



INDEPENDENT AGENCY FOR
ACCREDITATION AND RATING

REPORT

OF THE EXTERNAL EXPERT COMMITTEE (EEC) ON THE RESULTS OF THE SPECIALIZED ACCREDITATION OF

5B073100 - "Life Safety and Environment Protection"

5B060800-«Ecology»

5B072100-«Chemical Technology of Organic Substances»

6M072100-«Chemical Technology of Organic Substances»

Educational Programs

of Kazakh University of Technology and Business

10 May - 12 May, 2017

Astana 2017

INDEPENDENT AGENCY FOR ACCREDITATION AND RATING (IAAR)

External Expert Committee

***To
The IAAR Council for
Accreditation***



Independent agency for
accreditation and rating

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OF THE EXTERNAL EXPERT COMMITTEE (EEC)
ON THE RESULTS OF THE SPECIALIZED ACCREDITATION OF
5B073100 - "Life Safety and Environment Protection"
5B060800-«Ecology», 5B072100-«Chemical Technology of Organic Substances», 6M072100-
«Chemical Technology of Organic Substances» Educational Programs
of Kazakh University of Technology and Business
10 May - 12 May, 2017**

Astana, 2017

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In accordance with Order No. 29-17-OD as of April 23, 2017 of the Independent Agency for Accreditation and Rating as of April 23, 2017, an External Expert Committee has conducted assessment to verify if the educational programs 5B090200 - Tourism, 5B091200 - Catering and Hospitality, 5B050700 - Management, 6M050700 - Management, 5B051000 - State and Local Administration,

6M051000 - State and Local Administration, 5B050800 - Accounting and Auditing, 6M050600 - Economics, 5B073100 - Life Safety and Environment Protection, 5B060800 - Ecology, 5B072100 - Chemical Technology of Organic Substances, 6M072100 - Chemical Technology Of Organic Substances comply with the standards of specialized accreditation of the IAAR, at the Kazakh University of Technology and Business since May 10 to May 12, 2017

The Report of the External Expert Committee (EEC) contains the assessment of the submitted educational programs to the criteria of the IAAR, the EEC recommendations for further improvement of educational programs and field-specific parameters of the educational programs of the Kazakh University of Technology and Business.

EEC Composition

1. **Chairman of the Committee** – Arystanbayeva Saule Sabyrovna, Doctor of Sc. Economics., Professor, NARXOZ University (Almaty city);

2. **Foreign expert** – Vanyushkina Vera Vladimirovna, Candidate of Sc.Economics, expert of the National Guild of Experts in Higher Education, FSBEI of Higher Education Rostov State University of Economics (RSUE);

3. **Expert** – Ivleva Nadezhda Vladimirovna, Candidate of Pedagogical Sciences, Associate Professor of the Kazakh National University named after Abay (Almaty city);

4. **Expert** – Zakirova Dilnara Ikramkhanovna, Doctor of Philosophy, the Turan University (Almaty city);

5. **Expert** – Ziyadin SayabekTattibekuly, Doctor of Sc. Economics, Associate Professor, Kazakh University of Economics, Finance and International Trade (Astana city);

6. **Expert** – Akybayeva Gulvira Sovetbekovna, Candidate of Sc. Economics, the Karaganda State University named after Ye.A. Buketov (Karaganda city);

7. **Expert** – Aldungarova Aliya Kairatovna, Doctor of Philosophy, Associate Professor, the Pavlodar State University named after S.Toraigyrov (Pavoldar city);

8. **Expert** – Duisembiyev Marat Zholdasbekovich, Candidate of Chemical Sciences, Associate Professor, the Eurasian National University named after L. N.Gumilyov (Astana city);

9. **Employer** – Ilyasova Tattym Aibasovna, Organizational Management and QMS Unit Lead of the KazakhProjectStroy Company;

10. **Student** – Samanova Madina Bolatbekovna, 1st year Master's student in 6M050700-Management, the Kazakh University of Economics, Finance and International Trade (Astana city).

11. **Student** – Beisekov Daniyar Kuanyshpekovich, 2nd Master's program in 6M050600-Economics, the Kazakh Agrotechnical University named after Saken Seifullin (Astana city).

12. **Student** – Ashimova Balgyn Aidanovna, 2nd year Master's program 6M060800-Ecology, the Eurasian National University named after L.N.Gumilyov (Astana city).

13. **Agency Observer** – Kanapiyanov Timur Yerbolatovich, International Projects and the IAAR Public Relations Lead (Astana city).

Presentation of "Kazakh University of Technology and Business" JSC

Kazakh University of Technology and Business JSC was established on June 12, 2003 on the basis of the Almaty University of Technology and Business affiliate in Astana.

Since 2003-2004 academic year acts as an independent higher education institution, named as Akmola University of Technology and Business.

On March 26, 2008 it was renamed into Kazakh University of Technology and Business (hereinafter the KazUTB), which is the only specialized higher education institution in Astana and Akmola region to train competitive staff for the food, light, petrochemical, and hospitality industries.

The University implements the educational activities under the state license for the right to conduct educational activities No. KZ29LAA00008797 as of 19.04.2017 on 17 specialties of higher education and 5 Master's degree specialties.

The KazUTB conducts its research activities on the basis of the Certificate of Accreditation as a subject of scientific and/or scientific and technical activity (MK No.003978, as of 9 April 2014), issued by the Education and Science Control Committee. The certificate was granted to participate in the contests related to scientific, research and technological activities covered by the state budget of the Republic of Kazakhstan;

Since 2011, the quality management system ISO 9001: 2011 has been implemented based on certification of "KazCert" ST. RK. A unified information management system has been established at the University; innovative technologies and active teaching methods are used in the educational process, including distance learning technology. There is a system of internal quality control of education and the ATS qualitative composition.

The KazUTB academic activity is aimed at training personnel for the light, food and oil sectors, services and information technologies.

The major outcomes of the academic activity have received an external evaluation in the following bodies:

1. In April 2016, the University successfully passed institutional accreditation in the Independent Kazakh Agency for Quality Assurance in Education (IKAQAE) for 3 years (the date of issue of the certificate is 07.06.2016).

2. The University has got State Certification for the right to implement educational activities for a period of 5 years (order No. 821 from the Ministry of Education and Science of the Republic of Kazakhstan dated 06.05.05 2015);

3. The University participates in the annual national rating of universities carried out by the Independent Kazakh Agency for Quality Assurance in Education and the Independent Agency for Accreditation and Rating. In 2015, the KazUTB was ranked 14th (<http://nkaoko.kz/rejting-vuzov/rejting-vuzov-kazakhstan-2015/natsionalnyj-rejting-luchshikh-tekhnicheskikh-vuzov-kazakhstan>) among 16 technical universities and 36th among 40 universities in the total rating (http://www.iaar.kz/docstation/com_docstation/110/rejting_naar_2015_kaz_pravda_101_ot_02.06.15.pdf);

4. Since 2013, 5B091200 Catering and Hospitality program has been ranked the 2-nd among educational programs under the area (<http://nkaoko.kz/rejting-obrazovatelnykh-programm/rejting-programm-2015/rejting-programm-bakalavriata/rejting-po-napravleniyu-uslugi/item/6573>).

5. In 2011 the University approved the project in urban architecture and began construction of an educational campus, located south of the Korgalzhin highway in Astana. Construction of the facilities is set into 4 stages - the academic and administrative building, the hostel, the academic building no. 2, as well as the building with a library, an assembly hall, a cafe-canteen, and a sports hall. To date, the construction of the educational and administrative building, the academic building has been completed and an area of 24457,4 m² has been put into operation;

6. The University is working hard on the implementation of the Activity Plan within framework of the State Program for Development of Education of the Republic of Kazakhstan for 2011 - 2020 years (Phase 1), providing operational reporting to the MES RK.

7. The University academic and research activities have been marked with Recognition Letters from the Astana city akimat, collaborating enterprises, as well as for students' active participation in

city events;

8. The teachers of the University contribute significantly to education development. Teaching staff is composed of three members of the Union of Designers of Kazakhstan (E.Asylhanov, S.Sagintayeva, A.Kalikulova), 2 members of the Union of Artists of the USSR, RK, member of the Sculpture Association of Canada, Honorary member of the Academy of Arts of Russia (E. Asylhanov, A. Bajarlin), effective member of the National Academy of Design, Cultural Actor (E. Asylhanov), 2 valid members of the International Academy of Informatization (B.T. Ermagambet, B.T. Nurmuhambetova).

For the achievements in the science area of the Republic of Kazakhstan, breastplates of the MES RK: Honored Education Employee of the RK - Tumenov S.N., Tankibayeva M.Kh., Dugalova G.N.; Holder of Educational Excellence Award of the Republic of Kazakhstan - Dzhandarbekova D.;

Honorary Certificate of the MES RK - Tankibayeva M.Kh., Dugalova G.N., Zharmaganbetova G.M.

9. A number of teachers are members of the expert research group of the Science Committee of the MES RK, in particular: Dugalova G.N., Doctor Sc.Economics, Professor, Kerimkul S.E, Doctor Sc.Economics, Professor, Nurgalyeva A.Sh., Candidate of Sc.Economics, Professor.

Over the last 3 years, a number of university professors have won the state grant called "The Best Teacher of the University".

A number of changes occurred at the University during the reporting period, related to the revision of the Development Strategy, which, in turn, was reflected in the quality policy change. The current in-house regulations have been amended; new provisions on the organization of the educational process in the programs of higher and postgraduate education have been developed.

Currently, the KazUTB has established international relations with leading foreign and national universities in line with various directions of international cooperation in education and science. In order to establish international cooperation in the education and science, 26 contracts have been drawn up and signed.

The accredited EPs are closely associated with educational programs of a lot of universities of far and near abroad. Omsk State University named after F.M. Dostoyevsky (Russia, Omsk), Omsk State University of Railway Transport (Omsk, Russia), Omsk Regional Institute (Omsk, Russia), Ventspils College University (Latvia, Ventspils), Volga Region State University of Service (Tolyatti, Russia), European Institute of Design (Milan, Italy), Middlesex University (Erasmus+) (London, Great Britain), the Hitit University (Chorum, Turkey), Aiyun University (Istanbul, Turkey), Keimyung University (Daegu, Korea), St. Petersburg State Technological University (St. Petersburg, Russia), Moscow Institute of Economy, Policy and Law (Moscow, Russia), Vistul Academy of Finance and Business (Vistul, Poland), the Istanbul European Institute (Istanbul, Turkey), Vladivostok State University of Economy and Service, (Vladivostok, Russia), Technical University of Applied Sciences (Wildau, Germany), University of Agrobusiness and Regional Development (Plovdiv, Bulgaria), Odessa National Academy (Ukraine), Higher School of Tourism and Ecology (Beskidska, Poland), Mogilev State University of Food (Mogilev, Belarus), Pyatigorsk State Humanitarian University of Technology (Pyatigorsk, Russia), Technical University of Tajikistan (Dushanbe, Tajikistan), Russian State University of Oil and Gas named after I.M. Gubkin (Moscow, Russia), Budapest Metropolitan University Program (Erasmus+) (Budapest, Hungary), Bialystok University of Technology (Erasmus+) (Poland, Bialystok), BOKU University (Erasmus+) (Vienna, Austria).

In terms of scientific, creative cooperation and academic mobility of the students and ATS, contacts with leading universities of RK are established: Aktobe Regional State University named after K. Zhubanov, Aktobe University named after S. Baishiyev, Kokshetau University named after Abay Myrzakhmetov, Kokshetau State University named after Sh. Ualikhanov, Karaganda State University named after Ye.A. Buketov, Nazarbayev University, Kazakh Agrotechnical University named after Saken Seifullin, South-Kazakhstan State University named after M.O. Auezov, Kyzylorda State University named after Korkyt Ata, Eurasian National University named after L.N. Gumilev, Almaty Technological University, Astana Medical University JSC, Zhezkazgan University named after O.A. Baikunurov JSC, Karaganda State Technical University RSBSE, Taraz Innovative-Humanitarian University.

Based on the results of the competition for grant financing of research activities of the MES RK, the University has been successful in securing 5 grants (the amount of financing is 15 500 000 KZT) For the period 2015-2017. In 2017, the University entered into an agreement with the Foundation of the First President for the development and tailoring of clothes for children with disabilities (the amount of funding is 7 000 000 KZT).

The University infrastructure comprises of academic facilities consisting of 3 blocks - 2 academic and 1 administrative, training and production facilities, a dormitory for 280 students. The total area of the University buildings and facilities is 25816.2 m² according to the available technical certificates. All the buildings of the University correspond to health-based exposure limits, fire safety requirements and the requirements of the state compulsory standards of the specialties taught.

The construction of a new dormitory for 650 students has been commenced. The scheduled completion date is the end of 2017.

To organize the educational process, the University is sufficiently equipped with training and laboratory facilities, modern technology in classrooms, and lecture halls.

The University library is located in the academic building and in the dormitory. The area size of the reading rooms is 313 9 square meters with the total number of seats - 120.

The overall volume of the library stock together with electronic publications is 319 726 copies, 135 156 copies in Kazakh, which is 42.2%.

The general library stock on the accredited EP makes: 5B060800 Ecology – 8,640 copies (books provision per 1 student is 144); 5B073100 Life Safety and Environment Protection – 15,651 copies (books provision per 1 student is 141), 5B072100 - Chemical Technology of Organic Substances – 19,028 copies (books provision per 1 student is 142) 6M072100 - Chemical Technology of Organic Substances - 3066 copies (books provision per 1 student is 146).

The library strives to meet the requirements set for a modern university. First and foremost, it is the focus on informatization of education, based on the wide introduction and use of new information technologies. Since 2010, a program for computerizing library processes, called "Librarianship ver. 4.0" has been implemented in the library.

In order to assist in providing access to national and foreign library stock, the following agreements have been signed:

- the agreement (No.39 as of 05.01.2016) for the use of RIEL (the Republican Inter-university Electronic Library) resources - <http://www.rmeb.kz/> - the unified database that incorporates electronic resources of the Kazakh universities and the capability to use the resources of digital libraries of the RIEL other participants;

- the agreement (No. 1 as of 05.01.2017) on library and information services for users of the Kazakh University of Technology and Business with the Astana branch of the Republican Scientific and Technical Library - <http://astana.rntb.kz/>;

- the agreement on cooperation (as of 01.04.2015) with the Almaty Technological University - <http://www.atu.kz/>.

- the agreement (No. 22/1 as of 25.01.2014) with the Association of Libraries of Higher Education Institutions.

The scholarly library of the KazUTB University has established long-term cooperation with such Russian publishing houses as "Vysshaya Shkola", "Lan", publishing center "Academia", Kazakh publishing houses "Bastau", "Nur-Print", "Foliant", "NurPress", "Economics", book-selling organizations "Book Center Erudit", "IP Isabekova Ph.Kh.", "IP Zhamatova G.Sh.", "IP Nur-Zaman", "Dame" LLP, "Master PO" LLP of Astana, university publishing houses "Kazakh University" KazNU, the institution of "KazUEF&MT", "Association of Higher Educational Institutions of the RK" OYuL. Also, the library stock is supplemented by publications of book authors through signing contracts with them. The library's stock is replenished every year due to educational, methodical publications, monographs of the KazUTB teachers.

The number of information and library resources used to organize the learning process is sufficient and they meet the requirements of each educational program implemented.

A number of information systems based on the corporate network of KazUTB successfully operate at the University:

- Platonus - the automated information management system for the educational process;
- AIS Portal of Distance Learning KazUT-Moodle;
- Electronic Library AIS.

All of the above-mentioned information systems use MySQL electronic database.

For the next two years, the University plans to develop a corporate information portal. It should become a prototype of the Electronic University AIS, whose tasks will cover the integration of all structural units of the University into one single information environment.

The University has an official website of KazUTB (www.kazutb.kz) with pages in Kazakh, in Russian and in English, containing academic, methodological, educational, and administrative information necessary for students and other Internet users, with reference to the automation system to manage the 'Platonus' educational process and the Distant Learning Portal 'Moodle', which has its own address on the Internet. The portal is fully integrated with the Platonus system.

2. GENERAL EVALUATION OF EDUCATIONAL PROGRAMS

Educational activities for specialties 5B073100 - Life safety and environment protection, 5B060800 – Ecology, 5B072100 - Chemical technology of organic substances, 6M072100 - Chemical technology of organic substances are carried out at the university according to the state license No. KZ23LAA00007644 issued on 12/11/2016 No. 1013 by the Committee for control of education and science of the Ministry of education and science of the Republic of Kazakhstan.

According to the classifier of specialties the EP graduates are awarded the academic degree of the bachelors of engineering and technology by specialties 5B073100 - Life safety and environment protection, 5B072100 - Chemical technology of organic substances; the academic degree of the bachelor of natural sciences by the specialty 5B060800 – Ecology; the academic degree of the master of technical sciences by the specialty 6M072100 - Chemical technology of organic substances

The content of the educational programs is developed taking into account present-day scientific and technical achievements and production requirements. The elective disciplines catalogue (EDC) and working training programs are updated annually.

Evaluation of the educational achievements and the training level of the students is provided due to application of the grade-rating system. Provision of the required quality of the specialists' training is implemented with application of modern educational technologies, highly qualified ATS is the performer of main educational processes. The planning, management and implementation of the educational programs is carried out in compliance with the long-term development plans of the university. The specialists' training under educational programs 5B073100 - Life safety and environment protection, 5B060800 – Ecology, 5B072100 - Chemical technology of organic substances, 6M072100 - Chemical technology of organic substances is conducted in Kazakh and Russian languages. Under accredited EP separate academic disciplines of EDC are taught in English.

