



«АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТИҢ
ТӘУЕЛСІЗ АГЕНТТІГІ» КЕМ

НУ «НЕЗАВИСИМОЕ АГЕНТСТВО
АККРЕДИТАЦИИ И РЕЙТИНГА»

INDEPENDENT AGENCY FOR
ACCREDITATION AND RATING

REPORT

on the results of the external expert assessment committee's work for compliance
with the requirements of institutional accreditation standards of
Osh Technological University named after Academician M.M. Adyshev
from "2" to "4" May 2018

Osh 2018

INDEPENDENT AGENCY OF ACCREDITATION AND RATING

External Expert Commission

***Addressed to Accreditation
Council of IARA***



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"4" May 2018

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I LIST OF SYMBOLS AND ABBREVIATIONS

EEC - external expert commission
HEI - higher educational 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
NARA - national accreditation and rating agency
R & D - research and development
SRW - student research work
EP - educational program
Osh TU - Osh Technological University
SCAS - Software Computing and Automated Systems
TS – Teaching staff
IWS - independent work of students
EMC - educational and methodical 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.

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.

III REPRESENTATION OF OSH TECHNOLOGICAL UNIVERSITY NAMED AFTER. M.M. ADYSHEV

Osh Technological University. M.M. Adyshev is a higher educational institution, in its activities 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 regulatory legal acts of the MES KR and the Charter of Osh Technical University named after M.M. Adyshev.

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 Osh, the evening general technical faculty of the Frunze Polytechnic Institute was opened). January 21, 1991 the Osh Technological College was established by the Decree of the Kirghiz SSR Ministers Council on number 17 on the basis of the evening general technical faculty of the Frunze Polytechnic Institute. On February 24, 1996, the Osh Technological College was reformed into the Osh Technological University by the Decree No. 21 of the President of the Kyrgyz Republic.

By order of the Minister of Education and Culture of the Kyrgyz Republic No. 57/1, January 23, 2004 Osh Technological University was named after academician Musa Murzapayazovich Adyshev.

Currently, Osh Technical University includes: 3 institutes (Institute for Advanced Studies and Retraining; Institute of Applied Sciences; Institute of Language Training and International Educational Programs); 7 faculties (automobile transport; energy (specialty energy department

640200 - "electricity and electrical engineering" subjects 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). Osh TU also includes a center for vocational guidance and pre-university training, as well as a lyceum.

The priority research areas of Osh Technical University are: information and telecommunication technologies and new materials; energy and transport (including alternative energy sources and road safety issues); Building (Civil Engineering), design, architecture and mining; machine science, chemical technologies in agriculture and biotechnology; problems of environmental protection, nature management and biodiversity conservation; complex study 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 training; ecological and biotechnological problems in the highlands of the southern region of Kyrgyzstan.

Osh Technical 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 participate in internships abroad.

IV DESCRIPTION OF PREVIOUS ACCREDITATION PROCEDURE

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

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

1. *Chairman* - Shunkeev Kuanyshbek Shunkeevich, Doctor of Physics and Mathematics, Professor, First Category NARA 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 program of events, a meeting of experts of the NARA 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 main 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.

V DESCRIPTION OF THE EXTERNAL EXPERT COMMISSION'S VISIT

Osh Technical University implements educational programs: bachelor degree - 30 areas; Masters Degree - 13 areas. The total contingent of students is 8850 (of them, full-time education - 4874, on a grant - 696). Foreign students - 88. Contingent of undergraduates - 186; TS - 435, of which staff - 406; Doctors of sciences - 19, of them staff - 12. Candidates of sciences - 106, of them staff - 98; MA - 46. There are accredited programs - AAOPPO 2018 (certificate No. VU180000022) Official website of Osh Technical University: www.oshtu.kg, E-mail: oshtu.adyshev@mail.ru

The total number of OshTU employees in the 2017-18 academic year was 767 people. Teaching staff - 408 people, of them full-time - 389; part time -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 staff members there are 11 doctors of science, professors, 96 candidates of science, associate professors. Teaching staff with more than 10 years experience at the university consists of 72%.

There are 1 Honored Scientist of the Kyrgyz Republic, an academician of the Kyrgyz Republic National Academy of Sciences; 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 National Education of the Kyrgyz Republic".

The average age of doctors of science and professors is 55, candidates of science, professors are 52, 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 24513m² and meet the requirements for premises for educational activities.

Mission of Osh Technological University: 1) Ensuring high-quality and affordable education using the advanced educational technologies and innovations; 2) All-round support of

the economy and production development, technician and technology in the country through the training of highly qualified specialists of the new formation, trained on the principles of a competence approach and capable of practically realizing the knowledge acquired in science, industry, and business; 3) Achieving the international recognition.

VI CONFORMITY TO INSTITUTIONAL ACCREDITATION STANDARDS

6.1 Standard "Strategic development and quality assurance"

Provided self-report of OshTU named after M.M. Adyshev on institutional accreditation, interviews with all stakeholders of the educational process, the questionnaire of students and staff of the university shows the compliance with the national priorities of Kyrgyzstan and the Osh region.

The university has developed and approved the mission, goals and objectives that are reflected in the approved Development Strategy. The development strategy of Osh TU named after M.M. Adyshev was approved at the meeting of the Academic Council by Protocol No. 2, 09.29.2017. The structure of the development strategy consists of 4 key areas and includes all activities of the university. Implementation monitoring the of the development strategy is carried out at the university departments, reports are discussed at meetings of the Academic Council.

Aimed for implementation of the university development strategy the structural units have developed and approved work plans for departments, chairs, faculties. The university has an approved quality policy which is available to the public through electronic and paper resources. The quality policy was discussed and approved at the meeting of the University Academic Council - Minutes No. 2, 09.29.2016.

Activities for implementation on the ISO 9001: 2008 University's quality management system standards, and also preparatory work for certification audit are underway.

The mission, goals, objectives and development strategy of the university are available on the website of the university, on the AVN information platform, in the StudTimes newspaper, the library, as well as in the departments and faculties.

The activities of the EEC in the framework of institutional accreditation showed the orientation of Osh Technological University named after M.M. Adyshev on the development of strategic, tactical and operational planning of the activities of the university, ongoing work on monitoring and corrective actions.

Constant work to develop the corporate culture of university employees, events to increase corporate culture among students are going-on process.

Strengths:

- *availability of an implemented and realized university development strategy and its compliance with the national priorities of Kyrgyzstan;*
- *availability of university quality assurance policy;*
- *accessibility and extensive discussion of the university development strategy available at the university.*

Weak sides:

- *the analysis of existing risks is not in a sufficient level in the development strategy of the university;*
- *the absence of indicative implementation in the university development strategy;*
- *low degree of employers, graduates and other stakeholders involvement in the development strategy discussion of the university*

Members of the expert committee recommend:

- *the developed strategy for the development of the university requires substantial improvement with the indication of specific target indicators' of development;*
- *to activate the work on the implementation of the principles of corporate governance and corporate culture;*

- to expand the involvement of external stakeholders in the development of the mission and the university strategic plan of the development and to ensure their representativeness;
- development of planning activities of the university through educational processes, improvement the plans and educational programs for the development;
- to intensify the certification process of QMS audit.

The EEC underlines that according to 1 criterion of this standard the university has a strong position, according to 1 it has a satisfactory position and according to 3 criteria it implies improvements.

6.2 Standard “Leadership and Management”

Osh University of Technology leads its activities in accordance with the Charter, the university is registered with the Ministry of Education and Culture of the Kyrgyz Republic of 20.03.2000, Order No. 140/1 (reg. No. 53 "G"). The educational institution was registered in the Osh Regional Department of Justice as a legal entity on February 27, 1991, and re-registered on April 5, 2000 (state registration certificate: No. 25980-3306 UE of the PIU, No. 006138, OKPO 05709915, SOATO 4170640100000). Also, the university is guided by the normative documents of the Ministry of Education and Science, internal regulations and rules for the organization of higher educational institutions.

The university has an approved organizational structure that corresponds to the goals and objectives of an ongoing development strategy.

At the time of visiting Osh State Technical University named after M.M. Adyshev at the university carried out active work on preparing for the introduction of quality management system standards and the certification of audit.

The rector of the university is appointed by order of the Prime Minister of the Kyrgyz Republic based on the results of the ongoing election procedure. The highest collegial body of management is the Academic Council, which consists of all stakeholders - the administration of the university, teaching staff, representatives of student self-government.

University administration is carried out:

- by the rector of the university;
- by Vice Rector on Academic Affairs;
- by Vice-Rector on Science and Innovations;
- by Vice-Rector on external relations and development;
- by Vice-rector on the state language.

The Scientific Council of Osh Technological University is the elective supreme body of the university governing; headed by the rector of the university; consists of 48 members (Appendix 4.1. The members of the Academic Council of Osh Technological University named after M.M. Adyshev). The Academic Council of Osh Technological University is formed in accordance with the Charter of Osh Technical Management, approved by ESM KR (order No. 140/1 of 03.20.2000, reg. No. 53 "G") and the “Regulations on the Academic Council of the Higher Educational Institution of the Kyrgyz Republic”, approved by the Decree of the Government of the Kyrgyz Republic No. 346, May 29, 2012.

Also, the university has relevant departments, educational and methodological councils, collegial governing bodies of faculties (academic councils of faculties, educational methodological councils of faculties, student self-government bodies). The structure of Osh TU also includes: university administration, head of education quality department, educational and methodological councils, scientific and technical council, 3 institutes, head of library, department heads, deans of 7 faculties, heads of 35 departments, accounting, lawyer, office, archive, department for educational work and social development, administrative part and medical center.

Structural divisions of the university in organizing their activities are led by the approved regulations on departments, work plans. Employees of structural units are guided by approved job descriptions, internal regulations and other provisions of the university.

The university's quality management system supposes the introduction of corporate governance principles. In the frame of the QMS introduction at the university, regulatory documents and procedures that comply with the provisions of ISO standards are at the development and improvement stage. Monitoring of the activities of collegial governing bodies is carried out on a systematic basis, internal audit work is regularly organized. The university has developed a number of management provisions for providing documents to ensure the management of educational, scientific and non-educational activities, as well as the Code of Honor for teaching staff and staff, the Code of Honor for Students, etc.

The university has established close ties of cooperation with educational and manufacturing organizations of Kyrgyzstan (there are about 40 cooperation agreements). In order to improve the quality of education large-scale use of network technologies, information educational and telecommunication networks has been ensured at the university.

The university regularly carries out satisfaction monitors among teaching staff and students through the internal information system AVN. The accessibility and visibility of the administration and collegial governing bodies activities of the university is ensured by providing relevant information to all stakeholders through various communication channels (Internet, internal information system, social networks, stands, etc.).

The external expert committee notes a sufficient level of development of the corporate culture of workers.

Strengths:

- *the availability of an approved functional structure of the university allowing to implement a development strategy;*
- *a sufficient level of development of the corporate culture of the teaching staff of the university.*

Weak sides:

- *the lack of an implemented and certified quality management system of the university;*
- *the lack of implemented principles of corporate governance of the university;*
- *low level of management of university activities using a process approach;*
- *insufficient level of management development through planning the improvement of educational programs.*

Experts recommend:

- *improve the system of risk assessment and identification of ways to reduce them;*
- *develop and implement a system of corrective and preventive actions;*
- *to compile the work plans of the structural units and the university budget in line with the approved university development strategy;*
- *to activate work on improving the AVN IS for electronic document management modules, strategic planning modules (including the teaching staff rating, departments, faculties);*
- *to provide training courses for senior and middle managers in the field of administration in education, risk management, etc.*

The EEC notes that 1 position is strong, according to 9 criteria of this standard, the university has satisfactory positions and 6 criteria are supposed improvement.

