«АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТІҢ ТӘУЕЛСІЗ АГЕНТТІГІ» КЕМ

НУ «НЕЗАВИСИМОЕ АГЕНТСТВО АККРЕДИТАЦИИ И РЕЙТИНГА»

INDEPENDENT AGENCY FOR ACCREDITATION AND RATING

REPORT

based on the results of the external expert commission work for compliance with the requirements of the standards for specialized accreditation of educational programs

5B072900 "Civil Engineering» (accreditation)
6M072900 "Civil Engineering» (accreditation)
6D072900 "Civil Engineering» (accreditation)
6D073000 "Production of Building Materials, Products and Structures" (accreditation)

Karaganda State Technical University

Site Visit Dates: from May 20 to May 23, 2019

INDEPENDENT AGENCY FOR ACCREDITATION AND RATING
The External expert commission

Addressed to
the Accreditation Council
of the IAAR

REPORT

based on the results of the external expert commission work for compliance with the requirements of the standards for specialized accreditation of educational programs

5B072900 "Civil Engineering» (accreditation)
6M072900 "Civil Engineering» (accreditation)
6D072900 "Civil Engineering» (accreditation)
6D073000 "Production of Building Materials, Products and Structures" (accreditation)

Karaganda State Technical University

of the period from May 20 to May 23, 2019

Karaganda, 2019

CONTENT

(I) ABBREVIATIONS AND SYMBOLS

AC	Academic calendar
IKTU	International Kazakh-Turkish University
BD	Basic disciplines
HEI	Higher education institution
SAC	State attestation commission
SGES	State general education standard
SE	State exam
EHEA	European higher education area
ILC	Information and library complex
FSC	Final state certification
FC	Final control
IT	Information Technology
CTE	Credit technology of education
CED	Catalog of elective disciplines
MEP	Modular education program
MES RK	Ministry of Education and Science of the Republic of Kazakhstan
RW	Research work
RWS	Research work of students
GED	General education discipline
EP	Educational program
MD	Majors discipline
Faculty	Faculty
RIEL	Republican interuniversity electronic library
MC	Midterm control
WC	Work curriculum
QMS	Quality management system
IWDS	Independent work of doctoral students
IWDST	Independent work of doctoral students with a teacher
BMT	Building materials and technologies
MC	Model Curriculum
EMD	Educational and methodical department
EMCD	Educational and methodical complex of discipline
EMC	Educational and methodical council
ECTS	European Credit Transfer System
EEEA	External evaluation of educational achievements
DAA	Department of academic affairs
EPRC	Educational program and resource center
GSGE	Graduate school of Governance and Economics

(II) INTRODUCTION

In accordance with the order of No.53-19-OD from 02.05.2019 year, the Independent Agency for Accreditation and Rating from 20 to 23d of May 2019 the external expert commission conducted the assessment of educational programs compliance 5B072900»Civil Engineering", 6M072900»Civil Engineering», 6D072900 "Civil Engineering", 6D073000 "Production of building materials, materials and structures" of the Karaganda State Technical University to the standards of specialized accreditation of the IAAR (No. 10-17-OD of February 24th, 2017, fifth edition).

The report of the external expert comission (EEC) consists of assessment of the submitted educational programs to the IAAR criteria, recommendations of the EEC on further improvement and development of educational programs and profile parameters.

Members of the EEC commission:

1. **The chairman of the commission** is Gita Revalde, PhD in physics, corresponding member of the Latvian Academy of Sciences, member of the Latvian Science Association, president of the Almaty University of Power Engineering and Telecommunications (Almaty);
2. **Foreign expert** - Narkevitch Mikhail Yurevich, Candidate of Technical Sciences, Associate Professor, Magnitogorsk State Technical University (MSTU) named after GI Nosova, expert of the Federal Accreditation Agency (Magnitogorsk, Russian Federation);
3. **Foreign expert** - Torobekov Bekzhan Torobekovich, Candidate of Technical Sciences, professor, vice-rector for development and the state language, Kyrgyz State Technical University named after I. Razzakova (Kyrgyzstan, Bishkek);
4. **Expert** - Ibraishina Gulnar Kenzhegazievna, Candidate of Philosophy Sciences, Docent, Kazakh Leading Academy of Architecture and Civil Engineering (KazGASA) (Almaty);
5. **Expert** - Kalshabekova Elmira Nurlybaevna, Candidate of Technical Sciences, Docent, South Kazakhstan State University named after M. Auezova (Shymkent);
6. **Expert** - Kasymov Askar Bagdatovich, PhD, State University named after Shakarim (Semey)
7. **Expert** - Abdimuratov Zhubanyshbay Suinullaevich, Candidate of Technical Sciences, Docent, Almaty University of Power Engineering and Telecommunications (Almaty);
8. **Expert** - Markovsky Vadim Pavlovich, Candidate of Technical Sciences, Docent, Pavlodar State University named after S. Toraigyrov (Pavlodar);
9. **Expert** - Bulashev Berdibek Kabkenovich, Candidate of Agricultural Sciences, Docent, Kazakh Agro-Technical University named after S. Seifullin (Astana);
10. **Expert** - Polyakova Lyudmila Vladimirovna, deputy Chairman of UMCU, Kazakhstan Engineering and Technology University (Almaty);
11. **Expert** - Aldungarova Aliya Kairatovna, PhD, Associate Professor, Pavlodar State University named after S. Toraigyrov (Pavlodar) ;
12. **Employer -** Sergey Kutlin, director of the Logic-Soft Training Center (Karaganda);
13. **The employer is** Kairbekova Naylya Kamalovna, director of the Association of Developers of the Karaganda Region (Karaganda);
14. **Student** - Pozilbekov Murothon Muhtorugli, member of the Alliance of Students of Kazakhstan, 1st course student of the EP»5B071800-Electric Power", Karaganda State Industrial University (Temirtau);
15. **Student** - Omirzakova Aizhan Amangeldyevna, a member of the Alliance of Students of Kazakhstan, 2d course student of the EP»5B071600-Instrumentation", Karaganda State University named after academician E.A. Buketov (Karaganda);

16. **Student** - Tlegenova Ayman Askhatқyzy, a member of the Alliance of Students of Kazakhstan, 1st course student of the EP»5B071900-Radio engineering, electronics and telecommunications", Karaganda State University named after academician E.A. Buketov (Karaganda);

17. **Student** - Asanov Alikhan Altinbekuly, leader of the Alliance of Students of Kazakhstan in the Karaganda region (Karaganda);

18. **The observer from the Agency** - Kanapyanov Timur Erbolatovich, PhD, head of international projects and communication with the public IAAR (Nur-Sultan).

(III) REPRESENTATION OF EDUCATION ORGANIZATION

Republican State Enterprise Karaganda State Technical University (hereinafter KSTU) is the subject of higher education of the Republic of Kazakhstan and acts on the basis of the Charter, registered in the Karaganda regional administration of justice 14.04.2004 #3-8 / 139, the certificate of the state re-registration of the legal entity number 8488-1930-SE 24.02.2000.

In 2012 RSE "Karaganda State Technical University" was transformed into the Republican State Enterprise on the right of economic management "Karaganda State Technical University". The charter of the university was approved by order of the Chairman of the State Property and Privatization Committee of the Ministry of Finance of the Republic of Kazakhstan No. 922 of 09/17/2012.

KSTU is one of the largest higher education institutions in Kazakhstan. It provides training of highly qualified specialists for industrial enterprises of Kazakhstan, the implementation of scientific research and training on their basis of highly qualified personnel. Preparing personnel in KSTU carried out in accordance with the State license on educational activity in the sphere of higher and postgraduate education (#12014940 22.10.2012 y.), application for license (order the Chairman of the Committee on control in the sphere of education and science MES RK #547 31.05.2016 y.) on 82 specialties, in that number: 40 specialties of a bachelor degree, 27 specialties of master's degree and 8 specialties of PhD studies, 7 military occupational specialties, and applications for licenses (02.04.2019 y.) in 12 areas of bachelor's degree, 9 areas of master's degree and 3 areas of PhD studies.

In 2014 year the University has passed institutional, in 2014-2015 years - the specialized accreditation of 24 educational programs in the IAAR. In 2014-2015, the university also passed specialized accreditation of 27 educational programs in the IQAA and international specialized accreditation of 15 educational programs at ASIIN. In 2016 y., 10 educational programs of KSTU passed international specialized accreditation at ACQUIN.

In 2018 year KSTU has passed the international re-accreditation in the IAAR for the next 7 years.

In 2018 y., KSTU has taken 3rd place in the national rating of the best technical universities in Kazakhstan, conducted by IQAA.

According to the results of the national rankings, conducted by the Independent Agency for Accreditation and Rating (IAAR) in 2015 36 EP University occupied the prize places; in 2016 year - 37 EP of 38; in 2017 - 41 EP of 50; in 2018 - 35 EP of 50; in 2019 - 41 EP of 50, respectively.

In conformity with international rankings in 2018, the university took the following positions: QS World University Rankings 751+ place ; QS University Rankings EECA – 171st place (Top -300); UNIRANK World University Rankings 2765th - place; UNIRANK Country University Rankings 2d - place ; RANKPRO Worldwide Professional University Rankings 577th - place ; RANKPRO Country University Rankings 2d - place ; UI Green Metric World University Rankings 482d - place ; UI Green Metric Country University Rankings 5th place ; WEBOMETRICS World University Rankings 5574th - place ; WEBOMETRICS Country University Rankings 6th place ; ARES World Universities-European Standard ARES - BBB +.

The total area of the building, located in the property of the University, is 91268.6 square meters. The structure of the university includes 8 faculties (architecture and construction; mining; transport and road; engineering economics and management; innovation technology; power engineering, automation and telecommunications; correspondence and distance learning), 30 departments, 8 administrative departments, the Triune Languages Center named after Sh.Kudaiberdieva, Center of career guidance, Center

of work professions, Center of engineering pedagogy, Training center Serpin - 2050, Center of IT competencies, Career center, Upgrade center, International center of materials science, Research Institute»Kazakhstan Multidisciplinary Institute for Reconstruction and Development", Kazakhstan Institute of Welding, college.

There are 6 centers for receiving working professions at the first stage of student training at KSTU: engineering, mining, civil engineering, welding, power engineering and telecommunications.

In order to improve the organizational structure, centrally managing the implementation and promotion of innovative projects on the market, there was created University innovative scientific and technical complex, comprising:

– 6 research institutes;

– 4 scientific and educational complexes (Industry 4.0, Digital Engineering, Nanotechnology in Metallurgy and Bioengineering);

– 16 innovation centers;

– The test laboratory of engineering profile»Integrated development of resources of mineral raw materials."

There is combine of public nutrition, including cafe»Polytechnic»(area is 2345.9 square meters), 9 buffets, 3 student dormitories, sports and health camp»Polytechnic", the Palace of Youth»Zhastar Alemi".

Training classes are being taught by 67 (of which 60 is staff) Doctors of Sciences, in that number who have an academic rank of professor (HAC) – 46, candidates of Sciences-236 (of which 218 are full-time), 26 PhD doctors, 278 masters.

Contingent of the university consists of 11 402 students (in that number undergraduates – 1394, PhD students – 128).

The university, as part of its professional activities, uses a number of licensed software products that provide rational support for the educational, scientific, organizational and control functions.

The training process uses 72 interactive sets, 3186 - modern computers with the access to the Internet. The library is located in 3 educational buildings. The area of the library is 2311.06 sq.m. There are 290 landing places in the reading rooms. In the open access to the area of 72.1 sq.m. there are presented 2140 copies of literature. The general fund of the library is 1 898 611 storage units, it contains all the materials necessary for training: educational, technical, reference, non- fiction, various periodicals. The current fund - 1 185 771 copies. There are 337 045 copies in the state language.

Over the past few years there were achieved positive dynamics of growth of the total volume of financing of RW. In 2018 we made 98 scientific and scientific-technical projects in the amount of 980.1 mln. tenge, in fact including: 237 mln. tenge - on the state budget, 743 mln. tenge - on commercial contracts, which exceeded the figure in 2017 year to 90, 9 mln. tenge. The main customers of contractual works are JSC»Mittal Steel Temirtau»LLP»Corporation Kazakhmys", JSC»SSGPO", LLP»Bogatyr Coal», JSC»Zhayremsky GOK», JSC»Shubarkol Coal»and others.

In 2018, the university passed a recertification audit for compliance with the requirements of the ISO 9001: 2015 standard .

Information about the department

Preparation of specialists of accredited EP specialties 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000»Production of building materials, Materials and Structures»held in KSTU in the department»Building materials and technology", which is a structural subdivision of Architecture and Civil Engineering Faculty, which is formed in 2015 year by the merger of the departments Civil Engineering and housing and communal farm»and»Technology of building materials and products".

Educational activities on the direction of training 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000»Production of building materials, Materials and Structures»is carried out in accordance with the state obligatory standard of education (Decree of the Government of the Republic of Kazakhstan of August 23, 2012 (No. 1080»On approval of the relevant level of education") on the basis of the application 003 orders No. 1147 from 08.05.2013 license No. 12014940, issued 22/10/12 y.

Preparation of bachelors is carried out in the state and Russian languages. The term of study is 4 years. Terms of preparation of masters: scientific and pedagogical magistracy - 2 years, specialized magistracy - term of study- 1, 1.5 years. PhD studies - term of study - 3 years.

By contingent students of each EP in the context of forms and languages:

At the present time, a contingent of students consists of:

- EP 5B072900 -»Civil Engineering": full-time form of training - 83 students, it consists of 37 students who study free, chargeable - 46, remote form of training - 49, all on a paid basis;
- EP 6M072900 -»Civil Engineering": full-time form of training - 62 students, it consists of 52 students who study free, chargeable - 10 ;
- EP 6D072900 -»Civil Engineering": full-time form of training - 8 doctoral students, it consists of 6 students who study free, paid - 2;
- EP 6D073000 –»Production of building materials, products and structures": full-time form of training - 11 doctoral candidates, they study free.

For Qualitative and quantitative composition of the teachers of each EP

- In the framework of the EP 5B072900»Civil Engineering»learning process has been provided by 42 teacher, in fact including doctors of sciences - 1; Candidates of Sciences - 23; Masters - 14. The percentage of faculty with academic degrees and ranks is 57.1 %;
- In the framework of the EP 6M072900»Civil Engineering»educational process has been provided by 14 teachers, in fact including doctors - 4; Candidates of Sciences - 9; Doctors PhD - 1, percentage of teaching staff with academic degrees and titles is 100%;
- In the framework of the EP 6D072900»Civil Engineering»training process has been provided by 6 teachers, in fact including doctors of sciences - 3; Candidates of Sciences - 3. The percentage of faculty with academic degrees and ranks is 100 %;
- In the framework of the EP 6D073000»Production of building materials, products and structures»learning process has been provided by 9 teachers, in fact including doctors of sciences - 3; Candidates of Science - 6; The percentage of faculty with academic degrees and ranks is 100 %.

Employment of graduates for accredited cluster EP:

The average rate of employment of graduates of the last three years (2016-2018) is:

for bachelors EP 5B072900»Civil Engineering»- 89%;

for master's degree EP 6M072900»Civil Engineering»and doctoral EP 6D072900»Civil Engineering", 6D073000»Production of building materials, products and structures»- 100%. The number of unemployed included graduates who continued training of postgraduate professional education programs (Master's degree) and passing urgent military service in the ranks of the Armed Forces of Kazakhstan.

Academic mobility of accredited EP cluster:

Academic mobility enrolled with period 2014-2019 years: 1 - part (bachelor's degree) 99 - outbound (Bachelor's, Master's degree).

Research projects of the department "Building materials and technologies":

- Creation of extrusion technology for the production of concrete and reinforced concrete products and structures with desired properties (***19 288 000 tenge,*** Ministry of

Industry and New Technologies of the Republic of Kazakhstan, contractor: Doctor of Technical Sciences, Professor D. Baidzhanov).

-»Development of normative and technical documents",»Strengthening the framework aboveground parking lots closed type for passenger cars in the city of Astana",»Comprehensive study of strength and stability of the load-bearing building constructions of the building»Palace of Schoolchildren»in Astana city",»Complex research strength, stability, fracture toughness of the existing bearing building constructions of residential houses in Karaganda city",»Technical examination of bearing building constructions of a residential house in v. Shahan»(***70.5 million tenge,*** contractor Nuguzhinov Zh.S.).

