REPORT

on the results of the work of the external expert evaluation Commission
for compliance with the requirements of program accreditation standards
Educational program " 710100 Computer Science and engineering»

**Osh technological University named after Academician M. M. Adyshev
"2" to "4" May 2018**

Addressed
to the Accreditation
Council of IAAR

«АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТІҢ ТӘУЕЛСІЗ АГЕНТТІГІ» КЕМ

НУ «НЕЗАВИСИМОЕ АГЕНТСТВО АККРЕДИТАЦИИ И РЕЙТИНГА»

INDEPENDENT AGENCY FOR ACCREDITATION AND RATING

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Osh   **"4" May 2018**

CONTENT

I LIST OF SYMBOLS AND ABBREVIATIONS

EEC-external expert Commission
HEI – higher education institution
SEC- state examination Commission
MESKR- Ministry of education and science of the Kyrgyz Republic
NAS KR – national Academy of Sciences of the Kyrgyz Republic
NAAR-national Agency for accreditation and rating
R & d-research and development
RWS- a scientific – research work of students
EP-educational program
OshTU- Osh technological University
SCAS– Software for computers and automated systems
TS-teaching staff
IWS - independent work of students
TMC – training and methodological complex

II INTRODUCTION

In the period from 02 to 04 may 2018, the expert Commission of NAAR conducted an external quality assessment of the educational program "710100 Computer Science and technology" in accordance with the standards of the Independent Agency for accreditation and rating.

State inspection for licensing and certification of educational institutions of the Ministry of education and science of the Kyrgyz Republic series of ZhB № 55 reg. III-55, Protocol No. 09\06 from 18.06.2012 ((18.06.17 to the city with a contingent of 200 students, and is prolonged to a perpetual License No. LD170000223, from 28.02.2017 the city with a contingent of 100 students). Implementation of the educational program in the direction 710100 "Computer science and engineering" fully complies with the legislation of the Kyrgyz Republic in the field of education, including the State educational standard of higher professional education direction 710100-Computer science and engineering approved by the Order of the Ministry of education and science of the Kyrgyz Republic №1179/1 of September 15, 2015.

Training personnel of EP 710100 of "computer science and engineering" is carried out at OshTU from 1 September 2012. Graduates of the EP are awarded an academic bachelor's degree in engineering. Duration of training: on the basis of secondary General education 4 years (full-time Department only); on the basis of secondary vocational education 3 years (full-time Department only). Training is conducted in Russian. OshTU has the academic resources to carry out educational activities for accreditation of EP.

The mission of the Department "SCAS" (software for computers and automated systems) is to prepare highly competitive personnel in demand in the labor market of the South of the country and in the Kyrgyz Republic.

Currently, the staff of the Department "SCAS" is 8 teachers. Of the full-time teachers have a degree-2 people, which is 25%. Staff of the Department works on competition and individual employment contract.

Staff of the Department develops qualitatively and creatively, thanks to scientific and pedagogical activity of candidates of physical, mathematical and technical Sciences, which is carried out a great job to strengthen and develop the EP.

The objects of evaluation are the main processes of the University and the faculty of energy: the management system; the educational process, the quality of teaching and performance assessment, the University's activities for the admission of students; employment and demand for graduates in the labor market; qualitative and quantitative indicators of the teaching staff; research work of faculty and students at the time of accreditation and in the dynamics over the past 3 years.

III REPRESENTATION OF THE ORGANIZATION OF EDUCATION

Osh technological University. 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, Resolutions and Decisions of the government of the Kyrgyz Republic, other normative legal acts of the Ministry of Education and the Charter of OshTU after the name of M.M. Adyshev.

The University was founded on the basis of Frunze Polytechnic Institute by order of the Minister of higher and secondary special education of the Kyrgyz SSR in 1963 (in Osh was opened evening General technical faculty of Frunze Polytechnic Institute). On January 21, 1991 the Osh technological College was established on the basis of the evening General technical faculty of the Frunze Polytechnic Institute by the Resolution of the Council of Ministers of the Kyrgyz SSR № 17. On 24 February 1996, by presidential decree No. 21, the Osh technological College was transformed into the Osh technological University. By order of the Minister of education and culture of the KR No. 57/1 dated January 23, 2004, Osh technological University named after academician Musa Murzapayazovich Adyshev.

Currently, the University includes: 3 institutes (Institute of advanced training and retraining; Institute of applied Sciences; Institute of language training and international educational programs); 7 faculties (road transport; energy (specialty energy faculty 640200 - "electricity and electrical engineering" is subject to current accreditation); architecture and construction; Cybernetics and information technology; Economics and management; technology and environmental management; natural and technical), as well as 2 colleges (College of technology, Uzgen College of technology and education. Academician Murzubraimov). Also the center of vocational guidance and pre-University training, and also Lyceum is a part of OshTU.