Educational programs 5B073100 – Life safety and environment protection, 5B060800 – Ecology, 5B072100 - Chemical technology of organic substances, 6M072100 - Chemical technology of organic substances have the following benefits:

- the educational programs development plan undergoes public discussion with representatives of all interested parties, its coherence with national development priorities and the strategic development plan of KazUTB is provided;
- the learning environment reflecting the specifics of the educational programs is created which includes: personified interactive resources (accessible during extra-curricular time as well), including learning materials and assignments, ensuring the options for trial self-assessment of students' knowledge through remote access to the portal (site) of the University;
- orientation of the content on the formation of the practice-oriented training of the students;
- cooperation with typical employers during the educational process, questioning of employers for identification of their opinion on the quality of educational services;
- automation of knowledge control and educational achievements accounting with regard to the students;
- operation of the electronic library with unlimited access to library resources;

- availability and completeness of teaching materials by all disciplines of the educational programs.

EEC members visited academic studies:

- under the educational program 5B060800-"Ecology", a lecture on the subject "Main principles of waste disposal" by the discipline "Environmental monitoring in chemical industries" by the discipline "Ethylinic link in the cholesterol molecule" (Course 3, group Ecology 151, classroom 209), candidate of biological sciences, R.M. Mustafayeva. The lecture was conducted in the form of the conversation and dialogue communication with the students. The students took active participation, answered all questions, and the individual work was carried out with some students.

- under the educational program 5B073100 - "Life safety and environment protection", a lecture lesson on the subject "Convention on the ozone layer protection" by the discipline "International treaties and conventions in the area of environment protection" (Course 3, group LSEP-141, classroom 211), candidate of technical sciences, associate professor Sh.Sh. Nurseitov. At the lecture lesson the teacher used active methods of training. During the group task performed at the final stage the lecturer induced the students to creative and reflective activity.

- under the educational program 5B072100 - "Chemical technology of organic substances", a lecture lesson on the subject "The role in the processing of hydrocarbons, hydrogen" by the discipline "Chemical technology of destructive and non-destructive processes" (Course 3, group CTOS-141, classroom 411), senior lecturer H.K. Nurkanova. The lecture lesson was conducted in the form of a press conference, the teacher named a lecture subject and asked the students to ask her questions in writing, each student was to formulate questions which interested it within 2-3 minutes, write them down them and transfer to her. Senior lecturer H.K. Nurkanova sorted questions, the contents during 2-3 minutes and stated the lecture material on questions asked in a system and comprehensible form. At the end of the lecture lesson the teacher estimated the questions as the reflection of knowledge and interests of the students.

3 DESCRIPTION OF THE EEC VISIT

The EEC work was carried out on the basis of the Visit Program of the expert committee for specialized accreditation of educational programs in the establishment "Kazakh University of Technology and Business" during the period from May 10 to May 12, 2017.

For the purpose of coordination of the EEC work the kickoff meeting took place during which the authorities between the committee members were distributed, the visit schedule was specified, the agreement in issues of selection of examination methods was reached.

The meetings of EEC with target groups were held according to the visit schedule, with observation of the established time interval. On the part of the university staff the presence of all persons specified in the visit schedule was provided.

For obtaining objective information on the quality of the educational programs and the whole infrastructure of the university, specification of the contents of self-evaluation reports meetings with the rector, vice rectors for various directions of activity, deans, heads of divisions (accounts department, library, admission committee), heads of departments (academic and methodological department, human resources department, legal service, testing department, office-registrar, department of science and innovations, department of technology and software, administrative and economic department), heads of faculties, teachers, students, graduates, employers took place. In total 126 people took part in the meetings (Table 1).

Table 3.1 - Data on the employees and students which took part in the meetings with IAAR EEC

Category of participants	Quantity
Rector	1
Vice rectors	2
Deans	2
Faculty heads	3
Heads of departments and heads of divisions	12
Teachers	31

Students	42
Undergraduates	11
Graduates	15
Employers	7
Total	126

During the EEC work the visual survey of the university infrastructure is carried out:

-academic and scientific laboratories, specialized classrooms, computer classrooms, library, reading room, dean's office, gallery, committee for youth affairs, educational and methodological department, office-registrar, human resources department, etc.

-the documentation of faculties implementing accredited educational programs is studied;

- faculties and bases of practices of accredited EP in Standard Insurance JSC, Akhbutina LLP, Akmolatourist JSC, Institute of coal chemistry and technology LLP are visited.

The members of EEC visited academic studies under accredited educational programs, including theoretical classes in the university classrooms.

The activities planned within the visit of IAAR EEC, promoted detailed acquaintance of the experts with the academic infrastructure of the university, material and technical resources, the academic teaching staff and employees, students, employers' representatives, graduates. This allowed the members of IAAR EEC to perform the independent evaluation of compliance of the data stated in the reports for self-evaluation of the educational programs of the academy to the criteria of the specialized accreditation standards.

For the work of EEC all conditions were created, access to all necessary information resources is organized.

4. Compliance to standards of specialized accreditation

4.1 Standard "Educational Program Management"

The management and development of EP of specialties of the higher education - 5B060800 – "Ecology", 5B073100 - "Life safety and environment protection", 5B072100 - "Chemical technology of organic substances", 6M072100 – "Chemical technology of organic substances" are performed according to the normative legal documents of the Republic of Kazakhstan and MES RK, the KazUTB Development Strategy taking into account the State program for development of education of the Republic of Kazakhstan for 2016-2020, provisions, the mission and strategic development priorities of the university. The academic process planning is presented by the structure of interconnected documents (standard curricula, EDC, working curricula, individual curricula of the students) and the complex of different types of academic and methodological documentation. For implementation of the educational programs EDC are developed where disciplines of a selected component are described, with a summary, pre- and post-requisites specified.

The Kazakh University of Technology and Business has a published Quality Assurance Policy. The Quality Policy of KazUTB, its basic provisions and the procedure for its adoption are described in the Quality Concept of Kazakh University of Technology and Business JSC F.01-01-2015 dated 28/10/2015 and in the documentary procedures. STU 06-2015 "Analysis made by top management" is a document that demonstrates the ability of KazUTB to provide the consumers with products and services in accordance with their requirements and the requirements of legal, regulatory, methodological and technical documents at the national level. The Quality Policy sets out quality objectives, areas of activities, and the liabilities of the university and its management that take into account the level of customer satisfaction, the compliance of the quality management system with the requirements of ISO 9001-2009, the ENQA Standards and Directives, the efficient application of the system and the trends of improvement (ongoing performance improvement of the quality management system) for quality assurance. The main objective of the Policy is to ensure quality assurance of educational activities by meeting the consumer requirements.

The Quality Assurance Policy reflects the relationship between research, teaching and learning.

The university has demonstrated the development of quality assurance culture. Currently, the

KazUTB policy is focused on the corporate culture improvement and preservation of values. The university has adopted and approved the main regulatory documents that determine the policy related to quality assurance culture: Vision and mission of the Kazakh University of Technology and Business JSC F.4-46-2015, Policy of Kazakh University of Technology and Business JSC in the field of quality F.4-49-2015, Honor Code of the teacher of Kazakh University of Technology and Business JSC F.4-45-2015. The corporate culture is a decisive factor that determines the effectiveness of the university. The development of quality assurance culture at the university is confirmed by the successes in the achievement of target quality assurance indicators and the results of external assessments.

The feedback with the educational services consumers is implemented through annual questioning for determination of the degree of satisfaction with the quality of educational services and the transparency of the university's activity. The Quality Assurance Policy reflects the relationship between research, teaching and learning. This is demonstrated by formation of the databank of subjects of degree and dissertation works with the context of scientific directions of scientific-research projects implemented at graduate faculties.

At the faculty of ChChT&E the subjects of degree works and master's projects are updated annually by 30%, the proposals from the employers are considered. For example, under EP 5B060800 - "Ecology" – the subjects of degree works "Creation of composite nanoporous sorbents for purification of gases", "Obtaining new modified carbon-mineral sorbents for cleaning of water environments" were offered by the director of Institute of coal chemistry and technology LLP Ye.B. Yermagambet; under EP 5B073100 - "Life safety and environment protection" - the subject "Processing of solid household waste for obtaining combustible gas" is offered by the director of Institute of coal chemistry and technology LLP Ye.B. Yermagambet; under EP 5B072100 - "Chemical technology of organic substances" – the subjects of degree works "Obtaining catalysts for hydrogenation of carbon oxide", "Purification of oil-containing sewage by use of biofilters" are offered by the director of Institute of coal chemistry and technology LLP Ye.B. Yermagambet; "Hydrogels on the basis of cellulose carboxymethyl" is offered by the director of Centre for commercialization of technologies LLP Ye. Zhaktkanbayev; under EP 6M072100 – "Chemical technology of organic substances" – the subjects of master's theses "Development of nanocatalysts of transition metals for synthesis of hydrocarbons on the Fischer-Tropsch installation", "Obtaining synthetic hydrocarbons from carbon monoxide and hydrogen using cobalt catalysts based on zeolites", "Improvement of the technology of preparation of Uzen oils for processing in Atyrau Oil Refinery JSC are offered by the director of Institute of coal chemistry and technology LLP Ye.B. Yermagambet; the subject "Research of the influence of technological parameters on the properties of sorbents from vegetative waste" is offered by the director of Centre for commercialization of technologies LLP Ye. Zhaktkanbayev.

On the subjects of degree works and master's theses the faculty scientists carry out scientific researches which were commercialized in the form of the economic-contractual RW (research work). During the period from 2014 to 2017 academic years, under EP 5B060800 - "Ecology", 5B073100 - "LSEP", 5B072100 - "CTOS", 6M072100 - "CTOS" the financing of the research works of the faculty by the Committee of science of MES RK made 15 million tenge.

Also, ATS participate in the scientific projects of grant financing of the Committee of science of MES RK, financed in other organizations.

The EP administration has not shown the identity and uniqueness of the EP development plan, its coherence with the national development priorities and the development strategy of the educational organization.

The analysis of sufficiency of material and information resources is carried out in the course of the year. The conclusion is the discussion at the faculty council at the end of each academic year during preparation for a new academic year. When the faculty head forms the opinion of the whole faculty on the material and information resources, which is reported at the faculty council for discussion and provision of proposals for improvement.

The information reflecting the processes of planning and the results of assessment of its efficiency for the students, employees and the society is at the university site <http://www.kazutb.kz> with free access.

Under EP "Ecology" and EP "LSEP" the EP administration does not provide complete

compliance of the development plan with regard to the personnel and the material and technical base (MTB). At the faculty of ChChT&E ATS with basic education for specialties 5B060800 "Ecology" and 5B073100 "LSEP" is actually not available.

The laboratory base of EP "Ecology" and EP "LSEP" is attached in general to faculty branches.

In KazUTB all main business processes regulating the EP implementation are documented. The revision (update) of internal regulatory documentation is carried out by the owners of processes as required in case of change of external documents, processes, distribution of responsibility and authorities of employees, according to the results of audits (external, internal).

In the course of the academic year the top management and the heads of structural divisions of the university also carry out the collection and analysis of data with the view of improvement (DP Document Management 01-2015, DP Records Management 02-2015, DP Internal Audits 03-2015, DP Management of Non-Conforming Products of STU 04-2015, DP Corrective and Preventive Actions 05-2015, DP Analysis by the Top Management 06-2015, DP Requirements to Creation, Presentation and Execution of Paperwork under the Quality Management System 07-2015, DP Human Resources Management 08-2015), also at the end of each academic year the university management conducts a final analysis of the monitoring results including performance assessment and performance of structural divisions and their interaction (KazUTB DP 502 "Analysis by the top management"). Efficiency and effectiveness is also considered at the meetings of faculties, the Educational and Methodological Board, the Councils of the university.

The university has demonstrated the identification of persons responsible for business processes, distribution of official duties of the personnel, differentiation of functions of collegial bodies participating in the EP implementation. The structures involved in the educational program management at the university include:

- ATS of faculties engaged in the specialist's training, with more than 60% having an academic degree, as well as teachers with industrial work record in the specialty.
- the Committee for the EP, which, apart from the leading ATS, has representatives from potential employers, as well as students in this specialty.
- the Educational and Methodological Board of the university which incorporates representatives of the faculties teaching classes in the specialty, and activists-students - representatives of youth public organizations of the faculty.
- the Educational and Methodological Administration and the Quality Monitoring Administration.
- the Academic Board of the university.

The university has not demonstrated in full the systematic analysis of the information on the educational program implementation and implementation of self-investigation in all areas for assessment of the success of implementing the strategy for the EP development through such indicators as "effectiveness" and "efficiency". The analysis of the data collected within the survey "Teacher through the students' eyes", the survey of the employers is not available.

The process of developing a plan for EP is transparent, not only staff of the faculty take part in its drafting, but also employers and students.

The EP administration has not demonstrated in full successful operation of the internal EP quality assurance system, including its design, management and monitoring, their improvement, decision-making based on facts. The structure directly responsible for the EP quality management system is not available at the university, and, correspondingly, the mechanisms of the Quality Management System of the university are not displayed.

The university ensures the participation of stakeholders representatives (employers, ATS, students) in the collegial bodies of the educational program management, as well as their representativeness in decision making on the management of the educational program. The employers are a part of the state attestation commissions, committee for EP. The students of the specialty "CTOS", "Ecology" are representatives of the Committee for youth affairs, "Nurotan" party.

The EP administration ensures measuring the level of satisfaction of the teaching staff and students' needs and demonstrate evidence of addressing the deficiencies found during the measurement process.

Periodically the electronic survey "Teacher through the students' eyes", the survey of employers is carried out.

The mechanisms of conflicts identification are statements by ATS, employees and students, office memos and reports, personal requests to the head, anonymous reports. For consideration of a complaint a Commission for requests review is created and its chairman is appointed according to the order of the President-Rector of the University. The Commission consists of the Secretary of the commission (from IAD staff), specialists of the university, depending on the nature and content of the request. Deans' offices to deal with complaints and suggestions of staff and students use the feedback capability from personal pages on the university portal (<http://kazutb.kz/ru/index.php/uchebnyj-protsess/tekhnologicheskij-fakultet/dekanat>). Also, everyone can contact with questions the President-Rector via online tool through the President-Rector's Blog (<http://kazutb.kz/blog/voprosy-i-otvety/>). On the faculty site there is information on each employee specifying their mobile phones and e-mail addresses (<http://kazutb.kz/ru/index.php/uchebnyj-protsess/tekhnologicheskij-fakultet/khimiya-khimicheskaya-tekhnologiya-i-ekologiya>). The class schedules of all groups is freely available at the educational portal of the university (<http://kazutb.kz/ru/index.php/uchebnyj-protsess/raspisanie-zanyatij>). Information on the visiting hours of the Head of the Department is provided on the information stand of the department.

Various sources submit their innovative proposals aimed at improving the EP. The departments transfer the developed EPs for examination by leading enterprises of the country and foreign partnering universities. During the students internship, ATS collect proposals from enterprises which are the bases of internship, proposals to improve the EP. Senior students based on the results of training and internships make proposals for adjustments into the content of educational disciplines of the EP. The suggestions are summarized and analyzed at the faculties. Then, specific proposals are made for adjusting the EP and submitted for consideration of the faculty's Educational and Methodological Board. Once the proposals are approved by the faculty EMB, they are sent to the university EMN, which after discussion makes a decision on the EP implementation. This happens almost every academic year. On a practical level, most of the proposals are brought into effect. The reason for the rejection might be the lack of corresponding laboratory facilities or inexpediency to implementing due to little interest for the industry.

The survey of ATS conducted during the visit of IAAR EEC demonstrated that the involvement of ATS in the process of acceptance of managerial and strategic decisions is very good and this index is as high as 83.3%, however, 16.7% of ATS are not involved in this process. The satisfaction of ATS' needs related to the EP content is 96.3%.

For further development and improvement of activities of the university for implementation of the accredited educational programs the committee **recommends**:

- To harmonize the identity and uniqueness of EP 5B060800 – "Ecology", 5B073100- "Life safety and environment protection" with the strategic development plan and the educational policy of the university.

- To conduct the analysis of the data collected within the survey "Teacher through the students' eyes", the survey of the employers on a systematic basis. The dynamics in the data change, decisions and performance related to negative indices of the surveying to be minuted at the faculty meetings, the meetings of the faculty councils.

Under the Standard "Educational Program Management" the accredited educational programs 5B072100 - "Chemical technology of organic substances", 6M072100 – "Chemical technology of organic substances" have 22 "satisfactory" positions, 5 "suggest improvements" positions, and the accredited educational programs 5B060800–"Ecology", 5B073100- "Life safety and environment protection" have 21 "satisfactory" positions, 6 "suggest improvements" positions.

4.2 Standard "Development and Approval of Educational Programs"

To provide equal opportunities for the students, regardless of the language of instruction, the faculty MEPs (modular educational programs), WCs (working curricula), EDCs (elective disciplines catalogue) are developed in the state and Russian languages and are identical by the structure and content. Working curricula are developed for each academic year, separately by levels (bachelor's program for 5B072100 - "CTOS", 5B060800 – "Ecology", 5B073100- "LSEP", master's program for 6M072100 – "CTOS"), forms of education (full-time, part-time, evening), terms (full and reduced), technologies (remote), languages of instruction (Kazakh, Russian, English).

The department has an academic policy and corresponding quality assurance procedures, that meet the standards for the programs to be implemented, which are aimed at developing professional competences and meeting national and industry-specific qualification frameworks, and occupational standards.

The evidence confirming the EPs quality is their compliance with standard specialist training programs. A widely approved procedure for developing, evaluating and approving educational programs for higher and postgraduate education operate at the university.

Educational programs are updated annually by 30% taking into account interests of the labor market. The change of obligatory disciplines takes place due to introduction of State standards (GOSO RK) and standard curricula, regulatory documents of MES RK, information letters. In order to study the employers' interests in the development of the educational programs, meetings, round table are held with the employers with participation of interested parties and persons on a regular basis in the course of an academic year.

