakeholders' participation in the planning and implementation of the main educational program. However, experts note the need for improvements in this area of activity.

The university management provides openness and accessibility for students, employees, employers and other interested parties. The contact details of managers and key employees are presented on the official website of Osh Technological University. The manual provides feedback on all requests. There is a provision on the rules, forms and terms of feedback. Proposals received in the feedback process are used to continuously improve all aspects of the university's activities, including accredited educational programme.

#### *Strengths/Best Practices*

- OshTU has a published quality assurance policy reflecting the link between research, teaching and learning.

- responsible people are assigned for business processes in the framework of the EP, duties of staff are uniquely distributed and the functions of collegial bodies are delimited

#### *EEC Recommendations:*

- Ensure wide involvement in the quality management processes of the university staff and students.

- To provide training for 100% of the heads of the energy department (dean, deputy dean, head of departments) to strategic planning and risk assessment mechanisms.

*Conclusions of the EEC on the Standard "Management of the Educational Programme" criteria for an accredited educational programme are: strong - 3, satisfactory - 6, suggest improvements - 8.*

## 6.2 Standard "Information Management and Reporting"

### *Evidence part*

OshTU provides management of basic educational programs and other activities based on collection, analysis and use of relevant information using modern information and communication technologies and software. It also uses the classic processes of management and transmission of information. Appointed responsible for the operation of all processes of transmission and processing, as well as accuracy of the information.

The AVN information system was created and implemented at OshTU, which includes internal (Intranet) and external (Internet) portals. The educational portal contains personal offices of each teacher and student, access to which is protected. The Intranet has 38 software extensions (sub-programs) of the information system, reports, regulations and other information systems. The teachers communicate with students through the educational portal, exchange information, educational and program documentation, etc.

OshTU uses client-server technologies based on Microsoft SQL Server 2005, which allow operating information systems in multi-user mode.

### *Analytical part*

The management disseminates information about all aspects of development, formation, approval and implementation of information systems of the university, provides information to employees and students through the official website of OshTU, guaranteeing accuracy. There is a separate information resource for the management, both on the website and in the form of information stands.

Databases collected in the framework of the university, allow you to generate analytical reports. Service information is protected by security tools, and it is backed up.

OshTU conducts a regular survey of external and internal consumers' services, analyzes the information collected with the development of measures to improve the performance.

The university adopted an open door policy. The university regularly holds meetings with students and meeting of the management with students.

Periodically, the degree of satisfaction of employers by the graduates is monitored, as well as educational programs, services and activities of the university. The survey is conducted in the form of a survey and interviewing.

The Osh Technological University establishes the periodicity, reporting forms and methods for evaluating the management of the educational program, the activities of collegial bodies and structural divisions, top management, and the implementation of research projects. The university assesses the effectiveness and efficiency of its activities, including with the involvement of collegial bodies of the university, as well as external experts.

There is an information security policy, information storage terms are defined. Students and staff confirm their consent to the use of personal data. Students and staff have access to databases of electronic scientific libraries (e-Library). The site contains links to lists of scientific publications. It has its own library. The scientific department is supported by the science department, information about which is presented on the Osh Technological University website.

### *Strengths / Best Practices*

- *There is a workable information system for collecting and processing data on the activities of the university, access to which is provided for all representatives of employees and students.*

- *The information system of the university is built using modern information technology.*
- *Information is processed by authorized persons; reports are systematically reviewed at meetings of collegial bodies.*

- *Personal information is protected at the level of security standards used by the AVN information system.*

**Recommendations of EEC:**

- To provide a periodic discussion of the results of assessing the satisfaction of staff and students, as well as the performance indicators of teaching staff (including rating) at meetings of departments.

- Strengthen the work on performance evaluation in the framework of the accredited EP.

- To provide the access of faculty teachers staff to scientometric information of international databases of scientific publications Scopus and Web of Science.

**Conclusions of the EEC on the Standard "Information Management and Reporting"**  
criteria for an accredited educational program are strong - 3, satisfactory - 10, suggest improvements - 4.

### **6.3 Standard "Development and Approval of Basic Educational programmes"**

#### **Evidence part**

According to the presented information, the basic educational program of higher professional education (bachelor degree in the direction of preparation 640200 - "Electric Power Engineering and Electrical Engineering") includes the system of documents consisting of the followings: state educational standard of higher professional education in the relevant direction of training; regulations on the main educational program of directions for the preparation of bachelors and masters of Osh Technological University curriculum and academic calendar; work programs of academic disciplines, ensuring the implementation of appropriate educational technology and the quality of training of students; training and work practice programs; programs and guidelines for the final state certification.

There are documented procedures for developing educational programs in OshTU. The procedure for reviewing educational programs is described in detail in the relevant section of the report and is governed by the "Regulations on the main educational program of areas of training bachelors and masters".

The accredited educational program for the preparation of bachelors in the direction of 640200 - "Electric power industry and electrical engineering" is consistent with the strategy, mission, vision and values of Osh Technological University.

The program is updated with development of science, culture, economics, technology, technology and social services. It is important that to evaluate, monitor the implementation and revise the educational program, working groups of leading teachers have been set up that monitor and develop recommendations for improving curricula annually.

Assessment of quality of the educational program is regulated by the regulatory documents of Osh Technological University. Internal monitoring of academic indicators and a sociological survey of students is regularly conducted. External experts are involved in the quality assessment. The results of the assessment are discussed at meetings of the collegial governing bodies that make decisions on improving quality of education.

The objectives of vocational and pedagogical training for accredited educational program were determined; the competence model of the graduate was developed as a set of expected learning outcomes, the achievement of which the student can demonstrate at a particular stage of development of the educational program.

The discussed educational program provides for formation of key competencies and skills among graduates. A number of core and core disciplines are proposed for development of professional competencies of the graduate, which are offered for study taking into account approaches to individualization of the educational process

All the disciplines presented in the report, included in the curriculum of the educational program, contribute to formation of professional competencies of the graduate with the requirements of the educational standard.

To ensure the expected quality of training graduates apply modern educational technology. Organizations and institutions of the region are involved in the design and implementation of the program by activity profile (external expertise is also carried out).

It is possible to build an individual educational trajectory (individual curriculum) of a student, including through optional courses and teachers.

Continuity of content of the educational program, consistency and continuity of disciplines, rational distribution of disciplines by semesters are ensured. Implementation of the module principle and the system of educational loans.

The use of standard (basic, exemplary) and the development of work and individual curricula are carried out on documented procedures according to a specific structure.

Courses selected by students are included in a special catalog, communicated to students and used in the design of individual curricula.

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

When developing a working curriculum, principles of the competence approach and academic freedom of the university in the organization of the educational process, mobility, continuity, continuity and adaptability are taken into account. The working curriculum is discussed at the Academic Council, approved by the university rector and placed in the university information system.

The educational and methodical complex for the accredited educational program 640200 - "Electric Power Engineering and Electrical Engineering" includes a curriculum of a direction, courses for the choice of students, a working curriculum, methodical recommendations on the organization of work experience, methodical instructions on the implementation of course and final qualification works. Curricula are developed for each discipline. Control over the quality of curriculum disciplines is carried out by the profiling department and the methodical commission of the faculty.

Students enrolled in an accredited specialty undergo educational, industrial and pre-diploma practices that are provided with the necessary documentation. Contracts with practice bases are concluded.