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

OshTU is a member of the Russian-Kyrgyz consortium and cooperates with more than one hundred and fifty educational institutions of the near and far abroad, the exchange of students on international programs. Teachers and graduate students are trained abroad.

OshTU implements educational programs: undergraduate (bachelor's degree)– 30 directions; Master's degree – 13 directions. The total number of students – 8850 (of them, full – time education - 4874, grant-696). Foreign students - 88. The contingent of undergraduates – 186; TS – 435 of them full – time, 406; Ph. D. – 19 of them full – time- 12. Candidates of science-106, including staff-98; masters-46. The presence of the accreditation programs, *AOPA 2*018 (certificate number VU180000022) Official website of OshTU: www.oshtu.kg E-mail: oshtu.adyshev@mail.ru

The total number of employees of OshTU in the 2017-18 academic year was 767 people. Faculty — 408 people, including the staff – 389; part time 17; administrative staff -108. The total number of employees of the Uzgen Institute of technology and education — 76 people.

Of the 408 members of the faculty — 11 doctors, professors, 96 candidates of Sciences, candidates. The teaching staff with more than 10 years of experience at the University is 72%.

The University has: 1 honored worker of science of the Kyrgyz Republic, academician of the national Academy of Sciences of the Kyrgyz Republic; 2 honored worker of education of the Kyrgyz Republic; 2 honored worker of geological service of the Kyrgyz Republic; 9 academicians and corresponding members of industry academies; more than 80 teachers who received the badge "excellence in public education of KR.

The average age of doctors of science and professors, 55 candidates of science, professors, 52 candidates of Sciences, associate professors - 40 years.

Scientific activity of the University is coordinated by the Department of science and implemented in the following departments: Institute of applied Sciences, 2 research laboratories, departments and

faculties, scientific and technical Council. There is an interstate departmental dissertation Council, departments of master's degree, postgraduate and doctoral studies.

Academic buildings of the University occupy 24513m2 and meet the requirements for the premises for educational activities.

Mission of OshTU: 1) Providing quality and affordable education with the use of the latest educational technologies and innovations. 2) Full support for the recovery and development of the economy and production, technology and technology in the country by training highly qualified specialists of the new formation, prepared on the principles of competence approach and capable of practical implementation of the knowledge in science, production, business. 3) Achieving international recognition.

IV DESCRIPTION OF THE PREVIOUS PROCEDURE OF ACCREDITATION

Osh technological University is in the process of accreditation the NAAR for the first time.

In 2006 OshTU named after Acad. M. M. Adyshev passed accreditation / certification, because of which issued a certificate №SF 160000073, confirming the status of higher education institution (UNIVERSITY), implementing the program of higher professional education (bachelor) with the right to award academic degrees in areas of training according to the Annex with the issuance of state diplomas. (Order of MES of KR № 369\1 of March 28, 2016).

In 2017, OshTU named after M. M. Adyshev passed independent institutional accreditation areas/specialties in accordance with the Appendix: Certificate no VU180000022, 2017 (order of the Agency for accreditation of educational programs and organizations No. 3004 from 27.12.2017).

V DESCRIPTION OF THE VISIT OF THE EEC (External expert commission)

External evaluation was carried out in accordance with the program developed by the Chairman of the expert Committee together with the NAAR and agreed with the University management.

EEC approved by Order of the Director of the IAAR NO. 21-18-OD of April 1, 2018, with the following composition:

1. Chairman-Shunkeev Kuanyshbek Shunkeevich, D. F.-M. N., Professor, expert of I category of NAAR, first Vice-rector of Aktobe regional state University named after K. Zhubanov (Aktobe, Republic of Kazakhstan).

2. Observer – Niyazov, Gules Alkenovna, project Manager for institutional and specialized accreditation of universities (Astana, Republic of Kazakhstan).

3. Observer of the Ministry of education and science of the Kyrgyz Republic − Altybaeva Meilikan, Director of the Department of accreditation and quality of education of Osh state University (Osh, Kyrgyz Republic).

4. Foreign expert-German Andrey E., K. F.-M. N., associate Professor, Dean of the faculty of physics and technology of Yanka Kupala Grodno state University (Grodno, Republic of Belarus).

5. Foreign expert - toybaev Adlet Zhunusovich, Ph. D., Vice-rector of the Kazakh engineering University (Almaty, Republic of Kazakhstan).

6. National expert Tairov Mitalip of the Republic of Kazakhstan, D. SC.PhD, Professor of Batken state University (Kyzyl-kyya, Kyrgyzstan).