6.3 Standard "Information management and reporting"

Automation of the educational process organization management is provided by the university's "AVN" informational system that includes modules - the academic department, the students' human resource department, the human resource department of employees, the dean's office, department, accounting, etc.; there is an electronic journal. The internal information system AVN has the ability to accumulate information on the movement of students from the moment of entering the university until its completion and the issuance of a diploma.

IS AVN has the following reporting forms - Reports of the admission committee; Reports of the human resource department of employees; Reports from the students' human resource

department; Reports of dean; Accounting reports; Educational portal reports; Testing reports; Reports of questionnaire.

In the educational portal of the university teaching staff place their methodical materials of disciplines and additional information. Information technologies are being introduced into the educational process, and long-distance learning technologies are being developed. In the classrooms there are technical training tools, such as interactive whiteboards, multimedia projectors; there are electronic filmstrips (animation, audio and video clips, interactivity elements), virtual laboratories, testing systems, electronic textbooks and training courses.

In order to improve the quality of educational services provided by correspondence courses, long-distance technologies are being introduced at the university by means of IS AVN. Available in the university, IS AVN has the following functionality - SMS chat (on-line / off-line); webinar; file sharing; testing system; e-portfolio of teaching staff.

In order to provide feedback at the university, management meetings with students and the university administration members are regularly held, and the questionnaire "The teacher through the eyes of students" is conducted whose results are taken into account in the teachers' rating.

The university has a trade union that includes all full-time university teachers, there is a student council. The leadership of the trade union and the student council are actively involved in resolving existing conflict situations. Internal orders of the rector, vice-rectors and heads of structural divisions are brought to the notice of the performers by means of the Comfort system. The news events of the university are enlightened by Zhashtyk TV studio on local TV channels such as OshTV, Osh Pirim, Yntymak about 30 minutes a week. The television studio "Zhashtyk" is also used in the educational process as an educational laboratory room. YouTube, Facebook, Odnoklassniki, Instagram, Osh Zhanyrygy, Kutbilim, ErkinToo, Osh Shamy, Channel 7, EIFM, MaralFM, Kabar, Akipress, Barakelde, Art-line are used as public information channels.

Strengths:

- *availability of a system for collecting, storing information about the degree of satisfaction of students with educational programs;*
- *collection and discussion of reports on the activities of structural divisions at meetings of collegial managing bodies.*

Weak sides:

- *low level of use of information technology in the collection and analysis of data in the study of the views of TS, graduates and employers;*
- *poorly conducted monitoring of the successful educational programs with the involvement of all stakeholders;*
- *the lack of a single developed and approved monitoring system for evaluating the activities of all structural divisions, EP, collegiate bodies, etc. (forms, methods, reports, procedures, etc.);*

6.4 Standard "Development and approval of educational programs"

The development of educational programs is carried out by graduating departments of the university in accordance with the approved regulations. However, members of the EEC note a low degree of participation of all stakeholders in the development of EP (all TS, students, employers and graduates). EPs are developed in accordance with the regulatory documents of the Ministry of Education and Science, model plans. Along with the EP, the university develops the expected results for each specialty that are approved by the Academic Council

Planning the educational process is carried out by scheduling the educational process, summary schedules of examination sessions and SAC and other documentation. The distribution of the pedagogical loads for teachers are carried out by the departments, each of the TS members draws up an individual work plan. Student's workload includes all types of classroom and extracurricular work. Since 2012, the ECTS system has been introduced to the university, but the calculation of the pedagogical load is carried out in hours.

The implementation of educational programs is carried out on the basis of EMCD and EMCS. There are the following types of classes at the university: lectures, laboratory, practical and seminar classes, course design (course paper), colloquiums, individual tasks, consultation, test, independent work of students, individual work with students, educational and pre-diploma practices, final qualifying work. Intermediate control is usually carried out in the form of testing.

Strengths:

- annual improvement of the educational programs content, working plans and curricula;
- participation of university teaching staff in international TEMPUS projects;
- availability of a sustainable procedure for the development and approval of the working plans and curricula of Master degree and bachelor specialties.

Weak sides:

- the lack of joint educational programs with foreign partner universities (including double-degree programs);
- low level of comparative analysis with leading foreign universities and strategic partner universities;
- planning of working plans and curricula and pedagogical loads of teachers in hours, the formal aspect of the introduction of the ECTS system

Experts recommend:

- to widen the cooperation with leading foreign and Kazakhstan universities in order to harmonize the content and development of joint educational programs;
- take measures for the further development of multilingual training of students;
- to improve the level of introduction of the ECTS principles system, including in the preparation of EP, the calculation of the teaching load.

The EEC notes that the university has a strong position on 1 criterion of this standard, satisfactory on 8 criteria and 3 criteria are supposed to improvement.

6.5 Standard "Constant monitoring and periodic evaluation of the main educational programs"

The University has organized work on monitoring the successful implementation of the educational programs. One of the main forms of monitoring conducted by the university is a questionnaire process among students and teachers.

In accordance with the approved procedure for monitoring and reconsidering the EP, the following methods are used - questioning students, graduates, teachers, parents and employers; student performance analysis; use of AVN functionality, analysis of student performance; the EP content expertise. However, systematic successful work on monitoring the educational programs is conducted at the system level, and there is no developed procedures system for the evaluation monitoring of EP.

The implemented educational programs are primarily aimed at meeting the demands of the labor market in the southern region of Kyrgyzstan. The university administration organizes meetings and discussions on the content of educational programs with a view to improving them. However, members of the EEC note that the level of cooperation and employers' involvement in the development of EPs is insufficient, and there is no experience in targeted training of specialists on specialized programs for any enterprises. Employees representatives are involved in the implementation of the educational process by employers' participation in the work of SAC, in organizing professional practices, discussing EPs, discussing competency systems of EPs, etc.

The structure and content of educational programs is updated annually, taking into account the views of stakeholders, the MPs and state standards.

Monitoring of the student performance at the university is one of the methods for analyzing the success of the EP. The analysis of progress is carried out by means of IS AVN and is discussed at the meetings of the departments, and the results of the analysis are summarized at the meeting of the Academic Council. The classroom and extracurricular teaching load of students meets the norms for calculating the pedagogical load approved by the MES KR and is

also discussed with the department, students and parents. Registration for the elective disciplines is carried out by students in the AVN system, which allows the student to form their individual trajectory in the online mode. Organized in accordance with the academic load of students extracurricular work is carried out in the form of IWS, which is not included in the main schedule. Disciplines are provided with work programs test books for all sections, as well as guidelines on the IWS. It may be noted that there is a sufficient level of preparation of tasks for special disciplines, obtaining the ways and techniques of professional thinking, skills and abilities of independent analysis.

Parents of students also have access to the IS AVN, which allows them to get acquainted with the activities of the university, the news of the university and make suggestions in real time.

All stakeholders are informed about further improvement and the changes made to the EP through the following communication channels - the website of the University (www.oshtu.kg), social networks, e-mail.

The analysis of the existing working curricula of the EP showed the presence of disciplines in the following cycles - humanitarian; socio-economic; natural science; specializations. The additional types of training available in the WPCs structure include all types of organized practices; Interim and final attestation (SEC and SAC).

Strengths:

- the available organized monitoring and updating of the content of educational programs;
- the functioning of feedback channels with all stakeholders to inform changes in educational programs.

Weak sides:

- lack of systematic work on monitoring and constant improvement of the EP with the involvement of all stakeholders;
- not perfect functioning system of collecting, accumulating and analyzing data on educational evaluation;
- insufficient ongoing work on studying changes in the requirements of the labor market and the corresponding corrective actions.

Experts recommend:

- improve the system of planning the development of educational programs and monitoring the implementation of this plan;
- widely involvement of employers and graduates in the preparation and evaluation of educational programs.

The conclusion according to the standard - 1 has a strong position, 7 is satisfactory, 2 positions suppose improvements.

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

The university has created favorable conditions for all groups of students, regardless of the language of study, the form of organization of the educational process, the special personal needs and their preferences. A student independently registering for elective disciplines chooses his own learning trajectory through IS AVN. On various specialties, students can choose from 1 to 3 different learning trajectory. Specialists are trained in the state, Russian languages, and some disciplines are offered for study in English at the university. The introduced student-centered education principles allowed us to create unique conditions for each student, contributing to the effective promotion along the chosen educational trajectory. During the formation of his/her trajectory, the student is provided with advisory assistance from his/her adviser (curator).

With the aim of analyzing the compliance of the structure and content of disciplines with student-centered education, the university discusses each discipline in the departments according to the following criteria - focus on the formation of certain professional competencies; compliance with relevant areas of science; compliance with the level of education; practice-oriented discipline; narrow focus disciplines are not allowed; disciplines that are a section of any

other course are not allowed. *At the same time, members of the EEC note the doubtfulness of the correctness of the last two criteria on analyzing disciplines.*

The analysis of open door classes visited by members of the EEC showed the presence of interactive teaching methods used by teachers, such as business games, case study analysis; "Discussion", etc., which allows to make conclusions about the wide range of teaching methods used by the teaching staff. *However, members of the EEC did not provide supporting documentation on the availability of systematic research work of teaching staff of the department in the field of teaching methods.*

Active use of innovative methods of teaching is available in IT specialties in the field of study such disciplines as Algorithmization and Programming, Programming Technologies, Database Theory, Web Technologies, etc. The traditional material provided to students is supplemented by such means as Flash presentations made with the help of CamtasiaStudio editors, FreemakeVideoConverter and i-SpringFree.

The analysis of the University EP showed the presence of critical thinking development among students in the expected results of training directions. In turn, in the teaching staff syllabus, there are IWS tasks aimed at developing critical thinking and problem solving skills.

In order to improve the skills of teaching staff, the administration organizes training courses, departments conduct mutual visits of classes, trainings are held, and there are elements of mentoring.

The university has established strong ties with universities providing similar EPs located not only in the Kyrgyz Republic (4 partner universities), but also abroad, in countries such as Russia (27 universities), the EU (2), South Korea (3), India (1) and etc.

In the frame of the analysis the quality of teaching disciplines assessing and improving the content of courses, the university introduced elements of reflection implemented through questioning students at the end of each discipline, assessing students of the quality of teaching the discipline and level of satisfaction. Also, for feedback with students, the university has established boxes for feedback and suggestions, there is a rector's block on the university website.

The choice of the form and type of independent work of students in each discipline is carried out in accordance with the specifics of the discipline, its goals and objectives, the degree of complexity and relevance, the training level of the student, the complexity of the discipline. Each student is provided with guidelines or recommendations for the implementation of independent work on paper or electronic media.

The current, interim and final control is carried out using various forms and methods of assessing students' achievements - the control is carried out orally, in writing and oral, testing, project implementation, etc. *However, members of the EEC pay attention to the excessive use of testing in the framework of interim control.* The university introduced an appeals system for students in considering their appeals.

Strengths:

- equal opportunities provided for students, incl. regardless of the study language in the formation of an individual educational trajectory aimed at the formation of professional competence;

- research in the field of methods of teaching disciplines.

Weak sides:

- the functioning level of the monitoring system on the progress of the student along the educational trajectory and the students' achievements;

- lack of private research in the field of innovative learning technologies;

Experts recommend:

- improve the system of monitoring on the students' progress along the educational trajectory and the students' achievements;

- consider the possibility of research in the field of modern teaching methods and implementation.

The EEC notes that by 1 criteria of this standard the university has a strong position, by 6 criteria it is satisfactory and by 3 it needs to be improved.

6.7 Standard "Students"

The realized policy of students' admission to Osh Technological University is carried out in accordance with the rules of admission to higher educational institutions of the MES KR (Government Decision of the Kyrgyz Republic No. 256 of 05.28.2011). The university enrolls the students for the bachelors' programs on the basis of general secondary and vocational education, to the masters' degree programs from the gradulators of bachelors' and "specialty" programs.