Total labor intensiveness of mastering the educational program - 240 credits, which corresponds to the recommended labor intensity of training for undergraduate. The credit system (credit units) is based on the European credit transfer and accumulation system, ensuring the unification of educational programs, including with the countries of the European Region, the Russian Federation and Kazakhstan. Information about the rules of the organization of the educational process using the credit system is available to staff and students.

The university organized independent work of students according to the regulatory documentation. Approaches to the quality control of this work and its planning have been defined and documented.

From the report it follows that all the profiles of the educational program are provided with literature and teaching materials. A point-rating knowledge assessment system has been introduced. The system of control of students' knowledge was optimized; three stages of control were introduced - current, interim and final, and the appeal procedure.

Cooperation and exchange of experience with educational organizations implementing similar programs in the country and abroad have been established, but there are no joint EPs.

The final state certification includes a state examination in the profile, preparation and protection of qualifying work. Themes of final qualifying papers are reviewed annually in the light of the development of science, the emergence of new teaching methods, and are also coordinated with employers who are invited to work as part of the state certification commission. Upon completion of training, the graduate of the educational program is issued a state diploma with the award of a bachelor's degree.

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

- There are documented procedures for the development and approval of the EP.
- The opportunity for students to choose individual educational trajectories was secured.

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

- Improve the work on the development of models of graduates of the accredited EP

- Provide conditions for professional certification of graduates.
- Implement joint EPs with foreign educational institutions.

***Conclusions of the EEC on the Standard "Development and Approval of Basic Educational programmes" criteria for an accredited educational program are strong - 1, satisfactory - 7, suggest improvements - 4.***

#### **6.4 Standard "On-Going Monitoring and periodicReview of Basic Educational programmes"**

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

Osh Technological University continuously monitors and periodically evaluates educational programs with the participation of a number of university departments, including using the AVN information system (attendance rates, pay, etc., by students, groups, disciplines, teachers, departments, directions, faculties and university). The results of the analysis are discussed collectively.

Periodic certification and control of students' knowledge is carried out, testing systems are provided. According to the results of current and final control, ongoing monitoring is carried out.

Interested persons are involved in the monitoring of the educational program by questioning them, polling and subsequent collegial discussion. The results of the monitoring and periodic evaluation of the educational program are reflected in the regulatory documents of the university management system and are used for its continuous improvement.

Particular attention is paid to monitoring practices. On its basis, the tasks of the practice are coordinated, as well as the choice of places of practice taking into account the possibility of implementing an individual educational path. The manual guarantees to students that the activities performed by the student during the practice correspond to the direction of professional activity. The choice of databases of practices for the accredited program corresponds to the energy profile.

Analysis of the requirements of the external environment allows you to adjust the educational program and recruitment plan for the specialty. Analysis of changes in the labor market gives grounds for the annual signing of contracts with employers for the provision of grant (budget) places for training specialists.

The educational program content is reviewed at least once every 2 years. In addition, changes can be made as needed and there are relevant proposals for changing curricula, catalog of elective disciplines, work programs. The procedure for making the appropriate changes has been defined and documented.

There is a system for monitoring academic achievements of students, implemented by means of the AVN information system.

Implementation of the educational programme 640200 - "Electric Power Engineering and Electrical Engineering" provides for active interaction with interested parties. At OshTU there are two groups of interested persons: 1) external (state, government, employers, applicants and their parents, other structures); 2) internal (students of all levels, faculty, educational support and administrative and managerial staff), with whom constant interaction, analysis of their needs and satisfaction assessment are organized.

At OshTU, the teaching staff is distinguished as a main resource, providing the implementation of the educational program. The teaching staffs have the necessary qualifications and are directly involved in the designing and monitoring of educational programs.

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

The Osh Technological University provides wide opportunities for monitoring stakeholders by questioning the main activities of the university. Monitoring the satisfaction of students, teachers and employers involves their assessment of the quality of education and

training. The questionnaire procedure is provided with special questionnaires, respondents have the opportunity to make proposals for improving the activities of the university.

On the bases of the monitoring results, mechanisms are in place to formulate and revise the strategy, mission, and quality objectives.

The procedure for making changes to the educational program is regulated. The procedure for keeping records of the changes made has been determined. The report provides examples of changes in the accredited educational program based on the results of environmental analysis.

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

- Availability of mechanisms for monitoring and periodic evaluation of EP using modern information systems

- EP monitoring mechanisms take into account the workload, performance and graduation of students.

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

- To provide monitoring and periodic evaluation of the EP, taking into account the latest achievements of science and technology.

- Ensure that all interested parties are informed about changes in the EP, the publication of all changes in the EP in open access.

***Conclusions of the EEC on the "On-Going Monitoring and Periodic Review of Basic Educational programmes" criteria for an accredited educational program are strong - 1, satisfactory - 7, suggest improvements - 2.***

### **6.5 Standard "Student-Centered Learning, Teaching and Performance Evaluation"**

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

*OshTU activity is based on trusting a student, his involvement in all major processes. The manual pays special attention to respect for the various groups of students, their needs, creating conditions for realizing the potential of students with the provision of personalization of the educational process.*

*Students have the opportunity to influence the learning process. Students choose modules or elective disciplines on the basis of presentations by teachers of their courses. The right to choose is given to all students. Disciplines of the elective component of the accredited specialty are represented by 26 disciplines of the basic and profile cycles.*

*The level of education is determined by the presence of compulsory components in each block of disciplines, and the freedom to choose training paths lies in the possibility of free choice of academic disciplines.*

*Elective courses have a certain connection with each other and are complementary. The modules of the educational program also include other disciplines of compulsory and elective components.*

The university created necessary conditions for independent work of the students. Tasks and methodological materials for independent work of the students are defined and available. The complexity of this type of work is determined depending on the loan allocated for the study of the discipline. The results of independent work are monitored, which are taken into account when conducting the midterm control.

PTS owns innovative teaching methods, as well as modern methods of assessing learning outcomes. The educational process is fully provided with all necessary information sources, including electronic ones.

The EEC notes the widespread use of information and communication technologies in the educational process (using modern software products), but it is necessary to focus on problem, heuristic, project, contextual and other modern practice-oriented learning methods. The material and technical base of the educational process contains the necessary presentation equipment used in class.

Taking into account the individual needs of the students, teachers are provided with additional advice and assistance in the period of mastering the content of a particular discipline, course and diploma design.

#### **Analytical part**

In order to study the degree of satisfaction of the students in the framework of the educational program, "trust boxes" have been organized, the questionnaires, surveys on the conditions and organization of the educational process are conducted.

Feedback using the information systems of the university involves the use of an individual login and password, which allows personalized access to educational resources on the university portal. The student can familiarize himself with his educational achievements, as well as with educational and methodical materials through the AVN information system.

The educational program determines the order of teaching students on an individual educational trajectory, the monitoring of progress on which is also carried out through the AVN information system.

To ensure the objectivity of the assessment of knowledge and professional competence of the student, there is a documented knowledge assessment mechanism. A rating system of knowledge assessment has been introduced; the student has the right to appeal to the assessment in accordance with the developed procedure.

Teachers of the university pass advanced training in the field of modern educational technologies, as well as in the field of methods for assessing learning outcomes.

However, it is necessary to note the low level of safety in educational laboratories, which does not allow for the provision of completely safe conditions for learning.