Commercialization by accredited cluster EP:

At the Department it carries out the activities of test laboratory construction monitoring (Accreditation certificate No. KZT.10.1644, LLP "KaragandaTechnoService").

The laboratory carries out the following types of work: testing the physico-mechanical properties of cement, brick, mortar, sand and SGM; testing specimens for strength under compression; strength of concrete (structures) by non-destructive method; determination of the mobility of the concrete mixture; determination of water absorption of building materials; testing the frost resistance of building materials.

The total amount of work performed over 3 years amounted to ***360 million tenge*** with the participation of 4 doctoral students of EP 6D072900»Civil Engineering", 6D073000»Production of building materials, products and structures", 7 graduate students of EP 6M072900»Civil Engineering", 15 students of EP 5B072900»Civil Engineering".

(IV) DESCRIPTION OF THE PREVIOUS ACCREDITATION PROCEDURE

Educational programs 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000 "Production of building materials, products and structures" are accredited to the IAAR for the first time.

(V) DESCRIPTION VISIT EEC

The work of the EEC was carried out on the basis of the approved Program of the visit of the expert commission on specialized accreditation of educational programs at KSTU in the period from May 20 to May 23, 2019.

With the aim of coordinating the work EEC 19/05/2019 there was held on the meeting, where there were distributed the authority between the members of the Commission, was updated schedule of the visit, was reached agreement in matters of selection methods of examination.

To obtain objective information about the quality of educational programs and the entire infrastructure of the university, to clarify the content of self-assessment reports, meetings were held with the rector, vice-rectors of the university in areas of activity, heads of structural divisions, deans of faculties, heads of departments, teachers, students, graduates, employers. In total, 170 representatives took a part in the meetings (table1).

Table 1 - Data on employees and students, who took a part in meetings with EEC IAAR:

Category of participants	Quantity

Rector	one
Vice- rectors and chief of staff of the rector	6
Heads of structural divisions	36
Deans of faculties	2
Heads of departments	6
Teachers	23
Students	26
Graduates	35
Employers	35
Total	170

During the tour, members of the EEC have consulted with the material and technical base, visited the dean of the Faculty of Architecture and Civil Engineering, auditorium No. 1-130 Laboratory»Building Materials", No. 1-132 Laboratory»Cementing Materials", No. 1-136 Laboratory»Soil Research", No. 1-138 Laboratory»Engineering Systems", No. 1-142 Laboratory»Construction Monitoring".

At the meeting EEC IAAR with main groups of KSTU has asked the mechanisms of implementing the policy of the university and the specification of individual datas, which were presented in the report on the self-esteem of university.

For the accreditation period, classes at the university were no longer scheduled.

In time, the work members of EEC visited the following base of practice: LLP»Kurylysexpertproekt»(EP 5B072900/6M072900»Civil Engineering"), LLP»Institute of Karaganda Promstroiproekt»(EP 5B072900/6M072900/6D072900»Civil Engineering". From 2018 LLP»Institute of Karaganda Promstroiproekt»is a branch of the Department (contract number 17.2-45-2019) for conducting professional practices, LLP»KKK Beton»(EP 5B072900/6M072900»Civil Engineering", EP 6D073000»Production of building materials, products and structures»contract No.17.1-2019-4 for conducting professional practices, a branch of the department.)

In accordance with the procedure of accreditation was carried out a survey of 23 teachers, 26 students, in fact among students of junior and senior courses.

With the purpose of confirmation provided in the report on self-assessment of information by external experts was requested and reviewed the working documents of the University. Along with this, experts studied the university's online positioning through the university's official website www.kstu.kz

Within the framework of the planned program, recommendations for improving the accredited educational programs of KSTU, developed by the EEC based on the results of the examination, were presented at the meeting with management 23.05.2019 y.

(VI) COMPLIANCE WITH SPECIALIZED ACCREDITATION STANDARDS

6 .1. Standard»Management of the educational program"

✓ *The university should have published a policy of ensuring quality.*

✓ *Policy to ensure quality must reflect the relationship between scientific research, teaching and learning.*

✓ *The university must demonstrate the development of culture to ensure quality, in fact including in the context of EP.*

✓ *A commitment to the provision of quality should refer to any activity carried out by contractors and partners (outsourcing), in that those with the implementation of joint / double diploma education and academic mobility.*

✓ *Manual EP provides transparency development plan of EP on the basis of the analysis of its functioning, the real position of the university and the orientation of its activities to the satisfaction of the needs of the state, employers, interested persons and students.*

✓ *Manual EP shows the functioning of the mechanisms of formation and a regular review of the plan of EP and monitoring its implementation, evaluation of achieving the objectives of training, matching the needs of learners, employers and society, decision- making, aimed at continuous improvement of EP.*

✓ *Manual EP should involve representatives of the groups of interested parties, in fact including employers, students and faculty to the formation of the plan of EP.*

✓ *Manual EP must demonstrate the individuality and uniqueness of the Plan of Subdivision, its consistency with the national priorities of the development and strategy of the organization of education.*

✓ *The university should demonstrate a clear definition of those responsible for business processes within the framework of the EP, an unambiguous distribution of the duties of the staff, and the delimitation of the functions of collegial bodies.*

✓ *Manual EP must submit proof of the transparency of the system of management of the educational program.*

✓ *Manual EP should demonstrate the successful functioning of the internal system to ensure the quality of EP, including its design, management and monitoring of their improvement, the adoption of decisions on the basis of facts.*

✓ *Manual EP should carry out the management of risk.*

✓ *Manual EP should ensure the participation of representatives of the interested parties (employers, faculty, students) in the composition of the collegial bodies of management of the educational program, as well as their representation at decision- making on the issues of management of the educational program.*

✓ *The university must demonstrate management innovation in the framework of the EP, in that including the analysis and implementation of innovative proposals.*

✓ *Ep management must demonstrate evidence of openness and accessibility for students, faculty, employers and other interested parties.*

✓ *Manual EP should undergo training on program management education.*

✓ *Manual EP should strive to ensure that the progress achieved by the time of the last procedures of external software quality taken into account when it was preparation for the next procedure.*

Evidence part

The university has published a policy of ensuring quality. Policy in the field of software quality KSTU (http://www.kstu.kz/wp-content/uploads/2018/11/%D1%86%D0%B5%D0%BB%D0%B8%20%D0%B8% 20% D0% BF% D0% BE% D0% BB% D0% B8% D1% 82% D0% B8% D0% BA% D0% B0.pdf) determined by the university mission, strategic plan for the development of KSTU for 2014-2023, goals and objectives of KSTU and is aimed at providing high quality educational services and scientific research.

Policy KSTU in the field of quality reflects the relationship between scientific research, teaching and learning and is focused on the compliance with the international accreditation requirements, achievement of the fundamental competitive parameters of ranking universities in national and international ratings, innovative approaches in the lists of educational programs and the content of training, methods and technologies of training, focus on the priorities of industrialization of Kazakhstan.

Educational programs 5B072900/6M072900/6D072900 -»Civil Engineering»and 6D073000 -»Production of building materials, products and structures»are implemented in accordance with the adopted university development strategy, focused on the consumer of educational services.

Educational programs 5B072900/6M072900/6D072900 -»Civil Engineering»and 6D073000 -»Production of construction materials, products and structures»are performed in accordance with the state obligatory standard of education (Decree of the Government of the Republic of Kazakhstan of 23d on August 2012 No. 1080»On approval of the respective levels of education") on the basis of the application 003 orders No. 1147 from 08.05.2013 license #12014940, issued 10/22/12, the (http://www.kstu.kz/wpcontent/uploads/Litsenziya%20KarGTU.pdf) .

According to the state in 2019 the graduation of EP 6D072900 -»Civil Engineering»is not carried out. The first set was organized in 2017. According to EP 6D073000 -»Production of building materials, products and structures»in 2018 it has completed the theoretical training 1 doctoral student. Protection is planned in July, 2019.

The implementation of educational programs and their development programs are carried out in accordance with the mission, the Strategic Development Plan, academic rules and regulations. Paper and electronic versions of documents are available at the department, are available for faculty, staff and students, as well as employers and other interested parties. All of these documents are published on the University website.

Development plans for EP 5B072900 –»Civil Engineering", 6M072900 -»Civil Engineering", 6D072900 -»Civil Engineering", http://www.kstu.kz/wp-content/uploads/2019/03/Plan-razvitiya-OP-Stroitelstvo- BMD-1.pdf and 6D073000»Production of building materials, products and structures»http://www.kstu.kz/wp-content/uploads/2019/03/Plan-razvitiya-obrazovatelnoj-programmy.pdf, are approved by the First Vice-Rector of KSTU 08.28.2018, for the period until 2022.

Considering the specialization of the Karaganda region, the opinion of employers and students, the modern requirements of science and practice, are discusses at the meetings of the department and then approve the development plan of the EP, then the proposal is submitted for consideration by the faculty's methodological council. The final decision for changes in the plan of EP takes EMC University. Plan of Subdivision is taken for five years.

Manual EP has demonstrated the mechanism of formation and a regular review of plans for the development of accredited EP.

The monitoring system for the implementation of plans for the development of accredited educational programs includes the following mechanisms:

- annual reports of the department;
- annual reports of teachers of the department;
- results of internal audits;
- consideration of issues of development of different areas of specialist training at meetings of the department, educational and methodological councils of the faculty, university, scientific and technical college of the university, the Academic Council of KSTU .

In developing the content, plan development and external evaluation of EP there are taken a part faculty, stakeholders and students. Stakeholders are involved in the process at the stages of developing a plan for the development of EP, the competency model of a bachelor, undergraduate and doctoral candidate, determining learning outcomes, preparing elective modules and disciplines of EP.

Table 2 - Information about the employers who participated in the formation of the development plan

p/p No.	Name of organization	Name of the head
1.	Research, expert and design»Kazakhstan multidisciplinary Institute of reconstruction and development»(KazMIRD)	Nuguzhinov Zhmagul Smagulovich
2.	LLP»Institute»Karaganda Promstroyproekt»	Lee Alexander Vasilievich
3.	LLP»Institute Grazhdanproekt»	Moroz Yuri Alekseevich
4.	LLP»Uksproject-2006»	Tkachenko Vladimir Petrovich
5.	LLP»Kurylysexpertproekt»	Kumashev Nurzhan Argyngazievich
6.	LLP»Kurylysproekt»(network)	Cheredynchenko Grigory Petrovich
7.	LLP»KaragandaTechnoService»	Shvedov Alexander Alekseevich

p/p No.	Name of organization	Name of the head
8.	LLP»Mutlu GIPS»	Taukebaev Dos-Mukasan Aripovich
9.	LLP»Karaganda Promstroyproekt Institute»	Nagorny A Lexey Alexandrovich
10.	LLP»NORD Prom NC»	Zhapparov Daulet Orynbaevich
11.	LLP»ZHBI-Karaganda»	Zhanibekov Nurlan Kairullinovich, Lopachuk Pavel Nikolaevich
12.	LLP»KKK Concrete»	Kiku Alexander Ivanovich
13.	LLP»Oplot LTD»	Pakhteev Oleg Borisovich

Students of accredited EPs have participated in the survey of all training courses. Types of questionnaires: “Student satisfaction of the educational program”, “Teacher through the eyes of students”, “Teacher through the eyes of colleagues”, “Clean session”, etc. Questionnaire results are presented to members of the administration and to persons responsible for the implementation of certain areas of activity (http://www.kstu.kz/ankety-tsentra-menedzhmenta-kachestva-akkreditatsii/). According to the obtained results of the research of satisfaction of consumers of educational services in the institution they were formed certain target indicators of the plan of EP.

Faculty accredited EP has determined the inclusion to the plan of EP indicators:

- Creation the modern teaching methods and technologies;
- Development and testing of the copyright of innovative methods of training;
- Increase in the percentage of faculty with publications in journals according to Scopus, %;
- Increase in the growth of publications in international journals according to Thomson Reuters, %;
- An increase in the proportion of teaching staff, employees of research work (projects, grants), % of full-time faculty;
- Increase in the number of received innovative patents and copyright certificates, %;

All interested groups, defining their own set of indicators, have the opportunity to influence the content of the development plan of the EP.

The uniqueness and individuality of the development plans of accredited EPs is reflected in the priority areas and target indicators of the plans, which are formed on the basis of human resources, material and technical capabilities, requests from the state, society, employers, the business community, students and other interested parties. For example, the uniqueness of the development plan EP 6D073000»Production of building materials, products and designs»is, first of all, in the fact that with the development and introduction of new innovative technologies of production of construction materials and products are solved the problems of resource, energy conservation and environmental safety environmental protection and Kazakhstan’s society.

The university has demonstrated the management of innovation in the framework of the EP, in that including the analysis and implementation of innovative proposals. At the Department of BMaT there are acts of implementation of the scientific development of doctoral (Act implementation in the educational process of the sections of the thesis work Rakhimov A.M.»Modified concrete with the use of waste and structures on their basis"), there are monographs scientists of the department, used in the educational process on the EP 6D073000»Production of building materials, products and structures»("Modified fine-grained concrete for road constructions»the authors Rakhimov M.A. Rakhimov G.M.,»Extruded concrete. The modified»the author Baidzhanov D.O.).

EEC in the course of a visual inspection and analysis of the documents has made sure that it has been assigned responsibility for business processes in the framework of the EP, has been distributed job responsibilities of staff, has been differentiated function of collegiate bodies and management of the University, in that number and manual EP regularly runs training for program management education. With the aim of training the governing structure of the University (vice-rectors, deans, head. Departments and heads of other structural units) of the programs by management education it has been conducted training in the framework of the course»Management in Education". For teaching modern methods of management education in the university there was established the Center of engineering pedagogy, in which in April 2018 99 heads of departments and faculty have been increasing the qualification of the course»Modern technologies of management in education.»The head of the BMaT department has certificates of advanced training in management programs in education: Professional Development Program for Higher Education Leaders of Kazakhstan (N.A. Nazarbayev University, 160 hours), "Content, structure and teaching methods of students from the point of view of a competent approach" (KazGUU, 72 hours).

Analytical part

Manual EP identifies, analyzes and evaluates potential risks. To control the risk it has been carried out a detailed analysis of the contingent of students, staff resources, material and technical equipment, sources of funding, training, research and educational processes, international relations and contribution to the socio-economic development of the region, the dynamically changing requirements of modern production and the needs of both the regional, so and Republican market of educational services. When developing the strategy development takes into account external and internal factors of the environment KSTU, the requirements of interested parties, that allows to management of EP choose the model of development and options for solutions with an acceptable level of risks and opportunities for the realization of the potential of KSTU. By external factors of risk for KSTU there were attributed factors, due to reasons not related directly to the activities of the University (for example, in the result of internal political events taking place for the overseas loss of foreign partners for cooperation in the sphere of education and science, lack of funding, reduction contingent and others.) By internal factors of risk attributed factors, the emergence of which is caused by or generated by the activities of KSTU (failure to comply with the planned activities and others.). Possible risks and their management mechanisms are reflected in the Strategic Development Plan 2014-2023 (http://www.kstu.kz/wp-content/uploads/2018/10/15/StrPlan2014-2023.pdf). *However, the development plans for accredited EPs do not include risks .*

In 2014 educational program EP 5B072900 –»Civil Engineering", EP 6M072900 –»Civil Engineering»KSTU successfully has passed the specialized accreditation in IQAA, the most confirming compliance education program standards of the European quality in education. *However, the Self-Report does not describe the progress achieved in implementation the recommendations received during the previous accreditation procedure* .

Strengths/best practice for EP 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000»Production of building materials, products and structures":

- Ensuring transparency in the creation of development plans for accredited EPs through the constant involvement of all interested parties to discuss and implement proposals, and to publish development plans on the university's website in the public domain.

Recommendations EEC for EP 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000»Production of building materials, products and structures":

1. In accordance with the Strategic Development Plan of KSTU for 2013-2014 yy. in plans for the development of accredited EP it needs to be included a section with a description of possible risks during the implementation of accredited EP, with the indication of the names of the risks of possible consequences in case of failure and (or) the timely measures of response, but also a description of the mechanisms and measures of control risks.

2. Manual EP is necessary to take into account all criteria Standards IAAR and, at the passage of the following procedures of accreditation in the documents of self- fulfill the description made progress with the implementation of the recommendations, produced by the end of the passage earlier the procedure of accreditation .