The University established the procedure for periodic review and monitoring of educational programs. Educational programs are developed taking into consideration the University mission and contain titles and scope of academic disciplines, learning outcomes of each discipline, competences of the graduate, which are developed with the engagement of prospective employers and on the basis of achievements in researches and internship, taking into account the student opinions.

Educational programs are obligatorily reviewed at the meetings of the ChChT&E faculty, by the Committee for EP, the University EMB and are afterwards approved by the Academic Board of the University.

According to the Dublin descriptors during the development and drawing up of educational programs of specialties a competency-based approach is applied. First of all, it is reorientation of educational programs to design of learning outcomes and development of such competences as: 1) knowledge and understanding; 2) application of knowledge and understandings; 3) formation of judgments; 4) communicative abilities; 5) skills of training or ability to study.

The procedure of discussion and approval of the EP of specialties, observation of their norms by levels are reflected in the minutes of meetings of the ChChT&E faculty, the Committee for EP, EMB of the university and the Academic Board of the university. Then, the EP of specialties are approved by the President-Rector of the university.

To assess the quality of educational programs, the results of the following data analysis are used: feedback questionnaire on the course to be filled by all students after being trained a specific discipline. Analysis of quality of carrying out educational occupations. To be filled out following the results of attending the classes by the Head of the Department or the Management of the Faculty, lecturers as part of reciprocal visits during open classes;

Faculty ATS actively participates in introduction of methods and ways of training, including during implementation of research projects focused on inquiries of employers and consumers, as well as conducts developmental work in the area of the methodology of disciplines teaching. The analysis of methods of training and the content of courses, the examination of the quality of educational programs is carried out on a regular basis by the educational and methodological units of faculties, educational and methodological bureaus of faculties, the educational and methodological board of the university according to approved plans and is reflected in the meeting minutes. However at the ChChT&E faculty innovative methods of training are not actively enough applied.

The faculty develops modular EPs providing implementation of the individual educational path

of the students. At the heart of modular EP the model of the graduate is developed for each educational program. In formation of the EP development plans of 5B060800- "Ecology", 5B073100- "LSEP", 5B072100- "CTOS", 6M072100 – "CTOS" the following interested persons and representatives of leading production companies, such as Institute of coal chemistry and technology LLP, PI "SP and ASR" of the Department for emergency services of Astana city, Fire brigade No. 7, the Management Board of the Association of legal entities "Coalition for "green economy" and G-Global development" are involved.

An outcome of the program implementation to be the core competences of a graduate, described through the descriptors A, B, C, D, E (know - be able to - have), as provided for in the terminology of the Bologna process. Learning outcomes (competence) are to be developed both for the whole program, and for each module and individual subject. The module can incorporate academic subjects from different cycles (General Educational Subjects - GES, Fundamental Subjects - FS, Major Subjects - MS), if they form common competences. Professional competence of students by the specialties 5B060800 "Ecology", 5B073100 "LSEP", 5B072100 "CTOS" and masters by the specialty 6M072100 "CTOS" is formed during the study of academic disciplines of base and professional cycles.

The University demonstrated the participation of ATS, employers and students in the development of educational programs, provision of their quality, and presented evidence that the employers are typical representatives of employers.

In the structure of the Committee for educational programs development the staff from the ChChT&E faculty in EP include: candidate of technical sciences Zh.B. Baizhanova - the dean of Technological faculty; associate professor, candidate of chemical sciences. A.K. Kolpek - the head of the "ChChT&E" faculty; the senior lecturer, master N.S. Mamytova - an adviser of EP "Ecology"; the teacher, master A.A. Abdykhanova - an adviser of EP "LSEP"; the teacher, master P. Turebayeva.

Employers: under EP "Ecology", "LSEP" - the director of Centre for commercialization of technologies LLP Ye. Zhaktkanbayev, under EP "CTOS" (bachelor's program, master's program) - the director of Institute of coal chemistry and technology LLP B.T. Yermagambet.

Students: under EP "Ecology" - Kemelova B. - a second-year student; Duisenbaikyzy N. - a first-year student; under EP "LSEP" - Sayakhatova A. - a second-year student; Aitbayev B. - a third-year student; under EP "CTOS" - Uvaliyeva A. - a first-year student; Saparaly A., Abylgazina L., Ospanova S. - a second-year student, Ziyandanov K. – a third-year student.

The University should provide external expertise of the educational program and its approval by collegial bodies. There are tested mechanisms of internal quality assurance and review of EPs to assess the quality of programs, at the faculty. External experts of EP are such enterprises which heads are a part of the Committee for EP. Based on their outcomes, the following activities to be performed: analysis and development of measures to address non-conformities (analysis and adjustment of curricula and programs, teaching methods); analysis of the process and factors affecting the quality of education (timetable, schedule of the educational process, teaching methods, information resources availability, etc.), and development of improvement measures; analysis of the overall level of the demonstrated results of the final attestation (reports of SAC) and prepare proposals for adjusting the program, improving the learning environment; analysis and adjustment of learning objectives, curricula and program, conditions that affect the quality of education.

All educational programs of the faculty have clearly formulated objectives aligned with the KazUTB mission.

The objective of EP in the specialties 5B060800 "Ecology", 5B073100 "LSEP", 5B072100 "CTOS" and masters in the specialty 6M072100 "CTOS" - formation of habitat of the person, organically fits into the content of the university mission aimed at the intellectual and professional development of the society.

The objectives of EP are formulated taking into account requirements and inquiries of potential consumers, proceeding from the assessment of EP demand which is determined by interests of potential employers, capacity of the university, requirements of the state and society in general.

The EP administration demonstrated the logic of drawing up curricula and educational programs, in particular the reasons for including a discipline in the curriculum list, the reasons for assigning the

post- or prerequisite status.

Working curricula are developed by a graduate faculty which are approved by the vice rector for academic work. In academic curricula and training programs the logic sequence of studied disciplines is observable. The content of working curricula include an introduction, the basic part, the list of practical, laboratory, individual works, the list of literature. The elective disciplines catalogue and the modular catalogue by which students can get acquainted with disciplines for each academic year, are developed annually.

Development of educational programs is carried out considering the proposals of organizations and enterprises that participate in the process of selecting and making a list of elective disciplines of the ChChT&E faculty, which works closely with managers: Institute of Coal Chemistry and Technology LLP, Kazgidromet RSE, FSBEI of Higher Education of Stavropol State University, Information and Analytical Center for Environmental Protection RSE on the REM of the Ministry of Environmental Protection of the Republic of Kazakhstan, Environmental Department for Kyzylorda Region RSE, Environmental Department for Atyrau Region of the Committee for Environmental Management, Control, and State Inspection in the oil and gas sector of the Ministry of Energy of the Republic of Kazakhstan, Republican Collection of Microorganisms of the Science Committee MES RK, RES on the REM. Employer opinion is reflected when creating a catalogue of elective disciplines, which serves as the basis for the development of the individual curriculum for students, and since 2016 is compiled in three languages (Kazakh, Russian, English).

The EP administration ensures annual revision of the curriculum and educational program contents taking into account market changes, requirements of employers, students and teachers. During the reporting period the following proposals were made by the employers:

Table 4.2.1 - Proposals by the employers

academic year	EP	changes in the content of disciplines
2014-2015	5B060800 - "Ecology"	- Basics of environmental law, management and marketing (3 credits)
	5B073100 - "LSEP"	- Fluid dynamics and heat-mass exchange (3 credits)
		- Biogeochemistry and ecotoxicology (3 credits) - Bioindication methods of research (3 credits)
5B072100 - "CTOS"	- Environmental monitoring in the chemical industry (3 credits)	
2015-2016	5B060800 - "Ecology"	- Ecology of Kazakhstan (3 credits) - Methods of teaching ecology (3 credits) - Innovative technologies in environment protection (3 credits)
		5B073100 - "LSEP"
	5B072100 - "CTOS"	- Basics of planning of students' research work (3 credits) - Mathematical modeling of technological processes (3 credits) - Chemical utilization of natural gas and gas processing technology (3 credits) - Catalysis in the oil refining (3 credits)
2016-2017	5B060800 - "Ecology"	- Protection of water, atmospheric and land resources (4 credits) - Ecology of military space effect (4 credits) - Assessment of environmental damage (3 credits) - Environmental bioclimatology (3 credits)
		5B073100 - "LSEP"
	5B072100 - "CTOS"	- Environmental safety of enterprises (2 credits) - Mathematical modeling of technological processes (3 кр).

The EP administration ensures compliance of names and content of disciplines to actual directions of development of a studied area of science/society, etc. Also the university has determined the content, volume, logic of creation of individual educational paths of students of EP.

However the path of EP "LSEP" - "LSEP at industrial enterprises" is one of sections of the path of "LSEP in emergency situations".

The EP administration has demonstrated continuity of the content of EP "CTOS" at the level of the "bachelor's program – master's program". The logic of the academic interrelation of disciplines, sequence and continuity is discernable.

Under EP "Ecology", "LSEP" the continuity of the content is demonstrated only at the level of the "bachelor's program".

The EP administration has demonstrated the influence of disciplines on the development of professional competence in the students.

The set of obligatory disciplines and optional disciplines provides integrity of the educational program, combining the fundamentality of training with the interdisciplinary nature allowing to develop professional competences, skills and abilities. This is confirmed by the analysis of the positive responses of heads of enterprises reflected in the internship record books of third and fourth-year students.

The EP workload is accurately determined in Kazakhstan credits and ECTS.

Based on the Regulations for educational process organization using credit education technology approved by the Order of the Minister of Education and Science of RK dated April 20, 2011 No. 152 (with changes and additions as of 02/06/2014) and according to the Provision on credits reoffset system by ECTS type, the reoffset of Kazakhstan credits to ECTS credits and vice versa is implemented at KazUTB.

At that, since 2013 in all curricula of specialties of the higher and postgraduate education the column explaining the volume of credits of a discipline and other types of training under ECTS is introduced. In the workload of the educational program all types of classroom and individual work of students, practices and time devoted to monitoring activities are considered.

Table 4.2.2 - Labor input of internships of EP of the bachelor's program

Bachelor	Total labor input		
	KZ credits	ECTS units	in the volume of hours
Academic	2	3	30
Production 5B060800 "Ecology"	2	3	150
Production 5B072100 "CTOS"	3	5	225
Production 5B73100 "LSEP"	3	5	225
Predegree 5B060800 "Ecology"	2	3	150
Predegree 5B072100 "CTOS"	6	10	450
Predegree 5B73100 "LSEP"	6	10	450
Total	24	39	1680

In the course of the study of educational disciplines under 5B060800 "Ecology", 5B073100 "LSEP", 5B072100 "CTOS" and masters in the specialty 6M072100 "CTOS" various types of activity are provided for: lecture classes, practical and seminar classes, individual work of students, professional internship, final attestation. Various types of activity are aimed at development of professional competences in students.

As efficient forms of implementation of the model of professional competence development both traditional forms of education (receptive, reproductive, productive exercises, exercises on the basis of problematic situations of professional nature; role play; dramatization; discussion) and research projects are used. At that, the role of the teacher changed from the knowledge translator to the inspirer of creative active involvement of the student. All these forms of education are aimed at helping the student to increase independently further his professional level, to learn throughout his life. It should be noted that within SIW (Student's Individual Work) the students have the opportunity, along with fixing received knowledge, to realize their creative abilities.

The results of research investigations of faculty ATS form the basis of the introduced courses.

The university has demonstrated efficiency of professional internship organization and implementation.

The EP assume the need of passing professional internships which programs are approved by the

EMB of KazUTB. The organization and implementation of internships conform to the requirements of RK GOSO, Governmental Decrees and standard rules of activity of organizations of higher and postgraduate education of software of the RK GD No. 499 dated 17/05/2013. For organization of practical training and internship of students prolonged contracts are concluded with 25 bases of internship. The bases of students' internship are large production organizations of the industry such as: Atyrau Oil Refinery LLP, Kazakstan Rubber Recycling LLP of Astana city, "Aral-Syrdarya environmental department" PI of the Committee for environmental regulation and control of MEP RK, Plast Technology LLP for polymeric materials processing, Polimer Stroy Service LLP, National Industrial Chamber, KazBrandAstana LLP, Institute of Coal Chemistry and Technology LLP, "Republican Collection of Microorganisms" RSE on REM of the Committee of Science of MES RK, "KazTransGas PV", "Republican Scientific Research Institute for Labor Protection by the Ministry of Healthcare and Social Development of the Republic of Kazakhstan" RSE, SPA Energy-Saving Technologies LLP, Department of Legal Support and International Cooperation of the Ministry of Environmental Protection, Kazphosphate LLP – chemical plant, "Environmental Department for Kyzylorda oblast" RSE.

The organization of practical training promotes development of abilities to independent learning and cognitive activity and professional scientific work in the students. The internship is implemented in farms and organizations of research profile according to the subject indicated in the individual curricula of the students. On termination of the practical training the students provide record books defend the reports on internship.

The university ensures compliance of the content of academic disciplines and planned learning outcomes. The list and the content of disciplines are available to the students. The compliance of the content of academic disciplines and learning outcomes are continuously supervised at all stages of education: in the performance of assignments, during examinations conducted not by lecturers but by independent teachers. These moments are objectively assessed during the External evaluation of educational achievements (EEEA), complex final examinations, defense of degree works in which independent chairmen and members of SAC and councils take participation.

The students have direct access to EDC, curricula, syllabuses placed on the university site and have the opportunity to get acquainted with presentations of academic disciplines on the university site and at the faculty office.

Table 4.3.3 - EEEA results at the ChChT&E faculty

Academic year	% of performance/achievement 2014 – 2015	% of performance/achievement 2015-2016	% of performance/achievement 2016-2017
Ecology	73.5%	65%	59.7%
LSEP	-	44%	43.1%
CTOS	49%	47%	57.4%

The EP administration did not demonstrate harmonization of the content of educational programs with similar educational programs of leading foreign and Kazakhstan educational organizations.

There are no joint educational programs with foreign educational organizations.

The EP administration realizes cooperation and experience exchange with other educational organizations implementing similar educational programs, within the external and internal academic mobility of the students.

Table 4.2.4 – Academic mobility at the ChChT&E faculty

No.	Specialty/academic year	2014-2015 academic year	2015-2016 academic year	2016-2017 academic year
1	5B060800 "Ecology"	-	1	2

2	5B073100 "LSEP"	-	-	-
3	5B072100 "CTOS"	-	1	1
4	6M072100 "CTOS"	6	16	-
	Total number of students	6	18	3

It is noted that the students are not actively involved in the program of external academic mobility.

Research elements in the content of EP are not observed.

The surveying of students conducted in the course of IAAR EEC visit has shown that:

- **the level of availability and responsiveness of the university administration is estimated as high – 91.5%;**
- **availability for academic consultation is estimated as high – 84.7%;**

The satisfactory aspects of the accredited EP are the following items:

1. The university demonstrates participation of ATS, employers and students in the educational programs development, provision of their quality, presented evidence that the employers are typical representatives of the employers.
2. Provision of performance of external expertise of educational programs and their approval by collegial bodies on the part of the EP administration.
3. The EP administration has accurately determined the EP objectives.
4. Labor input of EP is accurately determined in Kazakhstan credits and ECTS.

Items demanding improvement:

- The EP administration did not demonstrate continuity of the educational program content at various levels: there is no master's program for specialties 5B060800 – "Ecology", 5B073100 - "Life safety and environment protection".
- Harmonization of the content of educational programs for specialties 5B060800 – "Ecology", 5B073100 - "Life safety and environment protection", 5B072100 - "Chemical technology of organic substances", 6M072100 – "Chemical technology of organic substances" with similar educational programs of leading foreign educational organizations is not demonstrated.
- Lack of joint educational programs for specialties 5B060800 – "Ecology", 5B073100 - "Life safety and environment protection" with foreign educational organizations.
- Lack of experience exchange with foreign educational organizations at faculties.
- Low academic mobility of the students.
- Insufficient application of innovative methods of teaching at faculties.
- Paths of EP "LSEP" demand revision according to priority directions of the university.

For further development and improvement of activities of the university for implementation of the accredited educational programs the committee **recommends:**

- In order to ensure the continuous maintenance of EP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection" consider the possibility of opening a master's degree for the specified EP.
- Consider the development of joint educational programs with foreign educational organizations, with the inclusion of items:
 - ✓ - to include disciplines that have a research direction in the EDC of joint educational programs;
 - ✓ - implementation of the academic mobility program for students on a free of charge basis, through mutual students' exchange with partner universities and KazUTB.

Under the Standard "Development and Approval of Educational Programs" the accredited educational programs 5B072100 - "Chemical technology of organic substances", 6M072100 – "Chemical technology of organic substances" have 19 "satisfactory" positions, 2 "suggest improvements" positions, and the accredited educational programs 5B060800 – "Ecology",

5B073100 - "Life safety and environment protection" have 18 "satisfactory" positions, 3 "suggest improvements" positions.

4.3 Standard "Student-Oriented Training, Teaching and Evaluation of Academic Performance"

The EP administration provides equal opportunities to students, including regardless of the language of instruction, for formation of an individual educational program aimed at developing professional competence. Since 2016 students' IEPs are compiled in three languages (Kazakh, Russian, English). The students are provided the opportunity to independently form the educational path and make the selection of disciplines for a next academic year from several disciplines proposed. For this purpose, before the students make a choice, under the management of the faculty advisers, ATS hold meetings with them, to represent the presentation material on their disciplines.