Citizens of the Kyrgyz Republic and people of Kyrgyz nationality who are citizens of other countries, like citizens of the Kyrgyz Republic have the right to get a higher free and paid education at OshTU on a competitive basis within state educational standards, if they get education of this level for the first time. Admission of foreign citizens to OshTU is carried out within the framework of existing interstate agreements, under agreements between educational organizations and with individual citizens.

Table 1. Student Admission Information

| 2015-2016 academic year | | | 2016-2017 academic year | | | 2017-2018 academic year | | |
|-------------------------|------------|------------|-------------------------|-----------|------------|-------------------------|------------|------------|
| Full-time | Part-time | Total | Full-time | Part-time | Total | Full-time | Part-time | Total |
| 495 | 157 | 652 | 484 | 70 | 518 | 474 | 114 | 588 |

As can be seen from the above table, there is no significant increase in enrollment at the expense of increasing in the number of part-time students.

The organization of the admission committee work and the professional orientation of applicants is carried out by the department of vocational guidance and pre-university training; by the executive secretary of the admission committee.

The university provides the training for bachelors and masters degree specialists, and additional training programs.

At the time of the visit EEC, the student body is 4928 students, of which 2472 are full-time students (including 296 on the grant) and 2456 by correspondence.

Indicators of the student body by levels and forms of education for the last three years are presented in the following tables.

Table 2. The contingent of full-time students for the last 3 years

| № | Cipher | The name of direction / specialist | Number of students | | |
|---|--------|---|--------------------|-----------------|-----------------|
| | | | 2015-16 ac.year | 2016-17 ac.year | 2017-18 ac.year |
| 1 | 640200 | Electrical Power Engineering and Electrical Engineering | 157 | 141 | 140 |
| 2 | 610300 | Agroengineering | 82 | 87 | 82 |
| 3 | 640100 | Heat power engineering and heat engineering | 29 | 43 | 29 |

| | | | | | |
|----|--------|--|-----|-----|-----|
| 4 | 710100 | Information study and computer facilities | 91 | 101 | 90 |
| 5 | 700200 | Information systems and technology | 58 | 54 | 56 |
| 6 | 690300 | Infocommunication technologies and communication systems | 88 | 85 | 67 |
| 7 | 531200 | Computer Linguistics | 106 | 103 | 80 |
| 8 | 630001 | Applied geology | 22 | 54 | 88 |
| 9 | 730100 | Forestry and landscape construction | - | 15 | 32 |
| 10 | 511102 | Ecology and nature management | 20 | 22 | 36 |
| 11 | 760300 | Technospheric safety | 37 | 42 | 48 |
| 12 | 610600 | Technology of production and processing of agricultural products | 56 | 78 | 71 |
| 13 | 740100 | Technology and food production from vegetable raw materials | 13 | - | - |
| 14 | 740700 | Technology and design of light industry products | 52 | 47 | 34 |
| 15 | 570700 | The art of costume and textiles | 81 | 62 | 58 |
| 16 | 630000 | Applied geology | 67 | 26 | - |
| 17 | 570020 | Design | - | 31 | 55 |
| 18 | 720100 | Chemical Technology | 15 | 12 | 13 |
| 19 | 580500 | Business Information Study | 15 | - | 19 |
| 20 | 580700 | Business Management | 21 | 30 | 25 |
| 21 | 531500 | Regional studies | - | - | 16 |
| 22 | 540200 | Social work | 22 | 33 | 25 |
| 23 | 580100 | Economics | 263 | 169 | 103 |
| 24 | 580600 | Logistics | - | - | 14 |
| 25 | 580200 | Business Management | - | 18 | 12 |
| 26 | 710300 | Applied Information | 163 | 180 | 180 |

| | | | | | |
|----|--------|--|-----|-----|-----|
| 27 | 540501 | Vocational training | 49 | 57 | 52 |
| 28 | 570021 | Interior and equipment | - | 37 | 60 |
| 29 | 510200 | Applied Mathematics and Information Study | 59 | 38 | 41 |
| 30 | 750002 | Construction of railways and transport tunnels | 30 | 26 | 12 |
| 31 | 750500 | Building | 299 | 248 | 191 |
| 32 | 620101 | Applied Geodesy | 15 | 14 | - |
| 33 | 750200 | Design of Architectural Environment | 192 | 171 | 100 |
| 34 | 750100 | Architecture | 202 | 216 | 172 |
| 35 | 750400 | Town planning | 42 | 32 | 27 |
| 36 | 620200 | Land management and cadastre | 16 | 15 | 14 |
| 37 | 670200 | Exploitation of transport and technological machines and complexes | 12 | - | - |
| 38 | 670300 | Technology of transport processes | 151 | 148 | 146 |
| 39 | 570400 | Design | 102 | 119 | 100 |
| 40 | 640200 | Electrical Power Engineering and Electrical Engineering | 14 | 16 | 25 |
| 41 | 610300 | Agroengineering | - | 9 | 13 |
| 42 | 700200 | Information systems and technologies | 11 | 12 | 10 |
| 43 | 690300 | Infocommunication technologies and communication systems | - | - | 10 |
| 44 | 511102 | Ecology and nature management | - | - | 9 |
| 45 | 610600 | Technology of production and processing of agricultural products | - | - | 8 |
| 46 | 710300 | Applied Information | - | 8 | 15 |

| | | | | | |
|----|-----------|--|----|----|----|
| 47 | 510200 | Applied Mathematics and Information Study | 12 | 8 | 14 |
| 48 | 750500 | Building | - | 12 | 14 |
| 49 | 520500 | Cartography and Geoinformation | 8 | 7 | 29 |
| 50 | 544319 | Information Study and programming technology | 9 | 24 | 21 |
| 51 | 530793 | Construction (TEMPUS MAPREE No. 530793) | 10 | 27 | 16 |
| 52 | 670300 | Technology of transport processes | | 2 | |
| 53 | 552101.02 | Exploitation of transport and technological machines and equipment service (by branches) | 15 | - | - |
| 54 | 552102.02 | Traffic organization and safety | 35 | - | - |
| 55 | 550401.01 | Communication networks and communication systems | 33 | - | - |
| 56 | 552801.04 | Computer software and automated systems | 48 | - | - |
| 57 | 553201.02 | Search and exploration of groundwater and engineering and geological surveys | 22 | - | - |
| 58 | 650002.04 | Emergency protection | 17 | - | - |
| 59 | 560402 | Technology of production and processing of agricultural products | 14 | - | - |
| 60 | 620006.01 | The art of costume and textiles | 23 | - | - |
| 61 | 550801.01 | Biotechnology | 16 | - | - |
| 62 | 553501.01 | Environmental protection and rational use of natural resources | 10 | - | - |
| 63 | 510201 | Applied Mathematics and Information Study | 24 | - | - |
| 64 | 540203 | Information | 24 | - | - |

| | | | | | |
|------------------------|-----------|--|---|--|--|
| 65 | 540501 | Professional training (by branches) | 16 | - | - |
| 66 | 650003 | Applied Information (in an economics) | 12 | - | - |
| 67 | 521603 | Finance and credit | 56 | - | - |
| 68 | 521604 | Accounting, analysis and audit | 52 | - | - |
| 69 | 520501.02 | Translation and translation studies | 28 | - | - |
| 70 | 521502 | State and governmental management | 11 | - | - |
| 71 | 620001 | International Relations | 14 | - | - |
| 72 | 551701.01 | Power Stations | 22 | - | - |
| 73 | 551701.03 | Power supplying (by branches) | 26 | - | - |
| 74 | 560801.02 | Electrification and automation of agriculture | 24 | - | - |
| 75 | 521701.02 | Design of Architectural Environment | 59 | 37 | - |
| 76 | 550101.02 | Industrial and civil engineering | 40 | - | - |
| 77 | 550101.09 | Building Design | 50 | 27 | - |
| Total on Osh TU | | | 3382 Of them on grant study 1158 | 2743 Of them on grant study 822 | 2472 Of them on grant study 696 |

Table 3. The contingent of part-time students for the last 3 years

| № | Cipher | The name of direction / specialist | Number of students | | |
|---|--------|--|--------------------|--------------------|--------------------|
| | | | 2015-16 ac.year | 2016-17 ac.year | 2017-18 ac.year |
| 1 | 640200 | Electrical Power Engineering and Electrical Engineering | 157 | 306 | 272 |
| 2 | 610300 | Agroengineering | 94 | 74 | 106 |
| 4 | 710100 | Information study and computer facilities | 14 | 13 | - |
| 5 | 700200 | Information systems and technologies | - | - | 19 |

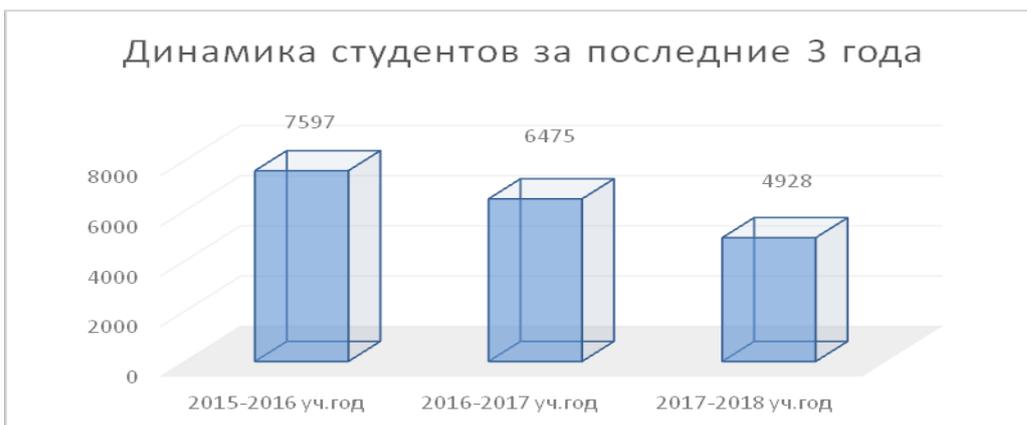
| | | | | | |
|----|-----------|--|-----|------|-----|
| 6 | 690300 | Infocommunication technologies and communication systems | 111 | 125 | 92 |
| 8 | 630001 | Applied Geology | - | - | 36 |
| 14 | 570700 | The art of costume and textiles | 83 | 72 | 40 |
| 16 | 720100 | Chemical Technology | - | 15 | 37 |
| 17 | 580500 | Business Information Study | - | - | 29 |
| 18 | 580700 | Business Management | 57 | 89 | 122 |
| 20 | 540200 | Social work | - | - | 19 |
| 21 | 580100 | Economics | 897 | 1050 | 550 |
| 23 | 580200 | Management | 13 | 10 | - |
| 24 | 710300 | Applied Information | 106 | 79 | 30 |
| 27 | 510200 | Applied Mathematics and Information Study | 39 | 75 | 101 |
| 28 | 750002 | Construction of railways and transport tunnels | 21 | 18 | 5 |
| 29 | 750500 | Building | 387 | 512 | 560 |
| 34 | 620200 | Land Management and Cadastres | - | - | 366 |
| 35 | 670300 | Technology of transport processes | 195 | 281 | 72 |
| 36 | 570400 | Design | - | 25 | - |
| 37 | 521600 | Economics | 53 | - | - |
| 38 | 552101.01 | Automobiles and cars industry | 19 | - | - |
| 39 | 552101.02 | Exploitation and of transport and technological machines and equipment service (by branches) | 42 | 22 | - |
| 40 | 552102.01 | Organization and management of transport (by type) | 36 | 39 | - |
| 41 | 552102.02 | Traffic organization and safety | 210 | 99 | - |
| 42 | 550201.01 | Management and information in technical systems | 14 | 14 | - |
| 43 | 550401.01 | Communication networks and communication systems | 76 | 31 | - |
| 44 | 552801.01 | Computers, complexes, systems and networks | 56 | 25 | - |
| 47 | 553201.02 | Search and exploration of groundwater and engineering geological survey | 23 | 24 | - |
| 49 | 650002.04 | Emergency protection | 72 | 45 | - |
| 55 | 553501.01 | Environmental protection and rational use of natural resources | 51 | 23 | - |
| 56 | 553901.01 | Technology of clothing | 35 | 15 | - |
| 61 | 510201 | Applied Mathematics and Information Study | 53 | 28 | - |