Conclusions EEC on standard»Management of the educational program": accredited by the educational program 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000»Production of building materials, products and structures»have 1 - strong, 14 - satisfactory, 2 - assuming their improvement in position.

6.2. Standard "Information Management and Reporting"

✓ *The university should ensure the functioning of a system for collecting, analyzing and managing information based on the use of modern information and communication technologies and software.*

✓ *Manual EP should demonstrate systemic use of the processed, adequate information for the improvement of the internal system to ensure quality.*

✓ *Within the framework of the EP, there should be a system of regular reporting, reflecting all levels of the structure, including an assessment of the effectiveness and efficiency of the departments and departments, scientific research.*

✓ *The university should establish the frequency, forms and methods of evaluating the management of EP, the activities of collegial bodies and structural units, senior management, and the implementation of scientific projects.*

✓ *The university must demonstrate determination order and to ensure the protection of information, in that including the definition of responsible persons for the accuracy and timeliness of the information analysis and data.*

✓ *An important factor is the involvement of students, employees and teaching staff in the processes of collecting and analyzing information, as well as making decisions based on them.*

✓ *Manual EP must demonstrate the existence of a mechanism of communication with learners, staff and other interested parties, in fact including the availability of mechanisms for resolution of conflicts.*

✓ *The university should provide a measure of the satisfaction in their needs, staff through the faculty students in the framework of the EP and demonstrate evidence of elimination of discovered deficiencies.*

✓ *The university must evaluate the effectiveness and efficiency of operations, in that those in the context of EP.*

✓ *Information collected and analyzed by the university in the framework of the EP should take into account:*

- *key performance indicators;*
- *the dynamics of the contingent of students in the context of forms and types;*
- *level of performance, achievements of students and deductions;*
- *satisfaction of students implementation of EP and the quality of teaching in the university;*
- *the availability of educational resources and support systems for students;*
- *employment and career growth of graduates.*

✓ *Students, staff and faculty have to confirm documented his consent to the processing of personal data.*

✓ *Manual EP should promote the provision of all necessary information in the relevant fields of science.*

Evidence part

In order to create conditions for the successful implementation of the information flow management process, KSTU has implemented and operates information collection, analysis and management systems, based on the use of modern ICT and software tools: corporate computer network, own domain name kstu.kz, corporate information system for educational process management»UNIVER 2.0", acquired from KazNU named after al Farabi (Identification of problem areas that hinder the work of individual business processes and the educational process as a whole), automated integrated library information system»Irbis", programs»1C Personnel»and»1C Accounting". There are also groups in the WhatsApp messenger for operational interaction of structural divisions and departments of the University.

Responsibility for the functioning of information systems and the accuracy of the processed information is assigned to deans and heads of departments. Access to information is carried out according to the multi-role policy: dean, deputy dean, student department and etc. Access to information in the IS is provided only for an authorized user and is differentiated according to the needs of users and the functional responsibilities of service personnel.

Information analysis of educational, scientific, and educational processes is carried out in the monitoring section of the information system»UNIVER 2.0", in the system»Rating of KSTU", electronic forms in the Google Forms system. The analysis of the received information is submitted to the rector, supervising vice-rectors, deans, heads of departments, chairmen of councils (NS, US, ES, NTS, UMS).

To manage the information, the university uses the»UNIVER 2.0»IC, the»Rating of KSTU»IC, the»Google Forms»cloud tool, 1C, the program Zabbix, Zimbra.

The UNIVER 2.0 information system helps to achieve the following goals:

- ✓ automation of the university educational process;
- ✓ optimization of educational services management processes;
- ✓ meeting the needs of students, teachers, and parents;
- ✓ improving the quality and reducing the labor intensity of staff work;
- ✓ improving the effectiveness of student's independent work;
- ✓ transparent monitoring and analysis of educational process data;
- ✓ providing management with up-to-date information;
- ✓ providing prompt access to up-to-date data on the educational process.

IS»Rating of KSTU»covers the main indicative indicators of TS in scientific, business and educational work.

The “Google Forms»cloud tool allows to create forms for collecting, storing, and analyzing information about a project. 1C information base for interaction of departments on personnel issues, economy and finance with employees of EHES. Zabbix is a system for monitoring and tracking the status of the computer network, servers, and network equipment. Zimbra is a unified system for communicating with the following groups: administration, staff, faculty, students, and parents of students.

Changing these tools and information systems is achieved by updating the SOFTWARE. If you change the requirements for the structure of information used in the»UNIVER 2.0»depending on the access level, changes can be made independently by the DRC employees. If it is impossible to execute it independently, an application is created and sent to the Treasury. This application is tested by a specialist of KazNU, after which a message about its implementation is sent to the university.

If you change the requirements for the nature and structure of information used in the computer program for managing the educational process in the credit system of training of its own development, the change of tools is made by the DRC programmers.

The processed information based on reliable and accurate input data is then used to improve the internal quality assurance system through the use of quality policies and objectives, audit results, data analysis, corrective actions, and management analysis. For example, the process of measurement, analysis, and improvement consists of actions that eliminate identified inconsistencies and their consequences. The university takes corrective actions. To improve the internal quality assurance system, the»Rating of KSTU»information system is used. Every year the university conducts a rating assessment of TS, departments, and faculties. The rating of the department consists of the rating of TS, and the faculty-from the rating of departments. The rating promotes effective personnel policy, identification of individual abilities and professional skills, increasing responsibility for the assigned task at all levels, legal and social protection of TS, heads of departments and deans. The results of the rating analysis are used by the university management during making decisions on contract extensions, personnel appointments, and when determining the amount of salary allowances for TS, department heads, deans and their deputies.

In»Rating of KSTU»IP the indicators of teaching staff is reflected that are consistent with the comprehensive program of development of the university and the work plan of structural divisions. In this regard, each teacher builds their individual work plan so that their work is focused on the overall strategic development of the university, faculty and department, which is provided by the strategic indicative planning adopted at the university. The results of the work done are reflected in the internal reporting documents, which are provided to the top management (rector's office), the management of structural divisions.

In the process of comparing actual reporting indicators with data from previous periods, areas of potential risks are identified at the planning stage, i.e. those indicators that should be given more attention due to the presence of unusual deviations. For example, during the summer of vocational guidance, the department of WOP generates reports, and identifies certain risks. Data on applicants are compared for the past year for the same period in the context of faculties, departments, and specialties, and if a large deviation from the planned indicator is detected, certain risks are identified by specialty.

On a monthly basis, departments, faculties, and structural divisions report to the supervising Vice-rectors on the indicators of target indicators. The reports provided are reflected in the additional employee allowance. At the same time, the university has current reports in the is»UNIVER 2.0", which contain processed and synthesized information and are compiled at different intervals (from once a month to once a semester): report on academic performance based on the results of border control, student attendance, etc. Summary reports are presented at intervals from once a semester to once a year for senior management, on the basis of which strategic decisions are made and general monitoring of activities is carried out.

Responsible in the departments for scientific work are systematization and reports on OR, which includes weekly reports of science and innovation, annual reports, ORD ofuniversity, matrix planning and actual execution. Verification is carried out by the deputy dean for research.

Example. The Department for digital university development reports weekly at the rector's meeting on the work done by departments to promote the university's website. Once a semester, the DRCU Director reports to the Informatization Council and the Academic Council on the Department's activities during the reporting period. The supervising Vice-rector also reports once a year on the implementation of the university's information environment development concept.

For the security of Internet resources, the university uses ESET NOD 32 antivirus products with centralized management and administration. Access to the official Internet

resource is divided according to the principle of DMZ (demilitarized zone) WAN (global network) LAN (Local network).

In order to prevent hacker attacks on the University's Internet resources, the state of the services responsible for the operation of the services is periodically monitored. The main page of the University's website publishes warning methods against such attacks and links to system updates.

Thus, when working with the information systems of KSTU, there may be cases of failure of the technical or software part, as well as a virus attack and even user carelessness (accidental deletion of information), which may lead to the loss of important data. To ensure the security of the University's information resources, data backup measures are being taken by creating backups that allow information recovery. As part of the development of the KSTU security system, each network user has an individual login and password for accessing the Internet and using the UNIVER IP (https://univer.kstu.kz).

In KSTU, students and faculty of the department, employers are involved in the process of collecting and analyzing information. Students and managers during the course of industrial and pre-graduate practices, identify problematic issues that form the basis of term papers and theses. Students and teachers are regularly interviewed. The results of the survey are reflected in the is»Rating of KSTU".

Incoming information for conducting non-compliance analysis and developing preventive actions are the results of internal audits, results of evaluation of educational activities, regulatory and regulatory state and industry documents, and consumer satisfaction assessment. At the faculty level, final information is concentrated and used by groups: - final reports on student attendance; reports on current monthly progress; results of intermediate certification based on the results of examination sessions.

Based on the incoming information, inconsistencies in the educational process are identified and their causes are analyzed. Curators play an important role in this. The curator's work involves a personal form of educational techniques (conversations, lectures, organizing meetings with reputable specialists, etc.).

The mechanisms for identifying conflicts are statements of teaching staff, employees and students, service notes and memos, personal appeals to the Manager, and anonymous appeals. Complaints and suggestions are considered by the Public Disciplinary Commission and recorded in the minutes of the meeting. Management provides timely internal information, responding to complaints and claims from consumers; identifies all the necessary responsibilities of employees and what value their activities bring, on the basis of which it optimizes the organizational structure. KSTU has an ethics Council - a permanent collegial body designed to review disciplinary cases of university employees and students, ensure anti-corruption legislation, prevention and preventive policy offenses in the educational sphere, and prevent violations of internal regulations and the university Charter.

The center for quality management and accreditation conducts an electronic survey of university staff and students, the purpose of which is to identify the degree of satisfaction with the quality of educational services provided and other activities of the university. The survey is conducted in the Google Forms system. The survey is aimed at identifying problems that arise in the course of the activities of employees and teaching staff and related to the work of various departments of the educational institution.

The university uses information about students ' personal data collected by curators of academic groups. The means of collecting information to measure the satisfaction of University graduates are questionnaires and surveys at the meeting of graduates immediately after graduation (before or after graduation), as well as questionnaires during traditional meetings of graduates at the university. The average indicators obtained from the survey are used to analyze information about needs and their expectations, trends in

the development and forecasting of these trends, to collect and analyze information about the results of university activities, including information about students 'and graduates' satisfaction with their education and employment, to determine employers ' satisfaction with graduates and their work results and etc. For example, a teacher's score on the questionnaire»Teacher through the eyes of students»is taken into account in the teacher's rating. The mechanism of internal evaluation of the effectiveness and efficiency of the educational program includes: current monitoring of academic performance, intermediate certification, state final certification; internal monitoring: students, faculty, departments, faculties, educational programs; quality system: internal audits.

Mechanisms for external evaluation of the effectiveness and efficiency of educational programs include: licensing of educational activities (EA), specialized accreditation of educational institutions, state control, monitoring of the education system, ratings, competitions, and projects of educational programs.

According to the calendar plan of the university and the local plans of departments, faculties, structural units, responsible persons in charge of the present rector, information on the reliability of the data provided, which are supported by the data from alternative sources: the number of employed graduates is matched with the information from state pension payment center (SPPC); scientific inventions by patents; the achievements of students examination statements; information about the bases for practical training relevant contracts and etc.

Reports of structural divisions by areas of activity and departments reflect a comparative analysis of performance with key performance indicators. For example, the target indicator»the Share of University graduates who studied under the state educational order, employed in the first year after graduation in the specialty – 87%»from the CP for 2018 is compared with the actual data from the»UNIVER 2.0»IP. In order to maintain feedback from employers, a questionnaire is provided, periodic contact (at least once a semester) is provided by telephone, Fax and email messages, and mailing letters. Surveys of employers are conducted at the university's annual graduate fair. During the annual graduate fairs, employment contracts are concluded for graduates. The percentage of employed specialists at the request of enterprises reaches 93%-94%. The demand for graduates of KSTU is 94%, 95% of them are employed at enterprises of the Karaganda region.

In accordance with the law of the Republic of Kazakhstan»on personal data", the university has developed a form of employee Consent to the processing of their personal data. The written consent of employees and staff members is drawn up at the time of employment and stored in the personnel Department's personal file.

In order to provide students, teaching staff and researchers with all the necessary information in the relevant fields of science, open access to the world resources of scientific publications of both foreign and national companies is provided through the portal http://lib.kstu.kz. These include Google Scholar, Springer Open, EDP Open, and eLIBRARY.RU, Scopus, Web of Science, the Republican interuniversity electronic library, and the Test access platforms are IDEAS, OAIster, Open Research Online and others.

Strengths/best practices for EI 5B072900»Civil Engineering", 6M072900»Civil Engineering», 6D072900»Civil Engineering», 6D073000»Production of building materials, products and structures":

- was not identified by this standard

MEC recommendations for EI 5B072900»Civil Engineering», 6M072900»Civil Engineering», 6D072900»Civil Engineering», 6D073000»Production of building materials, products and structures":

- there are no requirements for this standard

Conclusions of the MEC on the»Information management and reporting»standard": accredited educational programs 5B072900»Civil Engineering», 6M072900»Civil Engineering», 6D072900»Civil Engineering», 6D073000»Production of building materials, products and structures»have 17 satisfactory positions.

6.3. Standard»Development and approval of the educational program"

- ✓ *The University should define and document the procedures for the development of the EI and their approval at the institutional level.*
- ✓ *The management of the EI must ensure that the developed EI meets the set goals, including the expected learning outcomes.*
- ✓ *The management of the EI should ensure that there are developed models of the EI graduate describing the learning outcomes and personal qualities.*
- ✓ *The management of the EI must demonstrate the conduct of external reviews of the EI.*
- ✓ *The qualifications obtained at the end of the EI must be clearly defined, explained and correspond to a certain level of the NSC.*
- ✓ *The EI management should determine the impact of disciplines and professional practices on the formation of learning outcomes.*
- ✓ *An important factor is the ability to prepare students for professional certification.*
- ✓ *The management of the EI must provide evidence of the participation of students, teaching staff and other stakeholders in the development of the EI, ensuring their quality.*
- ✓ *The labor intensity of the EI should be clearly defined in Kazakhstan loans and ECTS.*
- ✓ *The management of the EI should ensure the content of academic disciplines and results of training at the level of training (bachelor's, master's, doctoral).*
- ✓ *The structure of the EI should include various types of activities that correspond to the results of training.*
- ✓ *An important factor is the availability of joint OP with foreign educational organizations.*

The evidence part

Development and approval of the accredited educational programs at the University is carried out in accordance with the provisions of normative legal acts in the sphere of higher and postgraduate education (http://www.kstu.kz/strategicheski-vazhny-e-dokumenty__trashed/), Methodical recommendations for the development of educational programs on the basis of the European system of transfer and accumulation of credits and intended learning outcomes, developed by the Center for Bologna process and academic mobility MES RK, 2014. (http://www.kstu.kz/wp-content/uploads/docs/Book23.pdf), DP KSTU 13-2018»General requirements for the construction, presentation and design of modular programs; DP KSTU 12-2018»General requirements for the construction, presentation and design of working curricula in the European ESTS system»and methodological recommendations for the development of Modular educational programs.

The qualification obtained upon completion of the accredited EI is determined by the Department of specialties and the state bachelor's degree program. In accordance with the NSC of the RK qualification levels of the NQF are related to the level of education and described in maps professional qualification ORK. Current ORCS for various sectors of the country's economy are posted on the website of NCE»Atameken".

Enterprises of the Corporate University are invited to participate in the development of accredited educational programs. At field meetings with the participation

of faculty of the Department - coordinators of joint work with a specific enterprise, the content of educational programs is discussed, which results in the development of specific recommendations that will be taken into account in the future when compiling the Catalog of elective disciplines.

Students participate in the development of the content of educational programs through participation in the work of the faculty Council, which is approved annually by the order of the Rector of KSTU and whose work Plans include consideration and approval of accredited programs. Students who are members of the faculty Council have the right to vote and actively participate in the discussion of all issues put on the agenda of meetings. The faculty Council also includes teachers who implement educational programs and are also actively involved in the formation of its content.