7. National expert Botobekov Arslanali Botobekov, head of the Department of accounting of the Kyrgyz national University named Zhusup Balasagyn (Bishkek, Kyrgyz Republic).

8. Employer – Sanaev Mirlan kurmanbekovich, Director of Osh branch OJSC "Halyk Bank Kyrgyzstan" in Osh city (Osh, Kyrgyzstan).

9. Student Asanov Maksatbek Turdumamatov, the student of the 4 course of the specialty "Information technologies" of the Kyrgyz-Uzbek University (Osh, Kyrgyzstan).

During the visit, a meeting of experts of NAAR with the management of OshTU in the person of the rector and Vice-rectors, heads of departments (the Department for organization of educational process and quality management, Department for educational work and social development, the Department of language training and international educational programs, advanced training Institute, Institute of applied Sciences, centre of international cooperation, Department of information technology, the Department of

vocational guidance and pre-University training, Department of postgraduate and doctoral studies, Department of graduate education, library, accounting, personnel Department, Executive Secretary of the selection Committee, etc.).

There were also meetings with deans of faculties on accredited specialties, heads of departments, staff of teachers and students of the University, as well as employers. A survey of students and teachers. A visual inspection of the material and technical base of the University, infrastructure and collective use. Experts inspected the training and laboratory facilities, discussed the main problems of the educational process and logistics.

During the visit, familiarization with the leading bases of practices for accredited educational programs was held, during which meetings with the leadership of the leading enterprises of the region, heads of practices from enterprises were held, workplaces were inspected, where students ' practice was organized.

Accredited by specialty expert Tairov M. M. attended a lecture of the teacher Ergeshova G.A. on the subject "Geographic information systems in emergency situations" (3rd year, total number of students – 18), lab Kochkonbaeva B. O. on the subject "Development and analysis of software requirements," (3 course, the total number of students – 12The man).

Modern teaching methods, including information technology, multimedia and presentation equipment were used during the lectures. Classes are held at a high methodological level, attendance is good. Languages of training − Russian, English.

Because of the visit, proposals were made to improve some areas of the University's work within the framework of the accredited educational program.

As part of the program of the visit, recommendations 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 CONFORMING TO THE STANDARDS OF SPECIALIZED ACCREDITATION

6.1 Standard "Educational Program Management

OshTU has a strategy, mission, and vision. Information on the 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 student learning, as well as the interaction between the business community, the scientific community, faculty and students.

The university is working on the 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.

Quality Assurance OshTU 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 the effectiveness of its implementation. The results of the evaluation of the effectiveness of the implementation of the plan and the current monitoring are used to develop corrective actions and make changes to the plan.

Based on the 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, and university, among which there are representatives of employers, students, teaching staff. They are selected and appointed to participate in these bodies with the right to vote.

The OshTU manual demonstrates the working mechanisms for the formation and regular review of the development plan of the main educational program and monitoring its implementation. The subject of the compliance of the development plan with the educational policy. 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.

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 participation of stakeholders 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 during the feedback process are used to continuously improve all aspects of the university's activities, including accredited educational program.

Strong sides/ best practices

- 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.

Recommendations of EEC

- 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, vice dean, chair person) to the strategic- planning and risk assessment mechanisms.

Conclusions of the EEC on the criteria for an accredited educational program are strong - 3, satisfactory - 6, suggest improvements - 8.

6.2 Standard "Information Management and Reporting"

OshTU provides management of basic educational programs and other activities based on the 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 the accuracy of the information.

The AVN information system was created and implemented in OshTU, which includes internal (Internet) 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. Through the educational portal, teachers communicate with students, 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.

In addition, the guide publishes up-to-date information in university and city newspapers, advertises on television programs of the university television studio Zhashtyk, the newspaper Ekho Osh, the magazine Univer.KG, the television channels ElTR and OshTV.

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

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

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

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

Osh Technological University establishes the frequency, reporting forms and methods for evaluating the management of the educational program, the activities of collegial bodies and structural divisions, senior 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 research department is supported by the science department, information about which is presented on the Osh Technological University website

Strong sides / 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

- 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 faculty members with access to scientometric information from international databases of scientific publications Scopus and Web of Science.

Conclusions of the EEC on the criteria for an accredited educational program are strong - 3, satisfactory - 10, suggest improvements - 4.

6.3 Standard "Development and approval of the educational program"

According to the information provided, the basic educational program of higher professional education (undergraduate degree in the direction of training 710100 - "Computer Science and Engineering"), includes a system of documents comprising: the 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 .

In OshTU there are documented procedures for developing educational programs. The order of consideration of 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 710100 - "Computer Science and Engineering" is consistent with the strategy, mission, vision and values of Osh Technological University.