| | | | | | |
|----|-----------|---|-------------|-------------|-------------|
| 62 | 540203 | Information Study | 61 | 36 | - |
| 63 | 540501 | Vocational training (by branches) | 26 | 14 | - |
| 64 | 521607 | Economics and enterprise management (by branches) | 50 | 19 | - |
| 65 | 650003 | Applied Information Study (in economics) | 67 | 26 | - |
| 66 | 521603 | Finance and Credit | 215 | 100 | - |
| 68 | 521604 | Accounting, analysis and audit | 223 | 110 | - |
| 69 | 521501 | Management organization | - | 26 | - |
| 73 | 521502 | State and Municipal Administration | 73 | 39 | - |
| 74 | 620001 | International relations | 53 | - | - |
| 77 | 551701.02 | Electric power systems and networks | 99 | 53 | - |
| 78 | 551701.03 | Power supply (by industry) | 105 | 44 | - |
| 80 | 560801.02 | Electrification and automation of agriculture | 92 | 54 | - |
| 82 | 550101.02 | Industrial and civil engineering | 165 | 84 | - |
| 84 | 550101.10 | Expertise and real estate management | 17 | - | - |
| 85 | 550102.02 | Highways and airfields | 40 | 18 | - |
| 86 | 511100 | Ecology and nature management | 2 | - | - |
| 87 | 521600 | Economics | 13 | - | - |
| | | Total at OshTU | 4215 | 3732 | 2456 |

Thus, there has been a significant reduction in the number of students in both full-time and part-time education over the past 3 years.

Table 4. Students' dynamics at Osh TU for the last 3 years

| | Total number of students for the last 3 years | | |
|--------|--|--------------------------|--------------------------|
| | 2015-2016 ac.year | 2016-2017 ac.year | 2017-2018 ac.year |
| Osh TU | 7597 | 6475 | 4928 |



Picture 1. Students' dynamics at Osh TU for the last 3 years

The administration of the university explains the reduction in the number of students by the transition from the training of “specialists” (the term of study is 5 years) to the preparation of “bachelors” (the term of study is 4 years). In 2016, the simultaneous release of full-time education (bachelor’s and specialists’s) was carried out; in 2017, the simultaneous release of correspondence courses (bachelor’s and specialists) was carried out.

At Osh University of Technology, students are regularly questioned: “Through the eyes of students”, “About the course of the educational process and examination session”, “On the organization and realization of the SAC” (taking the state examinations and protecting graduation qualification works), as well as monitoring the “Assesing of students' knowledge”. The results of the conducted sociological studies are analyzed and discussed at the meetings of departments, the Academic Council. Students' achievements are taken as the basis for analyzing the quality of educational services in determining the quality of education, expressed in terms of academic performance.

Table 5. Information about assessment of students' knowledge

| № | Number | The name of courses and specialties | 2015-16 Academic year | 2016-17 Academic year | 2017-18 Academic year |
|-----------|---------------|---|------------------------------|------------------------------|------------------------------|
| 1 | 690300 | Info-communication technologies and communication systems | 96,5 | 98,5 | 100 |
| 2 | 710100 | Information study and computer facilities | 94,7 | 96,8 | 100 |
| 3 | 710200 | Information systems and technologies | 93,5 | 97,2 | 99,8 |
| 4 | 531200 | Computer Linguistics | 99,1 | 100 | 100 |
| 5 | 750500 | Building | 91,2 | 95,9 | 98,7 |
| 6 | 6 | Design of Architectural Environment | 92,4 | 94,5 | 96,8 |
| 7 | 750100 | Architecture | 93,6 | 97,3 | 98,5 |
| 8 | 750002 | Construction of railways and transport tunnels | 92,5 | 96,4 | 97,8 |
| 9 | 640200 | Electrical Power Engineering and Electrical Engineering | 93,4 | 95,1 | 97,8 |
| 10 | 610300 | Agroengineering | 98,6 | 98,9 | 99,1 |
| 11 | 640100 | Heat power engineering and heat engineering | 99,5 | 100 | 100 |

| | | | | | |
|----|--------|--|-------------|-----------|-------------|
| 12 | 580100 | Economy | 100 | 100 | 98,7 |
| 13 | 540200 | Social work | 96,5 | 99,7 | 100 |
| 14 | 580600 | Logistics | 97,5 | 96,5 | 93,8 |
| 15 | 580500 | Business Information Study | 96,5 | 98,5 | 99,8 |
| 16 | 580700 | Business Management | 94,5 | 97,9 | 98,7 |
| 17 | 531500 | Regional studies | 93,8 | 96,8 | 99,8 |
| 18 | 510200 | Applied Mathematics and Information Study | 98,7 | 100 | 100 |
| 19 | 710300 | Applied Information Study | 98,5 | 100 | 100 |
| 20 | 550800 | Vocational training | 94,6 | 99,8 | 98,7 |
| 21 | 570021 | Interior and equipments | 92,2 | 93,8 | 97,1 |
| 22 | 610600 | Technology of production and processing of agricultural products | 99,6 | 100 | 100 |
| 23 | 720100 | Chemical Technology | 94,5 | 98,6 | 98,8 |
| 24 | 740700 | Technology and design of light industry products | 100 | 100 | 99,1 |
| 25 | 570700 | The art of costume and textiles | 100 | 97,1 | 99,5 |
| 26 | 760300 | Technospheric safety | 98,6 | 99,1 | 95,1 |
| 27 | 520800 | Ecology and nature management | 96,5 | 97,9 | 98,8 |
| 28 | 520800 | Forestry and landscape construction | 97,8 | 99,8 | 98,1 |
| 29 | 570020 | Design | 99,8 | 100 | 95,7 |
| 30 | 630001 | Applied geology | 98,8 | 99,1 | 97,8 |
| 31 | 670300 | Technology of transport processes | 96,7 | 98,5 | 99,5 |
| 32 | 570400 | Design | 92,4 | 98 | 98,5 |
| | | Total for the University | 96,3 | 98 | 98,5 |

As shown in the above table, student performance over the past 3 years remains stable, there is a slight increase compared with the 2015-2016 academic year.

University students participate in academic mobility programs in accordance with existing international agreements with countries of China, Germany and Korea.

Table 6. The number of the participant students in academic mobility

| Type of mobility | 2015-2016 | 2016-2017 | 2017-2018 |
|------------------|-----------|-----------|-----------|
| Students | | | |
| Internal | 17 | 27 | 36 |
| External | | | 6 |
| Masters | | | |
| Internal | | 4 | 2 |
| External | | - | - |

Analysis of quantitative indicators of academic mobility of students shows a significant increase in external academic mobility over the past 2 years.

In order to develop career growth of students at the university in 2004, the career center of OshTU was created that was the winner of the contest conducted in 2012, by the EDNET Educational Association was recognized as "The Best Career Center - 2012" and awarded 1st place among Kyrgyz universities.

The center provides consulting support the students and graduates, conducts seminars, master classes, etc. It implements purposeful work to promote and monitor the employment of graduates.

Table 7. Information on the employment of graduates (full-time education)

| Level of specialty of full-time department | 2014-2015 | | | 2015-2016 | | | 2016-2017 | | |
|--|---------------------|----------------------|---------------|---------------------|----------------------|---------------|---------------------|----------------------|---------------|
| | Number of graduates | Of them are employed | Employment, % | Number of graduates | Of them are employed | Employment, % | Number of graduates | Of them are employed | Employment, % |
| Bachelor | 539 | 253 | 46,9% | 555 | 297 | 53,5% | 566 | 329 | 58,1% |

OshTU students annually participate actively in the Regional Student Olympiad on subjects.

Table 8. Results of the Regional Student Olympiad in subjects (2015-2017)

| № | Regional Student Olympiad (RSO) | Total number of participants | Number of participants, are taken 1 st place | Number of participants, are taken 2 nd place | Number of participants, are taken 3 rd place |
|----|---|------------------------------|---|---|---|
| 1. | 2015г., IV RSO (Osh KUU) | 140 | 8 | 12 | 16 |
| 2. | 2016г, V RSO, (Batken State University) | 122 | 6 | 16 | 21 |
| 3. | 2017г., VI RSO, (Djalal Abad UEE) | 79 | - | 11 | 6 |
| 4. | 2018г., VII RSO, (OHPI) | 89 | 6 | 7 | 3 |

In 2017 at the VI Republican Olympiad, a student of group E (BEJA) -14 OshTU Bekmurzaeva Aymerim took the 3rd place on accounting, analysis and audit among universities of the Kyrgyz Republic.

In 2017, students of OshTU Biymamat uulu Ulankadyr g.EiP-14, Avazbek uulu Akbura g.EiP-14 Anarbaev Ernst g.GSMP-14 participated in the National Olympiad on Integrated Water Resources Management in Central Asia, organized on the basis of the KRSU by the Kazakh-German University, as a result Ernst Anarbaev passed the third round of the Olympiad, recognized one of the top 10 students on the water issue.

A student of the Energy Faculty of the EOJET-16 group, Maxsyrov Abdulaziz, was awarded a diploma for the best scientific report at the International Forum of Students, Master Students and Young Scientists, organized by the Kyrgyz-Russian consortium of technical universities.

The student of the group GSM-14 Eldiyar uulu Adilet has taken the 1st place in the Republican essay “Intellectual Property – by Student’s Eyes”, organized by the State Service of Intellectual Property and Innovation under the Government of Kyrgyzstan (Kyrgyzpatent) in October 2017. Awarded with a cash prize and a diploma.

Strengths:

- the availability of an adequate policy of forming of students contingent;

- the availability of functioning student government bodies and clubs of interest.

Weak sides:

- insufficient level of development of academic mobility of students, limiting the number of partner universities;
- poor orientation of educational programs content to the requirements of professional certification agencies;
- an insufficient percentage of students participating in external and internal academic mobility;

EEC members recommend:

- to work on the organization of cooperation of the university with other educational organizations and national centers of ENIC / NARIC in order to ensure comparable recognition of qualifications, professional certification of students in accordance with the Lisbon Recognition Convention;
- to improve the content of the EP with regard to the requirements of certification agencies (including foreign agencies);
- to activate the work on the academic mobility of students and the invitation of students and undergraduates from abroad;
- to improve the system of support and monitoring of students in the framework of employment and career growth;
- to expand the work spectrum of the information technology use in the educational process (including the MEP).

The EEC notes that according to 1 criterion of this standard, the university has a strong position, according to 6 criteria it is satisfactory and according to 5 criteria it implies improvements.

6.8 Standard "Teaching staff"

The teaching staff of the University carries out its activities in accordance with the labor code of the Kyrgyz Republic, the University Charter, individual labor contracts. At the time of the EEC visit to the university, the total number of workers was –772 people, of which the teaching staff is - 326, of whom the teachers are 163, the senior teachers are 109; candidates of science - 142; Doctors of Sciences - 21; AMP - 104; TSS -117. The total number of employees of the technology college is 155 employees and the Uzgen Institute of Technology and Education is 76 employees.

Table 9. Information about employees (total number, including teachers, senior teachers, assistant professors, professors, including candidates of sciences, doctors of science, AMP, TSS)

| | Total number | of them | | | | | | AMP | AE | TSS |
|--|--------------|----------|-----------------|------------------------|----------------------------|--------------------|---------------------|-----|-----|-----|
| | | Teachers | senior teachers | Assistant professors | | Professors | | | | |
| | | | | candidates of sciences | Assistant professors OshTU | doctors of science | Professors of OshTU | | | |
| | 772 | 163 | 109 | 106 | 36 | 19 | 2 | 104 | 116 | 117 |

Analysis of the quantitative and qualitative number of university employees shows a significant number of AMP and TSS workers. The share of the faculty with academic degrees and titles of the total number of full-time teachers is 41.2%. The teaching staff with university experience more than 10 years consists of 63%.