Table 3-data on the participation of stakeholders in the development of the EI

Academic year	Students	PPP	Employers
5B072900-CivilEngineering			
2014-2015	Smetanova M. M., 2nd year	Kasimov A. T., candidate of technical Sciences, associate Professor	Ashimov T. M. Gen.Director of PC "Aspap"
2015-2016	Smetanova M. M., 3 year	Bakirova D. G., Senior teacher	Shvedov A. A. Director of LLP "Karagandanerud"
2016-2017	Smetanova M. M., 4 year	Kurokhtina A. I., Art teacher.	Nagorny A. A. Director of»Institute of Karaganda»LLP "Promstroyproekt"
2017-2018	Ibrokhimov U. R., 2nd year Shcheglova V. V., 1st year	Pchelnikova Y. N., Senior teacher	Kumasi N. I. Director of LLP "Crisisexperts"
2018-2019	Shcheglova V. V., 2nd year	Serova R. F., candidate of technical Sciences, associate Professor	Tkachenko V. P. Director of LLP "Exproject 2006"
6M072900-CivilEngineering			
2017-2018	Bakirova D.G. A. Y. Borisevich, 1st year	Utenov E. S. doctor of technical Sciences, Professor	Shvedov A. A. Director of LLP "Karaganda Service"
2018-2019	Filippova D. N., 2nd year	Zhakulin A. S. doctor of technical Sciences, Professor	Shvedov A. A. Director of LLP "Karagandanerud"
6D072900-CivilEngineering			

2018-2019	Kurokhtina I.A, 1st year	Utenov E. S. doctor of technical Sciences, Professor	Nuguzhinov Zh. S. Director KAZ MIRR Institute
6D073000-Production of building materials, products and structures			
2018-2019	Khan M. A., 1st year	Baijanov D. O. doctor of technical Sciences, Professor	Kiku A. I. Director of the LLP "KKK Concrete"

In the result participation of stakeholders in development EI»5B072900-Construction","6M072900-Civil Engineering», Open company»Qurylysexpertproekt»were *implemented offers*, about enabling it to the curriculum next steps disciplines:

in RUE 2016-2017 academic year, EI»5B072900-Civil Engineering":

1. Module Design buildings and structures -»Energy efficient design and construction civilian's buildings",»Industrial buildings and structures".
2. Plug-in Professionally-oriented -»Calculation basics core values systems".
3. Module Engineering services building systems and facilities, hydraulics -»Engineering services building systems and facilities".

in RUE 2017-2018 academic year, EI»5B072900-Civil Engineering":

1. Module Design buildings and structures -»Architecture civilian's buildings",»Architecture industrial buildings and structures".
2. Plug-in Professionally-oriented -»Fundamentals of engineering entrepreneurship".
3. Module Engineering services building systems and facilities, hydraulics -»Heating systems and ventilation."

in RUE 2018-2019 academic year, EI»5B072900-Civil Engineering":

1. Module Design buildings and structures -»Architecture I",»Architecture II".
2. Plug-in Professionally-oriented -»Modern geodesic methods security features in construction".
3. Module Engineering services building systems and facilities, hydraulics -»Heat supply and ventilation."

in RUE 2017-2018 academic year, EI»6M072900-Civil Engineering»:

1. Module Modern construction -»Composite supporting structures buildings and structures".
2. Module Systems in construction -»BIM technologies in construction".
3. Module Modern methods -»Scientific and technical support services research and design features construction",»Scientific and technical support services research and design features construction map items metallurgy".

in RUE 2018-2019 academic year, EI»6M072900-Civil Engineering»:

1. Module Modern construction -»Organization and management innovative activity".
2. Module Systems in construction –»Numerical values calculation methods construction structures".
3. Module Modern methods -»Composite supporting structures buildings and structures",»Scientific and technical support services research and design features construction".

4. Participation the above-mentioned representatives in development accredited persons OP reflected in the protocols meetings departments»Civil Engineering materials and technologies":

- 2016-2017 academic year -Protocol No. 18 of 31.05.2016;
- 2017-2018 academic year-Protocol No. 18 of 30.05.2017;
- 2018-2019 academic year-Protocol No. 18 of 29.05.2018.

Besides participation in the development accredited personsEI students, teaching staff and others stakeholders actively promote implementation process educational programs. For example, during implementation EI 6D073000 – "Production construction companies' materials, products and structures":

- Creation branches of departments at the enterprises: LLP "KKK Beton", LLP "ZHBI Karaganda»(until 2017- "Nurkhan" LLP). Participants – shop Manager LLP "KKK Beton»- Kulinsky S. A., prof., doctor of technical Sciences KSTU Baijanov PhD student g. Pskd-15 Rakhimov A.M., PhD student Mr. Abdrakhmanov's Pskd-16 K. A.;
- The organization and holding professional practices in»Karaganda construction laboratory»LLP»Karagandanerud", Institute of KazMiir. Participants - Director of LLP»Karagandanerud", Shvedov A. A.; Director of Institute of KazMirr, Professor, Ph. D. Noginov J. S.
- Conducting training sessions»Karaganda region construction laboratory»at»Karagandatehnoservice»LLP, Institute of Kazmir. Participants - Director of LLP»Karagandanerud", Shvedov A. A.; Director Institute of KazMirr, Professor, Ph. D. of Noginov J. S.
- Development and publication of textbooks and manuals. Participants - Prof., doctor of technical Sciences Baijanov Doctor of Economics, associate Professor, candidate of technical Sciences Rakhimov M. A., CH. Techn. Open Company Suleimbekov's NORD Prom NS Z. A. educational manual director of LLP»Hold LTD»training manual»Anticorrosive materials and fire-resistant materials".
- Joint venture participation in scientific conferences, conducted universities and research centers organizations near and far foreign countries. Participants - foreman of LLP"KKK Beton»- Kulinsky S. A., prof., doctor of technical Sciences KSTU Baijanov D.O., doctoral student g. Pskd-15 Rakhimov A.M., doctoral student Mr. Abdrakhmanov's Pskd-16 K. A., doctoral student gr.Kskd -17 Khan M. A.

Representatives enterprises, organizations, other structures *attract to the expert examination* curriculum. According to EI 5B072900/6M072900/6D072900 –»Civil Engineering»- Director of LLP»Karagandatechnoservice»Shvedov A. A., 6D073000 – »Production of construction materials, products and structures»- Director of LLP»Building consulting company»IView Z. S. take participation in the development the catalog of elective disciplines.

Department»BMST»leads purposeful activity work on the organization preparation of those who study to professional training certifications. Currently there are time negotiations running with the guide Karaganda region technical and construction College and Karaganda Higher Polytechnic Institute College about opening a linkbased on educational programs workshops of these organizations TVCE Center working professions: bricklayer, plasterer, painter, tiler-finisher, gas-electric welder.

Laboriousness accredited EI defined in Kazakhstani rubles loans and ECTS. List and labor intensity mandatory fields disciplines, distribution their cycles correspond to RCD.

Compliance contents mandatory fields disciplines bachelor's degree level and offered results training provided via content standard training courses programs, approved MES RK. Most of them elective courses are presented as follows a training course additional material mandatory fields disciplines and contributing factors providing multidisciplinary character educational institutions for several reasons related specialties. Offered to study elective courses the courses are presented as follows in the form of certain parameters natural resources toolpaths with an indication previous disciplines, prerequisites, ownership tools which are necessary to understand the next, and also, with

an indication of the requisites. Logical function, the sequence and continuity knowledge within *EI 5B072900»Construction»- 6M072900»Construction»-6D072900»Construction*»confirmed distribution disciplines on courses and levels training.

For example, to achieve a common goal of problems investigation when solving engineering tasks and search solutions at the national and international levels is solved through serial of the study subjects cycle LTD.»Building design»in the 4 semester undergraduate continues in the 5 semester cycle DB OK the study discipline»Technology construction production I»and continues at the level master's degree programs by studying disciplines PD KV cycle»Energy-saving products construction companies principles of»b 3 semester and completed at the level doctoral programs by studying disciplines PD KV cycle»Reliability, monitoring and security buildings and structures".

Analytical part

The owner of EI established single aim for accredited user's modulus educational program:

- ✓ on practice to carry out democratic institutions management principles by educational services process, to expand academic degree program freedom and opportunity of higher educational institutions;
- ✓ provide adaptation of higher education by profession and scientific research to the changing requirements companies and achievements scientific thought;
- ✓ provide recognition level of training specialists in other countries;
- ✓ provide a higher price mobility graduates in the changing market conditions labor.

Developed EI correspond to installed goals of accredited persons EI including results training that described in developed the graduate's name. In development framework competence-based graduate models put classification, consisting of three main competence groups: professional services competencies, General education programs competencies and additional features competencies.

Description requirements to competencies graduates by accredited educational services programs: 5B072900 –»Civil Engineering», 6M072900 –»Civil Engineering», 6D072900 –»Civil Engineering», 6D073000 –»Production of construction materials, products and structures»
is being implemented in accordance with Resolution Governments Commonwealths Kazakhstan from August 23, 2012 No. 1080»on approval government agencies mandatory fields standards educational institutions appropriate education levels»and presented on the site http://www.kstu.kz/kafedra-stroitelnye-materialy-i-tekhnologiya/.

However, the Commission of the MEC notes that installed purpose of accredited EI should reflect personality in level cross section training and software specific features accredited persons EI.

Department collaborates with the following foreign universities: Berlin University Technical University, Vilnius region state-owned enterprise technical University after Gediminas, Moscow state-owned enterprise construction University, Voronezh region state-owned enterprise technical University, Tomsk state University architectural and construction University, Kuzbass region state-owned enterprise technical University after T. F. Gorbachev. Currently there are time negotiations running about the implementation of joint ventures master's programs educational programs with leading foreign companies by higher education institutions of the OP 6M072900-Construction:

- Siberian state owned automobile and road transport by a University (SibADI, Omsk, Russian Federation) by direction 08.04.0-Civil Engineering, implemented ones in KSTU and SibADI;

- Novosibirsk state owned architectural and Civil Engineering services by a University direction 08.04.0-Construction, implemented ones in KSTU

- Tomsk state University architectural and construction services by a University (TGASU, Tomsk, Russian Federation).

Commission MEC notes availability of conditions for development and implementation joint ventures educational programs with foreign organizations educational institutions by direction 6M072900»Construction".

Strong sides/best practice for EI 5B072900»Civil Engineering», 6M072900»Civil Engineering», 6D072900»Civil Engineering», 6D073000»Production of Civil Engineering materials, products and structures":

- increase indicators results training of students accredited OP due to influence disciplines, conducted competent the composition of the teaching staff departments and departments practical orientation training in as a whole by direction OP.

Recommendations The EEC for EI 5B072900»Civil Engineering», 6M072900»Civil Engineering», 6D072900»Civil Engineering», 6D073000»Production of Civil Engineering materials, products and structures":

1. When updates modular systems educational programs 5B072900/6M072900/6D072900-Construction, 6D073000 PBMaC to install individual orders implementation goals MEP with consideration for specific features specialties and levels training.

Additional features recommendations MEC according to EI 5B072900»Civil Engineering»:

2. During development accredited educational program programs perform an analysis on harmonization contents OP 6M072900»Civil Engineering»with foreign organizations educational institutions and consider possibility developments joint ventures educational programs with Partner universities.

Conclusions MEC by standard»Development and approval educational programs": accredited ones educational programs 5B072900»Civil Engineering», 6M072900»Civil Engineering», 6D072900»Civil Engineering», 6D073000»Production of Civil Engineering companies materials, products and structures»have 1-strong, 10-satisfactory, 1-assuming improvement positions.

6.4. The Standard»Permanent monitoring and periodic evaluation of educational programs"

- ✓ *University should conduct monitoring and periodic EI rating in order to provide achievement goals and responsibilities requirements of students and society. Results of these processes are directed on a permanent basis improvement EI.*
- ✓ *Monitoring and periodicals assessment EI needs to consider:*
- ✓ *Content programs in the light of recent events achievements science on a specific topic discipline to ensure current issues taught disciplines;*
- ✓ *Society requirements changes and professional activity environment;*
- ✓ *The load, academic performance and graduation of students;*
- ✓ *Efficiency of students' evaluation procedures;*
- ✓ *Expectations, needs and satisfaction students;*
- ✓ *Educational program environment and services support and their compliance EI goals.*

- ✓ *University and the manual EI should submit evidence participation of students, employers and other stakeholders under review of EI.*
- ✓ *All interested parties must be informed about any planned events or undertaken actions in the EI ratio. All changes, included in the EI, should be published.*
- ✓ *Guide of the EI should provide review contents and structures EI including changes labor market, requirements employers and social development the company's request.*

Evidence-based part

Internal the EI is evaluated at the following levels: Department»Civil Engineering materials and technologies", educational and methodical center faculty Council, academic Council University.

Permanent monitoring and periodic OP rating University is being implemented using three methods: using the questionnaire method and interviewing, using the method of systematic and direct tracking results, using external methods expert reviews ratings.

With the purpose of the assessment efficiency implementations EI 5B072900/6M072900/6D072900 –»Civil Engineering», 6D073000 –»Production of Civil Engineering materials, products and structures»the Department takes into account employers ' opinion and consumers educational programs services, that is students, through a questionnaire.

Analysis and monitoring applications innovative solutions training methods passes on meetings departments and at discussion visited sites teachers classes (http://www.kstu.kz/uchebnyj-process-kafedry-stroitelnye-materialy-i-tekhnologiya/). Application the most successful methods are demonstrated PPP in open markets classes. PPS departments in the classroom widely use both - the most diverse traditional and innovative technologies. Classes are held with the use of interactive features boards, also using digital cameras educational programs resources.

Monitoring click-through practices, tracking the quality of its organizations are conducted by manager's practices from departments and Career center growth. Based on the results of all types of practical training reporting conferences are conducted, recommendations on how to improve its click-through practices and generated summary report organizations are generated, which includes sections: internships organization; subject matter research, conducted by students during the internship period; performance analysis of internship programs, conclusions and suggestions. After passing through specific type of internship, students questionnaires are conducted with the purpose of students satisfaction ratings detection and internship organization, and also internship bases managers questionnaires are conducted with the purpose of satisfaction level of training students evaluation.

One of the criteria of internal monitoring EI quality is a control quality of performance of academic programs students' classes. During the academic year UMS of the Department is being developed and approved by the rector of the University. Open classes and master classes are carried out, within which the presentation of innovative solutions methods and technologies trainings are being implemented.

(http://www.kstu.kz/kalendarnye-plany-provedeniya-master-klassov-otkrytyh-zanyatij/).

By results an order is issued»About quality open classes and master classes.»For example, in spring mode semester 2017-2018 academic year at the Department of Civil Engineering materials and technologies were conducted 2 open classes for an accredited company EI 5V0072900»Civil Engineering»:

- Installation of special features structures, EI 5B072900»Civil Engineering», subject:»Installation special features buildings and structures industrial complexes", senior lecturer teacher Ryabkova M. P.;

Fundamentals of planning and computer graphics; op 5B072900»Civil Engineering», theme»Civil Engineering of complex objects based on AutoCAD", preposition B. B. Akhmetov.

Criteria performance indicators activities EI are: student recruitment, academic performance and employment. A set of trainees on accredited sites the survey shows positive dynamics.

The result satisfaction level of students, teaching staff and employers places, conditions and content of the interns, as well as level of students and teachers is an opinion form and reviews from organizations, providing services bases for passing through interns (http://www.kstu.kz/otzyvy-rabotodatelej-kafedry-stroitelnye-materialy-i-tekhnologiya/).

In University planned activity employment agencies graduates is organised. Since 2000 at the University annual alumni fair is conducted, where the employers represent own businesses and conduct Express interview with job seekers. For participant's fair»Graduate Karagandy state technical University-2018»exhibition of workers places with stands and others presentation tools materials businesses was organized. In a job fair representatives of enterprises construction industries of the region take part - potential customers employers, as well as representatives of enterprises corporate University.

Department on a permanent basis conducts the monitoring of employment graduates of University by collecting information about professional development employment of the graduates. One of the supporting documents of external environment factors EI scores are employment opportunities of graduates. Graduates, completed training OP 5B072900 -»Civil Engineering», 6M072900 -»Civil Engineering», 6D072900 -»Civil Engineering», 6D073000 –»Production of construction materials, products and structures", they show you an average of 95% employment.

Informing users about changes the survey contains on site visits meetings, conducted at enterprises, included in the Corporate governance structure University. All changes, included in the educational programs for all training levels, placed on the University's website and departments.