The assessment of the quality of the educational program is regulated by the regulatory documents of Osh Technical 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 the quality of education.

The goals of vocational and pedagogical training for the educational program being accredited 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 the educational program.

The accredited educational program provides for the development of key competencies and skills among graduates. A number of core and core disciplines are proposed for the development of professional competencies of the graduate, which are offered for study based on approaches to the individualization of the educational process.

The program is updated with the development of science, culture, economics, technology, technology and social services. It is important that in order 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.

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.

The continuity of the content of the educational program, the consistency and continuity of disciplines, the rational distribution of disciplines by semesters are ensured. The implementation of the modular principle and the system of educational loans.

The use of standard (basic, exemplary) and the development of work and individual curricula is carried out in accordance with documented procedures in accordance with a specific

structure. Elective courses for students are included in a special catalog, communicated to students and used in the design of individual curricula.

When developing a working curriculum, the 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 worker's training plan is discussed at the Academic Council, approved by the university's rector and placed in the university's information system.

The educational-methodical complex on the educational program under accreditation 710100 - "Informatics and Computer Engineering" includes a curriculum of a direction, courses for students' choice, a working curriculum, and 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 of the accredited specialty undergo educational, industrial and pre-diploma practices, which are provided with the necessary documentation. Contracts have been concluded with practices such as Oshelectro and Osh Kirgiz Giprozem. In the last organization in 2017, a special room was organized for students of the specialty ""Computer Science and Engineering ".

The total complexity of the development of the educational program - 240 credits, which corresponds to the recommended labor intensity of training for undergraduate. The system of credits (credit units), laid ECTS, 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.

Cooperation and exchange of experience with educational organizations implementing similar programs in the country and abroad have been established, but the creation of joint EPs is planned for the upcoming academic year.

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. The educational program is provided with literature and teaching materials.

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.

Strong sides / Best Practices

- There are documented procedures for the development and approval of the EP.

- The opportunity for students to choose individual educational trajectories.

Recommendations EEC

- Provide conditions for professional certification of graduates.

- Implement joint EPs with foreign educational institutions.

Conclusions of the EEC on the criteria for an accredited educational program are strong - 1, satisfactory - 5, suggest improvements - 6.

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

Osh Technological University continuously monitors and periodically evaluates educational programs with the participation of a number of university departments, including the AVN information system. Periodic certification and control of students' knowledge is carried out, testing systems are provided.

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 trajectory.

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 practice bases for the accredited program corresponds to the 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 content of the educational program 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.

The implementation of the educational program 710100 - ""Computer Science and Engineering" provides for active interaction with interested parties.

Based on the monitoring results, mechanisms are in place to formulate and revise the development strategy, mission, and quality objectives.

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

Strong sides / 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.

Recommendations of EEC

- Inform all interested parties about any planned or taken actions in relation to the EP in a timely manner.

Conclusions of the EEC on the criteria for an accredited educational program are

strong - 2, satisfactory - 7, suggest improvements - 1.

6.5 Standard "Student-centered Training, Teaching and Score standard

Activity of OshTU is based on trust to the student, his involvement in all main processes. The management pays special attention to respect in relation to various groups of students, their requirements, creation of conditions for realization of potential of students with ensuring personalization of educational process.

Students have an opportunity to influence educational process. The choice by students of modules or elective disciplines is carried out on the basis of the presentations by teachers of the courses. The option is granted to all students. Disciplines of an elective component are presented by disciplines of a professional cycle: "Introduction to specialty" (1 course), "Architecture of computing systems" (the 2nd course), "Programming in language C ++" (the 3rd course), "The system software" (the 3rd course), "Introduction to GIS" (the 3rd course), "Object-oriented programming" (the 4th course), "Programming in the environment of Borland Developer Studio" (the 4th course), "Design and realization of systems of data storage" (the 4th course).

Proceeding from above the described data, elective courses have a certain communication among themselves and are addition of each other.

Level of education is defined by existence of obligatory components in each block of disciplines, and the freedom of choice of trajectories of training is put into opportunities of the free choice of subject matters.

At the university necessary conditions for independent work of students are created. Tasks and methodical materials are defined and available to independent work of students. The labor input of this type of work is defined depending on the credit allocated on studying of discipline. Monitoring of results of independent work which are considered when carrying out landmark control is conducted.

TS (teaching staff) owns innovative methods of training and also modern methods of assessment of results of training. Educational process is in full form provided with all necessary information sources including electronic.

EEC notes wide use in educational process of information and communication technologies (with use of modern software products), however it is necessary to put emphasis by problem, heuristic, design, contextual and other modern methods of **practice-oriented** training. The material and technical resources of educational process contain the necessary presentation equipment used during the occupations.