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

- Availability of the AVN information system accessible to all students.
- Taking into account the needs of the students, the presence of a feedback system with students.
- Providing students with variable educational trajectories.
- The use of various forms and methods of teaching.
- Working mechanisms for assessing learning outcomes.

#### **EEC recommendations:**

- Ensure wide involvement of teaching staff and students in research and development in the field of the accredited EP.
- To work to improve safety works in educational laboratories, to exclude cases of conducting training sessions in non-core disciplines in educational laboratories.
- Strengthen the role of the student government in the decision-making administration of the faculty. Ensure the participation of representatives of student government in the faculty council.

*Conclusions of the EEC on the "Student-Centered Learning, Teaching and Performance Evaluation" criteria for an accredited educational program are strong - 2, satisfactory - 5, suggest improvements - 3.*

## **6.6 Standard "Students"**

#### **Evidence part**

The procedure for admission of students to OshTU is regulated in accordance with the rules of admission to higher educational institutions of the Ministry of Education and Science of the Kyrgyz Republic. The organization of the admission of applicants is carried out by the selection committee, which is guided by a number of regulatory acts.

The university has a transparent policy of forming a contingent of students. Applicants applying for training in an accredited educational program are required to overcome the threshold number of additional test points in the disciplines of "Physics" or "Mathematics".

Depending on the conditions of training, the contingent is subdivided into students on a state educational grant and students on a commercial basis.

Developed and used a clear algorithm for admission and enrollment. The passing score for admission to the budget form of education in 2017 was 110 points.

OshTU makes an analysis of the correspondence between the reception process and the subsequent learning outcomes.

*The work on career guidance and marketing activities has been established. Osh Technological University regularly organizes consultations for graduates of schools and lyceums, conducts additional training on compulsory subjects of entrance testing, and organizes trial testing. The applicants receive basic information on the official website of the university.*

*OshTU ensures the availability of information about the organization of the educational process, criteria for assessing knowledge, requirements for the development of academic disciplines, etc. A reference guidebook for the student has been developed, which contains information about the university, faculties, departments, as well as the rules for organizing the educational process and internal regulations, terms of tuition fees. The catalog of elective courses given out to a student contains an annotation of academic disciplines and gives an idea of the academic specificity of the disciplines.*

Withholdings, transfers to another university, to another area or form of education are carried out in accordance with the relevant regulatory and legal acts. The management analyzes the information on the contingent of the students. The results of the analysis are used to improve the quality of career guidance. Comparative analysis with a contingent of other universities, in OshTU was not conducted.

The institute curator has been created. For foreign students, additional instruction is offered in Russian and Kyrgyz. A dormitory is available for foreign students and students from remote areas.

Osh technological university declares the adherence to the provisions of the Lisbon Recognition Convention and recognizes qualifications conferred in other countries, and also contributes to the nostrification of education documents. Osh Technological University officially cooperates with other universities and national centers. The goal is to ensure comparable recognition of qualifications. This is confirmed by the possibility of transferring students of OshTU to other universities of the country and abroad. There is a procedure for the transfer and re-calculation of disciplines studied in other universities.

OshTU promotes external and internal academic mobility of the students. Information is provided on mobility programs, assistance in issuing grants for mobility programs. Examples of students' mobility of an educational program that is accredited are given. Periodic monitoring of academic mobility and its analysis is carried out.

Since 2008, OshTU has been participating in the project of the SCO Network University, carrying out programs of academic mobility, undergraduate programs at OshTU and magistracies.

On the accredited specialty, contracts with seven bases of practice were concluded. The organization of practices is carried out on the basis of the relevant legal acts.

During their studies at the university, students have the opportunity to participate in language, computer, vocational and other courses, after which they receive the appropriate certificates.

Each student, depending on his individual qualities, can design his own individual educational trajectory. Students have the opportunity to participate in research work, publish the results of scientific research and their approbation at scientific conferences. OshTU supports gifted students through their scholarships and awards.

It is noted that the high rates of current performance and final certification are confirmed by the results of the control sections of knowledge, which are held annually at the graduation

course. The final state certification provides for an oral examination in the basic and major disciplines, as well as the protection of final qualifying work.

*The university undertakes to employ graduates. The university has a career center (employing up to 80% of graduates with it), develops an annual work plan to promote graduates' employment, analyzes changes in the labor market, organizes psychological courses and trainings on successful employment.*

*It was noted that employer satisfaction on the basis of surveys was 95.1%; 58% of the employers surveyed invited graduates of the program to work, guided by the results of the practice. Student satisfaction is 90%.*

*The accredited program as a whole meets the requirements of employers. Given the opinion of employers, the curriculum is processed by the inclusion of new disciplines in it.*

Osh Technical University has created an environment that provides access to personalized interactive resources, educational materials and tasks, there is the possibility of self-assessment of students' knowledge. The educational process is carried out through classroom and extracurricular types of classes; the individual work of students with a teacher is actively used.

The electronic library includes all necessary types of educational and educational documentation. Access to the Internet and electronic resources of OshTU is provided throughout the university through a Wi-Fi network throughout the school.

*Interacting with students in the format of partnerships, the management of the faculty and the university shows its interest in developing feedback. Internal rules of the university assign the right to a student to address direct to the leadership of all levels. There are alternative ways of informing management through regular student sociological surveys and the current helpline.*

*The management supports the initiatives of students, contributes to an increase in the level of activity of students in government bodies. A committee on youth affairs has been created, formed from among the initiative students of faculties on an elective basis. The objectives of the Senate include assisting the university's leadership in conducting educational, educational and social policies. The newspaper STUD Times is published. The format of the newspaper allows university students to express their opinions about the policy being pursued in general and the activities of student government structures.*

*The Alumni Association was created (but does not work), which promotes the implementation of the educational program in connection with employers and the subsequent employment of OshTU graduates.*

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

- There is a clear policy of forming a contingent of the students.
- Opportunity to obtain the students the working profession.
- Concluded contracts with 7 bases practices.

#### **EEC recommendations:**

- To strengthen cooperation with partner universities for the implementation of programs of academic mobility of the students.
- Ensure the effective work of the graduate Association.
- Include the students' research work in the work plan of the departments of the Faculty of Power Engineering indicators.
- To ensure the regular work of student scientific circles, design offices and other structures in the main areas of scientific work of each department of the Faculty of Energy.
- To analyze the needs of the labor market and the demand for specialties among potential applicants and their parents before opening new specialties (taking into account the negative experience of opening specialties in the energy department without recruiting further applicants).

*Conclusions of the EEC on the standard "Students" criteria for the educational program under accreditation are strong -3, satisfactory - 7, suggest improvements - 2.*

## 6.7 Standard "Teaching staff"

### *Evidence part*

The OshTU considers the professor-teaching staff to be the main resource support for the educational process and takes the necessary measures for professional development and personnel training. University teachers are elected to their positions in accordance with the rules of competitive replacement of positions for scientific-pedagogical staff of higher educational institutions (in accordance with the documented procedure). Preference in the competitive selection is given to the most qualified candidates from among persons with academic degrees and titles.

The quantitative composition and qualifications of teachers correspond to the directions of training bachelors, and meet the licensing requirements. The selection of personnel is based on an analysis of the needs of the educational program; a competition for filling vacant positions is announced based on their results.