The EP administration provides harmonious development of the students taking into account the intellectual development and individual characteristics. Individual characteristics and requirements of the students, certainly, influence the EP implementation, as they determine the choice and development of elective courses, selection of internship bases, independent determination of subjects of degree works and master dissertations. Representatives of the students are members of the Committee for EP.

The EP administration does not fully provide introduction and application of active and innovative methods of training. The head of the ChChT&E faculty is responsible for implementation of the requirements of this criterion. The active and innovative methods of training at the faculty are planned, the plan of professional development of ATS for study of innovative methods of training is developed at the faculty according to which the teachers periodically study technologies on the basis of other universities of Kazakhstan and neighboring countries. There are certificates of professional development of ATS. But, after studying, there is no active application of studied methods in the educational process.

The EP administration carries out monitoring of satisfaction of students, heads of enterprises – places of internship and employers by means of surveying. On a constant basis on the site of KazUTB online survey of ATS, personnel and students on the quality of the educational process is conducted. However the results of surveying and monitoring analysis are not presented.

The monitoring of the students' knowledge is carried out by means of current, intermediate and final monitoring. Forms of monitoring are determined by each teacher individually in accordance with standard rules of current academic performance monitoring organization and implementation. Results of the current monitoring are displayed by teachers weekly in PLATONUS AIS.

The EP administration properly provides availability of proprietary solutions in the area of methods of teaching academic disciplines for specialties 5B072100 - "CTOS", 6M072100 – "CTOS". There is sufficient number of published work-books, study guides, monographs in the Russian and Kazakh languages which authors are academics of the ChChT&E faculty Mustafayeva R.M., Kerimkulov K.Zh., Nurseitov Sh.Sh., Ybyrai A.Y., Giniyatova G.M., Yermagambet B.T., Baimaganbetov K.B., Imanov A.N., Sarsenbayeva A.Zh., Iskakova Zh.B., Koshkarov T.B., Satayeva A.R.

However there is no sufficient number of own publications of the ChChT&E faculty for students in the specialties 5B060800- "Ecology", 5B073100- "LSEP".

The EP administration did not demonstrate availability of the system of feedback on use of various methods of teaching and knowledge control.

It does not seem possible to trace efficiency and effectiveness from introduction of innovations, as there is no active application of innovative methods of teaching at the faculty. Analysis of surveying for satisfaction of students and ATS with methodological innovations is not available.

During the educational program implementation the EP administration carries out monitoring of the student's individual work and adequate assessment of its results.

At KazUTB the student is one of the participants in implementation of educational programs, therefore when ensuring the quality of the educational process the students' interests, wishes, proposals

are considered, they are provided with equal educational opportunities, including, regardless of the language of training and gender identity, for formation of the individual educational program aimed at development of professional competence. The Student's Individual Work (SIW) makes two thirds of total labor input of a studied course. At the faculty the SIW is performed in the form of: current consultations, acceptance and analysis of practical assignments, defense of laboratory works, presentations, summaries, reports, etc.

The EP administration performs the monitoring of satisfaction of students passing professional internships. The students' wishes are revealed during their surveying, in reports on professional internship and during the advisor's work with them. The employers' satisfaction with the level of training of the students is traced in their responses which were presented in the form of reports on professional internship at the faculty. According to the results of monitoring of students' satisfaction with the base of internship it was decided to expand the base of conclusion of contracts for professional internship.

The EP administration demonstrated decision-making on the basis of results of feedback with students and evaluation of their satisfaction. This is traced in the correction of curricula, updating of the content of syllabuses and working programs which were accepted according to the decision of the Committee for EP of the faculty and EMB of the university which consist of representatives of students of the ChChT&E faculty. All decisions are recorded in the minutes of meetings of the faculty, the Committee for EP of the faculty and EMB of the university.

The EP administration proved availability of the system of monitoring of the student's advancement by the educational path and the students' achievements. The monitoring of the students' advancement by the educational path and their achievements is implemented by means of "Platonus" AIS. Also, at the faculty advisors and curators who supervise the academic performance of students and undergraduates are assigned to all groups. The results of academic performance are discussed at faculty meetings. All data are minuted. At the university there is a continuous attestation of students for ensuring quality. The description of process is presented in the documentary procedure PD 2/2.01-2016 – Knowledge Assessment. Measurements of the students' knowledge, assessment criteria, procedure for assessment of types and forms of monitoring are determined in "PD 2/2.01-2016 - "Testing", "Provision on the procedure for intermediate control (examinations)", "Provision on conducting verbal examinations", "Provision on final attestation of students".

The EP administration provides availability and efficiency of the mechanism of objective assessment of learning outcomes, collegial appeal mechanism, transparency of assessment criteria and tools. The final assessment of knowledge, skills and professional competences is accepted by the independent committee which consists of several teachers. In case of disputable issues in respect of the results of final estimates, an appeal committee which is approved at a faculty meeting is created. The members of the committee are teachers not having relation to a discipline by which disputable issues arise.

The EP administration ensures compliance of the procedures of assessment of the level of knowledge of the students in planned learning outcomes and the program objectives according to established criteria and assessment methods.

The EP administration did not demonstrate conditions for inclusive education.

The students express satisfaction with the teaching quality level (89.8%); fairness of examinations and attestation (91.5%); conducted tests and examinations (98.3%).

Strengths of accredited EP are:

1. Provision of students with equal opportunities, including regardless of the language of instruction, in formation of the individual educational program aimed at development of professional competence.
2. Performance of monitoring of the student's individual works and adequate assessment of their results.
3. Efficiency of monitoring of implementation of the curriculum by the students according to the educational path by means of the system of PLATONUS AIS.

For further development and improvement of the University activities as to the implementation of the accredited educational programs, the IAAR EEC **recommends**:

- Based on the results of the faculty qualification improvement for the last 3 years, each faculty having the certificate of advanced training is to develop and implement their own discipline teaching method using innovative teaching methods. To monitor the effectiveness of new teaching methods introduction, to conduct an analysis each semester and monitoring results are to be recorded at the meetings of the department, department Academic and Methodological Board.

- Develop and ensure the implementation of the AMC (academic and methodological complexes) publication plan for 2017-2018, 2018-2019, 2019-2020 academic years for each EP, including publication in Russian, Kazakh and English languages.

- To increase the level of the students' readiness to professional activity, intensify practical classes at faculty branches for EP 5B060800 – "Ecology", 5B073100- "Life safety and environment protection", expand the base of professional internship. To consider the possibility of opening additional faculty branches according to the area of paths of EP.

- The university administration should provide conditions for inclusive education.

Under the Standard "Student-Oriented Training, Teaching and Evaluation of Academic Performance" the accredited educational programs 5B072100 - "Chemical technology of organic substances", 6M072100 – "Chemical technology of organic substances" have 1 "strong" position, 8 "satisfactory", 3 "suggest improvements" positions, and the accredited educational programs 5B060800–"Ecology", 5B073100- "Life safety and environment protection" have 1 "strong" position, 7 "satisfactory", 4 "suggest improvements" positions.

4.4 Standard "Students"

The EP administration of KazUTB demonstrates the policy of formation of the contingent of EP students from admission to graduation and ensures transparency of its procedures. For formation of the contingent of students the faculty ATS performs a lot of professional orientation work going out to various regions of the Republic of Kazakhstan. During admission the priority is provided to applicants having the Altyn belgi badge, graduates of rural schools, winners of research projects, disabled people, orphans. During meetings with the university graduates full information on EP of KazUTB, its demand at the labor market, career growth prospects, the personnel of faculties and departments, etc. is provided.

For formation of the contingent the university annually conducts the "Welcome Day" for pupils of city and regional schools where reference materials, booklets about the university, the faculty and the specialty are distributed.

The policy of formation of the contingent of undergraduates is based on the general policy of admission of applicants in RK consisting in the necessity of reaching a number of points according to the results of examinations in a foreign language and the specialty.

One of the main sources of information for the contingent is the university site <http://www.kazutb.kz> where all necessary information is located. On the university site all requirements to the contingent of students are presented.

The admission and enrolment to the educational program are accompanied by an introductory course containing information on organization of the education and specifics of the educational program. There is a directory guidebook of the student.

Table 4.4.1 - Contingent of students across specialties

Academic year	Form of education	Total number of students	Students studying by a grant		Students studying on a paid basis	
			russian	kazakh	russian	kazakh
5B060800 – "Ecology"						
2014-2015	Full-time / Part-time	50/ 0	-	-	1	49

2015-2016	Full-time / Part-time	65/0	-	-	5	60
2016-2017	Full-time / Part-time	55/4	-	-	-	59
5B073100 - "Life Safety and Environment Protection"						
2014-2015	Full-time / Part-time	22/0	-	-	5	17
2015-2016	Full-time / Part-time	60/0	-	-	10	50
2016-2017	Full-time / Part-time	89/24	-	-	36	77
5B072100 - "Chemical technology of organic substances"						
2014-2015	Full-time / Part-time	91/3	-	-	17	74
2015-2016	Full-time / Part-time	142/1	-	-	34	109
2016-2017	Full-time / Part-time	110/11	-	-	39	89
6M072100 - "Chemical technology of organic substances"						
2014-2015	Full-time	31	-	-	31	-
2015-2016	Full-time	27	-	-	27	-
2016-2017	Full-time	21	-	-	21	-

Table 4.4.1 - Contingent of students across specialties

YEAR	2014-2015		2015-2016		2016-2017	
	grant	contract	grant	contract	grant	contract
5B060800 - "Ecology"						
full-time						
1	-	14	-	24	-	15
2	-	13	-	17	-	14
3	-	17	-	10	-	16
4	-	6	-	14	-	10
5B073100 - "Life Safety and Environment Protection"						
full-time						
1	-	6	-	31	3	29
2	-	11	-	8	-	37
3	-	10	-	10	-	8
4	-	-	-	11	-	14
part-time						
1	-	-	-	-	-	8
2	-	-	-	-	-	3
3	-	-	-	-	-	-
5B072100 - "Chemical technology of organic substances"						
full-time						
1	1	15	-	26	1	6
2	-	36	1	52	-	25
3	-	31	-	34	-	48
4	-	9	-	31	-	31
part-time						
1	-	-	-	1	-	17
2	-	-	-	-	-	6
3	-	3	-	-	-	-
6M072100 - "Chemical technology of organic substances"						
full-time						
1	-	25	-	9	-	11
2	-	6	-	18	-	10
Total for the faculty	1	202	-	296	4	312

As there are no foreign students at the faculty, the EP administration does not provide for implementation of the special program of adaptation and support for foreign students.

The EP administration demonstrated compliance of its actions with the Lisbon Recognition Convention.

The university cooperates with other educational organizations and national centers "The European network of National Information Centers for Academic Recognition and Mobility / National

Academic Information Recognition Centers" for the purpose of ensuring comparable recognition of qualifications. The EP administration demonstrated availability and efficiency of the mechanism of recognition of results of the academic mobility of students, as well as the results of additional, formal and informal training. Basic provisions on the academic mobility of students and teachers of the university are specified in the Provision on the academic mobility of students, academic teaching staff and employees of KazUTB approved by the Rector of KazUTB No. 0448/1 dated 28/10/2015. With the view of implementing the academic mobility of EP the university concluded the contract for scientific internships of undergraduates and joint researches with scientists of Omsk State Pedagogical Institute, Siang University of China, European University of Istanbul and Institute of Oil and Gas Technologies and New Materials of the Republic of Bashkortostan. The official site of KazUTB <http://www.kazutb.kz>: the unit for scientific work and international cooperation through traditional media and web resources informs departments and graduate faculties on the current status of external cooperation, availability of contracts with universities-partners, enrollment of participants for programs of academic mobility. Also the advisor conduct explanatory work with students on issues of selection of obligatory and elective disciplines of education in the admitting university in accordance with the individual curriculum of a student for the period of education.

The financing of the academic mobility is implemented according to concluded contracts, more often the financing and grants are provided from the university funds. According to the general procedure of implementation of external academic mobility of the students at KazUTB several options of implementation of external academic mobility are provided for: at the expense of the funds of the Ministry of Education and Science of RK; at the expense of the funds of international programs – TEMPUS, ERASMUS MUNDUS, DAAD, FULBRIGHT, etc.; at the expense of self-financing of the program participant. *At the same time at the faculty the real academic mobility, both internal and external, is implemented only in individual cases.*

Table 4.4.3 - Academic mobility at the ChChT&E faculty

No.	Specialty/academic year	2014-2015 academic year	2015-2016 academic year	2016-2017 academic year
1	5B060800 "Ecology"	-	1	2
2	5B073100 "LSEP"	-	-	-
3	5B072100 "CTOS"	-	1	1
4	6M072100 "CTOS"	6	16	-
	Total number of students	6	18	3

The EP administration demonstrated understanding of the main roles (professional, social) of the students proceeding from learning outcomes. The main professional and social roles of the students are determined by the following types of activity: production-administrative, scientific-research and teaching.

The EP administration does not fully promote professional certification of the students.

The EP administration provides adequate involvement of students to scientific-research work and involvement of students in the specialty "CTOS" to consulting.

At the "Chemistry, chemical technology and ecology" faculty the student's scientific circles "Ecologist", "Chemist" are available. Assignments and objectives, as well as the work plans of the scientific circles are considered at faculty meetings (Minutes No. 1 dated 26/08/2016)

Annually at the university the week of the ChChT&E faculty is conducted where the students of Ecology, LSEP, CTOS specialties are actively involved:

Table 4.4.4 – Involvement of the students of the ChChT&E faculty in scientific activities of the university

No.	Full Name of the Student	Group	Position awarded	Title of the Conference
1	Malikova K., Tanabayeva A.	Ecology-131	1-st Place Winner Certificate	Republican Scientific and Practical Conference entitled "New Age - New Technologies", April 17-18, 2015.

2	Yeserkhan Zh.	Ecology -121	3-rd Place Winner Certificate	Republican Scientific and Practical Conference entitled "New Age - New Technologies", April 17-18, 2015.
3	Abylgazina L.	CTOS - 121	1-st Place Winner Certificate	Republican Scientific and Practical Conference entitled "New Age - New Technologies", March 27-28, 2015.
4	Yeserkhan Zh.	Ecology -121	2-nd Place Winner Certificate	Republican Scientific and Practical Conference entitled "New Age - New Technologies", March 27-28, 2015.
5	Suindykkyzy A.	Ecology -121	Letter of Appreciation	Republican Scientific and Practical Conference entitled "New Age - New Technologies", March 27-28, 2015.
6	Bekbol A.	Ecology-131	Letter of Appreciation	Republican Scientific and Practical Conference entitled "New Age - New Technologies", March 27-28, 2015.
7	Yerkesary D., Bekbol A.	Ecology-131	2-nd Place Winner Certificate	15.02-20.02 2016, contest entitled «All our efforts are aimed at the cleanliness of the environment»
8	Tasybek R.	LSEP -132	3-rd Place Winner Certificate	15.02-20.02 2016, «Effect of activated sludge on soil»
9	Omirseit M.	LSEP -131	Letter of Appreciation	15.02-20.02 2016, contest entitled «Occupational Safety and Health»
10	Maratov D.	LSEP -131	Letter of Appreciation	15.02-20.02 2016, contest entitled «Occupational Safety and Health»
11	Musabek Ph.	LSEP -131	Letter of Appreciation	15.02-20.02 2016, contest entitled «Occupational Safety and Health»

Table 4.4.5 - Involvement of students of all levels in research work

No.	the faculty activity	2013	2014	2015	2016
1	Participation in the Olympiads	-	-	-	-
2	Participation in the contests	-	-	1	2
3	Participation in the scientific conferences	33	15	25	33
4	Scientific publications	33	15	25	33

Low level of involvement of students of specialties "Ecology", "LSEP" in the research work. There are no commercialized projects with participation of students and undergraduates under all EP of the faculty.

The university and the EP administration do not fully provide the possibility for external and internal mobility of the students, as well as do not render sufficient assistance in receiving external educational grants.

The university provides the graduates with documents confirming a received qualification, including reached learning outcomes, as well as the context, content and status of received education and the certificate of its completion.

The EP administration does not in full takes measures for employment of students-bachelors, systematic monitoring of the employment of graduates, development of their career and increase of the overall performance of associations of graduates.

Table 4.4.6 - Employment of graduates of the ChChT&E faculty

Specialties	Data on the employment of graduates in the specialty								
	2013-2014 academic year			2014-2015 academic year			2015-2016 academic year		
	Graduation	Employment		Graduation	Employment		Graduation	Employment	
	persons	persons	%	persons	persons	%	persons	persons	%
5B060800 "Ecology"	10	0	0	13	8	62	17	9	53
5B073100 "LSEP"	4	4	100	6	4	66	17	11	65
5B072100 "CTOS"	62	27	44	54	28	52	36	26	73
6M072100 "CTOS"	17	17	100	5	5	100	15	15	100

The EP administration provides the students with the possibility to exchange and express their

opinion by means of the Internet forum, the student's organizations.

The EP administration demonstrated functioning of the feedback system for support of students, including operative representation of information on students' knowledge evaluation results. According to satisfaction monitoring results organizational decisions focused on correction and improvements of EP are made. Feedback with graduates is maintained by means of surveying the graduates of the current year and previous years. The results of such contacts are entered into the database on graduates, then the analysis of problem situations in the course of employment is performed. Such information is discussed at faculty meetings, is brought to the notice of interested persons and is included in the report.

The EP administration demonstrated availability and efficiency of the mechanism of support for gifted students. There is a provision on discounts for education where the item providing for support of active youth, in the form of discounts for education from 10 to 20% is included.

The students express satisfaction with support by learning materials in the course of education (89.8%); satisfaction with existing educational resources of the university (93.2%); availability of healthcare services (84.7%); availability of library resources (88.2%); utility of the university website (91.5%); general quality of educational programs (88.1%); relationship between the student and the teacher (93.2%).