Taking into account individual needs of students, by teachers it is provided additional consultations and the help during development of content of concrete discipline, course and degree design.

For studying of degree of satisfaction of students within the educational program, "trust boxes" are organized, questioning, polls concerning conditions and the organization of educational process is carried out.

Feedback with use of information systems of the university assumes use of the individual login and password that gives the chance of the personified access to educational resources on the portal of higher education institution. The student can examine the educational achievements and also educational and methodical materials through the information system AVN.

The educational program defines an order of training of students in an individual educational trajectory, monitoring of advance on which is also carried out through the information system AVN.

For ensuring objectivity of assessment of knowledge and professional competence of the student there is a documentary mechanism of assessment of knowledge. The rating system of assessment of knowledge is introduced, the student has the right to appeal estimates according to the developed procedure

Teachers of higher education institution undergo professional development both in the field of modern pedagogical technologies, and in the field of methods of assessment of results of training.

Strong sides / best practices
- *Existence of the information system AVN available to all to the student.*
- *Accounting of needs of students, existence of system of feedback with students.*
- *Granting variable educational trajectories to students.*
- *Application of various forms and methods of teaching.*

Recommendations of EEC

− to provide broad involvement of TS and students in research and development in the field of the accredited EP.

− to strengthen a role of student government at decision-making of faculty by administration. To provide entry of representatives of student government into the structure of Council of faculty.

EEC conclusions by criteria for the accredited educational program
strong − 4, satisfactory – 4, offer improvements – 2.

6.6 Standard "Learners"

The procedure of reception of students in OshTU is regulated and is according to Regulations of Admission in higher educational institutions of the Ministry of Education and Science of Kyrgyz republic. The organization of reception of entrants is carried out by selection committee which is guided by a number of normative legal acts.

The higher education institution has transparent policy of formation of the contingent of students. Depending on training conditions the contingent is subdivided into students on the state educational grant and studying at a commercial basis. For example, in 2017-2018 academic year finish on the accredited EP of 31 students, from 20 on state order, 11-on a commercial basis. The accurate algorithm of receipt and transfer is developed and is used. The lowest passing score for revenues to the budgetary form of education in 2017 has made 110 points.

There is a system of career guidance and marketing activities of the university. Osh Technical 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. 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.

Deductions, 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 students. The results of the analysis are used to improve the quality of career guidance. Comparative analysis with a contingent of other universities, in Osh Technical University was not conducted.

The institute of coaching is created. For foreign students training in the Russian and Kyrgyz languages will in addition be organized. The hostel is provided to foreign students and students from the remote areas.

The Osh technological university declares commitment to provisions of the Lisbon convention on recognition and recognizes the qualifications appropriated in other countries and also promotes notification of documents on education. OshTU officially cooperates with other higher education institutions and the national centers. The purpose is ensuring comparable recognition of qualifications. It is confirmed by a possibility of the transfer of students of OshTU to other higher education institutions of the country and abroad. There is a procedure of the translation and reoffset of the disciplines studied in other higher education institutions.

OshTU creates external and internal academic mobility of students. There is an arrangement with the University of Salzburg on experience exchange as PTS and students. So for example: The student of the POVTAS-2-11 group in the first semester Abdykadyr uulu Zhoodarbek studied 2015-2016 academic years at the University of applied sciences of Carinthia (Austria).

In 2017-2018 academic year from 31/07/2017 to 29.01.2018 (6 months) Ulukbek kyzy Darygul studied at the University of Grenoble (France) in the "Informatics and Technology of Programming" direction. Detailed information can be obtained in the application.

Since 2008 OshTU participates in the project of the network university **ShOC (Shanghai Organization of cooperation)**, carrying out programs of the academic mobility, a bachelor's degree in OshTU and master's degree.

On the accredited specialty contracts with eight bases the practice are signed. The organization of practice is carried out on the basis of appropriative normative legal acts.

During training in higher education institution students have a possibility of participation in language, computer, professional and other course on which end receive the corresponding certificates.

Each student depending on his individual qualities can project the individual educational trajectory. Students have a possibility of participation in the research work realized as elements of scientific research in theses, publication of results a scientific research and their approbation at scientific conferences. OshTU supports gifted students by means of receiving grants and awards by them.

It is noted that high rates of the current progress and a final assessment are confirmed by results of control cuts of knowledge which are annually carried out on a final year of training. Final state assessment provides holding oral examination in the basic and main subjects and also protection of final qualification work.

The university undertakes the obligation for employment of graduates. In higher education institution the Center of career is created (employment with his help to 85% of graduates), the annual plan of work on assistance to employment of graduates is developed, the analysis of changes of labor market is carried out, psychological courses and trainings concerning successful employment are organized.