When applying for a job, one of the prerequisites is that a competitor has a higher professional education, an academic master's degree, an academic degree of a candidate or a PhD, education to the profile of university specialties, etc. Documents relating to the personnel policy of the university are available to all interested parties. Contracts and employment contracts are concluded with teachers recruited.

The strategic plans of the university and the faculty contain requirements for improving the quality of faculty.

The university has developed approaches to the current assessment of the quality of teachers' work, which is assessed by rating indicators, portfolio, student survey (survey results), and the results of introducing information and communication technologies in the educational process, organizing research and independent activities, and developing practical skills of students.

Controlling the classes is carried out by managers and invited experts, mutual attendance of classes, and open lectures (according to a separate schedule) are organized. Student interviews are conducted on the results of each teacher. There are procedures for analyzing the activities of each teacher. The collected information on competencies (portfolio) allows you to attract teachers as experts and performers of various tasks.

OshTU conducts corrective actions based on the results of the assessment of the quality of the work of the teaching staff, including the provision of methodological assistance. For additional and independent quality assessment at the level of the university and faculty, commissions are created for comprehensive verification of departments, diploma works (projects), coursework, laboratory works, reports on types of practices, examinations, etc.

### *Analytical part*

Under the accredited educational program, the share of full-time faculty members with academic degrees and titles in different departments is from 40 to 67%.

*For success in the work of the teachers, staffs, various measures of moral and material promotions are applied. One of the types of motivation of teaching staff is to be sent for internship abroad, as well as solving social issues. Taking into account the effectiveness of the work, allowances to the base salary are provided at the expense of the university. Additional mechanisms of material promotions for workers in the form of material assistance, bonuses, etc. are provided. In order to identify the leaders, contests are held on the results of the year disciplinary measures are also provided for and applied to employees who violate labor discipline. It is important that the principles of ethical behavior of staff are developed and followed at OshTU.*

OshTU does not provide safe working conditions to the full, although it declares full responsibility for its employees, which is noted in the main governing documents of the university.

The annual teaching load of teachers is about 750 hours for doctors, 800 hours for candidates of science and 850 hours for teachers without an academic degree. A record of the

performance of teaching staff is kept. Individual plans of teachers include all activities, approved by the head of the department and the head of the educational unit. Analysis of the implementation of plans is carried out twice a year.

Teachers improve their skills through participation in seminars, courses, advanced training programs, internships in Kyrgyzstan and abroad. There is a plan for further training by faculty and university staff. Evidence of advanced training by employees of the educational program under study is presented. Developed individual approaches to professional development by young employees.

Taking into account the student-centered approach, teachers develop and implement modern pedagogical technologies, primarily paying attention to the wide use of information technologies, which is confirmed by the certificates and diplomas obtained.

The low level of scientific work of the teaching staff and the lack of activity in the preparation of project applications for competitions of scientific projects at all levels should be noted.

Teaching staff of the Faculty of Energy participate in various international, republican and regional scientific conferences.

Work is underway with representatives of production, who are involved in the educational process, including as heads of internships, theses.

The cooperation agreement with leading educational institutions of Kyrgyzstan and abroad was signed. Teachers participate in academic mobility programs, but the report does not contain information on their participation in international project activities.

### **Strengths/Best Practices**

- Good involvement of the teaching staff in the region and in the whole society.

### **EEC recommendations:**

- *Strengthen the work on attracting the best students of the Faculty of Energy for training in graduate and postgraduate studies in order to create a personnel reserve and rejuvenate the teaching staff of the university*

- *To increase the participation of teachers in academic mobility programs.*

- *Ensure effective interaction of faculty staff with the research department in the preparation of project applications, the implementation of R & D, the establishment of productive relationships with customers of scientific and technical products, technology transfer, etc.*

- *To intensify the work of the teaching staff on the preparation of project applications for participation in competitions of projects of all levels (including scientific projects and international technical assistance programs).*

- *To ensure access of teaching staff of the faculty to scientometric information of international databases of scientific publications (Scopus, Web of Science), to conduct training courses on scientometrics for PTS.*

- *To enter into the criteria for the annual assessment of the performance of teaching staff accounting for the employee Hirsch index.*

- *To establish minimum requirements for publication activity in publications with an impact factor for candidates and doctors of science.*

- *To intensify the work of faculty with enterprises and organizations of the region to conclude economic contracts for the implementation of RW and the provision of scientific and technical services.*

- *Introduce the mechanisms for managing the teaching load of teaching staff, depending on the personal contribution to the implementation of the faculty's strategy.*

- *Strengthen the work on attracting the best students of the Faculty of Energy for training in graduate and postgraduate studies in order to create a personnel reserve and involving young teaching staff of the university.*

*Conclusions of the EEC on the standard "Teaching staff" criteria for the accredited educational program are strong -1, satisfactory - 6, suggest improvements - 5.*

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

*OshTU has a material and technical base to ensure the implementation of an accredited educational program. It is noted that the academic buildings of the university occupy 24513m<sup>2</sup> and are adapted to educational activities. A long-term development plan for 2017-2022 has been developed, which provides for the creation of a research and production test site for the energy faculty as a center for teaching new technologies.*

*For students of the "Power and Electrical Engineering" direction, in 2018, 3 new laboratories equipped with equipment and computing equipment were opened; there is a wide range of multimedia and demonstration equipment. However, the used laboratory equipment is mostly outdated; the volume of purchases of new equipment is very small and does not allow for the necessary quality of the educational process.*

The university demonstrates supports for students; a number of structures have been created that implement support mechanisms for areas of activity. There is a cultural and aesthetic center, a hostel, catering facilities, a student hall, clubs and associations of interests are organized.

The AVN information system provides technological support for students and teaching staff. Also purchased and implemented other licensed software products.

Since 2015, Osh Technical University has been using the StrikePlagiarism.com system to check student and scientific works for plagiarism, but at the same time this use is formal, there is no variability of graduate and course design topics.

It is important that the resources provided by the educational program being accredited meet license requirements; all students have access to educational materials and a library fund. The fund of the library of Osh Technical University is 109459 units of publications. All disciplines of the curriculum are provided with educational literature on paper and electronic media.

The university has integrated information network to which employees and students have access, including through wireless technologies.

Safe conditions for implementation of the educational process and training of staff, equipping classrooms and laboratories are not fully established and safety and health standards don't meet the requirements well in OshTU.

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

- The account of various groups of students' needs.

### ***EEC Recommendations:***

- To ensure continuous updating of the material and technical base of the educational process.
- To bring into compliance with the requirements of sanitary standards all classrooms and laboratories of the Faculty of Energy
- To work to improve safety work in educational laboratories, to exclude cases of conducting training sessions in non-core disciplines in educational laboratories.
- Ensure 100% variation in theses, eliminating recurring topics, including for different years of study (with analysis of plagiarism).

Conclusions of the EEC on the criteria for an accredited educational program are strong - 0, satisfactory - 5, suggest improvements - 4.

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

### ***Evidence part***

OshTU follows the principles of openness and accessibility to the public, places complete and accurate information about the activities of the university on information resources on the

Internet.

A press service has been created at the university, and persons assigned to inform the public in each department have been appointed. Informational booklets are periodically updated.

The AVN information system and the CommFort unified e-mail system allows you to implement corporate newsletters and ensure the operational communication of management with employees and departments, as well as teachers with students.

The university has 3 television studios, a periodical scientific journal Izvestia OshTU is published. Information stands are periodically updated, videos are being filmed.