The training and support staff includes junior service personnel - 110 people, administrative and management personnel - 77 people. The university has: 1 - Honored Scientist; 3 - Honored Education Worker of the Kyrgyz Republic; 2 - Honored Worker of the Geological Service of the Kyrgyz Republic; 1 - Academician of the Kyrgyz Republic; 4 - academicians and correspondents of branch academies; 80 - OshTU teachers received the badge "Excellence in National Education of the Kyrgyz Republic".

In order to increase the number of employees with advanced degrees, the administrative of the university is working to encourage and support teachers in obtaining academic degrees.

Table 10. Dynamics of these defense by teacher

| № | Years | Total dissertations defended | Of them | |
|---|---------------|------------------------------|----------|-----------|
| | | | Doctoral | Candidate |
| 1 | 2014 | 8 | 1 | 7 |
| 2 | 2015 | 9 | 2 | 7 |
| 3 | 2016 | 7 | 1 | 6 |
| 4 | 2017 | 8 | 1 | 7 |
| | Total: | 32 | 5 | 27 |

32 dissertations for candidates and doctors of science were defended by university employees for the last 4 years, which ensures a positive growth of specialists with advanced degrees.

Joint work is carried out with the heads of departments, on the selection and placement of personnel on the basis of an assessment of their qualifications, personal qualities, and monitoring the compliance of the workers' qualifications to the requirements of their positions at the university departments. The organization of certification of university employees, its methodological and informational support was organized.

The constant work on the organization of advanced training courses is carrying out at the university:

1. **In 2015, 324 employees completed the advanced training courses.** On the topic: "Modern technologies of teaching in higher education; Bologna process and credit technology; the use of ICT in the educational activities of the university "; on the topic: "Distance learning in higher education"; courses on computer graphics program AutoCAD.

2. **In 2016, 349 employees completed the advanced training courses.** On the topic: "New technology of education in the system of vocational education"; on the topic: "Improvement and features of the use of the AVN information system in the educational process of Osh Technical University"; courses on the computer graphics program AutoCAD; on the topic: "Competence-based approach in the system of professional education of universities of the Russian Federation; economic development; on the topic: "Theoretical basis of the economy in transferring period."

3. **In the 2017-18-year -338 employees completed the advanced training courses.** On the topic: "Innovative technologies in higher education. The peculiarities of IS AVN in the educational process usage. Electronic learning system (e-Learning) and its peculiarities; on the topic: "Information technology in education" 30-hour program; on the topic: "The formation of teacher in the condition of the credit technology"; The joint trade union committee of Osh Technical University represents the interests of employees, teachers and students in the field of labor, life, leisure and culture.

The joint trade union committee of Osh TU consists of 2024 members.

Strengths:

- the availability of a visible personnel policy of the university based on the competitive replacement of vacant positions;
- the accessibility of university administration for teaching staff members.

Weak sides:

- an increase in the average age of teaching staff of departments, low level of involving young professionals;
- insufficient support system for young university specialists.
- insufficient level of academic mobility of teaching staff of departments.

Experts recommend:

- to update and add the available information of the TS departments posted on the university website;
- to increase the number of enterprises' practitioners in involving to the educational process;
- to activate the work in increasing the number of teaching staff participation in academic mobility programs.

The EEC notes that by 8 criteria it is satisfactory and by 4 criteria it implies improvements.

6.9 Standard “Scientific Research work”

The policy of OshTU on the development of scientific research work is defined in the plans of the university strategic development, the work plans of the university departments and it reflected in the mission and vision of the university.

By the administration and departments of the university the corresponding plans for the realization of the strategic goals of research activities development are implemented.

At Osh Technological University annually the Regional Student Scientific and Practical Conference “Science and Student” is held, they devoted to various themes. On April 24, 2016, the Regional Scientific-Practical Conference “Science and Student-2016” was held, about 806 students participated and made reports at 39 sections. In 2017, on April 26, the Regional scientific-practical conference “Science and Student-2017” was held, about 882 students made reports at 45 sections. The students of OshTU annually actively participate in the Regional Student Olympiad (RSO), as well as in various exhibitions, competitions, and conferences.

Table 11. The information about the students’ participation in conferences, contests and competitions

| № | Acad emic years | Number of students | | | | | |
|---|-----------------------|------------------------------|---------|--|---------|----------------------------------|---------|
| | | In university conferences | Winners | In conferences of other universities | Winners | In competitions, olympiads | Winners |
| | 2015 | 630 | 139 | 33 | 9 | 148 | 39 |
| | 2016 | 705 | 143 | 42 | 12 | 129 | 47 |
| | 2017 | 802 | 148 | 51 | 15 | 84 | 21 |

As shown in the table about the students’ participation in conferences, contests and competitions that it shows a positive trend in the growth of the student’s participation activity of in scientific events. However, the students’ participation in the performance of the students’ research works over the past 3 years has decreased.

Table 12. Information on the participation of students in SRWS

| № | Academic years | Student participation in SRW | | |
|---|----------------|---|---|--|
| | | Number of students Full-time education | Number of students, participated in SRW | In % full-time education contingent |
| | 2015 | 3382 | 663 | 19,6 |
| | 2016 | 2743 | 747 | 27,2 |
| | 2017 | 2472 | 853 | 34,5 |

In the frame of the research activities of the teaching staff, there are received security documents.

Table 13. Patent and licensed work of the faculty of Osh Technical University for 2015-2017

| № | Название разработки | № патента или авторского свидетельства | Дата выдачи | ФИО автора (ов) |
|---|---|--|---------------|--|
| 1 | Calculation of drainage trays of highways taking into account of their real functioning | Author's certificate of the Kyrgyz Republic No. 2655 | 24.03.2015 | Marufiy A.T., Abdujabarov A.H., Jalaldinov M.M. |
| 2 | Determination of the ground bulk weight by a seismometrical method. | Author's certificate of the Kyrgyz Republic № 2629 | 03.06.2015 | Jalaldinov M.M |
| 3 | Investigation of seismic resistance of load-bearing elements of reinforced concrete columns and walls in emergency situations. | Author's certificate of the Kyrgyz Republic №2660 | 21.07. 2015г. | Seitov B.M. Ordobaev B.S. |
| 4 | Two-level water activator (DAV-1) | Author's certificate of the Kyrgyz Republic №1769 | 31.07. 2015г. | Satybaev A.T., Akimov A. |
| 5 | The production law of thermal energy on the basis of electrophysical ionization of liquids (EIL) | Author's certificate of the Kyrgyz Republic № 2187 | 25.07. 2015г. | Akmatov B.Zh.. Tashpolotov Y. |
| 6 | A device for generating effective thermal energy from liquid on the basis of electrophysical ionization (EPI) | Patent №1824 Kyrgyz patent | 29.01.2016 | Akmatov B.Zh. Tashpolotov Y. |
| 7 | Mathematical modeling of an infinite beam bending problem on a two-parameter elastic foundation with one section of incomplete contact with the base. | Kyrgyz patent Cert.№ 2450 | 31.10.2016г | Aitiev M.A. Marufiy A.T., Rysbekova E.S., Egenberdieva A.A. |

| | | | | |
|-----------|--|---|--|--|
| 8 | Calculating basis of linear transport structures on a deformable base with a local area of weakened contact interaction between them. | Kyrgyz patent Cert. №2451 | 31.10.2016r | Marufiy A.T., Tsoy A.V., Jalaldinov M.M. |
| 9 | software programs for convenient selection of water wheel parapets | Certificate № 414. Application registered in the state register №20160015.6 | July 21, 2016 | Satybaldiev A.B., Matisakov. T.K. |
| 10 | Electromechanical perforators with impact-rotary mechanism | Eurasian Patent № (21) 201501118 (13) A1 | The date of publication 31.05.17 The date of application 23.11.15 | Abdraimov E.S., Abidov A.O., Ismanov O.M. |
| 11 | «Creation of technology for obtaining thermal energy based on metal-thermal substances» | Kyrgyz patent №3201 | 18.09.2017 | Tashpolotov Y., Kydyraliev T.A., Ismanov E.M., Abdaliyev U.K. |
| 12 | Physico-chemical energy of silicon silicate » | Kyrgyz patent №2468 | 13.10.2017 | Baymuratova G.A., Omurbekova G.K. |
| 13 | Stress-strain condition of an endless slab lying on an elastic Winkler base, taking into account the influence of various longitudinal forces applied in the middle plane of the slab and incomplete contact with the base, in the form of one trench located in the central part under the slab along the Y axis. | Author's certificate №3214 | 20.10.2017r. | Marufiy A.T., Rysbekova E.S. |
| 14 | The calculation of the endless slab on an elastic base, taking into account the influence of longitudinal tensile and compressive forces in two directions along the X and Y axes and incomplete contact with the base, in the form of two trenches located under the slab symmetrically about the Y axis | Author's certificate № 3215 | 20.10.2017r. | Marufiy A.T., Rysbekova E.S., |
| 15 | Calculation of an infinite beam on a two parametric elastic base with one section of incomplete contact with the base under the action of an skew-symmetric load | Author's certificate № 3213 | 20.10.2017 | Marufiy A.T., Egenberdieva A.A. |
| 16 | Geodesic projections for geo-engineering works in mountain areas | Author's certificate №448 | 10.03. 2017 | Abjaparova D.A. |

Institute of Applied Sciences of Osh Technological University. M.M. Adyshev was founded in 2000, in its activities is guided by the Charter of Osh Technical University and is engaged in the development of scientific projects of the Education and Science Ministry on a competitive basis.

The management of the Institute of Applied Sciences (IAS) is carried out by the director, the IAS is an independent structural subdivision for leading internal organization and regulation affairs, planning scientific, production, economic, financial and other activities, determining the main future development. The Institute is funded on a competitive basis by the Education and Science Ministry of the Kyrgyz Republic.

There are 3 full-time employees at the IAS; annually on subcontracts temporary labor groups of 50–100 or more people are recruited who do scientific projects.

Table 14. Indicators for the SRW IAS for 2015-2017

| № | Name of the units on IAS | Years | | |
|----|--|--------------|---------------|---------------|
| | | 2015 | 2016 | 2017 |
| 1. | The total number of performed topics on the IAS | 1 | 3 | 4 |
| 2. | Of them: number of environmental topics | | 2 | 2 |
| 3. | Of the total number of topics: - applied - fundamental | 1 | 1 | 2 |
| 4. | Overall volume financing, thousand soms | 645,1 | 1079,0 | 1576,1 |
| 5. | Salary fund, thousand soms | 345,1 | 795,0 | 1025,0 |
| 6. | Number of employees, people | 11 | 36 | 42 |

In 2014 the execution of the Government Decree (March 23, 2012 No. 201 “On Strategic Directions for the Development of the Education System in the Kyrgyz Republic”), and an order of the Ministry of Education and Science of the Kyrgyz Republic, scientific laboratories were created at the IAS:

- research computing laboratory (the head of the laboratory is Professor Marufiy A.T., Doctor of Technical Sciences,).
- Laboratory of Climate and Land Use Problems (Head of the Laboratory, Prof. OshTU Dzhaparova Sh. Dzh.Candidate of Chemical Sciences) since 2017.

The scientific laboratories will ensure the activation of the research work of the university teaching staff on science issues and the introduction of innovative approaches, the interrelation of all levels of education, and improvement of staff professional qualification on relevant issues.