Strengths of accredited EP are:

1. The EP administration has demonstrated the policy of forming a contingent of students starting from admission to graduation and ensure the transparency of its procedures. Procedures regulating the lifecycle of students have been approved and published.

2. The admission and enrolment to the educational program are accompanied by an introductory course containing information on organization of the education and specifics of the educational program.

3. For formation of the contingent the university annually conducts the "Welcome Day" for pupils of city and regional schools where reference materials, booklets about the university, the faculty and the specialty are distributed. To attract university entrants, the departments use the potential of the media and television.

4. Each graduate is provided with the documents of the established type, which include confirmation of the acquired qualification, achieved results, the status of the education received and evidence of its completion.

For further development and improvement of the University activities as to the implementation of the accredited educational programs, the IAAR EEC **recommends:**

- University management should provide for the development and implementation of special program for adaptation and support of foreign students.

- To increase the number of students realizing external and internal academic mobility by developing and implementing joint educational programs with higher education institutions of Kazakhstan, near and far abroad.

- To increase the percentage of students involved in research, with the development of a mechanism to stimulate them. Attract students to participate in grant funding programs of the MES RK, the World Bank, social projects, competitions of the Foundation of the First President of the Republic of Kazakhstan, Erasmus, Tempus programs etc.

- Strengthen measures to prepare students for the transition to a multilingual education.

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Under the standard "Students", the accredited educational programs 5B072100 - "Chemical technology of organic substances", 6M072100 - "Chemical technology of organic substances" have 1 "strong" position, 11 "satisfactory", 4 "suggest improvements" positions, and the accredited educational programs 5B060800 - "Ecology", 5B073100- "Life safety and environment protection" have 1 "strong" position, 9 "satisfactory", 6 "suggest improvements" positions.

4.5 Standard "Academic Teaching Staff and Effectiveness of Teaching"

The main provisions of the University's HR policy are compliance with the standard qualification characteristics for employees of educational institutions, approved by the order of the Ministry of Education and Science; availability of higher and postgraduate education in relevant specialties, productive scientific activity, as well as competence and competitiveness. Recruitment is carried out on the basis of an analysis of the needs of the educational program, which results in the announcement of a competition for filling vacancies.

Quantitative and qualitative composition of teaching staff of specialty 5B072100 - "Chemical technology of organic substances", 6M072100 - "Chemical technology of organic substances" is given in the tables.

Table 4.5.1 – Qualitative composition of ATS of ChChT&E faculty

Period	Overall academic teaching staff (in total)	Regular academic teaching staff	Among the main (full-time academic-teaching) personnel the following have:				Master academic degree	% of academic degree holders	% of full-time teachers
			Academic degree		Academic rank				
			Doctor of sciences	Candidate of sciences	Professor	Associate Professor			
2014-2015	27 (2)	29	5	13	3.25	6.5	11	62	90
2015-2016	30(2)	28	6	12	2	7	10	64.3	96
2016-2017	28(2)	28	6	13	2	14	9	68	90

Table 4.5.2 – Qualitative composition of ChChT&E faculty

Period	The number of teachers conducting lessons in the state language.	Faculty's Academic Degree Holders Rate
2014-2015	27 (2)	62%
2015-2016	30 (2)	64,3 %.
2016-2017	28(2)	68%

The average age of the "Chemistry, Chemical Technology and Ecology" faculty teaching staff is 55 years of age. The share of teachers with academic degrees and titles from the number of full-time teachers, including the cycles of basic and specialized disciplines of the state compulsory education standard is 68%, which corresponds to regulatory requirements.

Table 4.5.3 – Age composition of ChChT&E faculty

No.	Period	Under 35 years old	35-50 years old	Over 50 years old	Pensioners
2	2014-2015	6	8	13	10
3	2015-2016	8	9	13	12
4	2016-2017	5	7	16	13

However, the university and the management of the EP do not fully ensure the professional competence of the staff for EP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection."

Competitive selection of candidates for filling the positions of the teaching staff is carried out in accordance with the qualification requirements and job descriptions. When hiring, instruction is given, employees are introduced to the Rules of Internal Labor Regulations, the Collective Agreement, job descriptions.

EEC members note the insufficient level of joint research with foreign partners in the EP implementation and the weak involvement of well-known scientists, public and political figures in the

implementation of the EP. Also, the management does not use the method of attracting foreign specialists to educational program implementation.

The EP administration should demonstrate understanding of responsibility for its employees and providing them with favorable working conditions. There is a sufficient number of education premises for classes.

The EP administration has not fully demonstrated the role change of the teacher in connection with the transition to student-centered learning.

The University has demonstrated the public accessibility to information about the teaching staff, including the catalogs of the academic teaching staff, the posting of profiles on the university's website.

The EP administration ensures completeness and adequacy of individual planning of the teaching staff work for all types of activities, monitoring the performance and effectiveness of individual plans. Assessment of the teachers' competence to determine the compliance of the teaching staff with the position held and the EP requirements is carried out through the passage of all staff members attestation.

The workload of the teacher includes educational, methodological, R&D, organizational, methodological, educational work, as well as professional development, activities in a professional environment. On average, the classroom load is (600-700 hours). The load planning is determined taking into account the academic degree and the position of the teaching staff. At the same time, the main part of the load for faculty professors is the management of scientific work, the main part of the work of faculty associate professors is the audience load.

The support of research activities is carried out by the leadership of the university, through training seminars, through the possibility of internships abroad, on the basis of agreements and memorandums of cooperation between KazUTB and foreign universities.

The research work of the faculty is carried out according to the priority directions of science in accordance with the plans. Table 5.4 shows the dynamics of the implementation of the R&D of the faculty for the reporting period.

Table 5.5.4 - Faculty R&D implementation dynamics for the reporting period.

No.	Name	2014-2015 academic year	2015-2016 academic year	2016-2017 academic year
1	Contractual subjects	-	-	-
2	Complex themes	3	3	2
Totally in the faculty		3	3	2

For the period of 2014-2017 academic years on EP 5B060800- "Ecology", 5B073100- "Life safety and environment protection", 5B072100- "Chemical technology of organic substances", 6M072100- "Chemical technology of organic substances" financing of R&D of the faculty by the Science Committee of the MES RK amounted to 15 million tenge:

Table 4.5.5 - ChChT&E faculty financed R&D

academic year	financing amount	project subject	scientific director	financing source
2014-2015 2015-2016	5 mln tenge	Synthesis of nano-sized catalysts of transition metals (palladium, cobalt, nickel, platinum, iron, zirconium) for hydrocarbon gas conversion	PhD in chemistry G.M. Nurgazina	MES RK Committee of science
2014-2015 2015-2016 2016-2017	5 mln tenge	"Development of theoretical bases, criteria and methods of evaluation of the possibility of application of the method of drillhole in situ leaching at non-ferrous and precious metals mining"	Doctor of chemical sciences, associate professor, CSE E.E. Zhatkanbayev	MES RK Committee of science
2014-2015 2015-2016	5 mln tenge	Cellulose-based agrarian hydrogels with prolonged fertilizers outflux	Ph.D. assistant professor	MES RK Committee

2016-2017		Z.K.Zhatkanbayeva	of science
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Participation in the Scientific Projects of MES RK Committee of Science Grant Financing, financed in other organizations:

- "Development of the technology and creation of a pilot installation for methane vapour-carbon-dioxide conversion in low temperature plasma to obtain liquid hydrocarbons". (financed in "IHTU"LLP). Director Z.M.Kasenova - master of engineering and technology, chief teacher of the faculty;
- "Development of ecological biotechnology of algoflora application in purification of water reservoirs contaminated by various pollutants". Director - Doctor of biological sciences, professor A.B. Abzhalelov
- "Commercialization of technology for the production of gasoline and diesel fuel from brown coal in Kazakhstan." 2013-2015. Director B.T.Yermagambet, doctor of chemical sciences, professor.
- "Development of technologies and creation of a pilot-experimental complex for advanced processing of shales of Kazakhstan with raw materials production capacity of 250 tons a year" (2015-2017) Director B.T.Yermagambet, doctor of chemical sciences, professor.
- Development of technology for obtaining new materials and solving the problem of ecology in the utilization of waste from the combustible shale ash processing of the RK, on the example of the Ural Group and Kendyrlyk deposits. TOO (ETK "KazSlanets-Batys") Director M. Utegaliyev

Table 4.5.6 - R&D statistical indicators for the "ChChT&E" Faculty

No.	Research work indicators	2014	2015	2016
1	Availability of patents, number	-	3	1
3	Publication of monographs, number	-	1	-
4	Publication of textbooks, number	3	1	2
5	Publication of study guides, number	17	6	1
6	Publication of scientific articles in editions with non-zero impact factor, number	2	3	4
7	Kazakhstan publications, number	35	32	10
8	Foreign publications, number	10	8	5
9	Involvement of teaching staff, employees in conferences, number	45	40	15

The subjects of scientific research are conducted mainly in the directions of EP 5B072100- "Chemical technology of organic substances", 6M072100- "Chemical technology of organic substances". The directions of EP 5B060800- "Ecology", 5B073100- "Life safety and environment protection" scientific areas are poorly developed.

Preparing and upgrading the qualifications of the faculty are short-term courses, seminars, internships in leading universities in Kazakhstan, abroad, as well as at manufacturing enterprises. Table 5.5 presents the dynamics of faculty qualification improvement.

Table 4.5.7 - ChChT&E faculty teaching staff qualification improvement

QI Level	2014/2015	2015/2016	2016/2017
Intra-university	-	-	-
Republican	19	22	18
International	-	-	2
Total	19	22	20

Amidst the innovation development of the country the necessity of development and implementation of the polylingual education in the educational activity becomes especially urgent. Committee of educational programs operates at the University. Since 2015-2016 academic year teaching individual disciplines in Kazakh, Russian and English languages is introduced at the University for this purpose for EP of specialty 5B060800 – "Ecology", 5B073100 - «Life Safety and Environment Protection», 5B072100 - "Chemical Technology of Organic Substances», 6M072100 – «Chemical Technology of Organic Substances».

Table 4.5.8 - The list of teachers of the "ChChT&E" faculty teaching in English language

No.	Subject	Teacher's full name	For EP students
1.	Ecology steady development	N.U.Koshkarov	CTOS, LSEP, Ecology
2.	Environment teaching	N.U.Koshkarov	Ecology
3.	HM chemistry and physics	E.E. Zhatkanbayev	CTOS
4.	HM chemistry and physics	A.Zhakennova	CTOS

The EP administration motivates the faculty to develop and apply various innovative methods in the educational process. The EP administration has not fully demonstrated the IT competence of the faculty, the conditions for motivating the faculty to apply innovative methods and forms of training, information and communication technologies in the educational process.

The questionnaire survey of the teaching staff, conducted during the visit of the IAAR EEC, showed that:

- *The university provides opportunities for faculty to use innovations in teaching - very good and good - 88.9%;*
- *The university provides an opportunity for the continuous development of the faculty potential - very good and good - 92.6%;*
- *Faculty highly appreciates the support of the university and its leadership in the research initiatives of the faculty - 88.9%;*
- *the level of feedback of faculty with management satisfies at 87%;*
- *not satisfied with the organization of academic mobility, and the plan of work to upgrade the qualifications of the faculty - 14.9% of the faculty;*
- *troubled to combine teaching with scientific research - 16.7% of the faculty.*

For further development and improvement of the University activities as to the implementation of the accredited educational programs, the IAAR EEC **recommends:**

- The EP administration must ensure the professional competence of the staff for EP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection" by recruiting a staff with a basic education.
- Consider the development of joint educational programs with foreign educational organizations, with the inclusion of items:
 - ✓ Attraction of foreign faculty for conducting joint scientific subject studies, lecturing on the basis of KazUTB, conducting online lectures by KazUTB scientists and partner universities;
 - ✓ Advanced training and IT competence of the faculty on the basis of partner universities;

Under the Standard "Academic Teaching Staff and Effectiveness of Teaching", the accredited educational programs 5B072100 - "Chemical technology of organic substances", 6M072100 - "Chemical technology of organic substances" have 17 "satisfactory" positions and 1 "suggests improvements" position, and accredited educational programs 5B060800 - "Ecology", 5B073100- "Life safety and environment protection" have 11 "satisfactory" and 7 "suggest improvements" positions.

4.6 Standard "Educational Resources and Student Support Systems"

An important factor in ensuring the quality of education and guaranteeing the sustainable development of the Engineering and Technology Faculty is the continuous improvement of the material, technical, information resources and student support systems. The Faculty has all the facilities for teaching students of specialties 5B060800 - "Ecology", 5B073100- "Life safety and environment protection", 5B072100 - "Chemical technology of organic substances", 6M072100 - "Chemical technology of organic substances", scientific research, publication of results faculty R&D, staff and students.

Annually repair and preparation of class fund is carried out for the new academic year. Before

launch of heating season, the heating system is prepared for trouble-free operation in winter. All types of work are completed with the receipt of an act of 100% completion and a permit for the use of heat and water. The availability of sports facilities, grounds, halls, medical facilities, canteens and buffets, assembly halls, dormitories, allow for effective social policy. The university has an educational and scientific laboratory base that provides the educational process in accordance with the State Educational Standards. The material and technical support of the educational process in general corresponds to the EP tasks and specific features, as well as facilitates the conduct of all types of laboratory, practical classes, research work of students, as provided for in the curriculum.

Table 4.6.1 - Laboratory premises of ChChT&E faculty

Classroom	Types of education activities	Area
Laboratory of Labor Protection - 211/212	Carrying out of practical works, separate kinds of laboratory works, independent works of students under the guidance of a teacher	18.2/59.5m ²
Laboratory of General and Inorganic Chemistry 311/312	Conduction of lectures, practical works, particular types of laboratory works	18.2/59.5m ²
Laboratory of Chemical Technology of Organic and Biological Chemistry 313/314	Conduction of lectures, practical works, particular types of laboratory works	16.6/65.1m ²
Laboratory of Chemical Technology of Organic Substances 413/414	Conduction of lectures, practical works, particular types of laboratory works	16.6/65.1m ²
Laboratory of Analytical and Physicolloid Chemistry 415/416	Conduction of lectures, practical works, particular types of laboratory works	16.6/65.1m ²

Also, laboratory and practical classes are conducted at the faculty's branch in "Institute of Chemistry, Coal and Technology" LLP. There are agreements on cooperation with this enterprise, an agreement on the branch of the faculty, an approved schedule of classes.

It is planned to purchase equipment for the educational and scientific process for the period 2017-2018 at the ChChT&E faculty:

- 1) Mass Spectrometer (ISP-MS, Mass Spectrometer)
- 2) Atomic Absorption Spectrometer
- 3) IR-spectrometer (IR-ft)
- 4) IB-SEM via VCT-100 scanning electron microscope
- 5) OxfordX-Supreme8000 X-ray Fluorescent Analyzer
- 6) Micromeritics ASAP 2010 Gas Sorption Analyzer

EEC Commission notes the insufficient number of laboratories for the conduct of special disciplines, the lack of modern software.

The faculty has created information education environments - "Platon" AMS, which includes technological support for students and faculty.

Conducting consultations, reviews on control and attestation works are implemented in three ways:

- In off-line-mode - by using e-mail;
- Contact - directly at the faculty in accordance with the approved timetable placed on the educational building hall stands.

Academic accessibility of students is provided by access to personalized interactive resources (also available during extra-curricular time), as well as educational materials and assignments.

Computer classes, fully equipped with computer equipment and software for conducting classes and consultations by faculty teachers. These computer classes are directly connected to the Internet and equipped with communication channels, providing each training workplace with a connection to the Internet with a bandwidth of 2 Mbps (provider - KazakhTelecom).

Table 4.6.2 - Number of published teaching aids for specialties

No.	Specialty	2014-2015 academic year	2015-2016 academic year	2016-2017 academic year
1	5B060800 - Ecology	4	4	1
2	5B073100- LSEP	-	-	-
3	5B072100 CTOS	2	2	1

4	6M072100 CTOS	1	2	-
Total:		7	8	2

The traditional fund of the library is 111298 printed publications, the fund on electronic media - 3120 units. Electronic publications are placed on 100 computers of the university and make up 31200 units. Thus, the total volume of educational, methodological and scientific literature, together with literature on electronic media amounts to 423298 units of publications, including 58334 copies in the Kazakh language.

Table 4.6.3 - Information on the Library Resources of the University

No.	Indicator name	Indicator
1	The number of seats in the library, including computer classes and RSTL (according to the Agreement No.5 of 17.03.2015)	308
2	Total number of copies of educational and methodological literature in the library	298 copies
3	Funds allocated for the acquisition of new literature	7000000 tg
4	Funds allocated for the acquisition of periodicals	300000 tg
5	Total library fund, including literature on electronic media	44609 copies
6	Book provision for 1 student of the applied contingent	173 copies

Providing students with access to the best educational resources of leading universities of the world through the Republican Intercollegiate electronic library on <http://rmebrk.kz> website (Kazakhstan), which combines the full text information resources of university libraries of the Republic of Kazakhstan. RIEL provides free and wide access to the electronic libraries of universities in Kazakhstan, where full texts of textbooks, teaching aids, scientific, methodological materials and published articles of the teaching staff are offered, subject to copyrights.

The library has access to the following databases:

1. The Republican Intercollegiate Electronic Library (RIEL) - www.rmebrk.kz
2. Electronic library of "Lan" publishing house - www.e.lanbook.com
3. Thomson Reuters: <http://it-science.thomsonreuters.com>.

The university does not reflect the specific nature of the EP, which includes: Book fund, including the fund of educational, methodological and scientific literature on general education, basic and profiling disciplines in paper and electronic media, periodicals in the context of the languages of education, the availability of scientific databases, electronic scientific journals and their availability, the availability of electronic versions of journals .