The accredited program in general meets the requirements of employers. Considering opinion of employers, the curriculum is processed by inclusion in him of new disciplines.

At OshTU is created the environment providing access to the personified interactive resources, training materials and tasks, there is a possibility of a self-assessment of knowledge of students. Educational process is carried out by means of classroom and out-of-class types of occupations; individual work of students with the teacher is actively used.

The electronic library includes all necessary types of educational and educational and methodical documentation. Internet access and the electronic resources is provided in all territory of the university by means of Wi-Fi of network in all territory of educational institution.

The management supports the initiatives of students, promotes increase in level of activity of students in self-government institutions. The committee on affairs of youth formed of number of initiative students of faculties on an elective basis is created. Tasks of the Senate include rendering assistance to the management of the university in carrying out educational, educational and social policy. The STUDENT Times newspaper is issued. The format of the newspaper allows students of the university to express the opinion on the pursued policy in general and activity of structures of student government.

The Association of graduates promoting implementation of the educational program in connection with employers and the subsequent employment of graduates of OshTU is created (however doesn't work).

Strong sides / best practices
− There is a clear policy of formation of the contingent of students.
− Agreements of cooperation with 8 enterprises are signed.
Recommendations of EEC
− To strengthen cooperation with partner higher education institutions for implementation of joint programs for training of specialists.
− To ensure effective functioning of association of graduates.
EEC conclusions by criteria for the accredited educational program
strong −3, satisfactory – 7, offer improvements – 2.

6.7 Standard "Teaching staff"

Selection of personnel structure is implemented on the basis of the analysis of requirements of the educational program; by their results the competition on replacement of vacancies is announced. At employment one of indispensable conditions is presence at the contestant of higher education, the academic degree of the master, an academic degree of the candidate or the doctor of PhD, compliance of education to a profile of specialties of the university, etc. The documents concerning personnel policy of higher education institution are available to all interested persons. Contracts and labor contracts are signed with the employed teachers. Strategic plans of the university and faculty contain requirements to improvement of quality of the faculty.

At the university approaches to the current assessment of quality of work of teachers which is estimated on indicators of rating, a portfolio, poll of students (results of questioning), results of introduction of information and communicative technologies at educational process, the organization of research and independent activity, formation of practical skills of students are developed.

Control of occupations is exercised by heads and the invited experts; mutually visit of occupations, open lectures is organized (according to the separate schedule). Surveys of students by

results of work of each teacher are conducted. Procedures of the analysis of activity of each teacher are provided. The collected information on competences (portfolio) allows involving teachers as the experts and performers of various tasks.

OshTU carries out the correcting actions by results of assessment of quality of work of TS, including rendering the methodical help. For additional and independent assessment of quality at the level of the university and faculty the commissions on complex check of departments, theses (projects), term, laboratory papers, reports on types the practice, examinations, etc. are created.

For progress in work of teachers, employees various measures of moral and material incentive is applied. One of types of motivation of PPS is the direction on training abroad and also the solution of social problems. Taking into account effectiveness of work extra charges to a basic salary at the expense of means of higher education institution are provided. Additional mechanisms of material stimulation of workers in the form of financial support, awarding, etc. are provided. For the purpose of identification of leaders competitions in results of work in a year are held. Measures of disciplinary influence in relation to the employees breaking labor discipline are also provided and are applied. It is important that in OshTU are developed and the principles of ethical behavior of personnel are observed.

The volume of annual pedagogical load of teachers is about 750 hours for doctors, 800 hours - for candidates of science and 850 hours for teachers without academic degree. Account of performance of PTS of pedagogical loading is kept. Individual plans of teachers include all kinds of activity, are approved as the head of the department and the chief of a teaching department. The analysis of implementation of plans is carried out twice a year.

For the purpose of improvement of quality of education and strengthening of its practical orientation, external employees (representatives of employers) actively are attracted.

Teachers improve skills by means of participation in seminars, courses, programs of professional development, training in Kyrgyzstan and abroad. There is a plan of professional development by the staff of faculty and university. The evidence of professional development by employees of the accredited educational program are produced. Separate approaches to professional development by young employees are developed. The management of EP organizes actions for professional development of PTS, in 2016 and 2017 the senior research associate and the teacher of Geoinformatiks department of the University of Salzburg (Austria) is invited.

Taking into account student-centered approach, teachers modern pedagogical technologies are developed and take root, first of all paying attention to wide use of information technologies that is confirmed by the received certificates and diplomas.

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

Contracts on cooperation with the leading educational institutions of Kyrgyzstan and the abroad are signed. Teachers take part in programs of the academic mobility. Based on the bilateral agreement with the University of Salzburg (Austria) about mobility of teachers the senior teacher Ergeshova G.A. passed an practice. PTS EP participates in the international projects, including Erasmus + (2017-2021).