The results of research and development on the basis of extra-budgetary funding (grants, economic agreements, etc.):

1. By order of Tuzbel-Tash LLC, a techno-working project was developed for working out plots No. 17 and 21 of Sary-Tash shell limestone deposits. The project received an expert opinion on environmental and industrial safety and conservation of mineral resources, protected at a meeting of the commission of the State Agency for Geology and Mineral Resources under the Government of the Kyrgyz Republic (department of GM, responsible Docent Kaldybaev N.).

2. By the order of LLC "Moldosh" preliminary geological and exploration work was carried out at the granodiorite deposit.

3. Experimental project of compaction of subsiding soils by the hydraulic blasting method for the object "Reservoirs for water in the Ken-Say massif in Osh" LLC "Musai" 2015.

4. Innovation and construction project "Compaction of loess subsiding soils base using the explosion method at the object "Water supply of the Ken-Sai residential area of the 2nd construction stage (water supply and reservoir) in Osh" LLC "Ablai" 2016.

5. Constructions of fire-prevention walls made of bricks and local ground materials for extensions to residential buildings in areas with seismicity of 9 points "LLC" "Ay Kut" 2016

6. Expert conclusion on "Establishing possible causes of damage to the structural elements of the compartment of a 60-apartment residential building No. 16 in the city of Anar, Osh city and evaluation of its current technical condition" DIA-S LLC, Osh Mayer, KR State Architecture, 2016.

7. Innovation - construction project "Installation of a soil foundation by the method of pre-soaking soils with subsequent deep explosions (hydraulic blasting method of soil compaction) for the object: Reservoirs for water under the project" Construction of engineering infrastructure Sary-Kolot area (Besh-Ui village) of the Ak-Tash rural management Karasu district of the Osh region. Water supply "LLC" "Musai" 2015

In 2016, together with LLC "Moldosh" conducted a geological study of the Shakhdar granodiorite deposit, located in the Chon-Alai district of the Osh region (responsible: N. Kaldybaev). Topographic and geodetic works were carried out on an area of 30 hectares, parameters of massif fracturing were studied, and an experienced quarry was completed with an area of 80 square meters and a depth of 6 meters. In the reporting year, field and laboratory research work was carried out in the amount of 120 thousand som.

By order of the LLC "Bozbu-Ata" in 2016, a draft reclamation of the Northern Kyzyl-Bulak coal deposit, located in village Kashka-Suu of Alay district (the amount of contractual work for 20 thousand som) was prepared.

During 2014-2015, the Grant Program on the topic of Improving the skills of scientists and engineers in Osh was realized at Osh Technical University. An application has been prepared for the Grant Training Skills Program for Scientists, organized by the CRDF Global Program and won a grant of \$ 2000). The goal of the project is to develop the professional skills of young scientists, graduate students and engineers in publishing research results and preparing applications for participation in various programs and grant competitions in the scientific and technical areas. With the help of this grant, a training seminar was held with the participation of Osh, Kyzyl - Kiya universities of the city, as well as 3 research institutes of the Southern branch of the Kyrgyz Republic National Academy of Sciences. The contingent of participants was represented mainly by graduate students and young scientists under the age of 35, the number of participants was 60 people. The grant was awarded by the CRDF Global Technology Entrepreneurship Foundation (USA, coordinator Dr. Charles Dunlap).

The University cooperates with the foundation for the support of Technology Entrepreneurship CRDF Global (USA, coordinator Dr. Charles Dunlap). The laboratory staff collaborates with the Association of Non-Profit Organizations of Tomsk Consortium of Scientific-Educational and Scientific Organizations (Tomsk, RF, Chairman O.S. Babkin).

Scientific and technical links are maintained with the Russian State Geological Survey University (MGRI-RGGRU) (rector Professor V.I. Lisov and Tomsk National Research University (rector professor P.S. Chubik). Scientific internships and joint publication of scientific papers are carried out. Cooperation agreements are signed.

OshTU annually participates in the Southern Economic Forum and works on the section "Construction and Communications". About 20 investment projects were prepared for implementation.

Table 15. Information about CRW financing

| Indications | 2015 | 2016 | 2017 |
|---|---------------------|--------------------|------------------------|
| The full amount of research funding (thousand soms): | 2519,1 | 4493,1 | 3939,8 |
| -on state budget | 645,1 thousand soms | 1079 thousand soms | 1576,100 thousand soms |
| - by contract | 40,0 | 205,0 | - |
| - University own funds | 459,9 | 521,0 | 539,3 |
| International | 914,3 | 2167,2 | 1275,0 |
| - The full amount of trip funding TS and students on research | 390,9 | 442,8 | 458,4 |
| | 68,9 | 78,1 | 88,0 |

Training the scientific and scientific-pedagogical staff at Osh Technological University (OshTU) is implemented through postgraduate department. The postgraduate department of OshTU is guided in its activities by the Regulation “On the Training of Scientific-Pedagogical and Scientific Staff in the Kyrgyz Republic” (approved by Order of the Education and Science Ministry of the Kyrgyz Republic, Higher Attestation Commission of the Kyrgyz Republic, National Academy of Sciences, November 9, 1995 No. 8c / c-3/2 ” Regulation of the Higher Attestation Commission of the Kyrgyz Republic, approved by the Government of the Kyrgyz Republic, August 22, 2012 No. 578, regulatory provisions of the Kyrgyz Republic, the Charter of Osh Technological University and other internal provisions of the university. Preparation of post-graduate students at Osh Technological University is carried out in accordance with the existing The nomenclature of specialties of scientific workers of the Kyrgyz Republic is “Approved by the Presidium of the Higher Attestation Commission of the Kyrgyz Republic on November 25, 2010 No. 8-4 / 10.NOMENCLATURE of the specialties of scientific workers.” Admission to postgraduate studies is carried out on the basis of budgetary and contractual funding for places allocated by the Ministry of the Kyrgyz Republic.

Together with the departments of the university, the Postgraduate Department of OshTU trains 23 specialties on:

- Mechanics-2
- 03 - Ecology - 1
- 05 - Technical - 10
- 06 –Forestry – 2
- 07- International relations -1
- 08 - Economy -2
- 10 - Philology – 2
- 13 - Pedagogies - 2
- 18 - Architecture - 1

Now OshTU trains 44 students, 12 of them are in full-time, 32 are in part-time education. To work on doctoral theses 16 aspirants are charge of post-graduates.

7 professors defended Doctoral dissertations in 2017 who completed postgraduate courses at Osh Technological University, a doctoral thesis was defended by 2 people. In 2018, 4 aspirants of Osh Technological University defended their Candidate thesis (Alisheva P. Artykbaeva S.), Momunov Umetbek Nasirdinovich and Baatyr uulu Altynbek got the approval for the academic degree of Candidate of Economic Sciences HAC KR in March 2018. In 2018, two doctoral students of Osh TU had pre-defense of a doctoral dissertation: Sattarova Aziza, the Head of Department “Kyrgyz and Russian Languages” for the degree of Doctor of Pedagogical Sciences and doctoral students Tanakov Nurlan Professor “TPAF” for the degree of Doctor of

Agricultural Sciences. At present 47 academic advisers supervise over the thesis works of graduate students, they are: 31 doctors, 16 candidates of science.

Table 16. Dynamics of teaching staff of Osh Technical University, defended candidate and doctoral dissertations

| № | Years | The number of teaching staff who defended their thesis | The number of teaching staff who defended their doctoral thesis |
|--------------|-------|--|---|
| 1 | 2015 | 8 | 2 |
| 2 | 2016 | 7 | 1 |
| 3 | 2017 | 7 | 2 |
| Total | | 22 | 5 |

At OshTU by the decision of the Higher Attestation Commission of the Kyrgyz Republic No. 34, 06.06.2014. (co-founders: Issyk-Kul State University named after K. Tynystanov MES KR and the Institute of Walnut and Fruit Crops, South Kazakhstan National Academy of Sciences) the Dissertation Council of K.03.14.492 is opened for the defense of PhD theses for the candidate of biological sciences in the field of: 03.02.08 - "Ecology", 06.01.11- "Plant Protection" and 06.03.02- "Forest Studies, Forestry and Forest Taxation" <http://ds.oshtu.kg/> 12 PhD theses have been defended and 10 of them approved by the Higher Attestation Commission of the Kyrgyz Republic. 5 staff of OshTU are in the list of the Council.

In November 2016, at Osh TU named after M.M. Adyshev (co-founders: Southern branch of the National Academy of Sciences of the Kyrgyz Republic, Academy of Sciences of the Republic of Tatarstan, Tajik Agrarian University named after Sh. Shotemur, Issyk-Kul State University named after K. Tynystanov) was opened the Interstate Dissertation Council D 06.16.540 for thesis defense for the candidate (Doctors) of Biological Sciences in the field of specialties: 06.01.07 - Plant Protection; March 6, 2002 - Forest science, forestry, forest management and forest inventory; 03.02.05 - Entomology; 03.02.08 - Ecology (by industry); 03.02.11 - Parasitology. <http://doctors.oshtu.kg/>. There are 3 staff members from Osh TU in this council. 1 doctoral and 8 candidate's theses were defended, and approved by the Higher Attestation Commission of the Kyrgyz Republic - 1 doctoral and 3 candidate dissertations, the rest are on the consideration of the Higher Attestation Commission of the Kyrgyz Republic.

13 scientists of Osh TU are members of dissertation councils for defending candidate and doctoral dissertations, and such scientists as Academician of the National Academy of Sciences of the Kyrgyz Republic, Dr. Sc. Professor Toktoralaliev B.A., Doctor of History, Professor B. Nurunbetov, Doctor of Technical Sciences, Professor Seitov B.M., Doctor of Economics, Docent Uzenbaev R.A. They are members of expert councils of the Higher Attestation Commission of the Kyrgyz Republic.

The Department of Science of Osh TU holds annual international, republican, regional scientific and practical conferences for teaching staff, scientific and practical student conferences, scientific and pedagogical readings for graduate students and young scientists, scientific seminars, round tables on current issues, etc. So, during 2012-2017. Osh Technical University held more than 9 conferences, including 5 international, 4 regional, 63 round tables, 66 seminars. They are:

June 8-9, 2012 the International Scientific and Practical Conference "Science, Technology and Actual Problems of Technology";

December 11, 2012 International Scientific and Practical Conference "Mountains and Climate";

October 2-3, 2014 International Scientific and Technical Conference "The current state, the directions of development of engineering equipment and technology" 2015;

November 27-28, International Scientific and Practical Conference "Innovative Technologies for Solving the Problems of Integrated Development of Mineral Resources and Sustainable Development" dedicated to the 215th anniversary of the prominent public and political figure Alymbek Datka Asan Biyulu and 100th anniversary of Academician M.M. Adyshev.

November 26, 2016, International Scientific and Practical Conference dedicated to the Year of History and Culture of the Kyrgyz Republic and the 70th anniversary of a public figure, honored teacher of the Kyrgyz Republic, Doctor of History, Professor B.A.Nurunbetova.

October 20, 2017, Republican scientific-practical conference dedicated to the 75th anniversary of the professor Sarybay Akmatovich Akmatov, the department "Construction manufacture".