The "Kazakh University of Technology and Business" JSC uses 1100 Mbit Internet. Of these, 10 Mbit from "Teraline" LLP, 100 Mbit of "KazakhTeleCom" JSC fiber-optic communication.

The University has its own information website and educational portal. The information website has the address: www.kazutb.kz located on an external resource.

Information resources of the University are available to students and teachers both in KazUTB's internal network and on the Internet, in particular, users are granted access to the following information resources of the University: an educational portal that provides the opportunity for rapid and effective access of different levels of users to educational information, KazUtB LMS, which provides access to the teaching materials of the university for students of all forms of education; the "KazUTB Anti-plagiarism" system, in which final qualification works and master's theses are necessarily tested for uniqueness; KazUTB webinar system, allowing to conduct online lectures in the format of webinars; the system for placing scientific articles of KazUTB faculty and scientists on the website in free access (<http://www.kazutb.kz/>), the total number of articles in which exceeded 1500 works.

The questioning of students carried out during IAAR EEC visit has shown that the amount of those unsatisfied with:

- ***availability of library resources is 11.9%;***
- ***existing educational resources of the university - 6,8%;***
- ***availability and accessibility of computer classes and Internet resources - 18.7%;***
- ***classrooms, classrooms for large groups - 8.5%;***

- available scientific laboratories - 32.2%.

For further development and improvement of the University activities as to the implementation of the accredited educational programs, the IAAR EEC **recommends**:

- The university's leadership is to consider the possibility of allocating funding for the expansion of the laboratory base for conducting special disciplines among students of EP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection", taking into account the specific application fields.

- In order to implement the multilingualism program, the EP administration is to strengthen the development, publication and acquisition of specialized literature for accredited EP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection", in English language.

- The EP administration is to expand the base for concluding agreements on the establishment of the faculty branches for all EP's for conducting practical and laboratory work, to develop and implement a dual education system for students of all EP's.

- The University Management, based on the results of questionnaires and interviews with employees and students, is to consider the possibility to take into account the wishes of the teaching staff and students to ensure the availability of projectors and interactive whiteboards in all lecture rooms, and also to carry out work with the appropriate bodies of the Astana in order to provide pedestrian crossings on the road adjacent to the university.

Under the Standard "Educational Resources and Student Support Systems", the accredited educational programs 5B072100 - "Chemical technology of organic substances", 6M072100 - "Chemical technology of organic substances" have 2 "strong", 16 "satisfactory" positions and 1 "suggest improvements" position, and the accredited educational programs 5B060800 - "Ecology", 5B073100- "Life safety and environment protection" have 2 "strong", 12 "satisfactory" and 5 "suggest improvements" positions.

4.7 Standard "Information Management"

The management of the university is carried out in accordance with the legislation of the Republic of Kazakhstan, the standard rules of the organization of education and normative documents of the MES RK. Reflection of the management system and organizational structure of the university in the documents (Charter, regulations on the organizational structure of the university, etc.).

The joint-stock company "Kazakh University of Technology and Business" was registered in the Justice Department of the Saryarka district of the Astana city Justice Department on May 06, 2003. According to the Charter, the Shareholders of JSC "KazUTB" are:

- Legal entity of the Republic of Kazakhstan Joint Stock Company "Almaty Technological University", located at: 100 Tole Bi str., Almaty city;
- "Ertam" Limited Liability Partnership.

The system of collection and analysis of statistics on the contingent of students and graduates, available resources, staffing, scientific and international activities and other areas functions through the rating of the institution in national, regional international rating agencies, analysis of grant sites by regions and analysis of the competitive environment. This system is often used in EP management processes when planning the teaching load of the faculty, the preparation of classroom fund for the new academic year, taking into account the contingent of students and in planning internal and external academic mobility.

Processing of personal data is carried out with the consent of the students, employees and faculty of the University.

"Platonus" automated information system ("Platonus" AIS) is used in KazUTB as an instrument for the collection and analysis of information, providing receiving of information designed for operational and strategic management of the university. Responsible persons are appointed for timely input of reliable data into the "Platonus" AIS for subsequent formation of reporting information. The

user's guide is posted on the university's website.

Main information flows used to improve the quality of services provided, as well as management of educational, financial, etc. processes can be conditionally combined into the following groups: Students; Employees; General information about the university. Based on processing and analysis of information, specific decisions are made, action plans are developed to improve indicators, the results are drawn up in the form of reports and reviewed at the university's academic council.

In all subdivisions of the university, office work is conducted in accordance with the approved nomenclature of cases, the preservation and archiving of documents is ensured.

In order to assess the achievements of the faculty and departments, to identify leaders in certain types of activities and manage the scientific and pedagogical potential of the university, a provision has been developed for awarding the faculty.

Experts note that in the minutes of the faculty sessions (Minutes No. 3 of 12.10.16, No. 8 of 15.03.16, No.9 of 20.04.15), annual reports (approved by Minutes No.12 of 20.06.16) reflect the results of the analysis of the EP goal achievement, as well as ways to improve the effectiveness of the educational program. The analysis of the graduates employment is reflected in the documents (minutes No. 2 of 14.09.16).

Storage of administrative documentation of faculties is carried out according to requirements of the cases nomenclature.

Based on processing and analysis of information, specific decisions are made, action plans are developed to improve indicators, the results are drawn up in the form of reports and reviewed at the university and faculty academic council.

The EP administration has not demonstrated the possibility for information analysis in order to identify and forecast risks. It is not shown how the risks are identified and predicted on the basis of the information analysis, the methods of analysis are not shown respectively.

The questioning of students which is carried out during IAAR EEC visit has shown that the satisfaction with:

- *the utility of the organization's website - 91.5%, including 90% at the faculty;*
- *informing the requirements in order to successfully complete this specialty - 89.8%;*
- *informing students of courses, educational programs, and academic degrees - 89.5%.*

Strengths of accredited EP are:

- Placement of complete objective information about the activities and specifics of the EP on the faculty's website, including the current support systems, the results of training and the qualifications awarded; availability of adequate and objective information about the faculty, including personal pages of the faculty on the faculty website.

For further development and improvement of the University activities as to the implementation of the accredited educational programs, the IAAR EEC **recommends:**

- Regularly update the website information on the cluster EP in three languages.
- To develop a SWOT-analysis of the faculty annually on the final informational semester and academic year data, in order to identify and forecast the risks, and also develop ways to solve these risks.

Under the Standard "Information Management", the accredited educational programs 5B072100 - "Chemical technology of organic substances", 6M072100 - "Chemical technology of organic substances", 5B060800 - "Ecology", 5B073100- "Life safety and environment protection" have 13 "satisfactory" positions, 1 "suggest improvements" position.

4.8 Standard "Public Awareness"

The university should publish information about its activities in general and about implementation of educational programs. (<http://kazutb.kz/ru/index.php/abiturientam/>) The specified

information is clear, objective, relevant and accessible. Information on the ChChT&E faculty ATS is available on the KazUTB website at <http://kazutb.kz/ru/index.php/uchebnyj-protsess/tehnologicheskij-fakultet/khimiya-khimicheskaya-tehnologiya-i-ekologiya/> and is accessible to the public, including the entrants, parents, students and employers.

The university's website contains the following functional elements: to entrants, about KazUTB, educational process, international cooperation, KazUTB AMS, science and innovation, KDM, ask a question to the President-Rector. Information posted on the site of KazUTB is periodically updated as new information becomes available.

It is noted that information on the faculty ATS is not presented in three language versions.

The EP administration uses a variety of ways to disseminate information, including information networks for informing the general public and interested persons. The university has profiles in the networks like "My World", "Facebook", "Football Federation", etc. <https://my.mail.ru/community/kazutb/>, https://sportsffa.kz/ffa/football/team_kazutb/, <https://www.facebook.com/profile.php?id=100013999993320&fref=ts>.

The University demonstrates on the web resource the indication of information characterizing the university in general and in the context of educational programs, the effectiveness of its use to improve the educational process, which has the following characteristics:

- placement of complete objective information about the specifics of educational programs, including the acting support systems, education outcomes and qualifications awarded;
- placement of information on interaction with scientific/consulting organizations and educational organizations implementing similar educational programs;
- availability of adequate and objective information on teaching staff, including the teaching staff profiles;
- placement of information and links to external resources based on the results of external assessment procedures.

However transparency of information as to complaint handling, including the placement of a virtual complaint book for consumers is not shown.

The EP's participate in external assessment procedures, including ratings and rankings. Materials for accreditation can be found at <http://kazutb.kz/ru/index.php/mezhdunarodnaya-akreditatsiya/spetsializirovannaya-akkreditatsiya/klastery>.

In KazUTB there are also information stands on which information on educational, research, educational work, patriotic nature is represented, which is handled by the student dean's office and the faculty.

Based on the results of the survey, the satisfaction rating is as follows:

- access to the Internet - 81.4% of students,
- the usefulness of the website of educational organizations in general and faculties in particular - 91.5% of students;
- informing the requirements in order to successfully complete this specialty - 98.3% of students;
- informing students of courses, educational programs, and academic degrees - 89.8% of students.

Strengths of accredited EP are:

a variety of ways to disseminate information (site, media, social networks, YouTube).

For further development and improvement of activities of university for implementation of the accredited educational programs of IAAR EEC **recommends:**

- The EP administration is to ensure Public Awareness on interaction with scientific and consulting organizations;
- The University Management is to increase the transparency of the procedure for budget formation with the involvement of all interested parties; to ensure the consistency of the approved

University Development Strategy with the budget under formation (budget for 3-5 years);

- The EP administration is to strengthen the development of the website in three languages.
- The question-and-answer procedure on the President-Rector's blog should be open and accessible.

Under the Standard "Public Awareness", the accredited educational programs 5B072100 - "Chemical technology of organic substances", 6M072100 - "Chemical technology of organic substances" have 1 "strong" position, 7 "satisfactory" positions and the accredited educational programs 5B060800 - "Ecology", 5B073100- "Life safety and environment protection "have 1 "strong" position, 6 "satisfactory" positions, 1 "suggest improvements" position.

4.9 Standard "Standards across Individual Specialties"

Accredited EP's include disciplines and activities aimed at gaining practical experience and skills in the specialty in general and profiling disciplines in particular, including tours to enterprises, conducting practical classes at the faculty's branch, conducting seminars to solve practical problems relevant to enterprises in the field of specialization with the involvement of specialists with extensive experience in leading enterprises, organizations, and companies of the region. Involved for conducting master classes: On specialty 5B072100- "Chemical technology of organic substances", 5B060800 "Ecology" A.B.Abzhalelov - Director of RSE on REU "Republican collection of microorganisms of the MES RK Science Committee "; on specialty 5B072100- "Chemical technology of organic substances" R.Ermagambet - chief laboratory engineer of "KazMunaiGas Onimderly" JSC; on 5B0731000 «Safety of vital functions and protection of the environment» A. Smagulova - director of "Industrial Security and Expertise" LLP.

The academic teaching staff included in the educational program under "CTOS" EP includes full-time teachers with significant full-time staff member working experience at enterprises in the EP specialization area However, for EP "Ecology" and "LSEP" the situation needs improvement.

The content of all the disciplines of EP "CTOS", "Ecology", "LSEP" is based and includes a clear relationship with the content of the fundamental natural sciences, such as mathematics, chemistry, physics. The EP administration demonstrates the logic and reasons for drawing up curricula and education programs, in particular the reasons for including one or another discipline in the curriculum list, the reasons for assigning the post- or prerequisite status, compliance of the discipline name and content. The catalogs of educational programs elective disciplines are updated annually in accordance with the recommendations of employers.

The EP administration does not fully provide for measures to strengthen practical training in the field of specialization for students of the EP "Ecology" and "LSEP".

The EP administration does not fully ensure that students are trained to use modern information technologies.

EP'S have the following strengths:

- organization of educational process based on credit education technology;
- the possibility of students choosing an individual educational trajectory, through the choice of elective disciplines;
- the introduction of elective disciplines into educational programs that correspond to the current state of education and science, containing the results of current research and other relevant information in the production industry;
- involvement of employers in the design of the educational program content, its implementation;
- availability of a practice database;

There is a good level of industrial practice organization for the "CTOS" specialty.

For further development and improvement of the University activities as to the implementation of the accredited educational programs, the IAAR EEC **recommends:**

- The EP administration is to consider the possibility of including employees of production organizations that have a long working experience at enterprises in the field of specialization of the education program into the faculty staff for OP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection".

- The university's leadership is to consider the possibility of allocating funding to expand the list of disciplines that have advanced software, virtual laboratory programs on profiling disciplines for all EP's.

- The EP administration to ensure the actual passage of professional practice on all enterprises with which cooperation agreements have been concluded.

Under the Standard "Standards Across Individual Specialties", the accredited educational programs 5B072100 - "Chemical technology of organic substances", 6M072100 - "Chemical technology of organic substances" have 5 "satisfactory" positions and the accredited educational programs 5B060800 - "Ecology", 5B073100- "Life safety and environment protection" have 2 "satisfactory" positions and 3 "suggest improvements" positions.



IOAR

RECOMMENDATIONS TO THE UNIVERSITY ON THE ACCREDITED EP

- To harmonize the identity and uniqueness of EP 5B060800 – "Ecology", 5B073100- "Life safety and environment protection" with the strategic development plan and the educational policy of the university.

- To systematically conduct the analysis of the data collected within the survey "Teacher through the students' eyes" and the employers survey. The dynamics in the data change, decisions and performance related to negative indices of the surveying to be minuted at the faculty meetings, the meetings of the faculty councils.

- In order to ensure the continuous maintenance of EP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection" consider the possibility of opening a master's degree for the specified EP.

- Consider the development of joint educational programs with foreign educational organizations, with the inclusion of items:

- *to include disciplines that have a research direction in the EDC of joint educational programs;*

- *implementation of the academic mobility program for students on a free of charge basis, through mutual students' exchange with partner universities and KazUTB.*

- Based on the results of the faculty qualification improvement for the last 3 years, each faculty having the certificate of advanced training is to develop and implement their own discipline teaching method using innovative teaching methods. To monitor the effectiveness of new teaching methods introduction, to conduct an analysis each semester and monitoring results are to be recorded at the meetings of the faculty, faculty Academic and Methodological Board.

- Develop and ensure the implementation of the AMC (academic and methodological complexes) publication plan for 2017-2018, 2018-2019, 2019-2020 academic years for each EP, including publication in Russian, Kazakh and English languages.

- To increase the level of students' readiness for professional work, strengthen practical classes at the faculty branches for OP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection", expand the base of professional practice. To consider the possibility of opening additional faculty branches according to the area of paths of EP.

- The university administration should provide conditions for inclusive education.

- University management should provide for the development and implementation of special program for adaptation and support of foreign students.

- To increase the number of students realizing external and internal academic mobility by developing and implementing joint educational programs with higher education institutions of Kazakhstan, near and far abroad.

- To increase the percentage of students involved in research, with the development of a mechanism to stimulate them. Attract students to participate in grant funding programs of the MES RK, the World Bank, social projects, competitions of the Foundation of the First President of the Republic of Kazakhstan, Erasmus, Tempus programs etc.

- Strengthen measures to prepare students for the transition to a multilingual education.

- The EP administration must ensure the professional competence of the staff for EP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection" by recruiting a staff with a basic education.

- Consider the development of joint educational programs with foreign educational organizations, with the inclusion of items:

- *involvement of foreign faculty for conducting joint scientific case studies, lecturing on the basis of KazUTB, reading online sessions by scientists of KazUTB and partner universities;*

- *improving qualification and IT competence of the faculty on the basis of partner universities;*

- The university's leadership is to consider the possibility of allocating funding for the expansion of the laboratory base for conducting special disciplines among students of EP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection", taking into account the specific application

fields.

- In order to implement the multilingualism program, the EP administration is to strengthen the development, publication and acquisition of specialized literature for accredited EP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection", in English language.

- The EP administration is to expand the base for concluding agreements on the establishment of the faculty branches for all EP's for conducting practical and laboratory work, to develop and implement a dual education system for students of all EP's.

- The University Management, based on the results of questionnaires and interviews with employees and students, is to consider the possibility to take into account the wishes of the teaching staff and students to ensure the availability of projectors and interactive whiteboards in all lecture rooms, and also to carry out work with the appropriate bodies of the Astana in order to provide pedestrian crossings on the road adjacent to the university.

- Regularly update the website information on the cluster EP in three languages.

- To develop a SWOT-analysis of the faculty annually on the final informational semester and academic year data, in order to identify and forecast the risks, and also develop ways to solve these risks.

- The EP administration is to ensure Public Awareness on interaction with scientific and consulting organizations;

- The University Management is to increase the transparency of the procedure for budget formation with the involvement of all interested parties; to ensure the consistency of the approved University Development Strategy with the budget under formation (budget for 3-5 years);

- The EP administration is to strengthen the development of the website in three languages.

- The question-and-answer procedure on the President-Rector's blog should be open and accessible.

- The EP administration is to consider the possibility of including employees of production organizations that have a long working experience at enterprises in the field of specialization of the education program into the faculty staff for EP 5B060800 - "Ecology", 5B073100- "Life safety and environment protection".

- University management is to consider the possibility of providing funding for expanding the list of disciplines with advanced software, virtual laboratory programs in the core disciplines for all EPs. - The EP administration is to ensure the actual passage of professional practice at all enterprises with which cooperation agreements have been concluded.