Strong sides / best practices
− *Involvement of TS into the international projects.*
Recommendations of EEC
− *To improve activities of TS for preparation of design applications for participation in competitions of projects of all levels for the purpose of expansion of the directions of a research.*
− *To enter accounting of the Hirsha index of the employee into criteria of annual assessment of activity of TS. To establish the minimum requirements of printing activity in the editions having an impact-factor for candidates and doctors of science.*
EEC conclusions by criteria for the accredited educational program
strong − 3, satisfactory – 6, offer improvements – 3.

6.8 Standard "Educational Resources and Systems of Support of Students"

OshTU has the material and technical resources providing implementation of the accredited educational program. It is noted that educational cases of the university occupy 24513 sq.m and are adapted for educational activity. The long-term plan of development for 2017-2022 where creation for power faculty of the research and production ground as the center of training in new technologies is provided is developed.

3 new laboratories equipped with the equipment and computer aids are open for students of the Power Industry and Electrical Equipment direction in 2018, there is a wide range of the multimedia and demonstration equipment. At the same time, the used laboratory equipment in the majority has become outdated; the volume of purchases of the new equipment is very small and does not allow providing necessary quality of educational process.

The university shows support of students, a number of the structures realizing support mechanisms on activities is created. There is a cultural and esthetic center, the hostel; points of public catering, the student's hall, clubs and associations on interests are organized.

The information system AVN provides technological support of students and TS. Other license software products are also acquired and introduced.

Since 2015 OshTU uses the StrikePlagiarism.com system for check of student's and scientific works on existence of plagiarism, at the same time this use is formal, there is no variability of subjects of degree and course design.

It is important that security of the accredited educational program with resources conforms to license requirements; all students have access to educational and methodical materials and library stock. The fund of OshTU library makes 109459 units of editions. All disciplines of the curriculum are provided with educational literature on paper and electronic media.

At the university the uniform information network to which access for employees and students, including by means of wireless technologies is provided is created.

Strong sides / best practices

− Accounting of needs of various groups of students.

Recommendations of EEC

− to Provide examination of results of research, final works, theses on plagiarism.

EEC conclusions by criteria for the accredited educational program

strong - 0, satisfactory – 8, offer improvements – 1.

6.9 Standard «Public Information»

OshTU follows the principles of openness and availability to the public, places full and reliable information about activity of the university on information resources on the Internet.

In higher education institution the press service is created, persons, responsible for informing the public, in each division are designated. Information booklets are periodically updated.

The information system AVN and the uniform system of e-mail Comfort allow to realize corporate mailings and to provide an operative communication of the management with employees and divisions and also teachers with students.

At the university 3 television stations work, the periodic scientific magazine "OSHTU Izvestiya" is issued. Information stands are periodically updated, video records are shot.

The top management of OshTU shows openness to contacts with students, including by e-mail. Feedback of OshTU studying with the rector is provided through e-mail of the rector.

At the university questioning of students concerning quality and availability of the obtained information is regularly carried out. By results of questioning the correcting actions are planned.

A number of information functions is performed by the Center of education and career focused on employment and the organization the practices of students and graduates created in higher education institution.

The website of OshTU is realized on the 3rd (Kyrgyz, Russian and English) languages and reflects information on structural divisions and the main processes of the university. Information on the website is constantly updated. The higher education institution regularly publishes information on the accredited educational program on the website. Also for informing newspapers and television station of the university are used. OshTU publishes the audited financial statements on the website.

Data on lowest passing scores and educational opportunities are posted on the corporate website. In addition additional information for entrants, including necessary normative legal acts is placed. Also rather full information about the faculty of the accredited specialty in a section of departments is posted on the website.

The higher education institution conducts active work with partners, information on which results is posted on the corporate website and in other media.

Strong sides / best practices

− *Rather effective information policy of higher education institution.*
− *Use of various ways of dissemination of information.*
− *Existence of television station.*
− *OshTU Website in three languages.*
− *Existence of the Center of education and career.*
Recommendations of EEC
− *to strengthen use of capacity of social networks for advance of the university.*
− *to provide periodic holding procedures of external assessment and the publication of their results in open access.*

EEC conclusions by criteria for the accredited educational program
strong - 6, satisfactory – 6, offer improvements – 1.

6.10 Standard "Standards in a Section of Separate Specialties"

On the accredited educational program 710100 − "Computer science and computer engineering" is conducted in internal and correspondence forms of education on the basis of secondary general and higher education and provides graduates of necessary theoretical and practical preparation. OshTU provides realization of competence-based approach.