Table 17. Publication activity of faculty Osh

| Indicators | 2015 | 2016 | 2017 |
|--|------------|------------|------------|
| The number of publications on the portal elibrary.ru | <u>150</u> | <u>302</u> | <u>235</u> |
| The number of publications в РИНЦ | <u>135</u> | <u>224</u> | <u>186</u> |
| The number of publications, included to the main part of РИНЦ | 0 | <u>4</u> | 0 |
| The number of articles in the scientific journals | <u>125</u> | <u>200</u> | <u>154</u> |
| The number of articles in the scientific journals included in Web of Science or Scopus | 0 | <u>2</u> | 0 |
| The number of articles included the scientific journals RSCI | 0 | <u>2</u> | 0 |
| The number of articles in the scientific journals included in the reference of HAC | <u>10</u> | <u>16</u> | <u>7</u> |
| Numbers of monographs | 0 | <u>1</u> | <u>1</u> |
| The number of articles with the participation of foreign authors | 3 | 5 | 11 |
| Average impact-factor of journals, where the articles have been published | 0,120 | 0,114 | 0,139 |

Strengths:

- *the availability among the teaching staff involved in the implementation of individual research projects and participating in projects carried out on the basis of third-party organizations;*

- *high publication activity of teaching staff in Russian scientific journals.*

Weak sides:

- *insufficient activity in investigating the researches together with foreign scientists and universities;*

- *insufficient number of articles in journals with non-zero impact factor;*

In order to improve research activities, members of the **commission recommend** the following:

- *initiate joint research projects with foreign partner universities;*

- *develop and implement an effective system for motivating the development of research and activities of teaching staff.*

The EEC notes that the university has a strong position on 1 criterion of this standard, satisfactory positions on 5 criteria, and suggests improvements on 4 criteria.

6.10 Standard "Finance"

The financial policy of Osh Technological University is aimed at the implementation of strategic plans, the mission of the university, the goals and objectives of educational programs.

At OshTU, financial planning is carried out in accordance with strategic and operational planning. Operational planning is realized by adopting the annual budget of the university at the University Academic Council. For the development and coordination of the budget of the university all stakeholders - students, teachers, heads of departments participate. Heads of structural divisions participate in the development of the budget by submitting appropriate applications for the acquisition of the required material and technical means, teachers discuss draft budgets at department meetings. One of the important conditions for the economically sustainable development of the University is an organized structure with distribution of functions and by consolidation of rights and responsibilities.

In accordance with the developed procedure of budget approval, the project is reviewed at a meeting of the Finance Committee and the Academic Council of the University. The membership of the financial committee includes university administration, heads of departments, representatives of the teaching staff. At financial committee meetings, financial risks are assessed and decisions are made that provide possible options for action. External audits are also conducted by the Territorial Division of the Accounts Chamber of the Kyrgyz Republic on Osh city, Osh, Jalal-Abad and Batken Oblasts (order No. 01-06 / 258 of September 14, 2017) by the Tax Inspectorate of MSTs Osh (order No. 1172/032 of 17.01. 2017), by the prosecution, (order "No. 4 of 01/24/2017), State Agency of Antimonopoly Regulation under the Government of the Kyrgyz Republic (order No. 16/91 of 10.10.2017), Osh City Social Fund Administration (order No. 151 of 04.10.2017.).

The main sources of funding for Osh TU are the republican budget and funds received from the provision of educational services on a fee basis. Financial sources received from research and other activities consist of an insignificant part. By the university carries out internal and external audits on an ongoing basis, a financial report is submitted to the MES KR. Financial and economic activities are carried out in accordance with the documents approved by the Ministry of Education and Science of the Kyrgyz Republic and agreed with the Ministry of Finance of the Kyrgyz Republic. All financial transactions are carried out through the treasury and approved by the rector of Osh TU.

Table 18. Planning of university expenses for school years

| Код статьи | Item of expenditure name | Academic years | | |
|------------|---|----------------|-----------|-----------|
| | | 2014-2015 | 2015-2016 | 2016-2017 |
| 2111 | Salary | 92233,2 | 104250,0 | 105000,0 |
| 2121 | Allocation to the social fund | 15910,2 | 17983,2 | 18112,5 |
| 2211 | Utility fee | 3014,1 | 6014,1 | 2600,0 |
| 2212 | Fee for community services | 1500,0 | 1500,0 | 1400,0 |
| 2213 | Premises for rent | 500,0 | 500,0 | 500,0 |
| 2214 | Hiring and keeping vehicles | 1600,0 | 1600,0 | 1600,0 |
| 2215 | Acquisition of other services | 3300,0 | 3300,0 | 2000,0 |
| 2218 | Acquire products. Food | 1000,0 | 1200,0 | 1200,0 |
| 2221 | Expenses for current repairs | 10798,7 | 8000, | 8000,0 |
| 2222 | Acquire an item for an economic purpose | 26010,0 | 18000,0 | 12000,0 |
| 2225 | Purchases security services | 250,0 | 250,0 | 250,0 |
| 223 | Utility fee | 5909,0 | 8722,8 | 7000,0 |
| 3111 | Buildings of the structure | 32200,0 | 1790,2 | 4000,0 |
| 2215 | Machinery Equipment | 18250,0 | 7039,8 | 8537,5 |
| | Total | 162025,2 | 171320,1 | 159662,5 |

The following table covers all activities of the university. At the same time, there has been a decrease in the expenditure side of the budget over the past 3 years, while the revenue part of the university budget has increased.

Table 19. University Revenue Planning

| № | Item of expenditure name | Academic years | | |
|---|--------------------------------------|-----------------|-----------------|-----------------|
| | | 2014-2015 | 2015-2016 | 2016-2017 |
| | Balance at the beginning of the year | 50042,3 | 42693,8 | 39848,2 |
| | Flow of the current year | 162432,9 | 164887,0 | 172200,0 |
| | Total | 162432,9 | 164887,0 | 172200,0 |

At the same time, the revenue part has not changed significantly over the past 3 years.

Table 20. University income

| № | Item of expenditure name | Academic years | | |
|---|--------------------------------------|-----------------|-----------------|-----------------|
| | | Actual income | | |
| | | 2014-2015 | 2015-2016 | 2016-2017 |
| | Balance at the beginning of the year | 50042,3 | 42693,8 | 39848,2 |
| | Flow of the current year | 163076,5 | 164847,4 | 168639,2 |
| | Total | 163076,5 | 164847,4 | 168639,2 |

The largest amount of budget expenditures is the staff cost payment of university employees. In 2015, the university increased salaries by 20%, in 2016 by 10%, in 2017 by 10%.

Table 21. The dynamics of wages of university staff

| № | Indicators | Academic years | | |
|---|---|----------------|-----------|-----------|
| | | 2014-2015 | 2015-2016 | 2016-2017 |
| | Average teaching staff cost at the university | 10359 | 11473 | 11929 |
| | AMP | 12728 | 15300 | 17716 |
| | AAP | 7590 | 7943 | 8290 |
| | MOII | 5316 | 5565 | 6906 |

In order to improve the material and technical base of the university, the teaching and methodological support of the university over the past 3 years has been allocated - 17,608,300 soms.

Table 22. Capital investments for the period 2014-2017. (thousand soms)

| Designation | 2014-2015 | 2015-2016 | 2016-2017 |
|---|------------------|------------------|------------------|
| Office equipment acquisition | 289,9 | 908,4 | 840,3 |
| Acquisition of other furniture and equipment | 530,8 | 549,6 | 21,2 |
| Acquisition of teaching aids, textbooks and books | 921,4 | 280,3 | 761,6 |
| Computer equipment acquisition | 1458,8 | 3128,9 | 1858,2 |
| Furniture | 3068,9 | 1904,2 | 1085,8 |
| Total | 6269,8 | 6771,4 | 4567,1 |

Strengths:

- financial sustainability of the university over the past 3 years.

Weak sides:

- weak coherence of the university's development strategy with the university's financial planning documents;
- the absence of additional financial sources of university profits, except for educational services;
- weak financial autonomy and sustainability of university structural divisions.

Experts recommend:

- to carry out work on the coordination of the strategy for the development and running financial flows;
- to increase the financial autonomy and sustainability of university structural divisions.

The EEC notes that according to 1 criterion of this standard, the university has a strong position, 5 satisfactory positions.

6.11 Standard "educational resources and student support systems"

The university's material and technical base and infrastructure meet the licensing requirements for higher education institutions. The university has educational and laboratory buildings, language centers, a multimedia information and computer center, training grounds, an electronic library, reading rooms, language laboratories, computer classes, a Students' House, gyms and playgrounds, a gym, a stadium, catering facilities, cultural aesthetic center, youth committee, career center, etc.

The university has 4 teaching and laboratory buildings, a Students' House:

- Educational and laboratory building number 1 (area 5870.3 m²);
- Educational and laboratory building № 2 (area 8406.7 m²);
- Educational and laboratory building number 3 (area of 7220.0 m²);
- Educational and laboratory building of the Technological College (area 932.0 m²);
- Students' House (area 3907 m²).

The material base, that is in full economic management (own) for the implementation of statutory goals and objectives:

- educational and laboratory buildings with an area of 42191 m²;
- total area of sports facilities - 10906 m²;
- total area of residential buildings - 3907 m²;

Table 23. Educational base of Osh Technical University

| Building | Construc- tion year | Total area of the building in m² | Training are, in m² | Carrying value, soms | in | Training faculties on specialty |
|---|--------------------------------|--|---|-------------------------------------|-----------|--|
| 1 | 2 | 3 | 4 | 5 | | 6 |
| Training campus №1 Isanov Street 81 | 1985 | 5870,3 | 5704,0 | 737200 | | All specialties |
| Training campus №2 Isanov Street 83 | 1985 | 8406,7 | 5500,0 | 737200 | | All specialties |
| Training and laboratory campus Isanov Street 81a | 2001 | 7220,0 | 4501,44 | 25796000 | | All specialties |
| Students' House, Isanov Street 86 | 1988 | 3907 | 672,0 | 346000 | | |
| Training campus Isanov Street 35a | 2010 | 932,0 | 701 | 10000200 | | All specialties |
| Health Center | 1994 | 246 | - | 90 000 | | All specialties |
| by Contract | | | | | | |
| South-Kyrgyz geological expedition, 184 Yuzhnaya Street | | 1232,0 | 724,6 | | | Applied geology |
| Kyrgyz GISR, 224 K.Datka Street | | | 80 | | | Applied geology |
| CUNR (Complex Use of Natural Resources) Nagornaya Street | | | 180 | | | Applied geology |
| Southern Center for Standardization, Certification and Licensing in Construction, 106 Zainabetdinova Street | | | 108 | | | Building |
| Pluad -2 | | | 160 | | | |
| JSC «Maksat», 3 Gogol Street | | | 108 | | | TT |
| Regional STI, Navoyi Street | | | 70 | | | TT |
| PTE -2 Gulchinskaya Street | | | 60 | | | TT |
| JSC «Argymak», Navoyi Street | | | 80 | | | TT |
| JSC «Symbat», 50 Kyrgyzstan Street | | | 54 | | | T&CD, CDT |
| Dressmaking « Ayperi» | | | 54 | | | CDT |
| Regional Tax Inspectorate, 289 Lenin Street | | | 126,0 | | | Economics |
| Financial Management, 287 Lenin Street | | | 96 | | | AIE |
| Osh regional branch of JSC «Kyrgyztelecom», 422 Lenin Street | | | 86 | | | ICTNW |
| CTS, Lenin Street | | | 46 | | | ICTNW |
| LLP "TYPM MTP 1" | | | 74 | | | CT |

In the educational process, 816 PC units are used in 34 computer rooms, that is 77% of the total number of computer equipment at the university. And besides computer rooms, for arranging training process other technical equipment (a projector, a laptop, a screen for the proctor) 159 classrooms are equipped with teaching aids, including: 100 classrooms in the university's academic buildings used by lecturers for presentations in lecture classes, seminars, conferences, course papers defending and for diploma papers. Recently a multipoint video conferencing server based on the Adobe Connect technology has been widely used, which has significantly expanded the capabilities of distance learning and communication technologies: conduct lecture classes online, record video lectures with the ability to listen to offline at any convenient time.

The goals of network security can vary depending on the situation, but the main goals are usually five:

- Data integrity.
- Confidentiality of data.
- Data availability.
- Technical threats
- Human factor

According to losses statistics the lion's share is taken by losses from crimes committed by own unscrupulous staff members that organizations have from various computer crimes. However, lately there has been a clear tendency of increasing losses from external intruders. In any case, it is necessary to provide protection against both disloyal personnel and those able to penetrate your network of hackers. Only an integrated approach to information protection can inspire confidence in its security.