As the result of constantly conducted monitoring and periodic assessments of the accredited company EI 5B072900 -»Civil Engineering»and 6M072900»Civil Engineering»during the last three years for improvements educational program programs in content Directories elective courses the discipline the following changes were made:

Table 4-Changes included in the KED at EI 5B072900 Civil Engineering

School years	Modules 5B072900 CivilEngineering			
	Module Design buildings and structures	Module Design buildings and structures	Module Professionally-oriented	Module Engineering services building systems and facilities, hydraulics
2016-2017	"Energy efficient design and construction	"Industrial buildings and structures"	"Fundamentals calculation of core values systems"	"Engineering services building systems and facilities"

	civilians buildings"			
2017-2018	"Architecture Civil and building"	"Architecture industrial buildings and structures"	"Fundamentals engineering for business development"	"Systems heating and air conditioning systems ventilation system"
2018-2019	"Architecture I"	"Architecture I"	Modern ones geodesic methods security features in construction	"Heat supply and ventilation"

Table 5-Changes included in the QED for EI 6M072900 Construction

School years	Modules 6M072900 Construction			
	Module Modern construction	Module Systems in construction	Module Modern method	Module Modern method
2017-2018	"Composite materials supporting structures buildings and structures"	"BIM technologies in construction"	"Scientific and technical support services research and design features construction"	"Scientific and technical support services research and design features construction map items metallurgy"
2018-2019	"Organization and management innovative activity"	"Numerical values calculation methods construction companies structures"	"Composite materials supporting structures buildings and structures"	"Scientific and technical support services research and design features construction"

In the result conducted monitoring and periodic assessments of accredited persons EI»5B072900»Civil Engineering»,»6M072900-Civil Engineering»with participation managers and employees LLP»Karagandanerud", LLP»Crisisexperts", in connection with the needs of modern construction were entered changes in the MOSFET and QED (of the Protocol from 09.02.2016, 14.02.2017, 20.02.2018).

In the light of recent events achievements science, change of companies requirements and professional activity environments, changes of labor requirements employers and social development the company's request form content accredited EI of doctoral studies changed 6D072900»Construction»by implementing in the survey disciplines»Strategic management»and»Risk management".

Proof participation of students, employers under review accredited OP are Protocols field meetings at enterprises Corporate University (№5 of

30.08.16»Karagandatehnoservice", No. 4 dated 28.07.15 of LLP»Karagandanerud", No. 6 dated 27.08.14 G. Open Company Oplot LTD, No. 5 from 01.09.17 "Nurkhan" LLP).

Analytical part

For estimations satisfactions EI among studying held questionnaires on the KSTU website in AIS UNIVER. Topics of questionnaires are»Satisfaction quality organizations educational level process",»Satisfaction teaching staff by its composition",»Satisfaction students of the 2-4 courses",»Satisfaction of students of the 1 course's".

Results of the questionnaires are processed by the management quality center and accreditation and they're heading out to the Department for output levels of corrective actions.

*However, The Commission of the MEC noted the absence of feedback to conduct analysis of recommendations in the context of accredited EI, output corrective actions in the OP section, in particular, by results questionnaires»*Satisfaction teaching staff structure".

Strong sides/best practice for EI 5B072900»Civil Engineering», 6M072900»Civil Engineering», 6D072900»Civil Engineering», 6D073000»Production ofCivil Engineering materials, products and structures":

- content and structure of accredited EI are periodically updated using offers of the main employers graduates, partners departments from corporate governance structure of the University.

Recommendations VEC according to EI 5B072900»Civil Engineering», 6M072900»Civil Engineering», 6D072900»Civil Engineering», 6D073000»Production of Civil Engineering materials, products and structures":

1 To the supervisor of structural division of University to develop implementation mechanism of regular questionnaires (at least 2 times per year) by sector EI and mechanism periodic maintenance carrying out analysis of results of questionnaires with development corrective plan of actions by educational category programs and security monitoring of the execution.

Conclusions MEC by standard»Permanent monitoring and periodic evaluation of educational programs": accredited educational programs 5B072900»Civil Engineering», 6M072900»Civil Engineering», 6D072900»Civil Engineering», 6D073000»Production of Civil Engineering materials, products and structures»have 1 strong, 8-satisfactory, 1-assuming improvement positions.

6.5. Standard»Student-centered training, teaching and assessment of academic performance"

- ✓ *Guide of the EI should provide respect and attention to various groups of students and their needs, providing and creating flexible paths training.*
- ✓ *Guide of the EI should provide usage of various forms and teaching methods and training.*
- ✓ *Important factor is having your own rules research in the field of methodology teaching methods academic subjects of EI.*
- ✓ *Guide of the EI should demonstrate availability of the system feedback system by usage various teaching methods and evaluation of results training.*
- ✓ *Guide of the EI should demonstrate support autonomy students at the same time the manual and help with the teacher's side.*
- ✓ *Guide of the EI should demonstrate availability of the procedure response time on students complaints.*
- ✓ *University must provide the sequence, transparency and objectivity of the mechanism evaluation of results training for each EI, including an appeal.*

- ✓ *University must provide compliance evaluation procedures results training of students EI planned results training and the objectives of the program. Criteria and evaluation methods within the OP must be published in advance.*
- ✓ *In the University mechanisms security features development should be defined by each a graduate EI of results training and secured their completeness formations.*
- ✓ *Evaluation individuals must own modern technologies of evaluation methods results training and regularly raise qualification in this area.*

Evidence-based part

In KSTU student-centered training is implemented by executing the following provisions:

1. Trainee using an adviser forms their own individual curriculum for each academic year period using standard training course plan and CAD. Choice individual educational trajectory is based on MOS, in which in addition to General basic disciplines mandatory component elective courses and practices aimed to ensure professional competencies are included.
2. Trainee has the right to complete training by academic degree mobility issues in other universities in both - the Republic of Kazakhstan and abroad, followed by reinsertion studied disciplines in the University and enabling it add them to the transcript.
3. Trainee can participate in programs of double degree educational institutions with other universities with the ability to inclusion in the transcript disciplines, studied in the another University.
4. Trainee, being in the another University within the framework of the academic program mobility, in the absence of features explore there some disciplines, has the right to explore these disciplines, using remote applications technologies training.
5. For satisfaction needs in the additional section or repeated studying disciplines at the University it is held annually in summer semester. Dates of the event summer semester divided for students, passing students practice on businesses Karaganda city, and for students, passing students military fees or practice in a different area, what gives equal features to go through an additional window training for all students.

During the academic year in the schedule pinned SRSP hours, in departments consultation schedules Teaching staff are available, additional information provided in syllabuses by discipline, the student can contact a teacher also by email by mail.

Training matches with extracurricular activities work and production line in practice, for carrying out classes branches of the Department at the factory are used. For today, the number of branches of the Department Construction materials and technologies at work makes up 12 units. On 5 of them they are held academic programs classes (table 6). in the 2015-2019 academic year on branches of departments the following classes were conducted:

Table 6-Classes on branches of departments

Branchesdepartments	Discipline	Laborintensity, credits KZ
EI 5B072900 CivilEngineering		
2014-2015 academicyear		
Kazakh multidisciplinary Institute of reconstructions	Calculation metal parts structures according to Euro codes	3

and development (Of KazMirr)	Technology construction sites buildings and structures	2
	Technology construction production facilities I	2
2015-2016 academic year		
Kazakh multidisciplinary Institute of reconstructions and development (Of KazMirr)	Technology reconstruction of buildings	2
Open Company»Institute Karaganda Promstroyproekt"	Static images tests construction companies structures	4
PC»Aspap"	Installation special features structures.	2
	Monitoring quality of the survey. and testing in construction	3
Laboratory construction monitoring Karaganda LLP Technoservice"	Building material Artificial ones construction companies conglomerates	2
2016-2017 academic year		
Open Company»Institute Karaganda Promstroyproekt"	Architecture 1	1
Kazakh multidisciplinary Institute reconstructions and development (Of KazMirr)	Calculation metal parts structures according to Euro codes	5
2017-2018 academic year		
Laboratory construction monitoring Karaganda LLP Technoservice"	Monitoring quality, surveys and testing in construction	2
Kazakh multidisciplinary Institute reconstructions and development (Of KazMirr)	Construction companies structures 2	1
	Automated systems construction calculations structures	2
2018-2019 academic year		
Laboratory construction monitoring Karaganda LLP Technoservice"	Building material Artificial ones construction companies conglomerates	2
PC»Aspap"	Installation special features structures.	1
6M072900 Civil Engineering		
2015-2016 academic year		
Karaganda region construction laboratory	Monitoring quality and testing construction companies materials and structures	2

Kazakh multidisciplinary Institute reconstructions and development (Of KazMirr)	Research work	20 hours
2016-2017 academic year		
Kazakh multidisciplinary Institute reconstructions and development (Of KazMirr)	Research work	20 hours
	Geotechnical services problems construction	3
Laboratory construction monitoring Karaganda LLP Technoservice"	Monitoring quality and testing construction companies materials and structures	1
2017-2018 academic year		
PC»Aspap"	Construction buildings and structures in regional settings conditions	3
Kazakh multidisciplinary Institute reconstructions and development (Of KazMirr)	Research work	25 hours
2018-2019 academic year		
PC»Aspap"	Construction buildings and structures in regional settings conditions	3
Kazakh multidisciplinary Institute reconstructions and development (Of KazMirr)	Research work	20 hours
6D72900 Civil Engineering		
2017-2018 academic year		
Kazakh multidisciplinary Institute reconstructions and development (Of KazMirr)	Research work	10
PC»Aspap"	Numerical values calculation methods in geotechnical engineering	3
2018-2019 academic year		
Kazakh multidisciplinary Institute reconstructions and development (Of KazMirr)	Research work	10
	Euro code 1990 design Basics buildings and structures	3
6D73000 PBMaC		
2015-2016 academic year		
Kazakh multidisciplinary Institute reconstructions and development (Of KazMirr)	Methodology scientific research	3
2016-2017 academic year		
Kazakh multidisciplinary Institute reconstructions	Research work	10

and development (Of KazMirr)		
2017-2018 academic year		
Kazakh multidisciplinary Institute reconstructions and development (Of KazMirr)	Technology extrusion equipment concrete and reinforced concrete;	3
Laboratory construction monitoring Karaganda LLP Technoservice"	Research work	10
2018-2019 academic year		
Kazakh multidisciplinary Institute reconstructions and development (Of KazMirr)	Methodology scientific research	3
	Research work	10

Table 6 - Classes at the branches of the departments

Branches of the department	Discipline	Labor intensity, credits KZ
OP 5B072900 Construction		
2014-2015 academic year		
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KazMIRD)	Calculation of metal structures according to Eurocodes	3
	Technology of construction of buildings and structures	2
	Technology of construction production I	2
2015-2016 academic year		
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KMIRD)	Technology for reconstruction of buildings	2
Institute Karaganda Promstroyproekt LLP	Static tests of building structures	4
PK»Aspap"	Installation of special structures.	2
	Quality control of inspection and testing in construction	3
Laboratory of construction monitoring LLP»Karaganda TechnoService"	Construction materials Artificial construction conglomerates	2
2016-2017 academic year		
LLP»Institute Karaganda Promstroyproekt"	Architecture 1	1
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KazMIRD)	Calculation of metal structures according to eurocodes	5
2017-2018 academic year		
Construction monitoring laboratory of Karaganda TechnoService LLP	Quality control, inspection and testing in construction	2
Kazakhstan Multidisciplinary	Building structures 2	1

Institute for Reconstruction and Development (KazMIRD)		
	Automated calculations of building structures	2
2018-2019 academicyear		
Laboratory of construction monitoring LLP»Karaganda TechnoService"	Construction materials Artificial construction conglomerates	2
PC»Aspap"	Installation of special structures.	1
6M072900 Construction		
2015-2016 academic year		
Karaganda construction laboratory	Quality control and testing of building materials and structures	2
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KazMIRD)	Research work	20 hours
2016-2017 academic year		
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KazMIRD)	Research work	20 hours
	Geotechnical problems of construction	3
Laboratory of construction monitoring LLP»Karaganda TechnoService"	Quality control and testing of building materials and structures	1
2017-2018 academic year		
PK»Aspap"	Construction of buildings and structures in regional conditions	3
Kazakhstan Multidisciplinary Institute of Reconstruction and development (KazMIRD)	Research work	25 hours
2018-2019 academic year		
PK»Aspap"	Construction of buildings and structures in regional conditions	3
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KazMIRD)	Research work	20 hours
6D72900 Construction in		
2017-2018 academic year		
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KazMIRD)	Research work	10
PC»Aspap"	Numerical methods of calculation in geotechnics	3
2018-2019 academic year		
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KazMIRD)	Research work	10
	Eurocode 1990 Fundamentals of designing buildings and structures	3
6D73000 PBMPS		
2015-2016 academic year		
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KazMIRD)	Scientific Research Methodology	3

2016-2017 Academic Year		
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KazMIRD)	Research work	10
2017-2018 academic year		
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KazMIRD)	Technology of extruded concrete and reinforced concrete;	3
Laboratory of construction monitoring LLP»Karaganda TechnoService"	Research work	10
2018-2019 academic year		
Kazakhstan Multidisciplinary Institute for Reconstruction and Development (KazMIRD)	Research methodology	3
	Research work	10

To strengthen the practical orientation of the educational process, specialists are invited to conduct classes - production workers - Zhanakov Kuanysh Alimzhanovich - director of»POWER BETON»LLP and Kulinsky Sergey Anatolyevich - shop manager of»KKK Beton»LLP.

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

In 2018, multilingual groups were formed, where classes were conducted in English in the following disciplines:»Architecture 1",»Geotechnics I".

The Department of BMT has an appropriate material and technical base for organizing the process of learning languages: (textbooks, study guides, methodological guidelines, monographs, electronic textbooks, dictionaries).

Ensuring equal opportunities for students is achieved through the development of educational, methodological, organizational, methodological and informational support of the educational process in two languages of instruction: Kazakh and Russian. For multilingual groups in 2 languages: Kazakh / Russian, Kazakh / English, Russian / English.

The main role in assisting in the formation and advancement of the educational trajectory is played by teachers - advisors. Experienced teachers - Ph.D., PhD, Masters, are appointed as advisors for the formation of individual learning paths.

For the successful mastering of educational programs by students of the teaching staff of the Department of Building Materials and Technologies, to increase the interest of students in educational and cognitive activities, such teaching methods as simulation trainings, case studies, coursework, modular teaching technologies, interactive posters are introduced into the educational process ...

The EEC Commission notes a fairly good level of publication of its own publications used in the educational process (Table 7).