The senior management of Osh Technological University demonstrates openness to contacts with students, including via email. Feedback of students with the Rector of OshTU is provided through the e-mail rector

The university regularly conducts surveys of the students on the quality and availability of the information received. According to the results of the survey, corrective actions are planned.

A number of information functions are performed by the Center for Education and Career, created at the university, focused on finding employment and organizing students and graduates' practices.

#### *Analytical part*

The OshTU website is implemented in 3 (Kyrgyz, Russian and English) languages and reflects information about the structural units and main processes of the university. Information on the site is constantly updated. The university regularly publishes on the website information on the educational program being accredited. Also used to inform the newspaper and television studio of the university. OshTU publishes audited financial statements on its website.

Information about passing points and training opportunities are posted on the corporate website. In addition, additional information is available for applicants, including necessary regulations. Also, the site contains fairly complete information about the faculty of the accredited specialty in the context of the departments.

The university is actively working with partners, information about the results of which is posted on the corporate website and in other mass media.

#### *Strengths/Best Practices*

- Sufficient effective information policy of the university.
- The use of various methods of disseminating information.
- Availability of own publications (magazine, newspaper).
- The presence of a television studio.
- OshTU website in three languages.
- Availability of the Center for Education and Career.

#### *EEC recommendations:*

- Strengthen the use of the potential of social networks to promote the university.
- To ensure the periodic conduct of external evaluation procedures and the publication of their results in the public domain.

*Conclusions of the EEC on the Standard "Public Information" criteria for the educational programme under accreditation are strong - 6, satisfactory - 6, suggest improvements - 1.*

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

According to the accredited educational program 640200 "Power engineering and Electrical engineering", the training of specialists has been conducted since 2012 in full-time and part-time forms of education based on secondary and higher education.

The educational program includes disciplines and activities aimed at obtaining practical experience and skills in the specialty. The content of academic disciplines is based on fundamental disciplines: mathematics, chemistry, physics, etc.

OshTU provides implementation of the competence approach. Practice-oriented learning is achieved by attracting specialists to the educational process who have experience in organizations in the real economy, organizing employer-based practices, applying modern teaching methods and equipping the educational process with the necessary resources. Special attention is paid to the introduction of information and communication technologies into the educational process.

On the basis of employers also organized laboratory and practical work, course and diploma design. Within the framework of the accredited educational program, agreements were concluded with 7 specialized enterprises of the region.

As a result of the practices, there are positive feedbacks from employers about graduates of the educational program under accreditation.

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

- EP includes disciplines and events aimed at gaining practical experience, incl. using employers resources.
- The content of all disciplines of the EP is clearly related to the content of the fundamental natural sciences.
- The widespread use of modern information technology in the educational process.

#### ***Recommendations EEC***

- To ensure greater involvement of practitioners in the teaching of disciplines OP.
- To introduce the project method of training in the implementation of laboratory workshops (primarily in the disciplines of specialization).

*Conclusions of the EEC on the standards in the context of individual specialties criteria for the educational program under accreditation are strong - 3, satisfactory - 2, suggest improvements - 0*

## **VII OVERVIEW OF STRENGTH / BEST PRACTICES FOR EACH STANDARD**

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

- OshTU has a published quality assurance policy reflecting the link between research, teaching and learning.
- Assigned responsible for business processes in the framework of the EP, uniquely distributed duties of staff, delimited the functions of collegial bodies.

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

- There is a workable information system for collecting and processing data on the activities of the university, access to which is provided for all representatives of employees and students.

The information system of the university is built using modern information technology.

- Information is processed by authorized persons; reports are systematically reviewed at meetings of collegial bodies.
- Personal information is protected at the level of security standards used by the AVN information system.

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

- There are documented procedures for the development and approval of the EP.
- The opportunity for students to choose individual educational trajectories was secured.

### ***Standard "Ob-going monitoring and periodic review of basic educational programmes"***

- Availability of mechanisms for monitoring and periodic evaluation of EP using modern information systems
- EP monitoring mechanisms take into account the workload, performance and graduation of students.

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

- Availability of the AVN information system accessible to all students.

- Taking into account the needs of the students, the presence of a feedback system with students.
- Providing students with variable educational trajectories.
- The use of various forms and methods of teaching.
- Working mechanisms for assessing learning outcomes.

***Standard "Students"***

- There is a clear policy of forming a contingent of students.
- Ability to obtain students of the working profession.
- Concluded contracts with 7 bases practices.
- Support for gifted students.

***Standard "Teaching staff"***

- Transparent personnel policy
- Good involvement of the teaching staff in the region and in the whole society.

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

Strengths/Best Practice

- Consideration of the needs of various groups of students.

***Standard "Public Information"***

Strengths/Best Practice

- Sufficient effective information policy of the university.
  - The use of various methods of disseminating information.
  - Availability of own publications (magazine, newspaper).
  - The presence of a television studio.
  - OshTU website in three languages.
  - Availability of the Center for Education and Career.
- Standard "Standards in the context of individual specialties"***
- Strengths/Best Practice
  - EP includes disciplines and events aimed at gaining practical experience, incl. using employers resources.
  - The content of all disciplines of the OP is clearly related to the content of the fundamental natural sciences.
  - The widespread use of modern information technology in the educational process.

## **VIII OVERVIEW OF THE RECOMMENDATION ON IMPROVING QUALITY**

***Standard "Management of the Educational Programme"***

Ensure wide involvement in the quality management processes of the university staff and students.

To provide training for 100% of the heads of the energy department (dean, deputy dean, head of departments) to strategic planning and risk assessment mechanisms.

***Standard "Information Management and Reporting"***

To provide a periodic discussion of the results of assessing the satisfaction of staff and students, as well as the performance indicators of teaching staff (including rating) at meetings of departments.

Strengthen the work on performance evaluation in the framework of the accredited EP.

To provide the access of faculty teachers staff to scientometric information of international databases of scientific publications Scopus and Web of Science.

***Standard "Development and Approval of Basic Educational programmes"***

Improve the work on the development of models of graduates of the accredited EP

Provide conditions for professional certification of graduates.

Implement joint EPs with foreign educational institutions.

***Standard "On-Going Monitoring and periodicReview of Basic Educational programmes"***

To provide monitoring and periodic evaluation of the EP, taking into account the latest achievements of science and technology.

Ensure that all interested parties are informed about changes in the EP, the publication of all changes in the EP in open access.

***Standard "Student-Centered Learning, Teaching and Performance Evaluation"***

Ensure wide involvement of teaching staff and students in research and development in the field of the accredited EP.

To work to improve safety works in educational laboratories, to exclude cases of conducting training sessions in non-core disciplines in educational laboratories.

Strengthen the role of the student government in the decision-making administration of the faculty. Ensure the participation of representatives of student government in the faculty council.

***Standard "Students"***

To strengthen cooperation with partner universities for the implementation of programs of academic mobility of the students.

Ensure the effective work of the graduate Association.

Include the students' research work in the work plan of the departments of the Faculty of Power Engineering indicators.

To ensure the regular work of student scientific circles, design offices and other structures in the main areas of scientific work of each department of the Faculty of Energy.

To analyze the needs of the labor market and the demand for specialties among potential applicants and their parents before opening new specialties (taking into account the negative experience of opening specialties in the energy department without recruiting further applicants).