However, because of the limited volume of this article, we will consider only the main technical methods for protecting networks and information circulating over them, namely cryptographic algorithms and their application in this field.

The following cryptographic methods can be used to protect the information circulating in the local network:

- information encryption;
- electronic digital signature (EDS).

In 2014, OshTU wireless network was modernized. 8 modern access points with a maximum throughput of 300Mbit / s were installed.

At the moment, access points are installed in the main building 1-2-3-4-5th floors (Network name - oshtu), 2-building 2nd floor (Network name - accounting), 3-building 3-floor (Network name - fat), in OshTULibrary 1st floor (Network name - library).

It is planned to continue the development of a wireless network by covering the entire territory of the university for 2018.

In 2009 OshTU was included in the project of "Exchange of Library and Information Resources between University Libraries of Kyrgyzstan" KYRLIBNET-UM-JEP-26219-2005 TEMPUS-TACIS.

Participation in the Tempus project allowed the libraries of higher educational institutions significantly raise the level of their work. Each project participant made a certain contribution to his/her university in publishing scientific information and teaching materials in the World Wide Web.

Objective of the project:

- Improvement the professional level of librarians in the use of new methods and tools of document management
- Equipment and assistance in the establishment of training modules for the training centers of university libraries.

The acquisition of special software (software) Joomla-IRBIS (J-IRBIS) by the project funds allowed the university libraries to publish their catalogs on the Internet without purchasing

a special add-in. Enter such an option on the site as an "Order for acquisition", this viewing will allow libraries to purchase the most ordered book in paper or electronic versions. The most important acquisition of this software allowed to introduce a search system through a single search window for all databases, including electronic catalogs of all eight university libraries at the same time.

The open of Kirlibnetarchives contain five main full-text collections: author's abstracts of dissertations, dissertations, monographs and textbooks, university news bulletins, teaching and methodological works, etc. Over 140 Internet pages (this is approximately more than 2,800 different documents) is updated daily. The program is placed for ease of reference in case if it is not available for him/her. It is enough to click on the document and the system will offer to open or download the document. On all types of documents the author's contract is signed except for the universities Vestniks and teaching and methodical papers.

In September 2009 our staff were trained on the basis of Issyk-Kul State University named after K. Tynystanov scientific library within the framework of the project "Exchange of Library and Information Resources between University Libraries of Kyrgyzstan" KIRLIBNET. In October 2009, a seminar in JASU was held for librarians of Osh Technological University.

In December 2009, 1 project officer completed an internship in Nice (France, University of Sofia antipolice).

The library of OshTU received the following equipment within the framework of the project:

- Data server - 1;
- Professional scanner - 1;
- Multifunction device (MFP) 3 in one (scanner + printer + copier) - 8;
- Camera - 1;
- PS computers-4;
- UPS-1 (uninterruptible power supply);
- IRBIS-64 (5 modules) - 1.

Strengths:

- *accessibility for students the methodological aid on the educational process through IS AVN;*

Weak sides:

- *not complete provision of the campus and buildings of the university with a wireless Internet;*

- *inconsistent university buildings on comfortable access of students with special educational needs.*

The Commission recommends:

- *to improve the library fund for the acquisition of textbooks in the state language, including electronic media;*

- *to activate work on ensuring conditions for inclusive education at the university.*

The EEC notes that 7 criteria are satisfactory and 1 criterion implies improvements.

6.12 Standard "Public Awareness"

In order to support feedback and public awareness about the activities of the university, the following communication channels are available:

- University site;
- corporate university pages in social networks (YouTube, Facebook (<https://www.facebook.com/pressaoshtu>), Odnoklassniki, Instagram, in the newspapers: Osh Zhanyrygy, Kutbilim, ErkinToo, Osh Shamy, on the channels: Channel 7, E1FM, MaralFM, Kabar, Akipress, Barakelde , Art-line), etc .;

The university administration holds regular meetings with parents of students 2 times per academic year, at which the rector's reports are heard, current problems and prospects for the development of the university, student performance, etc. are discussed. The university provides openness and accessibility of information to the public, openly places complete and reliable information about the university's activities, rules for admission of applicants, educational programs, terms and forms of study, international programs and reliable information of each structural divisions, useful information for applicants and students on various information media.

In the frame of the professional orientation of applicants, the university publishes printed publications (booklets, brochures, special issues of newspapers, etc.). Control over ensuring the level of relevance of information is carried out by heads of structural divisions, making appropriate adjustments in time.

The university site covers all activities of the university and provides information in 3 languages (Kyrgyz, Russian and English), the information on the site is constantly updated. Another internal communication channel for university employees is a single corporate mail-CommFort. Also, they are actively used as a means of communication for the newspaper "StudTimes", "Univer.kg", the TV studio "Zhashtyk" and the periodical scientific publication "Izvestia OshTU".

On the territory of the university and in the buildings of the university there are stands, bulletin boards, information screens through which news and announcements are brought to students. The website of the Osh Technical University contains: orders of the Education and Science Ministry of the Kyrgyz Republic "On threshold scores", "On approval of the schedule for conducting selection tests and enrollment for applicants", "On approval of lists of specialties", "List of specialties and areas of training that require additional tests by the university", "The list of subject areas and specialties, in enrolling applicants where the results of General republican testing are not required, "List of specialties and subject areas, indicating the required additional compulsory subject in the General republican testing.

For the purpose of visibility and informing the public about scientific activities, the official website of Osh Technical University has an electronic link: www.oshtu.kg, which reflects the following:

1. The web page of the dissertation council was created according to the requirements of the Higher Attestation Commission, electronic link: [http:// ds. oshtu.kg](http://ds.oshtu.kg); <http://doctors.oshtu.kg>, which contains full information on the activities of the dissertation council, about the members, a package of documents necessary for applicants and other data;

2. A web page of the scientific technical journal "Izvestiya OshTU" was created, which reflects all published articles in open access, as well as the all necessary procedure for publication in this edition, which are sent to RSCI in real time;

3. Annual reports of scientific research work (SR) of Osh TU and other useful information are uploaded on the Osh TU website in the "SCIENCE" section;

4. The teaching staff of Osh TU are registered in sciensometric platforms. ELIBRARY.ru, Web of Science. Information about OshTU's scientists publication activity can be obtained at this link.

Strengths:

- *availability of a wide range of feedback channels with all university stakeholders;*
- *availability of a functioning information system AVN.*

Weak sides:

- *not complete information about employment and career building on the university website;*

Experts recommend:

- *to improve and update the information available on the university's website about the EP, the expected results, the available vacancies.*

The EEC notes that 3 criteria are satisfactory and 9 criteria imply improvements.

VII REVIEW OF STRENGTHS/BEST PRACTICES FOR EVERY STANDARD

6.1 Standard "Strategic Development and Quality Assurance"

- availability of an implemented and realized university development strategy and its compliance with the national priorities of Kyrgyzstan;
- availability of university quality assurance policy;
- accessibility and extensive discussion of the university development strategy available at the university.

6.2 Standard "Leadership and Management"

- the availability of an approved functional structure of the university allowing to implement a development strategy;
- a sufficient level of development of the corporate culture of the teaching staff of the university.

6.3 Standard "information management and reporting"

- availability of a system for collecting, storing information about the degree of satisfaction of students with educational programs;
- collection and discussion of reports on the activities of structural divisions at meetings of collegial managing bodies.

6.4. Standard "Development and approval of the main educational program"

- annual improvement of the educational programs content, working plans and curricula;
- participation of university teaching staff in international TEMPUS projects;
- availability of a sustainable procedure for the development and approval of the working plans and curricula of Master degree and bachelor specialties.

6.5 Standard "Constant monitoring and periodic evaluation of the main educational programs"

- the available organized monitoring and updating of the content of educational programs;
- the functioning of feedback channels with all stakeholders to inform changes in educational programs.

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

- equal opportunities provided for students, incl. regardless of the study language in the formation of an individual educational trajectory aimed at the formation of professional competence;
- research in the field of methods of teaching disciplines.

6.7 Standard "Students"

- the availability of an adequate policy of forming of students contingent;
- the availability of functioning student government bodies and clubs of interest.

6.8 Standard "Teaching staff"

- the availability of a visible personnel policy of the university based on the competitive replacement of vacant positions;
- the accessibility of university administration for teaching staff members.

6.9 Standard "Scientific Research work"

- the availability among the teaching staff involved in the implementation of individual research projects and participating in projects carried out on the basis of third-party organizations;
- high publication activity of teaching staff in Russian scientific journals.

6.10 Standard "Finance"

- financial *sustainability* of the university over the past 3 years.

6.11 Standard "educational resources and student support systems"

- accessibility for students the methodological aids on the educational process through IS

AVN;

6.12 Standard "Public Awareness"

- *availability of a wide range of feedback channels with all university stakeholders;*
- *availability of a functioning information system AVN.*

VIII REVIEW OF RECOMMENDATIONS O IMPROVE QUALITY IMPROVEMENT

1. The developed strategy for the development of the university requires substantial improvement with the indication of 'specific target indicators' of development.
2. To activate the work on the implementation of the principles of corporate governance and corporate culture.
3. To expand the involvement of external stakeholders in the development of the mission and the university strategic plan of the development and to ensure their representativeness;
4. Development of planning activities of the university through educational processes, improvement the plans and educational programs for the development;
5. To intensify the certification process of QMS audit.
6. To improve the system of risk assessment and identification of ways to reduce them.
7. To develop and implement a system of corrective and preventive actions.
8. To compile the work plans of the structural units and the university budget in line with the approved university development strategy.
9. To activate work on improving the AVN IS for electronic document management modules, strategic planning modules (including the teaching staff rating, departments, faculties);
10. To provide training courses for senior and middle managers in the field of administration in education, risk management, etc.
11. To develop and implement a single integrated system for monitoring the assessment of the structural divisions' activities, the realization of educational programs, and the implementation of the university's development strategy.
12. Widely involve the student community and TS representatives in the management decisions of the university.
13. To widen the cooperation with leading foreign and Kazakhstan universities in order to harmonize the content and development of joint educational programs.
14. To take measures for the further development of multilingual training of students.
15. To improve the level of introduction of the ECTS principles system, including in the preparation of EP, the calculation of the teaching load.
16. To improve the system of planning the development of educational programs and monitoring the implementation of this plan.
17. Widely involvement of employers and graduates in the preparation and evaluation of educational programs.
18. To improve the system of monitoring on the students' progress along the educational trajectory and the students' achievements.
19. To consider the possibility of research in the field of modern teaching methods and implementation.
20. To work on the organization of cooperation of the university with other educational organizations and national centers of ENIC / NARIC in order to ensure comparable recognition of qualifications, professional certification of students in accordance with the Lisbon Recognition Convention.
21. To improve the content of the EP with regard to the requirements of certification agencies (including foreign agencies).
22. To activate the work on the academic mobility of students and the invitation of students and undergraduates from abroad.
23. To improve the system of support and monitoring of students in the framework of employment and career growth.

24. To expand the work spectrum of the use of information technology in the educational process (including the MEP).

25. To update and add the available information of the TS departments posted on the university website.

26. To increase the number of enterprises' practitioners in involving to the educational process. 27. To activate the work in increasing the number of teaching staff participation in academic mobility programs.

28. To initiate joint research projects with foreign partner universities.

29. To develop and implement an effective system for motivating the development of research and activities of teaching staff.

30. To carry out work on the coordination of the strategy for the development and running financial flows.

31. To increase the financial autonomy and sustainability of university structural divisions.

32. To improve the library fund for the acquisition of textbooks in the state language, including electronic media.

33. To activate the work on ensuring the conditions for inclusive education at the university.

34. To improve and update the information available on the university's website about the EP, the expected results, the available vacancies.