Table 7 - List of own publications of the teaching staff of the department for the implementation of the educational process for the period 2015-2019 academic year

№	Name of the edition	Disciplines
OP 5B072900 -»Construction"		
1.	Kasimov AT.»Стержендер жүйесін есептеу негіздері": textbook, 2015	Construction mechanics, Engineering mechanics
2.	Zhakulin A.S.»Основы геотехнического проектирования»: monograph, 2015	Geotechnics I
3.	Kozhas A.K., Pchelnikova Yu.N.»Проектирование производства земляных работ при вертикальной планировке строительной площадки»: textbook, 2015	Technology of construction production I
4.	Nuguzhinov Zh.S. ., Nemen VN»Проектирование каменных	Building structures III

	конструкций по Евронормам»: textbook, 2015	
5.	Nuguzhinov Zh.S., Nemen V.N.»Евронорма бойынша тасты конструкцияларды жобалау»: study guide, 2015	construction physics III
6.	Pchelnikova Yu.N., Kozhas AK»Технологическая карта на отдельные виды строительных работ в условиях реконструкции»: study guide, 2015	Inspection of building structures and reconstruction buildings and structures
7.	Kurokhtina IA, Pchelnikova Yu.N.»Металлическая балочная клетка»: textbook, 2015	Building structures II
8.	Nuguzhinov Zh.S., Kurokhtina A.Yu.»Основы проектировния железобетонных конструкций по Евронормам»: textbook, 2015	Building structures III, Reinforced concrete and stone structures
9.	Kalmagambetova A.Sh., Almenov K.S.»Система для устройства теплозащиты стен жилых и общественных зданий»: monograph, 2016	Architecture I, Building materials
10.	Zhakulin A.S., Zhakulina A.A., Orazaly E.E.»Геотехниаклық жобалау негіздері»: monograph, 2016	Geotechnics I, Foundations and Foundations
11.	Kasimov A.T.»Теория и расчет слоистых пластинчатых конструкций на основе механики композитных материалов»: monograph, 2016	Building mechanics, Engineering mechanics
12.	Abdrakhmanova K.A., Zhakulina A.A.,»Құрылыстық физика": textbook, 2016	construction physics
13.	Kropachev P.A., Mukhamedzhanova A.T.»Ғимараттар мен үймереттердің беріктігі, қауіпсіздігі және бақылауы: апаттардың себептерін анықтау»: a manual 2016	Strength, safety and control of buildings and structures: determining the causes of accidents
14.	Kropachev PA, Mukhamedzhanov A.T, Tungyshbaeva SJ»Ғимараттар мен үймереттердің беріктігі, қауіпсіздігі және бақылауы: техникалық қадағалау»: educational 2016	Inspection of building structures and reconstruction of buildings and structures
15.	Ayapbergenova B.E., Bakirova D.G., Mukhamedzhanova A.T., Beketova M.S. Құрылыс конструкцияларын нығайтуды есептеу және құрылымдау»: trainingmanual,2017	Calculation and structuring of reinforcement of building structures
16.	Kasimov A.T., Қozhas A.K.»Арнайы ғимараттарды монтаждау»: a trainingmanual,2017	Installation of special buildings
17.	Zhakulina AA .»Architecture": study guide, 2017	Architecture (according to the program for the introduction of multilingualism)
18.	Serova R.F., Khan M.A., Imanov E.K.»Quality control of building materials": study guide, 2017	Quality control of building materials (according to the program of introducing multilingualism)
19.	Rozhkov AV, Beketova MS, Tungyshbaeva S.Zh.»Гидравлика, гидрология және гидрометрия": textbook, 2017	Hydraulics, hydrology and hydrometry (for students of the program»Серпін")
20.	Kasimov A.T., Kozhas A.K., Pchelnikova Yu.N.»Құрылыс өндірісінің технологиясы": study guide, 2017	Technology of construction production I, II (For students studying in the program»Серпін")
21.	Bakirova D.G., Ayapbergenova B.Ye., Mukhamedzhanova A.T. Құрылыс конструкцияларының автоматтандырылған есептеулері": study guide, 2017	Automated calculations of building structures
22.	Nemen V.N. .»Основы проектирования конструкций	Architecture I, Building

	зданий (EN 1990: Еврокод)» (реализация шага 49 Внедрение системы Еврокодов взамен устаревших Строительных норм и правил (СНиП) Плана нации»100 конкретных шагов»): study guide, 2017	structures I
23.	Abildin S.K., Bakirova D.G., Ayapbergenova B.E., Kalmagambetova A.Sh.»Статические испытания строительных конструкций зданий и сооружений»: educational p special, 2018	Static tests of building structures of buildings and structures
24.	Rakhtaev A.S., Stasilovich E.A., Abdylkokim S.A.»Жылыту және желдету жүйелері»: study guide, 2018	Heating and ventilation systems
25.	Kozhas A.K., Tuleubaeva Sh.B., Pchelnikova Yu.N.»Құрылыстың бас жоспарынын элементтерін есептеу және дайындау»: study guide, 2018	Calculation and preparation of elements of the general plan of construction
26.	Kozhas A.K., Pchelnikova Yu.N., Kurokhtina I.A.»Расчет и разработка элементов строительного генплана»: study guide, 2018	Calculation and development of elements of the construction general plan
27.	Kozhas A.K., Pchelnikova Yu.N.»Проектирование производства земляных работ при вертикальной планировке строительной площадки»: study guide, 2018	Engineering surveys in construction
28.	Imanov M.Ғ., Divak L.A., Khan M.A., Imanov E.K.»Architecture of industrial buildings": textbook, 2018	Architecture of industrial buildings and structures
29.	Zhakulin A.S., Zhautikova S.A., Kropachev P.A.»Geotechnical", 2018	Geotechnics 1
30.	Zhakulin A.S., Abdrakhmanova A.A., Serova R.F., Zhakulina A.A., Kim L.B., 2018»Ғимараттар мен үймереттерді жобалау»2018	Engineering systems of buildings and structures
31.	Kasimov A.T.»Статически неопределимые стержневые системы»: study guide, 2018	Structural mechanics, Fundamentals of calculation of rod systems
32.	Kasimov A.T.»Статически определимые системы": textbook, 2018	Structural mechanics
33.	Kasimov A.T.»Технология реконструкции зданий": textbook, 2018	Technology of reconstruction of buildings and structures
34.	Kropachev P.A., Abildin S.K., Rakhimov M.A., Pchelnikova Yu.N.»Design of steel constructors": textbook, 2018	Building technology, Building structures
35.	Kropachev P.A., Abildin S.K., Rakhimov M.A.»Ғимараттар мен үймереттердің жай-күйін техникалық қадағалау»: a textbook, 2018	Inspection and reinforcement of building structures
OP 6M072900 -»Construction"		
36.	Kropachev PA, A.T. Mukhamedzhanov»Ғимараттар мен үймереттердің беріктігі, қауіпсіздігі және бақылауы: физикалық тозуын бағалау»: textbook, 2016	Mechanical problems of construction
37.	Zhakulin A.S., Zhakalyulina E.A.»Топырақтардың геотехникалық қасиеттерін зерттеу (еврокод)»: monograph, 2017	Study of geotechnical properties of soils
38.		
39.	Zhakulin A.S., Kropachev P.A., Zhakulina A.A.,»Научно-техническое сопровождение объектов строительства»: textbook, 2017	For profile magistracy in SPIIR-2»Строительный инжиниринг в металлургии»
40.	Kropachev P.A., Zhakulin A.S., Zhakulina A.A., Zhusupbekov	Foundations and

	A.Zh.»Проектирование оснований и фундаментов (Геотехника)»: textbook, 2018	foundations, Geotechnics 1, Geotechnics
41.	Zhakulin A.S., Kropachev P.A., Zhakulina A.A.,»Научно-техническое сопровождение объектов строительства»: study guide, 2018	Engineering surveys
OP 6D072900 -»Construction"		
42.	Nemen V.N.»Основы проектирования конструкций зданий. (EN 1990: Еврокод)»(реализация шага 49 Внедрение системы Еврокодов взамен устаревших Строительных норм и правил (СНиП) Плана нации»100 конкретных шагов»): study guide, 2017	Fundamentals of structural design of buildings
43.		
44.	Nemen V.N.»Композитные и слоистые несущие конструкции зданий и сооружений»: study guide, 2018	Composite and layered load-bearing structures of buildings and structures
OP 6D073000 -»Production of building materials, products and structures"		
45.	Baydzhanov D.O., Malyshev O. N., Divak L.A.»Современные строительные материалы»: textbook, 2017	Modern technologies of building materials science
	Rakhimov M.A., Rakhimova G.M.»Физико-химические исследования строительных материалов»: textbook, 2017	Energy-saving technologies in the production of modern building materials
46.	Nurguzhin M.R., Danenova G.T. Akhmetzhanov T.B.»Методы повышения технологической прочности сварных металлоконструкций»: monograph, 2018	Modified fine-grained concrete for road construction
47.	Rakhimov M.A.»Modified fine-grained concrete for road construction»: monograph, 2018	Modified fine-grained concrete for road construction
48.	Shaikezhan A.»Жоғарыалитті цемент»: Monograph, 2018	Physical chemistry of building materials
49.	Abildin S.K., Kropachev P.A., Rakhimova G.M.»Methods for determining fire-resistance of reinforced concrete structures by eurocode-2»: textbook, 2018	Methodology of scientific research, technology of extruded concrete and reinforced concrete
50.	Akhmetzhanov T.B., Danenova G.T.»Особенности технологии малоклинкерных вяжущих и бетонов на их основе»: monograph, 2018	Cements based on unconventional raw materials

The University carries out systematic work to monitor the academic performance of students. The analysis of progress for the reporting period showed that students consistently achieve high results during the intermediate control (table 8).

Table 8 - Indicators of students' progress

№ p / p	Uch. year	Productivity,%							
		5B072900 - »Construction"		6M072900 - »Construction"		6D072900 - »Construction"		6D072900 -»PBC"	
		total	incl. grant	total	incl. grant	total	incl. grant	total	incl. grant
1	2015-2016	97.59	95.66	89.6	100			100	100
2	2016-2017	86.38	95.33	97.1	100	100	100	100	100
3	2017-2018	95.87	97.48	97.9	100	100	100	100	100

As can be seen from the grading tables for the last three academic years, the overall academic performance of students of EP 5B072900»Construction»in the 2016-17 academic year decreased to

86.38,%. The progress of undergraduates and doctoral students stably remains at the level of 100%. The decline in the performance of undergraduate students EP 5B072900»Construction»is associated with the adaptation to the educational process of students of the»Серпін»program.

The University constantly monitors the effectiveness of the educational services provided by systematic surveys of students using various standardized questionnaires. To assess students' satisfaction with the quality of the educational process, a questionnaire»Teacher through the eyes of students»is conducted online before the examination session of each academic semester on the page http://www.kstu.kz/wp-content/uploads/2012/11/Anketa-PPS-glazami -stud.doc.

Youth Policy Department of University (http://www.kstu.kz/category/dmp/) every year during the period of intermediate certification carries out the action»Clean session". Within the framework of this action, at the suggestion of the deans of faculties and the committee on youth affairs, a commission is created from among students-activists and excellent students who conduct a survey among the student environment. The survey is conducted online after the examination session of each academic semester on the page http://www.kstu.kz/studentu/. The survey aims to identify problems associated with the intermediate certification of students.

The main methods of periodic assessment of educational activities include questionnaires (sociological survey), conversations and polls; internal audits; analysis of the rector's blog,»boxes of trust"; content analysis of mass media, etc. One of the important indicators of students' confidence in the university administration is the rector's blog http://blog.kstu.kz/?lang=ru.

In the course of interviews with the students, the doctoral student of OP 5B073000 PBMPS said that during the questioning he pointed out the need to use a device that is not available in the university and at the branches of the department. He was given the opportunity to conduct tests at KazGASA (Almaty) free of charge. When asked where the structure and composition of materials are being studied using modern methods, doctoral students and undergraduates answered that they use the laboratories of the»Technoservice»enterprise.

The results of the SEC, SAC indicate a stable positive influence of teaching methods on the quality of the educational process. In the period 2015-2018 the quality of knowledge on the results of state exams and the protection of graduates increased:

- within the framework of OP 5B072900»Construction", according to the results of state exams, the quality of knowledge has averaged over the past 3 years - 100%, progress - 100%; based on the results of the defense of thesis, the quality of knowledge is 100%, progress is 100%;
- within the framework of OP 6M072900»Construction", according to the results of state exams, the quality of knowledge has averaged over the past 3 years - 100%, progress - 100%; based on the results of the defense of thesis, the quality of knowledge is 100%, progress is 100%;
- within the framework of OP 6D072900»PBMPS", according to the results of state exams, the quality of knowledge has averaged over the past 3 years - 100%, academic performance - 100%; based on the results of the defense of theses, the quality of knowledge is 100%, academic performance is 100%.
- within the framework of OP 6D073000»PBMPS", according to the results of state exams, the quality of knowledge has averaged over the last 3 years - 100%, academic performance - 100%; based on the results of the defense of theses, the quality of knowledge is 100%, academic performance is 100%.

Over the past four academic years, the share of graduates of EP 5B072900»Construction»who received a diploma with honors is on average 19.8% (Table 9).

Table 9 - The proportion of graduates who received honors diplomas

Academic year	Total graduates	Honors diplomas	
		Number	%
5B072900 -»Construction"			
2014-2015	60	6	10%
2015-2016	41	11	27%
2016-2017	41	12	30%
2017-2018	59	7	12%

When implementing the EP, active teaching methods are used, which are based on the

following principles: verbosity of teaching methods, the use of problem-developing and research teaching methods, stimulation in the organization and control of the learning process, modern methods of organizing independent learning activities, implementation in the learning process innovative and information technologies. A special role is assigned to the use of group work methods, individualization of training, the use of various new modern technologies to ensure motivation and stimulation of students in the learning process.

In the learning process, a criterion generally accepted in world practice is used in terms of the scale of alphabetic and numerical designations, reflecting the mechanism for the implementation of a credit transfer based on the ECTS credit system. In accordance with this scale, marks are given in oral and written examinations. (http://www.kstu.kz/wp-content/uploads/2018/10/18/%D0%94%D0%9F%2012-2018.pdf, http://www.kstu.kz/wp-content / uploads / 2018/10/15 /% D0% 94% D0% 9F% 2018-2018.pdf).

A point-rating letter system for assessing educational achievements is a system for assessing the level of educational achievements in points corresponding to the letter system with a digital equivalent adopted in international practice, and allowing to establish a rating of students. According to the Regulation on the organization of the educational process on credit technology of education, the conduct of exams at the University is separated from the educational process. Assessment of students' knowledge allows you to obtain data on the effectiveness of the educational process.

When implementing a student-centered approach, the feedback process takes into account the wishes and needs of students and makes decisions that are taken into account when drawing up the EP. Feedback from the student is carried out through the definition of an individual login and password, which creates the possibility of forming a two-way communication between the subjects of the educational process. The necessary teaching materials can also be accessed through the»Education Portal»of the university website. The official website of the university is posted on the Internet at http://www.kstu.kz. Monitoring of progress along the educational trajectory is carried out through the AIS»Platonus»system, and for the last year - through the»Univer 2.0»system, https://univer.kstu.kz, where the student can get acquainted with his educational achievements through his personal account, which creates an opportunity to control their achievements. The members of the council of the institute and the student dean's office provide feedback to students in order to take their opinion into account when making decisions.

As a result, the knowledge control system has become completely transparent, and all progress results are available for viewing online. Instructions for students on working with IS»Univer 2.0»posted on the site https://drive.google.com/file/d/1JzhcZ-VJoK89SYChtTqVzQ3bRNhvbHUX/view.

An element of assessing students' knowledge is midterm control, which is used in the 7th and 15th weeks of the educational process and reflects the results of the current control with putting down the midterm results in the statement in the IS “Univer 2.0”. The educational documentation of the faculty records the results of midterm control for the past 7 weeks (1st midpoint control) and 15 weeks (2nd midpoint control). The results are discussed at a meeting of the department. The teacher is given the right to determine the form of current and midterm controls, depending on the specifics of the discipline. These forms include: test polls, tests and colloquia, active work of students in the classroom (group and individual assignments). These assessment methods are included in the syllabus and are voiced by the teacher at the beginning of the semester.

The final element in assessing educational achievements is intermediate certification, which is carried out after studying the discipline during the examination session. To participate in the final control of knowledge, a student must score at least 50% of points based on the results of two midterm controls. The duration of examination sessions and the number of exams are determined in accordance with the academic calendar and the approved working curriculum of the specialty. The responsibility for organizing and conducting the exam lies with the deans and the registrar's office. During the session, in order to ensure openness and transparency, the following are organized: an appeal commission, independent teachers on duty at exams (in order to separate the learning and control processes), a commission of observers to control the quality of the development and use of test and measurement materials at exams. The procedure for the appeal is set out in sections 3 and 4 of the order for Karaganda State Technical University No. 181 of August

29, 2018»On the procedure for organizing the educational process, conducting intermediate and final certification in the 2018-2019 academic year»posted on the university website (page http: //www.kstu.kz/studentu/, section»Documents").

There is a Council of Young Scientists in KSTU, the regulations on the Council, the work plan of the Council of Young Scientists, information on the activities carried out is presented on the KSTU website (http://www.kstu.kz/sovet-molody-h-ucheny-h-kargtu/). To carry out research work in KSTU, the International Center for Materials Science, the Kazakhstan Institute of Welding, the Laboratory of Methane Energy, the Laboratory of Engineering Profile, the Center for Laser Geoscanning, and the Laboratory of Construction Monitoring were created. A technology commercialization center has been created for the implementation of scientific developments.

Evaluators of the department»BMT»improve their skills in the field of modern methods of assessing learning outcomes. (PPS standard).

To work with young teachers, the university operates a mentoring institute. Before starting work, teachers are required to conduct an open lesson, the results of which are discussed at a meeting of the department.