***Standard "Teaching staff"***

Strengthen the work on attracting the best students of the Faculty of Energy for training in graduate and postgraduate studies in order to create a personnel reserve and rejuvenate the teaching staff of the university

To increase the participation of teachers in academic mobility programs.

- Ensure effective interaction of faculty staff with the research department in the preparation of project applications, the implementation of R & D, the establishment of productive relationships with customers of scientific and technical products, technology transfer, etc.

To intensify the work of the teaching staff on the preparation of project applications for participation in competitions of projects of all levels (including scientific projects and international technical assistance programs).

To ensure access of teaching staff of the faculty to scientometric information of international databases of scientific publications (Scopus, Web of Science), to conduct training courses on scientometrics for PTS.

To enter into the criteria for the annual assessment of the performance of teaching staff accounting for the employee Hirsch index.

To establish minimum requirements for publication activity in publications with an impact factor for candidates and doctors of science.

To intensify the work of faculty with enterprises and organizations of the region to conclude economic contracts for the implementation of RW and the provision of scientific and technical services.

Introduce the mechanisms for managing the teaching load of teaching staff, depending on the personal contribution to the implementation of the faculty's strategy.

Strengthen the work on attracting the best students of the Faculty of Energy for training in graduate and postgraduate studies in order to create a personnel reserve and involving young teaching staff of the university.

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

To ensure continuous updating of the material and technical base of the educational process.

To bring into compliance with the requirements of sanitary standards all classrooms and laboratories of the Faculty of Energy

To work to improve safety work in educational laboratories, to exclude cases of conducting training sessions in non-core disciplines in educational laboratories.

Ensure 100% variation in theses, eliminating recurring topics, including for different years of study (with analysis of plagiarism).

***Standard "Public Information"***

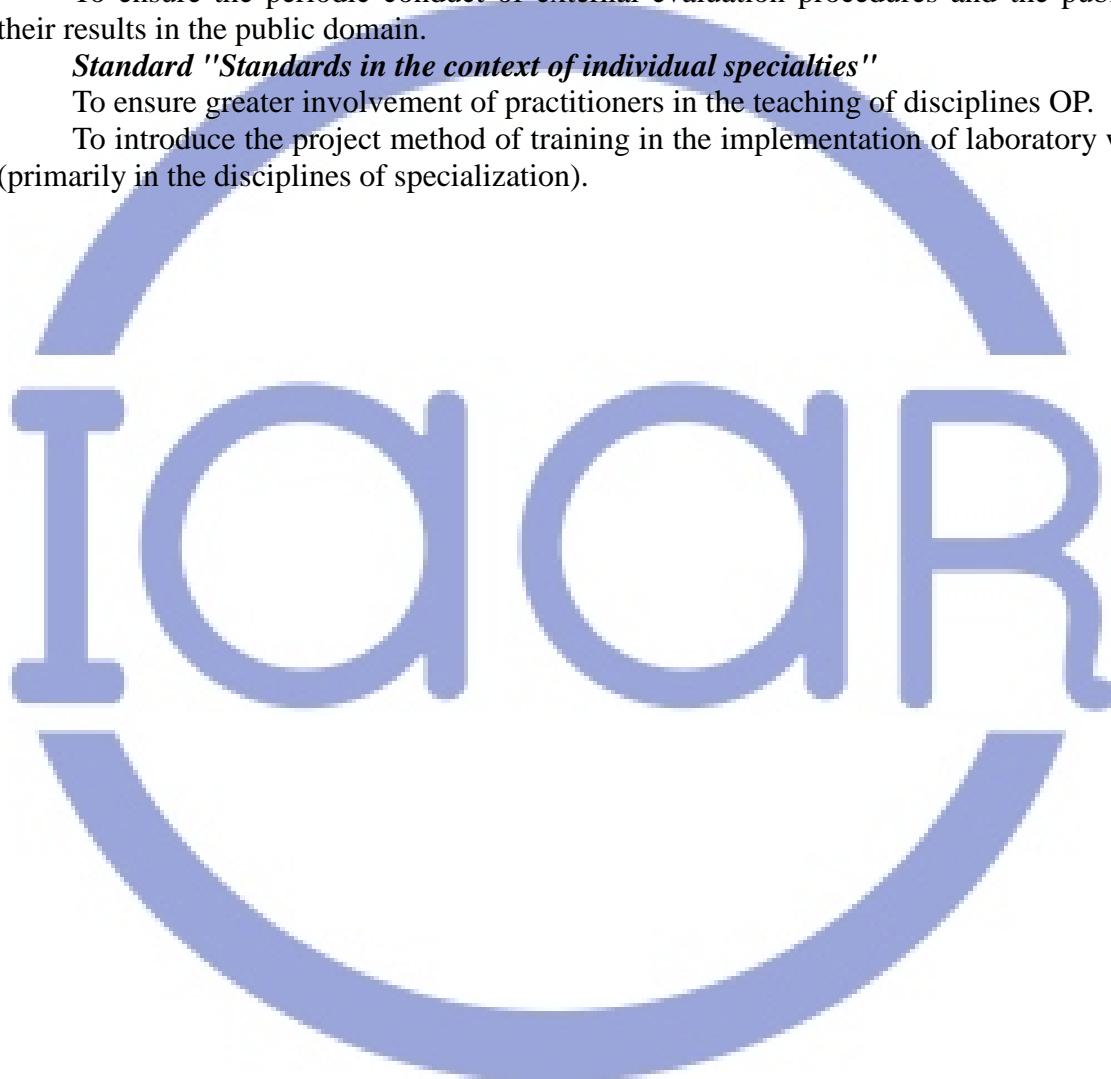
Strengthen the use of the potential of social networks to promote the university.

To ensure the periodic conduct of external evaluation procedures and the publication of their results in the public domain.

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

To ensure greater involvement of practitioners in the teaching of disciplines OP.

To introduce the project method of training in the implementation of laboratory workshops (primarily in the disciplines of specialization).



**Appendix 1 Evaluation table "PROGRAMME PROFILE PARAMETRS" Educational programme 640200 – "Electric Power Engineering and Electrical Engineering**

No.	No.	Criteria for evaluation	Position of the educational organisation			
			Strong	Satisfactory	Suggest improvement	Unsatisfactory
<b>Standard «Management of Educational Programme»</b>						
1	1.	The institution 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 HEI must demonstrate the development of a culture of quality assurance, including in the context of BEP			+	
4	4.	Commitment to quality assurance should apply to any activity performed by contractors and partners (outsourcing), including the implementation of joint / double degree education and academic mobility		+		
4	5.	The BEP management ensures the transparency of the development of the BEP development plan based on an analysis of its functioning, the real positioning of the HEI and the focus of its activities on meeting the needs of the state, employers, interested persons and students		+		
6	6.	The BEP management demonstrates the functioning of mechanisms for the formation and regular revision of the BEP development plan and monitoring its implementation, assessing the achievement of learning goals, meeting the needs of students, employers and society, making decisions aimed at continuous improvement of the BEP			+	
7	7.	BEP leadership should involve representatives of stakeholder groups, including employers, students and TS, in the formation of the BEP development plan		+		
8	8.	The BEP leadership must demonstrate the individuality and uniqueness of the BEP development plan, its consistency with national development priorities and the development strategy of the educational organisation			+	
9	9.	The HEI must demonstrate a clear definition of those responsible for business processes within the framework of the BEP, an unambiguous distribution of job duties of personnel, and the delineation of functions of collegial bodies	+			
10	10.	The BEP leadership must provide evidence of the transparency of the main educational programme management system		+		
11	11.	The management of the BEP must demonstrate the successful functioning of the internal quality assurance system of the BEP, including its design, management and monitoring, their improvement, decision-making based on facts			+	
12	12.	The management of the BEP must manage risk			+	
13	13.	The management of the BEP should ensure the participation of representatives of interested parties (employers, TS, students) in the collegial management bodies of the main educational programme, as well as their representativeness in making decisions on the management of the main educational programme			+	