The current state of preparation within EP is maintained, active use of information computer technologies, annual updating of scope of term and qualification (degree) papers and also introduction of new elective disciplines taking into account the recommendations of employers and elective courses of students.

Curricula of the accredited educational program are made according to State educational standard of higher professional education of KR of the 3rd generation in the direction 710100 "computer science and engineering" (approved by the order MES of KR of September 15, 2015, No. 1179/1) and created on the basis of competence-based approach, taking into account introduction of annual adjustments on the basis of results of poll of interested persons (users).

The educational program includes the disciplines and actions directed to obtaining practical experience and skills in the specialty. The maintenance of subject matters is based on fundamental disciplines: to informatics, mathematics, etc.

On the basis of employers carrying out practical works, course and degree design is also organized. Within the accredited educational program contracts with 8 enterprises of the region are signed. Following the results of the practices there are positive reviews of employers about graduates of the accredited educational program.

Strong sides / best practices
− *EP includes the disciplines and actions directed to obtaining practical experience including with use of resources of employers.*
− *wide use of modern information technologies in educational process.*
Recommendations of EEC
− *to provide broader involvement of experts experts in teaching disciplines of GEP.*
EEC conclusions by criteria for the accredited educational program
strong − 4, satisfactory – 1, offer improvements – 0.

VII REVIEW STRONG SIDES/GOOD PRACTICES FOR EACH STANDARD

6.1 Standard «Educational program Management»

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

-Responsible for business processes within the EP are appointed, the duties of the staff are clearly distributed; the functions of collegial bodies are delimited.

6.2 Standard " Information Management and reporting»

- There is a working 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 with the use of modern information technologies.

- Information is processed by authorized persons, reports are systematically considered at meetings of collegial bodies.

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

6.3 Standard " Development and approval of the educational program»

Strong sides/best practices

- There are documented procedures for the development and approval of the EP.

- The possibility of students ' choice of individual educational trajectories is provided.

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

- Availability of mechanisms for monitoring and periodic evaluation of OP with the use of modern information systems

- Mechanisms for monitoring EP take into account the load, performance and output of students.

6.5 Standard " Student-Centered learning, teaching and performance assessment»

− The availability of the information system of the AVN, available to all students.

- Taking into account the needs of students, the presence of a feedback system with students.

- Providing students with variable educational trajectories.

- The use of different forms and methods of teaching.

6.6 Standard " Learners»

- There is a clear policy of formation of the contingent of students.

- Contracts with 8 bases of practices are signed.

6.7 Standard " Teaching staff»

- Involvement of TS in international projects.

6.8 Standard " Educational resources and student support systems»

- Taking into account the needs of different groups of students.

6.9 Standard «Public Information»

- Quite effective information policy of the University.

- The use of different ways of disseminating information.

− The presence of a television Studio.

 Is the website OshTU in three languages.

- Availability of the Center of education and career.

6.10 Standard «Standards in the context of individual specialties»

Strong sides/best practices

- EP includes disciplines and activities aimed at gaining practical experience, including the use of employers ' resources.

- Wide use of modern information technologies in the educational process.

VIII REVIEW RECOMMENDATIONS FOR IMPROVING QUALITY

1. To ensure wide involvement of employees and students in the quality management processes of the University.

2. Provide training for 100% of the heads of the faculty of energy (Dean, Deputy Dean, head. departments) strategic planning and risk assessment mechanisms.

3. To provide periodic discussion of the results of staff and students ' satisfaction assessment, as well as the performance of staff (including rating) at the meetings of departments.

4. To intensify efforts to assess the impact of actions in the framework of accredited EP.

5. Provide faculty staff access to scientometric information of international databases of scientific publications Scopus and Web of Science.

6. To provide conditions for professional certification of graduates.

7. Implement joint EP with foreign educational institutions.

8. To inform all interested parties of any planned or undertaken action regarding the EP in a timely manner.

9. Ensure wide involvement of faculty and students in research and development in the field of accredited EP.

10. Strengthen cooperation with partner universities to implement academic mobility programs for students.

11. To ensure the effective work of the alumni Association.

12. To improve the activities of the TS in the preparation of project applications for participation in competitions of projects at all levels in order to expand the areas of research.

13. Enter the criteria for the annual evaluation of teaching staff consideration of the Hirsch index of the employee. Set minimum requirements for publication activity in publications with impact factor for candidates and doctors of Sciences.

14. To ensure examination of results of research, final papers and dissertations for plagiarism.

15. To strengthen the use of social media to promote the University.

16. Ensure that external evaluation procedures are periodically conducted and their results are publicly available.

17. To ensure greater involvement of practitioners in the teaching of EP disciplines.