In an open lesson, the presence of leading teachers of the corresponding department and faculty, young teachers must be mandatory. A prerequisite for scheduling is the conduct of open classes by doctors and candidates of science in the magistracy. The results are summarized, analyzed and discussed at the department, at the meeting of the councils of the faculties, as well as the UMC of the university. The duties of the heads of departments include attending teaching staff classes and organizing mutual visits at the departments.

Also, when forming commissions for the protection of term, diploma and master's theses, representatives from among the most competent persons of the teaching staff of the department are invited, with the involvement of third parties (chairman of the SAC) who have the appropriate qualifications, scientific degree, work experience in the commissions of the SAC.

Strengths / best practice for OP 5B072900»Construction", 6M072900»Construction", 6D072900»Construction", 6D073000»Production of building materials, products and structures":

- according to this standard, no

Recommendations of the EEC on OP 5B072900»Construction", 6M072900»Construction», 5B073000»Production of building materials, products and structures», 6M073000»Production of building materials, products and structures», 6D073000»Production of building materials, products and structures»:

- according to this standard, no

EEC conclusions on the standard»Student-centered teaching, teaching and assessment of progress»: accredited educational programs 5B072900»Construction», 6M072900»Construction», 6D072900»Construction», 6D073000»Production of building materials, products and structures»have 10 satisfactory positions.

6.6. Standard»Students»

✓ *The university must demonstrate the policy of forming the contingent of students in the context of EP from admission to graduation and ensure the transparency of its procedures. The procedures governing the life cycle of students (from admission to completion) must be defined, approved, published.*

✓ *The EP's management must demonstrate the implementation of special adaptation and support programs for newly admitted and foreign students.*

✓ *The university must demonstrate the compliance of its actions with the Lisbon Recognition Convention.*

✓ *The university should cooperate with other educational organizations and national centers of the»European Network of National Information Centers for Academic Recognition and Mobility / National Academic Recognition Information Centers»ENIC / NARIC in order to ensure comparable recognition of qualifications.*

✓ *OP management must demonstrate the existence and application of a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and non-formal education.*

✓ *The university should provide an opportunity for external and internal mobility of OP students, as well as assist them in obtaining external grants for training.*

✓ *The OP's management must make the maximum amount of effort to provide students with places of practice, to promote the employment of graduates, to maintain communication with them.*

✓ *The university must provide OP graduates with documents confirming the acquired qualifications, including the achieved learning outcomes, as well as the context, content and status of the education received and evidence of its completion.*

✓ *An important factor is monitoring the employment and professional activity of OP graduates.*

✓ *OP management should actively stimulate students to self-education and development outside the main program (extracurricular activities).*

✓ *An important factor is the existence of an active alumni association / association.*

✓ *An important factor is the availability of a support mechanism for gifted students.*

Evidence-based part The

university has demonstrated the policy of forming a contingent of students in the context of EP from admission to graduation and ensures the transparency of its procedures. The procedures governing the life cycle of students (from admission to completion) are defined, approved, published.

The policy and procedures for admitting applicants to the state university are consistent with the mission, vision, strategic goals of the university and are officially published on the university website (http://www.kstu.kz/priemnaya-123komissiya-2/).

Table 10 shows data characterizing the contingent of students for 2014-2019.

Table 10 - Formed contingent of students in the context of specialties accredited

academic year	Form of study	Number of students	enrolled in the grant		Studing on a paid basis		Number of expelled students
			rus	kaz	rus	kaz	
5B072900 - Construction							
2014-2015	Full-time / part-time condensed	60/30	24	24	14/15	11 / 15	-
2015-2016	Full-time / part-time reduced	41/13	25	7	4/9	4/4	-
2016-2017	Full-time / part-time reduced	40/19	25	7	5/5	4/14	1
2017-2018	Full-time / part-time reduced	59/41	16	8	15/29	20/12	1
2018-2019	Full-time / part-time reduced	83/49	5	32	28/32	18/17	1
6M072900 - Construction							
2014-2015	full-time	22	11	-	11	-	
2015-2016	full-time	15	9	-	6	-	
2016 -2017	full-time	28	27	-	1	-	
2017-2018	full-time	60	50	-	9	-	
2018-2019	full-time	62	52	-	10	-	1
6D072900 - Construction							
2017-2018	full-time	3	1	-	2	-	
2018-2019	full-time	8	6	-	2	-	
6D0723000 - Production of building materials, products and structures							
2015-2016	full-time	1	1	-	-	-	-
2016-2017	full-time	1	1	-	-	-	-
2017-2018	full-time	1	1	-	-	-	-

2018-2019	full-time	11	11	-	-	-	-

By Ed As of 2019, the release under OP 6D072900 -»Construction»was not carried out. The first recruitment was organized in 2017. According to EP 6D073000 -»Production of building materials, products and structures»in 2018, 1 doctoral student completed theoretical training. Defense is planned for July 2019.

The commission notes an increase in the contingent of students in accredited programs by years, and for EP 5B072900 - "Construction and part-time abbreviated and paid forms of education, which indicates the good quality of education in EP and the demand for graduates.

Schoolchildren take an active part in the»Open Days»scientific and practical conferences; in targeted seminars in educational institutions with the involvement of university teachers. Pupils of schools and colleges are informed about the forms of education, the requirements of the educational program. On 06.11.18, a meeting was held with graduates of the city's schools, and on 21.11.18, with students of the Karaganda Railway College.

Carrying out career guidance work for the formation of a contingent of undergraduates and doctoral students is carried out among graduate students of universities and during field meetings at the enterprises of the corporate university. A meeting with the agenda»Discussion of candidates for potential undergraduates»was held with the enterprises of»NORD Prom NC»LLP,»Oplot LTD»LLP,»KaragandaTechnoService»,»KKK Beton»LLP,»Santehenergoproekt»LLP. Information stands and advertising billboards located on the territory of the university and the city are also used to inform the applicants in a timely manner; an LED screen is actively used to advertise the university and highlight events.

During the career guidance period, information is broadcast in the media (radio, television) and published in republican newspapers and magazines, in addition, during the academic year, information about the university is actively promoted in social networks and stories shot by the Student TV studio are broadcast.

Also on the official website of KSTU there is a page»Applicant»(http://www.kstu.kz/spetsialnosti-2/), where you can get all the necessary information.

The University determines the procedure for the formation of the contingent of students based on such criteria as: social order, implementation of the needs of the region and the country in the profile of specialists with higher and postgraduate education; placement of a state educational order for the training of specialists; the number of students at their own expense and other sources.

From the first day of stay at KSTU, for quick adaptation, students meet with deans of faculties, advisers, during which they receive a guidebook on paper, an electronic guidebook is available on the university website (http://www.kstu.kz/ wp-content / uploads / docs / spr2018ru.doc). General information about the university, the location of educational buildings (http://www.kstu.kz/korpusa-2/), the text of the code of honor of students of KSTU is given (http://www.kstu.kz/wp-content/uploads/2013/ 11 / Kodeks-chesti-studenta-compressed.pdf).

The procedure for organizing the educational process for the formation of an individual educational trajectory of a student is explained in detail. Including the procedure for registering for the discipline, the operating procedure of the registrar's office, the mechanism for monitoring and assessing knowledge (http://www.kstu.kz/uchebnyj-process-kafedry-stroitelnye-materialy-i-tekhnologiya/).

The guide also presents the rules of translation, expulsion, restoration of students, rules for using the library, the location of the reading rooms of KSTU, the academic calendar for the current academic year.

All 1st year students on the curatorial hours are obliged to get acquainted with the regulations of the educational process, the Charter of the University (http://www.kstu.kz/ustav-kargtu/), the Internal Regulations (http://www.kstu.kz /wp-content/uploads/2013/03/Pravila-vnutrennego-rasporyadka-KarGTU.pdf), Code of honor of students (http://www.kstu.kz/wp-content/uploads/2013/11/Kodeks-chesti- studenta-compressed.pdf), the Rules of Academic Integrity of Teachers, Students and University Staff (http://www.kstu.kz/wp-content/uploads/2012/12/kodeks chesti.pdf), with the Rules of Residence in the Dormitory (http: //www.kstu.kz/wp-content/uploads/2016/09/Pravila-Vnutrennego-rasporyadka-v-

obshhezhitiyah-Universiteta-na-rus.yaz.pdf).

Within two months after enrollment, a doctoral student is assigned a scientific supervisor to manage his doctoral dissertation. Scientific guidance of doctoral students for the degree of Doctor of Philosophy (PhD) is carried out by consultants in the number of at least two people, appointed from among doctors or candidates of sciences or doctors of philosophy (PhD), one of whom is a scientist from a foreign university. Scientific guidance and research topics for undergraduates and doctoral students on the basis of the decision of the Academic Council are approved by order of the rector within the first 2 months after enrollment (http://www.kstu.kz/wp-content/uploads/2018/10/15/ДП% 2028-2018.pdf.

Personnel training in PhD doctoral studies is carried out on the basis of Master's degree programs. At the same time, at the»entrance", if the profile of the doctoral study program coincides with the master's program, the learning outcomes of the previous level of education are recognized automatically; in case of a discrepancy between the profile of the educational program of doctoral studies and the master's program, the prerequisites for mastering are set for the applicant for doctoral studies. The list of prerequisites for applicants for doctoral studies under OP 6D072900 - »Construction»and 6D073000»Production of building materials, products and structures»are given on the website http://www.kstu.kz/wp-content / uploads / 2018/06 / 6D072900-Stroitelstvo - rus.yaz..pdf, http://www.kstu.kz/wp-content/uplo ads / 2018/06 / 6D073000-proizvodstvo-stroitelnyh-mater..pdf.

Students from the Islamic Republic of Afghanistan and the Hashemite Kingdom of Jordan are currently studying according to OP 5B072900- Construction. In the 2015-2016 academic year, the number of foreign students enrolled in OP 5B072900 was 5 people, in the 2016-2017 academic year - 13 people, in the 2017-2018 year - 30 people, including citizens of the Hashemite Kingdom of Jordan - 5 students, the Islamic Republic Afghanistan -26 students, Russia - 3 students, Armenia -1 student and Uzbekistan -1 student. In 2015-2017, one citizen of the Republic of Afghanistan also studied and successfully defended his master's thesis on OP 6M072900-Construction.

To solve emerging problems and further support foreign students, employees of the Center for International Cooperation and Academic Mobility took part in the round table»Adaptation of foreign students to Kazakhstan's education systems: problems and solutions", which was held in Almaty, KazNU named after Al-Farabi (2017), in the educational exhibition»Days of Education of Kazakhstan»in Navoi (Uzbekistan, April 9-10, 2018).

To fully ensure the awareness of foreign students, a section has been launched on the website for foreign students (at the link http://inter.kstu.kz/?lang=ru), the work of which is constantly supported by the specialists of the Center for International Cooperation and Academic Mobility. The process of adaptation of foreign students is organized in KSTU, which takes place both within the framework of educational activities and during extracurricular activities. Foreign students study in groups with other students, which contributes to the integration of a foreign student into a new social and cultural life. (http://www.kstu.kz/inostrannym-studentam/). To provide feedback with foreign students, a group has been created in WhatsApp and Telegram messengers. A section has been created on the main page of the KSTU website for foreign students: http://www.kstu.kz/inostrannym-studentam/. Meetings and meetings with foreign students are held monthly (Minutes No. 1 dated 09/10/2018).

In 2018, multilingual groups were formed, where classes were held in English in the following disciplines:»Architecture 1",»Geotechnics I»- OP 5B072900»Construction".

For students actively involved in sports and other activists who are often on business trips, there is a procedure for additional individual accumulation of points by discipline.

In order to identify the needs of various categories of students, data from a regularly conducted analysis of progress in the context of courses, faculties, specialties and students are used; information on the nature of students' appeals to dean's offices, registrar's office, and other structural divisions is used. For example, the application of this approach revealed the need for some foreign students to study additional courses in the specialty»Construction".

Information on providing students with places in KSTU hostels is published on the website (http://www.kstu.kz/raspredelenie-grantov-i-mest-v-obshhezhitiyah/).

Achievements of students' research work are confirmed by diplomas, certificates. Students participate in SRWS and have the opportunity to complete their thesis (course) work based on the

results of these studies, that is, real work that is of practical importance for the enterprise, which raises the rating and competitiveness of the student when hiring.

In 2017-2018 academic year year for participation in the 1st stage of the Republican competition of scientific research works of students in the natural, technical, social, humanitarian and economic sciences in higher educational institutions of the Republic of Kazakhstan, 3 student projects were presented:»Defective damage to reinforced concrete structures»(scientific supervisor, associate professor Kozhas A. K.),»Modification of concrete and the effectiveness of their use in monolithic construction»(scientific supervisor, associate professor Serova R.F.),»Forecast of the development of construction in the design of energy-efficient buildings between the countries of Europe and Kazakhstan»(scientific supervisor assoc. Zhakulina A.A.).

3rd year students of the specialty 5B072900 -»Construction»Akkert A. and Absimetova A. (scientific supervisor, Ph.D. Nuguzhinov Zh.S.) and specialty 5B073000 -»Production of building materials, products and structures»Dauletova D., Isaeva N, Muzdybaeva A., Akhmadi B. (scientific supervisor Ph.D., associate professor Rakhimov M.A.) took part in the subject Olympiad among higher educational institutions of the Republic of Kazakhstan of the International Educational Corporation (Kazakh Head Architecture and Construction Academy) from April 6 to April 7, 2017 in Almaty - II degree diploma in the discipline»Building structures I".

There are 5 scientific circles at the department, in which 35 students and 9 undergraduates take part, 6 undergraduates participated in the implementation of the research work of the department.

The University applies procedures and mechanisms for recognizing the results of academic mobility of students, teaching staff, as well as additional education. To recognize and take into account the results of external academic mobility, the Registration Office includes disciplines in the student's transcript and transfers credits and received grades in accordance with the approved IEP and based on the transcript of a foreign university.

The basic principles of the Bologna Declaration have been successfully implemented in KSTU: credit technology of education has been introduced, joint educational programs are being implemented with foreign universities, a complete transition to a three-level model of training specialists has been carried out: bachelor - master - doctor Ph.D.

Within the framework of internal and external academic mobility, students of EP 5B072900»Construction":

- in the 2017-2018 academic year, 39 students were trained at the Karaganda State Industrial University (Temirtau). According to the program of external academic mobility at the Ostrava Technical University (Czech Republic), a student of group C-14-4 Daukisheva S.A. studied;

- in the 2018-2019 academic year, 49 students studied at the Karaganda State Industrial University (Temirtau). According to the program of external academic mobility at the Ostrava Technical University (Czech Republic), senior gr. C-16-2 kaz. Imanov A., at Poznan Technical University (Poland): senior gr. C-16-2 kaz. Bimagambetov Sh., Senior group C-16-4. Chen R., at the Tomsk State University of Architecture and Civil Engineering (Russia): students gr. C-16-1 kaz. Bilul Y., Jalal A., Ziyadullaev B.

Within the framework of the educational program *6M072900 -»Construction"*, foreign internships are carried out. For example, undergraduates gr. BM-16-1 Balmukhanov A., Muratbekova A. passed a scientific internship at the Academy of Instrumental Modern TRIZ at the Technical University of Berlin (Germany) from November 1 to 10, 2016, Aisanova M.A. completed a scientific internship at the Peter the Great St. Petersburg Polytechnic University (Russia, St. Petersburg) from 08 to 17 April 2017, undergraduates gr. BM-17-2 Boguslavskaya A.V., Dosymzhanova B.E., Daniyaruly M., Ibragimov R.V., Kutvarova G.A., Mukashov Zh.E., Omirzakh Zh., Abylkhan A.K., Ashimova A.T. had a scientific internship at the Vilnius Technical University named after Gediminas (Lithuania, Vilnius) from April 23 to May 04, 2018, A.U. Esentaev and Kovalenko O.AND. completed an internship at the National Research State University of Civil Engineering, (Moscow, Russian Federation) from 15 to 27 April 2018, Zavodny A.V. passed a scientific internship at the St. Petersburg State Polytechnic University from 04 to 18 June 2018.

Within the educational program *6D072900 -»Construction»*foreign internships were held by A.M. Rakhimov. at the National Research Moscow State University of Civil Engineering (NRU MGSU, Moscow, Russia), Abdrakhmanova K.A. at Incheon National University (Incheon, South Korea).