**Specialized profile parameters (5B073100 - Life Safety and Environment Protection
5B060800 – Ecology)**

No.	No.	Evaluation criteria	Position of the educational institution			
			Strong	Satisfactory	Improvement is required	Unsatisfactory
"Educational Program Management" Standard						
1	1	The institution shall have a published Quality Assurance Policy.		+		
2	2	The Quality Assurance Policy shall reflect the relationship between research, teaching and learning.		+		
3	3	The higher education institution shall showcase the development of the Quality Assurance culture.		+		
4	4	The Quality Assurance Policy shall also apply to any activities performed by contractors and partners (outsourcing).		+		
5	5	The University showcases the EP Development Plan based on an analysis of its functioning, the actual positioning of the institution and targeting its activities to meet the needs of the state, employers, stakeholders, and students.		+		
6	6	The University determines the mechanisms to draw up and regularly review the educational program Development Plan and monitor its implementation, assessment of the achievement of the education objectives, the needs of students, employers and society, decision-making aimed at the continuous improvement of the educational program		+		
7	7	The University showcases the transparency in developing the EP Development Plan processes. The University provides the stakeholders with information about the		+		

		content of the EP Development Plan and its drafting processes.				
8	8	The University shall engage the stakeholder group representatives, including employers, students and the ATS when drawing up the EP Development Plan.		+		
9	9	The University shall showcase the distinction and uniqueness of the EP Development Plan, its coherence with national development priorities and the education organization's Development Strategy.			+	
10	10	The University shall ensure the alignment of the EP Development Plan to the resources available (including financial, information, personnel, material and technical base).		+		
11	11	All the core business processes regulating the EP implementation to be documented in the educational organization.		+		
12	12	The University shall showcase a clear definition of those responsible for business processes, unambiguous distribution of the staff's duties, delineation of the collegiate authorities functions participating in the EP implementation.		+		
13	13	The University, on a regular basis, analyzes information on the educational program implementation and conducts self-examination across all areas to assess the success of the EP Development Strategy using such indicators as "effectiveness" and "efficiency."			+	
14	14	The EP Management shall provide evidence of the Educational Program Management transparency.		+		
15	15	The EP Management shall show the successful functioning of the internal EP Quality Assurance system, including its design, management and monitoring, their improvement, decision-making based on findings.			+	
The EP Management shall include:						
16	16	process-based activities management;		+		
17	17	mechanisms for planning, development and continuous improvement;		+		
18	18	risk assessment and identification of ways to mitigate the risks;			+	

19	19	monitoring, including the development of the reporting processes, enabling to determine the dynamics in the activities and implementation of plans;		+		
20	20	analysis of the identified discrepancies, implementation of the developed corrective and preventive measures;			+	
21	21	change effectiveness analysis;			+	
22	22	evaluation of the efficiency and effectiveness of the units and cooperation between them;		+		
23	23	employer liaison.		+		
24	24	The University shall ensure engagement of the stakeholder representatives (employers, ATS, students) in the collegiate authorities of the Educational Program Management, as well as their representativeness in making decisions on the EP management.		+		
25	25	The EP Management shall ensure the measurement of the ATS, staff and students' satisfaction rate and ascertain the fact of addressing the gaps defined during the measurement process.		+		
26	26	The EP Management shall showcase the evidence of openness and accessibility for students, ATS, employers (official hours of reception on personal matters, e-mail communication, etc.).		+		
27	27	The University shall show the available communication channel enabling any stakeholder to submit an innovative proposal on the EP improvement to the leadership. The University shall showcase examples of the analysis of the proposals and their implementation.		+		
Total for the standard				21	6	
"Development and Approval of Educational Program" Standard						
28	1	The University shall define and document the procedures for assessing the quality of the Educational Program and establish the cadence, forms and methods to evaluate the EP quality.		+		
29	2	The University shall establish the procedure for recurring review and monitoring of educational programs.		+		
30	3	The University shall set the requirements for educational programs depending on their specificity, educational		+		

		level, as well as on the technologies used, incl. distance learning technology.				
31	4	The University shall showcase the available developed models of the educational program graduate, including his/her knowledge, skills, and professional competencies.		+		
32	5	The University shall showcase the ATS, employers and students engagement in the development of educational programs, ensuring their quality, and provide evidence that employers are ordinary representatives of employers.		+		
33	6	The University shall provide external expertise of the educational program and ensure its approval by collegiate bodies.		+		
34	7	The EP Management shall clearly define the EP objectives.		+		
35	8	The EP Management shall demonstrate the logic of drawing up curricula and educational programs, in particular, the reasons for including a discipline in the curriculum list, the reasons for assigning the post- or prerequisite status.		+		
36	9	The EP Management shall ensure the alignment of the subjects title and content to the current trends in the development of the science/society, and etc range covered.		+		
37	10	The University shall set the content, scope, logic of the construction of the individual educational pathway of students.		+		
38	11	The EP Management shall showcase the continuity of the content of the educational program across various levels, including the logic of the academic interconnection of disciplines, consistency and continuity.		+		
39	12	On an annual basis, the EP Management shall ensure the review of curriculum and educational programs content taking into account market changes, the needs of employers, students and teachers.		+		
40	13	The EP Management shall showcase the impact of subjects on the professional competence development among the students.		+		
41	14	The EP workload shall be clearly defined in line with		+		

		Kazakh credits and the ECTS.				
42	15	The educational program structure to provide for various activities, the content of which should contribute to the development of students' professional competence.		+		
43	16	The University shall showcase the effectiveness in arranging and conducting professional practical training.		+		
44	17	The University shall ensure the alignment of the academic subjects content to the target learning outcomes. The list and content of subjects to be available for students.		+		
45	18	An important factor is the harmonization of the educational program content with similar educational programs of leading foreign and Kazakh educational organizations.			+	
46	19	An important factor is the availability of joint educational programs conducted together with foreign educational organizations.			+	
47	20	An important factor is the cooperation and sharing experience with other educational organizations that implement similar educational programs.		+		
48	21	The EP Management should ensure that there are research elements in the EP content.			+	
Total for the standard				18	3	
"Student-centered Education, Teaching and Assessment of Academic Performance" Standard						
49	1	The EP Management to ensure equal opportunities for students, including, regardless of the language of the course, to develop individual educational program aimed at professional competence development.	+			
50	2	The EP Management to ensure the harmonious development of students with regard to intellectual development and individual characteristics.		+		
51	3	The EP Management shall enable the introduction and effectiveness of implementing active and innovative learning techniques.			+	
52	4	The EP Management shall provide the in-house developments in the area of Teaching Techniques for			+	

		academic subjects.				
53	5	The EP Management shall showcase the availability of a feedback system on the use of various teaching methods and the academic performance rating			+	
54	6	When implementing the educational program, the EP management should monitor the student's individual work and appropriate evaluation of its results.		+		
55	7	The EP Management shall monitor students satisfaction with the professional practical training.		+		
56	8	The EP Management shall demonstrate decision-making based on students' feedback and assessment of their satisfaction.		+		
57	9	The EP Management shall prove the availability of a system to monitor the student advancement along the learning pathway and student achievements.		+		
58	10	The EP management shall ensure the availability and effectiveness of the objective evaluation mechanism of the learning outcomes, of the collegiate appeal mechanism, transparency of evaluation criteria and tools.		+		
59	11	The EP management shall ensure alignment of the the procedures for assessing the level of student's achievement with the program's goals, the established criteria, and methods of evaluation.		+		
60	12	The EP Management shall ensure the environment for inclusive education.			+	
Total for the standard			1	7	4	
"Students" Standard						
61	1	The AP management should demonstrate the policy of forming a contingent of students starting from admission to graduation and ensure the transparency of its procedures. Procedures regulating student life cycle to be approved and published.		+		
62	2	Admission and enrollment for the educational program to be followed by an induction course containing information on the educational institution and the educational program specifics.		+		
63	3	The EP Management shall envisage a special adaptation			+	

		and support program for foreign students.				
64	4	The EP Management shall demonstrate the conformity of its activities with the Lisbon Recognition Convention.		+		
65	5	The University shall cooperate with other educational organizations and national centers of the "The European Network of National Information Centres on academic recognition and mobility/The National Academic Recognition Information Centres" in order to ensure consistent recognition of qualifications.		+		
66	6	The EP Management shall prove the availability and effectiveness of the tool for recognizing the outcomes of academic mobility of students, as well as the results of additional, formal and informal teaching.		+		
67	7	The EP Management shall showcase the effectiveness of monitoring student academic achievements.			+	
68	8	The EP Management shall showcase realization by students of the main roles (professional, social) based on learning outcomes.		+		
69	9	The EP Management shall facilitate the professional certification of students.			+	
70	10	The EP Management shall ensure involvement of students in research and development activities and consulting.			+	
71	11	The University and the EP Management shall provide an opportunity for student external and internal mobility, as well as assist them in obtaining external education scholarship.			+	
72	12	The University shall provide graduates with relevant credentials, including the outcomes achieved, as well as the context, scope and status of the qualification received and certificate testifying its completion.	+			
73	13	The EP management shall ensure measures to employ graduates, to monitor graduates employability on a regular basis, to develop their career and increase the performance of the graduates associations.			+	
74	14	The EP Management shall allow for sharing and expressing students opinions, for instance, through the Internet forum or student organizations.		+		

75	15	The EP Management shall show a functioning feedback system, including the prompt submission of information on the student assessment results.		+		
76	16	The EP Management shall showcase the availability and effectiveness of the talented student support mechanism.		+		
Total for the standard			1	9	6	
"Academic Teaching Staff" Standard						
77	1	The University should have a candid and transparent HR policy, which involves hiring, professional growth and development of personnel ensuring the professional competence of all of the staff.			+	
78	2	The EP Management shall show the alignment of the academic teaching staff's capacity to the University Development Strategy, qualification requirements, the level and specifics of the educational program, and recruitment based on the recruiting system.		+		
79	3	The EP Management shall show an awareness of responsibility for its employees and providing them with favorable working conditions.		+		
80	4	The EP Management shall show the changing role of the teacher due to the transition to student-centered learning.			+	
81	5	The University should demonstrate the availability of the ATS information to the public, including the catalogs of the academic teaching staff, posting profiles on the university's website.		+		
82	6	The EP Management shall ensure monitoring the ATS activities, systematic evaluation of the teachers' competence, integrated assessment of the teaching quality, as well as the assessment of the teachers and students satisfaction level.		+		
83	7	The EP Management shall ensure completeness and adequacy of individual work planning by the ATS across the all activities, monitoring the efficiency and effectiveness of individual plans, and present evidence of delivering all types of scheduled workload by the teachers.		+		
84	8	The EP Management shall show the support of the ATS			+	

		research activities, ensuring the link between research and learning.				
85	9	The EP Management shall show the availability of a professional development system, professional and personal development of the ATS, administrative and management personnel, as well as the correspondence of the ATS professional and personal development to the Development Strategy.		+		
86	10	The EP Management shall engage specialists with experience in the relevant industry, as well as well-known scholars, public, and political figures.			+	
87	11	The EP Management shall ensure targeted actions for the newcomers professional development.		+		
88	12	The EP Management should ensure availability of incentive system for professional and personal development of teachers and personnel.		+		
89	13	The EP Management should ensure monitoring of the ATS satisfaction.		+		
90	14	The EP Management should demonstrate the involvement of the ATS in the specialization practice activities on an a regular basis.			+	
91	15	The EP Management shall prove the IT competence of the ATS, the conditions for motivating ATS to apply innovative methods and forms of training, information and communication technologies in the educational process.			+	
92	16	The key factor is to develop the teachers academic mobility, engaging best foreign and local teachers, conducting joint research.			+	
93	17	The key factor is the ATS engagement in the social life (the ATS role in the education system, in the development of science, of the region, in the creation of a cultural environment, participation in exhibitions, creative competitions, charity programs, etc.).		+		
94	18	The EP Management displays the alignment of the priorities of counseling, research work implemented by the EP ATS to the current economic issues, state development priorities, national educational policy, science, and innovative development.		+		

Total for the standard				11	7	
"Educational Resources and Student Support Systems" Standard						
95	1	The University shall demonstrate the adequacy of material, financial and human resources.	+			
96	2	The University shall demonstrate the effectiveness of students support services and the availability of support procedures.	+			
97	3	The University shall identify the needs for the support of various student groups and categories.		+		
98	4	The University shall ensure the availability and effective functioning of the information and feedback system focused on students, employees and stakeholders, information provision systems and feedback.		+		
99	5	The University shall showcase the effectiveness of regular analysis of the adequacy of resources and students support systems, including the competence of the staff involved.		+		
		<i>Learning environment reflecting the specifics of educational programs to be created in the university, which includes:</i>				
100	6	technological support of students and the ATS in line with the programs (for example, on-line training, modeling, databases, data analysis programs);		+		
101	7	personalized interactive resources (accessible during extra-curricular time as well), including learning materials and assignments, ensuring the options for students' self-assessment of knowledge through remote access to the portal (site) of the University;		+		
102	8	interactive academic counseling to assist students in planning and mastering educational programs, including through the use of personalized interactive resources;		+		
103	9	professional guidance, assistance in the selection and achievement of career paths;		+		
104	10	sufficient number of classrooms equipped with modern technical means of training: educational and scientific laboratories, modern military training areas, technology parks equipped with modern equipment compliant with implemented educational programs, sanitary and			+	

		epidemiological regulations, and requirements;				
105	11	sufficient number of computer classes, reading rooms, multimedia, language labs, and scientific-methodical classrooms, number of seats;			+	
106	12	book fund, including the fund of educational, methodical and scientific literature on general, basic and major subjects in hard and soft copy, periodicals in the context of the language of instruction;			+	
107	13	structured information across the subjects. For instance, presentation materials, video materials, lecture notes, compulsory and additional literature, practical assignments, etc .;		+		
108	14	availability of scientific databases, electronic scientific journals and their accessibility;			+	
109	15	availability of soft copies of journals published;			+	
110	16	expert assessment of the research results, graduation papers, dissertations on plagiarism;		+		
111	17	free access to educational Internet resources, free WI-FI throughout the educational organization.		+		
112	18	The EP Management shall ensure respect for copyrights when making the educational literature, academic and teaching materials publicly available.		+		
113	19	Educational equipment and software to meet current requirements.		+		
Total for the standard			2	12	5	
"Information Management" Standard						
114	1	The University shall ensure operations of information collecting, analyzing and managing system based on the use of current information and communication technologies and software.		+		
115	2	The University defines the scope and structure of regularly updated information and staff responsible for the reliability and timeliness in line with the University Development Strategy.		+		
116	3	The University ensures timeliness, reliability, completeness, and security of information.		+		

117	4	The EP Management shall display the adoption of management decisions based on fact analysis.		+		
118	5	The information collection, analysis and management system should be used to ensure the EP implementation quality.		+		
		The information collected and analyzed by educational organizations should reflect the following:				
119	6	dynamics of the students enrolled across the forms and types;		+		
120	7	academic performance rate, students' achievements and expulsion;		+		
121	8	student satisfaction with the EP implementation and training quality at university;		+		
122	9	accessibility of educational resources and students support systems;		+		
123	10	graduate employment and career growth.		+		
124	11	The EP Management shall allow for information analyzing option in order to identify and forecast risks.			+	
125	12	The University shall ensure the availability and effective functioning of an information and feedback system focused on students, employees, and stakeholders.		+		
126	13	Students, employees and ATS should give documentary evidence of their consent to their personal data processing.		+		
127	14	The key factor is the engagement of students, employees and ATS in the information collecting and analyzing processes, as well as decision-making.		+		
Total for the standard				13	1	
"Public Awareness" Standard						
128	1	The University shall publish information about its activities, in general, and on the educational programs implementation. The information specified to be clear, accurate, fair, relevant and, accessible.		+		
129	2	The EP Management shall apply a variety of ways to disseminate information, including information networks to inform a wide public and stakeholders.		+		

		The University shall showcase the reflection on the web-resource of information characterizing the university, in general, and within the educational programs, the effectiveness of its use to improve the educational process, which has the following characteristics:				
130	3	posting complete unbiased information on the educational program specifics, including the current support systems, learning outcomes and qualifications awarded;		+		
131	4	availability of adequate and objective information on ATS, including the ATS profiles;		+		
132	5	transparency of information as to complaint handling, including the placement of a virtual complaint book for consumers;			+	
133	6	posting information on liaison with scientific/consulting organizations and educational organizations implementing similar educational programs;		+		
134	7	posting information and links to external resources based on the results of external evaluation procedures.	+			
135	8	An important factor is the participation of the EP in a variety of external evaluation procedures, including ratings and ranking.		+		
Total for the standard			1	6	1	
"Standards Across Individual Specialties" Standard						
NATURAL SCIENCE, ENGINEERING SCIENCE AND TECHNOLOGY						
<i>Educational programs for "Engineering Science", "Engineering Science and Technology" shall meet the requirements</i>						
136	1	In order to introduce students to professional environment and relevant issues related to specialization, as well as to acquire skills on the basis of theoretical training, the educational program shall incorporate subjects and activities aimed at obtaining practical experience and skills in the specialty in general and major subjects in particular, including: - enterprise trips related to the specialization (plants, workshops, research institutes, laboratories, educational experimental facilities, etc.) - conducting separate classes or subjects at the specialization enterprise, - conducting seminars to address practical challenges		+		

		relevant to enterprises in the area of specialization, etc.				
137	2	The academic teaching staff engaged in the educational program shall consist of permanent teachers with significant full-time staff track record at enterprises in the area of specialization of the educational program;			+	
138	3	The scope of the EP subjects shall be based, to some extent, and provide for a clear link with the scope of basic Natural Sciences, such as Mathematics, Chemistry, Physics;		+		
139	4	The EP Management shall ensure measures to accelerate practical training in the area of specialization;			+	
140	5	The EP Management shall ensure that students are trained to use modern information technologies.			+	
Total for the standard				2	3	
TOTAL			5	99	36	

Characteristics of specialized profile (5B072100 - Chemical Technology of Organic Substances , 6M072100 - Chemical Technology Of Organic Substances)