14	14.	The HEI must demonstrate the management of innovations within the framework of the BEP, including the analysis and implementation of innovative proposals			+	
15	15.	The PEP management must demonstrate evidence of openness and accessibility for students, TS, employers and other interested persons		+		
16	16.	The BEP leadership should be trained in educational management programmes			+	
17	17.	BEP management should strive to ensure that progress made since the last external quality assurance procedure is taken into account in preparing for the next procedure		+		
<b>Total by standard</b>			<b>3</b>	<b>6</b>	<b>8</b>	<b>0</b>
<b>Standard «Information Management and Reporting»</b>						
18	1.	The HEI must ensure the functioning of the system for collecting, analysing and managing information based on the use of modern information and communication technologies and software	+			
19	2.	BEP management should demonstrate the systematic use of processed, adequate information to improve the internal quality assurance system		+		
20	3.	Within the framework of the BEP, there should be a regular reporting system reflecting all levels of the structure, including an assessment of the effectiveness and efficiency of the activities of departments and departments, scientific research		+		
21	4.	The HEI must establish the frequency, forms and methods of assessing the management of the BEP, the activities of collegial bodies and structural units, top management, the implementation of scientific projects			+	
22	5.	The HEI must demonstrate the determination of the order and ensuring the protection of information, including the identification of persons responsible for the accuracy and timeliness of the analysis of information and the provision of data	+			
23	6.	An important factor is the involvement of students, employees and TS in the processes of collecting and analyzing information, as well as making decisions based on them.		+		
24	7.	The BEP management must demonstrate the existence of a mechanism for communication with students, employees and other interested persons, including the availability of mechanisms for resolving conflicts		+		
25	8.	The HEI must ensure the measurement of the degree of satisfaction of the needs of TS, and students in the framework of the EP and demonstrate evidence of elimination of the identified deficiencies		+		
26	9.	The HEI must evaluate the effectiveness and efficiency of its activities, including in the context of the educational programme			+	
		The information collected and analyzed by the HEI should take into account:				
27	10.	key performance indicators;			+	
28	11.	dynamics of the contingent of students in the context of forms and types;	+			
29	12.	the level of academic performance, student achievement and expulsion;		+		
30	13.	satisfaction of students with the implementation of BEP and the quality of education at the HEI;		+		
31	14.	availability of educational resources and support systems for students;		+		
32	15.	employment and career growth of graduates.		+		

33	16.	Students, employees and TS must document their consent to the processing of personal data.		+		
34	17.	The BEP leadership should facilitate the provision of all necessary information in the relevant fields of science			+	
<b>Total by standard</b>			<b>3</b>	<b>10</b>	<b>4</b>	<b>0</b>
<b>Standard «Development and Approval of Basic Educational Programmes»</b>						
35	1.	The HEI must define and document procedures for the development of the BEP and their approval at the institutional level	+			
36	2.	The BEP leadership should ensure that the developed BEP meets the stated objectives, including the intended learning outcomes		+		
37	3.	The BEP leadership must ensure the availability of developed models of the BEP graduate, describing the learning outcomes and personal qualities			+	
38	4.	The BEP management must demonstrate that external examinations of the BEP have been carried out		+		
39	5.	The qualifications obtained upon completion of the BEP must be clearly defined, explained and correspond to a certain NQF level		+		
40	6.	BEP leadership should determine the impact of disciplines and professional practices on the formation of learning outcomes.			+	
41	7.	An important factor is the ability to prepare students for professional certification			+	
42	8.	The management of the BEP must provide evidence of the participation of students, TS and other interested persons in the development of the BEP, ensuring their quality.		+		
43	9.	The complexity of the BEP should be clearly defined in Kyrgyz loans and ECTS			+	
44	10.	The BEP leadership must ensure the content of academic disciplines and learning outcomes to the level of learning		+		
45	11.	The structure of the BEP should provide for various types of activities corresponding to the learning outcomes		+		
46	12.	An important factor is the presence of joint educational institutions with foreign educational organisations			+	
<b>Total by standard</b>			<b>1</b>	<b>6</b>	<b>5</b>	<b>0</b>
<b>Standard "On-Going Monitoring and Periodic Review of Basic Educational Programmes"</b>						
47	1.	The HEI should conduct monitoring and periodic assessment of the educational programme in order to ensure the achievement of the goal and meet the needs of students and society. The results of these processes are aimed at continuous improvement of BEP		+		
		Monitoring and periodic evaluation of the BEP should consider:				
48	2.	the content of the programmes in the light of the latest scientific achievements in a particular discipline to ensure the relevance of the taught discipline;			+	
49	3.	changes in the needs of society and professional environment;		+		
50	4.	workload, academic performance and graduation of students;	+			
51	5.	the effectiveness of student assessment procedures;		+		
52	6.	expectations, needs and satisfaction of learners with BEP training;		+		
53	7.	educational environment and support services, and their relevance to the objectives of the BEP		+		

54	8.	The HEI and the leadership of the BEP must provide evidence of the participation of students, employers and other interested persons in the revision of the BEP		+		
55	9.	All interested persons should be informed of any planned or taken action in relation to the BEP. All changes made to the BEP must be published			+	
56	10.	The management of the BEP should ensure the revision of the content and structure of the BEP taking into account changes in the labor market, the requirements of employers and the social demand of society		+		
<b>Total by standard</b>			<b>0</b>	<b>1</b>	<b>7</b>	<b>2</b>
<b>Standard «Student-Centered Learning, Teaching and Performance Evaluation»</b>						
57	1.	The BEP leadership must ensure respect and attention to different groups of learners and their needs, providing them with flexible learning paths		+		
58	2.	The BEP leadership must ensure the use of various forms and methods of teaching and learning		+		
59	3.	An important factor is the presence of our own research in the field of teaching methods of educational disciplines of BEP			+	
60	4.	The BEP leadership must demonstrate that there is a feedback system on the use of different teaching methods and the assessment of learning outcomes		+		
61	5.	BEP leadership must demonstrate support for learner autonomy while providing guidance and assistance from the teacher		+		
62	6.	The BEP leadership must demonstrate that there is a procedure for responding to student complaints		+		
63	7.	The HEI must ensure consistency, transparency and objectivity of the mechanism for assessing learning outcomes for each educational programme, including appeal.		+		
64	8.	The HEI must ensure that the procedures for assessing the learning outcomes of students of the BEP are consistent with the planned learning outcomes and the objectives of the programme. Evaluation criteria and methods for the BEP should be published in advance			+	
65	9.	The HEI should define mechanisms for ensuring the development of learning outcomes by each graduate of the educational programme and ensure the completeness of their formation			+	
66	10.	Evaluators should be proficient in modern methods of assessing learning outcomes and regularly improve their qualifications in this area		+		
<b>Total by standard</b>			<b>2</b>	<b>5</b>	<b>3</b>	<b>0</b>
<b>Standard " Students "</b>						
67	1.	The HEI must demonstrate the policy of forming the 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 leadership of the BEP must demonstrate the conduct of special adaptation and support programmes for newly admitted and foreign students		+		
69	3.	The HEI must demonstrate the compliance of its actions with the Lisbon Recognition Convention.		+		
70	4.	The HEI should cooperate with other educational organisations and national centers of the " European Network of National Information Centers for Academic Recognition and Mobility / National Academic Recognition Information Centers" ENIC / NARIC in order to ensure comparable recognition of			+	