No.	No.	Evaluation criteria	Position of the educational institution			
			Strong	Satisfactory	Assumes improvement	Unsatisfactory
Standard "Management of Educational program"						
1	1	The University must have a published quality assurance policy.		+		
2	2	The quality assurance policy should reflect the relationship between research, teaching and learning.		+		
3	3	The University should demonstrate the development of quality assurance culture.		+		
4	4	The quality assurance policy should also apply to any activities performed by contractors and partners (outsourcing).		+		
5	5	The University demonstrates elaboration of the EP development plan based on EP functioning analysis, real positioning of the University and their orientation to meeting the needs of the state, stakeholders and students.		+		
6	6	The University determines the mechanisms for the formation and regular revision of the educational program development plan and monitoring of its implementation, assessment of the achievement of the education objectives, the needs of students, employers and society, decision-making aimed at the continuous improvement of the academic program		+		
7	7	The University demonstrates the transparency of EP development plan drafting processes. The University provides the stakeholders with information about the		+		

		content of the EP development plan and its drafting processes.				
8	8	The University should involve representatives of stakeholder groups, including employers, students and the ATS in the formation of EP development plan.		+		
9	9	The University should demonstrate the individuality and uniqueness of the EP development plan, its coherence with national development priorities and the development strategy of the education institution.			+	
10	10	The University should ensure the compliance of the EP development plan with the available resources (including financial, information resources, personnel members, material and technical base).		+		
11	11	The education institutions should document all the main business processes regulating the EP implementation.		+		
12	12	The University should demonstrate a clear definition persons responsible for business processes, an unambiguous assignment of staff duties, a delineation of the functions of the collegiate bodies participating in the EP implementation.		+		
13	13	The University systematically analyzes information on the academic program implementation and conducts self-examination in all areas to assess the success of the implementation of the academic program development strategy with such indicators as "efficiency" and "effectiveness".			+	
14	14	EP Management should provide evidence of educational program management transparency.		+		
15	15	EP management should demonstrate the successful functioning of the internal EP quality assurance system, including its design, management and monitoring, their improvement, decision-making on the basis of facts.			+	
EP Management should include:						
16	16	management of activities through processes;		+		
17	17	mechanisms for planning, development and continuous improvement;		+		
18	18	risk assessments and identification of ways to reduce			+	

		these risks;				
19	19	monitoring, including the creation of reporting processes allowing to determine activities and implementation of plans dynamics;		+		
20	20	analysis of identified discrepancies, of implementation of the developed corrective and preventive actions;			+	
21	21	analysis of the effectiveness of changes;		+		
22	22	evaluation of the efficiency and effectiveness of the structural units activities and their interaction.		+		
23	23	interaction with employers.		+		
24	24	The university should ensure the participation of stakeholders representatives (employers, ATS, students) in the collegiate bodies of the educational program management, as well as their representativeness in decision making on the management of the educational program		+		
25	25	The EP management should ensure that the degree of satisfaction of the ATS, staff and students' needs is met and demonstrate evidence of addressing the deficiencies found during the measurement process.		+		
26	26	The EP management should demonstrate evidence of openness and accessibility for students, ATS, employers (official hours of reception on personal matters, e-mail communication, etc.).		+		
27	27	The University should demonstrate the availability of a communication channel allowing any interested person to make innovative proposals to improve the EP activities to the leadership. The University should demonstrate examples of the analysis of these proposals and their implementation.		+		
Total for the standard				22	5	
Standard "Development and approval of educational program"						
28	1	The University should define and document the procedures for assessing the quality of the academic program and establish the frequency, forms and methods for assessing the quality of the academic program		+		
29	2	The University should establish the procedure for		+		

		periodic review and monitoring of academic programs.				
30	3	The University should determine the requirements for academic programs depending on their specificity, educational level, as well as on the technologies used, incl. distance ones.		+		
31	4	The University should demonstrate the availability of the developed models of the academic program graduate, including his/her knowledge, skills, skills and professional competencies.		+		
32	5	The University should demonstrate the participation of ATS, employers and students in the development of academic programs, ensuring their quality, and provide evidence that employers are typical representatives of employers.		+		
33	6	The University should provide external expertise of the academic program and its approval by collegiate bodies.		+		
34	7	The EP management should clearly define the objectives of the EP.		+		
35	8	The EP management should demonstrate the logic of drawing up curricula and academic programs, in particular the reasons for including a discipline in the curriculum list, the reasons for assigning the post- or prerequisite status.		+		
36	9	The EP management should ensure that the title and content of the disciplines correspond to the current trends in the development of the studied field of science / society, and etc.		+		
37	10	The University should determine the content, scope, logic of the construction of the individual educational trajectory of students.		+		
38	11	The EP management should demonstrate the continuity of the content of the academic program at various levels, including the logic of the academic interconnection of disciplines, consistency and continuity.		+		
39	12	The EP management should annual ensure revision of the curriculum and educational programs contents taking into account market changes, the needs of employers, students and teachers.		+		

40	13	The EP management should demonstrate the influence of disciplines on the formation of students' professional competence.		+		
41	14	The labor intensity of an EP should be clearly defined in Kazakhstani credits and ECTS.		+		
42	15	The structure of the academic program should provide for various activities, the content of which should contribute to the formation of students' professional competence.		+		
43	16	The University should demonstrate the effectiveness of organizing and conducting professional practical training.		+		
44	17	The University should ensure that the contents of the academic disciplines and the planned learning outcomes are in line. The list and content of the disciplines should be accessible to students.		+		
45	18	An important factor is the harmonization of the content of academic programs with similar academic programs of leading foreign and Kazakhstani educational organizations.			+	
46	19	An important factor is the availability of joint educational programs with foreign educational organizations.			+	
47	20	An important factor is the cooperation and exchange of experience with other educational organizations that implement similar academic programs.		+		
48	21	The EP management should ensure that there are research elements in the content of the EP.		+		
Total for the standard					19	2
Standard "Student-Centered Training, Teaching and Student Evaluation"						
49	1	The EP management should ensure equal opportunities for students for the formation of an individual educational program aimed at the formation of professional competence, including regardless of the language of instruction.	+			
50	2	The EP management should ensure the harmonious development of students with regard to intellectual		+		

		development and individual characteristics.				
51	3	The EP management should ensure the introduction and implementation effectiveness of active and innovative teaching methods.			+	
52	4	The EP management should ensure the availability of its own developments in the field of methods of teaching the academic disciplines.		+		
53	5	The EP management should demonstrate the availability of a feedback system on the use of various methods of training and knowledge control.			+	
54	6	When implementing the academic program, the EP management should monitor the student's independent work and adequate evaluation of its results.		+		
55	7	The EP management should monitor the student satisfaction with the professional practical training.		+		
56	8	The EP management should demonstrate decision-making based on feedback from the students and assesment of their satisfaction.		+		
57	9	The EP management should prove the availability of a monitoring system for the progress of the student on the educational trajectory and the students' achievements.		+		
58	10	The EP management should demonstrate the availability and effectiveness of objective evaluation mechanism of the learning outcomes of the collegiate appeal mechanism, transparency of evaluation criteria and tools.		+		
59	11	The EP management should ensure compliance of the procedures for assessing the level of knowledge of the students with the program's goals and the established criteria and methods of evaluation.		+		
60	12	The EP management should ensure inclusive education.			+	
Total for the standard			1	8	3	
Standard "Students"						
61	1	The EP management should demonstrate the policy of forming a contingent of students starting from admission to graduation and ensure the transparency of its procedures. Procedures regulating the life cycle of students should be approved and published.		+		

62	2	Admission and enrollment for the academic program should be accompanied by an introductory course containing information on the educational institution and the specifics of the academic program.		+		
63	3	The EP management should envisage a special program of adaptation and support for foreign students.			+	
64	4	The EP management should demonstrate the conformity of its activities with the Lisbon Recognition Convention.		+		
65	5	The University should cooperate with other educational organizations and national centers, the "European Network of National Information Centers for Academic Recognition and Mobility" in order to ensure matching recognition of qualifications.		+		
66	6	The management of the academic program should demonstrate the availability and effectiveness of the mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and informal education.		+		
67	7	The EP management should demonstrate the effectiveness of monitoring the academic achievements of students.			+	
68	8	The EP managementshould demonstrate awareness of the main roles (professional, social) of students based on learning outcomes.		+		
69	9	The EP management should promote professional certification of students.			+	
70	10	The EP management should ensure the involvement of students in research and consulting .		+		
71	11	The University and the EP management should provide an opportunity for external and internal mobility of students, as well as assist them in obtaining external scholarships for education.		+		
72	12	The University should provide graduates with documents confirming the received qualification, including the learning outcomes achieved, as well as the context, content and status of the education received and evidence of its completion.	+			
73	13	The EP management should ensure measures for the employment of graduates, the systematic monitoring of			+	

		the employment of graduates, the development of their career and increasing the effectiveness of the work of associations of graduates.				
74	14	The EP management should provide an opportunity for students to exchange and express their opinions - for example, through the Internet forum or student organizations.		+		
75	15	The EP management should demonstrate operating feedback system of the students support, including the prompt presentation of information on the results of the evaluation of the students' knowledge.		+		
76	16	The EP management should demonstrate the availability and effectiveness of the support mechanism for gifted students.		+		
Total for the standard			1	11	4	
Standard "Academic Teaching Staff"						
77	1	The University should have an objective and transparent personnel policy which includes hiring, professional growth and development of personnel ensuring the professional competence of all of the staff.		+		
78	2	The EP management should demonstrate the conformity of the workforce capacity of the ATS with the development strategy of the university, the qualification requirements, the level and specifics of educational program and selection of cadres on the basis of recruiting system		+		
79	3	The EP Management should demonstrate an understanding of responsibility for its employees and providing them with favorable working conditions.		+		
80	4	The EP Management should demonstrate the changing role of the teacher in connection with the transition to student-centered learning.			+	
81	5	The University should demonstrate the public accessibility to information about the ATS, including the catalogs of the academic teaching staff, the posting of profiles on the university's website.		+		
82	6	The EP Management should ensure monitoring of ATS activities, systematic assessment of the teachers'		+		

		competence, integrated assessment of the teaching quality, including assessment of the teachers and students satisfaction level.				
83	7	The EP Management should ensure completeness and adequacy of individual work planning by the ATS for all activities, monitor the efficiency and effectiveness of individual plans, and demonstrate evidence of performing all types of planned workload by the teachers.		+		
84	8	The EP Management should demonstrate support of the ATS research activities, ensuring the link between research and learning.		+		
85	9	The EP Management should demonstrate the availability of a professional development system, professional and personal development of the ATS and administrative and management personnel, as well as the correspondence of the professional development and personal development of the ATS to the development strategy.		+		
86	10	The EP Management should involve specialists with experience in the relevant industry, as well as well-known scientists, public and political figures.		+		
87	11	The EP Management should provide targeted actions for the professional development of young teachers.		+		
88	12	The EP Management should ensure availability of incentive system for professional and personal development of teachers and staff.		+		
89	13	The EP Management should ensure monitoring of ATS's satisfaction.		+		
90	14	The EP Management should demonstrate the involvement of the ATS in the practice of specialization on an ongoing basis.		+		
91	15	The EP Management should demonstrate the IT competence of the ATS, the conditions for motivating ATS to apply innovative methods and forms of training, information and communication technologies in the educational process.		+		
92	16	An important factor is the development of academic mobility of teachers, attracting best foreign and domestic teachers, conducting joint research.		+		

93	17	An important factor is the participation of ATS in the life of society (the role of ATS in the education system, in the development of science, of the region, in the creation of a cultural environment, participation in exhibitions, creative competitions, charity programs, etc.).		+		
94	18	The EP Management demonstrates conformity of the priorities of consulting, research work implemented by the EP ATS with pressing economic problems, state development priorities, national educational policy, science and innovative development.		+		
Total for the standard				17	1	
Standard "Educational Resources and Student Support Systems"						
95	1	The University should demonstrate the sufficiency of material, financial and human resources.		+		
96	2	The University should demonstrate the effectiveness of students support services and the availability of support procedures.		+		
97	3	The University should identify the needs for the support of different groups and categories of students.		+		
98	4	The University should ensure the availability and effective functioning of the information and feedback system focused on students, employees and stakeholders, information provision systems and feedback.		+		
99	5	The University should demonstrate the effectiveness of regular analysis of the sufficiency of resources and students support systems, including the competence of the staff involved.		+		
		<i>Learning environment reflecting the specifics of educational programs should be created in the University, which includes:</i>				
100	6	technological support of students and ATS in accordance with the programs (for example, online training, modeling, databases, data analysis programs);		+		
101	7	Personalized interactive resources (accessible during extra-curricular time), including learning materials and assignments, ensuring the options for trial self-assessment of students' knowledge through remote access to the portal (site) of the university;		+		

102	8	interactive academic consultations to assist students in planning and mastering educational programs, including through the use of personalized interactive resources;		+		
103	9	professional guidance, assistance in the selection and achievement of career paths;		+		
104	10	sufficient number of classrooms equipped with modern technical means of training: educational and scientific laboratories, modern training polygons, technoparks equipped with modern equipment compliant with implemented educational programs, sanitary and epidemiological regulations and requirements;		+		
105	11	sufficient number of computer classes, reading rooms, multimedia, linguaphone and scientific-methodical cabinets, the number of seats in them;		+		
106	12	book fund, including the fund of educational, methodical and scientific literature on general educational, basic and profiling disciplines on paper and electronic media, periodicals in the context of the language of instruction;			+	
107	13	structured information across the disciplines. For example, presentation materials, video materials, lecture notes, compulsory and additional literature, practical assignments, etc .;		+		
108	14	availability of scientific databases, electronic scientific journals and their accessibility;		+		
109	15	availability of electronic versions of published journals;		+		
110	16	expert assessment of the research results, graduation papers, dissertations on plagiarism;		+		
111	17	free access to educational Internet resources, the operation of free WI-FI throughout the educational organization.		+		
112	18	EP Management should ensure preservation of copyright when the educational literature and educational and methodological provision are placed for public access.		+		
113	19	Educational equipment and software should meet modern requirements.		+		
Total for the standard			2	16	1	
Standard "Information Management"						

114	1	The University should ensure the functioning of information collecting, analyzing and managing system based on the use of modern information and communication technologies and software.		+		
115	2	The University determines the volume and structure of periodically updated information and responsible persons for the reliability and timeliness in accordance with the development strategy of the University.		+		
116	3	The University provides timeliness, reliability, completeness of information and its safety.		+		
117	4	EP Management should demonstrate the adoption of managerial decisions based on fact analysis.		+		
118	5	The information collection, analysis and management system should be used to ensure the quality of the implementation of the EP.		+		
		Information collected and analyzed by educational organizations should take into account the following:				
119	6	dynamics of the contingent of students in the context of forms and types;		+		
120	7	level of academic performance, students' achievements and expel;		+		
121	8	satisfaction of students with the EP implementation and the quality of education in the university;		+		
122	9	accessibility of educational resources and students support systems;		+		
123	10	employment and career growth of graduates.		+		
124	11	EP Management should provide for information analyzing option in order to identify and forecast risks.			+	
125	12	The University should ensure the availability and effective functioning of an information and feedback system focused on students, employees and stakeholders.		+		
126	13	Students, employees and ATS should give documentary evidence of their consent to the processing of personal data.		+		
127	14	An important factor is the involvement of students, employees and ATS in the processes of collecting and analyzing information, as well as decision-making based		+		

		on it.				
Total for the standard				13	1	
Standard "Public Awareness"						
128	1	The University should publish information about its activities in general and about implementation of educational programs. The specified information should be clear, accurate, objective, relevant and accessible.		+		
129	2	EP Management should use a variety of ways to disseminate information, including information networks to inform the general public and stakeholders.		+		
		The University should demonstrate the reflection on the web resource of information characterizing the university in general and in the context of educational programs, the effectiveness of its use to improve the educational process, which has the following characteristics:				
130	3	placement of complete objective information about the specifics of educational programs, including the acting support systems, learning outcomes and qualifications awarded;		+		
131	4	the availability of adequate and objective information on ATS, including ATS personal pages;		+		
132	5	Transparency of information regarding the consideration of complaints, including the placement of a virtual complaint book for consumers;		+		
133	6	placement of information on interaction with scientific/consulting organizations and educational organizations implementing similar educational programs;		+		
134	7	placement of information and links to external resources based on the results of external evaluation procedures.	+			
135	8	An important factor is the participation of the EP in a variety of external evaluation procedures, including ratings and ranking.		+		
Total for the standard			1	7		
"Standards across individual specialties"						
TECHNICAL SCIENCE AND TECHNOLOGY						

<i>Educational programs in the direction "Engineering science and technology" do not meet the requirements</i>						
136	1	In view of raising an awareness of students with the professional environment and relevant issues in the field of specialization, as well as for acquiring skills on the basis of theoretical training the educational program should include disciplines and activities aimed at obtaining practical experience and skills in the specialty in general and profiling disciplines in particular, including: Excursions to enterprises in the field of specialization (factories, workshops, research institutes, laboratories, educational experimental enterprises, etc.) The holding of separate classes or whole disciplines in a specialization enterprise, The holding of seminars to address practical challenges relevant to enterprises in the field of specialization, etc.		+		
137	2	The academic teaching staff included in the educational program should include full-time teachers with significant full-time staff member working experience at enterprises in the area of specialization of the educational program		+		
138	3	The content of all the disciplines of the EP should be based to some extent and include a clear relationship with the content of Basic Natural Sciences, such as Mathematics, Chemistry, Physics		+		
139	4	The EP management should provide measures to accelerate practical training in the area of specialization		+		
140	5	The EP management should ensure that students are trained to use modern information technologies.		+		
Total for the standard				5		
TOTAL			5	118	17	