		qualifications			
71	5.	The BEP leadership must demonstrate the existence and application of a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and non-formal education		+	
72	6.	The HEI should provide an opportunity for external and internal mobility of students of the BEP, as well as assist them in obtaining external grants for training		+	
73	7.	The leadership of the BEP should make the maximum amount of effort to provide students with places of practice, promote the employment of graduates, and maintain communication with them	+		
74	8.	The HEI must provide BEP graduates with documents confirming the qualifications received, 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 the employment and professional activities of BEP graduates		+	
76	10.	The BEP leadership should actively stimulate students to self-education and development outside the main programme (extracurricular activities)		+	
77	11.	An important factor is the existence of an active alumni association / association.			+
78	12.	An important factor is the availability of a support mechanism for gifted students.		+	

<b>Total by standard</b>	<b>3</b>	<b>7</b>	<b>2</b>	<b>0</b>
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#### Standard "Teaching Staff"

79	1.	The HEI must have an objective and transparent personnel policy, including recruitment, professional growth and personnel development, ensuring the professional competence of the entire staff		+	
80	2.	The HEI must demonstrate the compliance of the staff potential of the TS with the development strategy of the HEI and the specifics of the educational programme		+	
81	3.	The management of the BEP must demonstrate a sense of responsibility for their employees and provide them with a favorable working environment		+	
82	4.	The BEP leadership must demonstrate the change in the role of the teacher in connection with the transition to student-centered learning			+
83	5.	The HEI must determine the contribution of the TS of the BEP to the implementation of the development strategy of the HEI, and other strategic documents			+
84	6.	The HEI should provide opportunities for career growth and professional development of the TS of the BEP		+	
85	7.	BEP leadership should involve practitioners from the relevant industries in the teaching			+
86	8.	The BEP leadership must ensure targeted actions for the development of young teachers			+
87	9.	The HEI must demonstrate the motivation for the professional and personal development of BEP teachers, including the encouragement of both the integration of scientific activity and education, and the use of innovative teaching methods		+	
88	10.	An important factor is the active use of information and communication technologies by TS in the educational process (for example, on-line training, e-portfolio, BEP, etc.)		+	

89	11.	An important factor is the development of academic mobility within the framework of the educational programme, attracting the best foreign and domestic teachers			+	
90	12.	An important factor is the involvement of the TS of the BEP in the life of society (the role of the TS in the education system, in the development of science, the region, the creation of a cultural environment, participation in exhibitions, creative competitions, charity programmes, etc.)		+		
<b>Total by standard</b>			<b>1</b>	<b>6</b>	<b>5</b>	<b>0</b>
<b>Standard "Educational Resources and Student Support Systems"</b>						
91	1.	The BEP leadership must demonstrate the sufficiency of material and technical resources and infrastructure		+		
92	2.	The PEP leadership must demonstrate that there are procedures to support various groups of learners, including information and counseling.			+	
		The BEP leadership must demonstrate the compliance of information resources with the specifics of the BEP, including compliance with:				
93	3.	technological support for students and TS in accordance with the main educational programmes (for example, online training, modeling, databases, data analysis programmes);		+		
94	4.	library resources, including the fund of educational, methodological and scientific literature on general education, main and major disciplines on paper and electronic media, periodicals, access to scientific databases;		+		
95	5.	examination of research results, graduation works, dissertations for plagiarism;			+	
96	6.	examination of research results, graduation works, dissertations for plagiarism;		+		
97	7.	functioning of WI-FI on the territory of the educational organisation		+		
98	8.	The HEI should strive to ensure that the educational equipment and software used for mastering BEP are similar to those used in the relevant industries			+	
99	9.	The HEI must ensure compliance with safety requirements in the learning process			+	
100	10.	The HEI should strive to take into account the needs of various groups of students in the context of BEP (adults, working people, foreign students, as well as students with disabilities)		+		
<b>Total by standard</b>			<b>0</b>	<b>6</b>	<b>4</b>	<b>0</b>
<b>Standard «Public Information»</b>						
		The information published by the HEI within the framework of the BEP must be accurate, objective, relevant and must include:				
101	1.	programmes being implemented, indicating the expected learning outcomes;		+		
102	2.	information on the possibility of awarding qualifications at the end of the BEP;	+			
103	3.	information about teaching, learning, assessment procedures;	+			
104	4.	information about passing scores and learning opportunities provided to students;	+			
105	5.	information about the employment opportunities of graduates		+		
106	6.	The BEP leadership should use a variety of ways to disseminate information (including the media, web resources, information networks, etc.) to inform the general public and interested persons	+			

107	7.	Public awareness should include support and explanation of national development programmes for the country and the system of higher and postgraduate education	+			
108	8.	The HEI must publish audited financial statements on its own web resource		+		
109	9.	The HEI must demonstrate the reflection on the web resource of information characterizing the HEI as a whole and in the context of BEP		+		
110	10.	An important factor is the availability of adequate and objective information about the TS of the BEP, in the context of personalities		+		
111	11.	An important factor is informing the public about cooperation and interaction with partners in the framework of the BEP, including with scientific / consulting organisations, business partners, social partners and educational organisations		+		
112	12.	The HEI should post information and links to external resources based on the results of external evaluation procedures	+			
113	13.	An important factor is the participation of the HEI and the implemented educational programmes in various external assessment procedures			+	

<b>Total by standard</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>0</b>
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#### Standards in the Context of Individual Specialties

##### NATURAL SCIENCES, AGRICULTURAL SCIENCES, TECHNICAL SCIENCES, AND TECHNOLOGIES

		Basic educational programmes in the areas of "Natural Sciences", "Technical Sciences and Technologies", 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 educational programme should include disciplines and activities aimed at gaining practical experience and skills in the specialty in general and in the major disciplines in particular, including .h .: - excursions to enterprises in the field of specialization (factories, workshops, research institutes, laboratories, training and experimental farms, etc .), - conducting individual classes or entire disciplines at the enterprise of specialization, - holding seminars to solve practical problems relevant for enterprises in the field of specialisation, etc.	+			
115	2.	The TS involved in the education program mssshould include full-time teachers with long-term experience as full-time employees in enterprises in the area of specialization of the education programme		+		
116	3.	The content of all BEP disciplines should be based to one degree or another and include a clear relationship with the content of fundamental natural sciences, such as mathematics, chemistry, physics	+			
117	4.	The BEP leadership should provide measures to strengthen the practical training in the area of specialization.		+		
118	5.	The leadership of the BEP must provide training for students in the use of modern information technologies	+			

<b>Total by standard</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>
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<b>TOTAL</b>	<b>23</b>	<b>61</b>	<b>34</b>	<b>0</b>
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