Training under the educational programs of bachelor's degree 5B072900»Construction", master's degree 6M072900 Construction»and doctoral studies 6D072900»Construction»and 6D073000»Production of building materials, products and structures»provides for the opportunity to undergo all types of professional practice provided for by state compulsory education standards. Professional practice is also regulated by an internal document of the university»Regulations on the organization of practices»(http://www.kstu.kz/wp-content/uploads/2016/04/Rus.-Polozhenie-ob-organizatsii-praktik_posl.-variant.pdf, http://www.kstu.kz/wp-content/uploads/2018/10/15/ДП%2028-2018.pdf).

The organization of internship at the university is carried out in accordance with academic calendars of specialties on the basis of basic and individual agreements, letters of inquiry, petitions from places of internship. The bases of educational and educational practice are an educational institution, educational workshops, laboratories, training grounds, computer labs and other educational and auxiliary departments of the university, as well as organizations corresponding to future professional activities. The bases of industrial practice are organizations that correspond to the profile of the trained specialty (or related organizations).

After passing a certain type of practice, a survey of students is carried out in order to identify an assessment of student satisfaction with places and the organization of internship, as well as a survey of managers of practice bases in order to assess satisfaction with the level of training of students.

Pedagogical practice for doctoral students EP 6D073000 -»Production of building materials, products and structures", undergraduates and doctoral students of EP»Construction»- are held at the department of SM&T, under the guidance of the teaching staff of the department they conduct lecture, practical and laboratory classes, curatorial hours.

Doctoral students of specialty 6D073000 -»Production of building materials, products and structures»undergo research practice at the enterprises of»KKK Beton»LLP and»KaragandaTechnoService»LLP. Doctoral students of specialty 6D072900»Construction»undergo research practice at the enterprises of»Institute Karaganda Promstroyproekt»LLP,»KazGerStroy»LLP,»Grand Project»LLP,»Classic-VI»LLP, etc.

Information on the availability of contracts for professional practice within each EP is provided in the nomenclature of the department.

The departments of the accredited EPs are systematically working to strengthen ties with enterprises.

All types of internships in the Department of Building Materials and Technologies are provided with a package of documents, including work curricula, guidelines for passing internships, diary forms, report forms. The composition of the practice management is represented by teachers whose qualifications correspond to the profile of the OP:

Scientific internships for doctoral students specialty 6D073000 -»Production of building materials, products and structures»and 6D072900»Construction»are held in leading universities under the guidance of foreign scientific consultants:

1) Berlin Technical University, Germany;
2) Vilnius State Technical University named after Gediminas, Lithuania;
3) Moscow State University of Civil Engineering, Russia;
4) Voronezh State Technical University, Russia;
5) Novosibirsk State Technical University, Russia;
6) FSBEI HE Kuzbass State Technical University named after T.F. Gorbachev, Russia;
7) Tomsk State University of Architecture and Civil Engineering, Russia;
8) Incheon National State University, Korea.

All universities have the necessary methodological support, laboratories equipped with modern equipment, scientific and technical libraries. Candidates and doctors of technical sciences in the field of building materials science act as consultants for doctoral students.

Postdoctoral students, undergraduates, accredited programs have published 34 scientific works in four years, including 7 in foreign journals with a high impact factor, 10 in the proceedings of international conferences, 6 in the proceedings of republican conferences and publications, as well as in the form of copyright applications for invention and patents - 7.

Departments monitor the labor activity of graduates, invite them to a meeting with freshmen, help in further professional growth through training in magistracy and doctoral studies. The analysis of employment has shown that the bulk of graduates are employed in the OP profile. Places of employment of graduates are mainly leading companies, such as Institute KAZ MIRD,»Institute Karaganda Promstroyproekt»LLP, GU»Karaganda City Construction Department»,»Kazakhmys»Corporation LLP,»Temir Arka»LLP,»KazGerStroy», PC»Aspap», LLP»Grand Project», IE»ARKH Format», LLP»Classic-VIN», LLP»APS», LLP»Adonis Stroy», LLP»RIPARO», LLP»BK Vershina», BI Group Astana, KGP»KARAGANDY SUҚOIMALARY», LLP»KHAN Building», GU»Department of Energy and Housing and Communal Services of the Karaganda Region».

The percentage and number of employment of full-time graduates of the 5B072900 specialty for 2016, 2017, 2018 reflect an increase in the percentage of graduates in employment (Table 11).

Table 11 - Information on the employment of graduates of the bachelor's degree»Construction"

No.	Year of graduation	Number of graduates	Number of employed graduates	% of employment
1	2016	41	36	87
2	2017	75	67	89
3	2018	59	54	91

Graduates of master's and doctoral programs accredited by EP have 100% employment.

In order to attract potential employers, the university annually holds a job fair in April, in which institutions and enterprises of the region take part. Employers' reviews are posted on the website (http://www.kstu.kz/otzyvy-rabotodatelej-kafedry-stroitelnye-materialy-i-tekhnologiya/).

EEC on EP 5B072900 "Civil Engineering", 6M072900 "Civil Engineering", 6D072900 "Civil Engineering", 6D073000 "Production of building materials, products and structures":

- The leadership of the university to update the activities of the Alumni Association by developing a regulation and an operational plan for the work of the KSTU Alumni Association.

Conclusions of the EEC according to the standard»Learning": accredited educational programs 5B072900/6M072900/6D072900 - Construction, 6D073000 "PBMPaS»have 1 strong, 11 - satisfactory positions.

6.7. Standard»Faculty"

✓ *university should have an objective and transparent personnel policy, including in the context of EP, including hiring, professional growth and staff development, ensuring professional competence of the entire staff.*

✓ *university should demonstrate the compliance of the staff potential of the teaching staff with the development strategy of the university and the specifics of the OP.*

✓ *management must demonstrate awareness of responsibility for its employees and ensure favorable working conditions for them.*

✓ *management must demonstrate the changing role of the teacher in connection with the transition to student- centered learning.*

✓ *university should determine the contribution of faculty staff to the implementation of the development strategy of the university, and other strategic documents.*

✓ *university should provide opportunities for career growth and professional development of the teaching staff of the study program.*

✓ *management should involve practitioners in relevant fields in teaching.*

✓ *management of the EP should provide targeted action for the development of young teachers.*

✓ *university should demonstrate motivation for the professional and personal development of teachers of the EP, including encouraging the integration of scientific activity and education, as well as the use of innovative teaching methods.*

✓ *An important factor is the active use of the teaching staff of the information and communication technologies in the educational process (for example, on-line training, e-portfolio, MEP, etc.).*

✓ *An important factor is the development of academic mobility within the framework of EP, attracting the best foreign and domestic teachers.*

✓ *An important factor is the involvement of teaching staff in public life (the role of teaching staff in the educational system, in the development of science, the region, the creation of a cultural environment, participation in exhibitions, creative contests, charity programs, etc.).*

Evidence part

The main goal of Personnel policy at KSTU– ensuring processes update and maintain the number and quality of staff in accordance with the needs of the University, the requirements of current legislation of Kazakhstan and the state of the labor market. If necessary, the regulations on personnel policy are developed or adjusted annually and approved by the Decision of the academic Council of KSTU no later than January 15 of each year. Changes to the Regulations on the personnel policy of KSTU are made based on the results of monitoring the personnel structure, the results of the University's work and its management system. (http://www.kstu.kz/wp-content/uploads/2012/11/Polozhenie-o-kadrovoj-politike.pdf)

The personnel policy is carried out on the basis of normative acts of the labor legislation of the Republic of Kazakhstan and internal acts of KSTU:

Internal acts:

1. Collective agreement between the administration (administration) and the trade union organization of KSTU for 2016-2019.
2. Rules of internal regulations of KSTU;
3. employment contract;
4. Supplementary Agreement.
5. Regulation on the system of remuneration, material incentives and bonuses for KSTU employees, approved by the decision of the Academic Council No. 7 of 01/12/2017.

The personnel management of the University is carried out on the principle of the equal need to achieve individual (employee) and organizational (University) goals.

Personnel Management Objectives:

- Meeting the needs of the University in staff for the future;
- Regulation of the level of remuneration sufficient to select, retain and motivate personnel at all organizational levels;
- High priority for leadership development in key positions;
- Providing effective training and development programs to improve the skills of all staff and the formation of high internal dynamics of the staff;
- The development of effective communication systems between management and other employees, between departments and divisions;
- Creation of mechanisms to combat the consequences of the psychological perception of change.

The main directions of HR policy of KSTU:

1. University staff management; http://www.kstu.kz/dup/;
2. Recruitment and placement of staff;
3. Formation and training of personnel reserve for promotion to leading positions;
4. Competition, assessment and certification of personnel; http://www.kstu.kz/dup/;
5. Further training;
6. Motivation and stimulation.

The teaching staff is formed on the basis of the needs for the effective implementation of the educational program, which provides the opportunity for students to replace teachers, and also based on the total amount of teaching load per full-time teacher and student population.

Training for accredited educational programs is provided by the faculty of the department "Building materials and technologies". Basic education, code of the specialty of the scientific degree and academic rank of teachers of the graduating department involved in the implementation of EP 5B072900 -»C", 6M072900 -»Civil Engineering", 6D072900 -»Civil Engineering», 6D073000 -»Production of building materials, products and structures", correspond to the profile EP.

The teaching staff of the Department of Building Materials and Technologies includes 47 teachers, 5 of which are doctors of science, including 4 with the academic title of professor (VAK), 13 candidates of science, including 13 with the academic title of associate professor (VAK), 1 PhD, 11 Masters.

The total number, staffing and average age of faculty over the past 5 years are presented in table 12.

Table 12 - the staffing of the faculty involved in the implementation

No.	School years	The total number of faculty members	Including staff . n teachers, people (%)	Including part-time workers, people (%)	Average age, years
EP 5B072900 - Civil Engineering					
1	2014-2015	48	45	3	48
2	2015-2016	51	46	5	46
3	2016-2017	47	43	4	50
4	2017-2018	53	46	7	47
5	2018-2019	56	49	7	48
EP 6M072900 - Civil Engineering					
1	2014-2015	12	12	-	54
2	2015-2016	12	12	-	57
3	2016-2017	12	12	-	56
4	2017-2018	14	14	-	56
5	2018-2019	14	14	-	54
EP 6 D 072900 - Civil Engineering					
1	2014-2015	No set			
2	2015-2016	No set			
3	2016-2017	No set			
4	2017-2018	5	5	-	63
5	2018-2019	5	5	-	62
EP 6D073000 -Production of building materials, products and structures					
1	2014-2015	No set			
2	2015-2016	5	5	-	62
3	2016-2017	5	5	-	62
4	2017-2018	4	4	-	58
5	2018-2019	8	8	-	56

The qualifications of the teachers of the Department "Building Materials and Technologies" for 2015-2019, their quantitative composition are presented in table 12.1.

Table 12.1 - Qualitative indicators of the faculty of the department»Building materials and technologies"

Indicators	School years				
	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
Total PPS			36	34	36
Of them:					
Doctors of Technical Sciences			5	5	5
Candidate of Technical Science			13	11	13
Doctor PhD			1	1	1
With an academic master's degree			8	10	15
Graduation (%)			52,8	50	52,8

- In the framework of EP 5B072900»Civil Engineering»the educational process is provided by 42 teachers, including 1 Doctors of Technical Sciences; Candidates of Technical Sciences - 23; Masters - 14. The percentage of faculty with academic degrees and ranks is 57.1%;

- In the framework of EP 6M072900»Civil Engineering»the educational process is provided by 14 teachers, including 4 Doctors of Technical Sciences; Candidates of Technical Sciences – 9; PhD-1 faculty with academic degrees and ranks is 100%

- In the framework of EP 6D072900»Civil Engineering»the educational process is provided by 6 teachers, including 3 Doctors of Technical Sciences; Candidates of Technical Sciences - 3. The teaching staff with academic degrees and ranks is 100%

- In the framework of EP 6D073000 “PBMPaS»the teaching process is provided by 9 teachers, including 3 Doctors of Technical Sciences; Candidates of Technical Sciences - 6; The faculty with academic degrees and titles is 100%

An analysis of the quality indicators of teachers who carry out accredited educational programs has shown a sufficient level of degree that allows them to successfully carry out educational activities at all levels of education. The Commission notes that teachers who pursue a Master's and Doctoral program are in the age group of 54 to 63 years. But the head of the EP pays great attention to the rejuvenation of the staff. Currently, 10 people are studying in doctoral studies, more than half of whom are teachers of the department.

In the framework of accredited specialties, responsibility for employees according to graduation is borne by: University Rector Ibatov M.K. Doctor of Technical Sciences, a professor who carries out general management of all departments and services of the university, concludes contracts; The first vice-rector of the university, Ph.D., associate professor Isagulov A.Z. - exercises control and coordination of the educational, methodological, scientific, career guidance work of the university, the personnel policy of the university, the organization of work and the effective interaction of structural units of the university, and more; Vice-rector for scientific work Ozhigin S.G. controls the activities of research centers, faculties and departments, carries out the development and implementation of plans for comprehensive research work at the university, strengthening the material and technical base of research laboratories, research centers, scientific and technical library, departments, faculties, Vice-Rector for Strategic Development Zhetesova G.S. controls the activities of the departments of strategic development, development of a digital university, innovation and entrepreneurial activity,; Vice-rector for educational work Alpysbaeva N.A. controls the Department of Youth Policy, Research Institute of Patriotic Education, youth centers, sports clubs, etc.

Dean of the Faculty of Architecture and Civil Engineering, Ph.D. Imanov M.O.: coordinates the activities of educational and scientific units that are part of the faculty, determines the personnel policy at the faculty. Carries out, together with the heads of departments, the selection of staff of faculty, scientific and educational support staff; Head

of the Department»Building Materials and Technologies", Ph.D., Associate Professor G. Rakhimova develops an intra-department quality system for training specialists, organizes research work at the department, considers dissertations submitted for protection by department employees or applicants, monitors the quality and fulfillment of individual plans of department teachers and other types of employees' work, monitors the implementation by employees of the department of labor and technical safety rules safety, industrial sanitation and fire safety;

In order to improve the professional level, motivate teachers and stimulate employees, the university has developed and operates a system of material incentives and social support for teaching staff based on the results of differentiated wages in accordance with the Regulation on the rating of the faculty of the RSE at the Karaganda State Technical University at http: //difoplata.kstu.kz/web/. Twice a year, a personal rating of the teaching staff is compiled, which assesses the educational-methodical, research, educational and public work for the academic semester. Based on the results of the university commission, a consolidated report is prepared, the results of which establish increasing coefficients for the official salary. In 2014-2016. the coefficients were established - 1.1,1.3,1.5, in the academic year 2017-2018 - 1.2,1.4,1.6, and in the academic year 2018-2019 - the coefficients were increased to 1.3,1.5,1.7. Every year, university teachers participate in the competition of the Ministry of Education and Science of the Republic of Kazakhstan for the title»Best University Teacher". In different years, the following faculty members of the department were awarded the title»Best University Teacher": Doctor of Technical Sciences, Professor D. Baijanov, Doctor of Technical Sciences, Professor. Nuguzhinov Zh.S., Doctor of Technical Sciences, prof. Zhakulin A.S., Associate Professor, Ph.D. Imanov M.O.

For high performance in teaching and research, research and public work, teachers are awarded with badges, letters of appreciation and letters of thanks of the President of the Republic of Kazakhstan, the Ministry of Education and Science of the Republic of Kazakhstan, line ministries, region and city administrations, rector, etc.

The faculty of the department providing the OP are actively engaged in research activities. They carry out commercialized and proactive scientific research, the details of which are given in tables 13 and 14.

Table 13 - Commercialized research

Name of research work	Project Manager	Contract time	Number, date of contract and contractor	Discipline (as part of the OP)
Development of regulatory and technical documents	Nuguzhinov Zh.S.	11/28/2014	No. 14. ИР.05 Contract No. 021-2014 dated 01/14/2014. JSC»KazNIISA»	**6D072900 – Civil Engineering** 1 Design of geotechnical systems according to EN 1997 Eurocode 2 Eurocode 1990 Fundamentals of the design of buildings and structures **6D073000 - PBMPaS** 1 Modified fine-grained concrete for road construction 2 Technology of extrusion concrete and reinforced concrete
"Strengthening the framework aboveground parking lots gated for cars section	Nuguzhinov Zh.S.	09/10/2015	№15.IR.07 23.02.2015g Triumph Astana Company LLP	**5B072900 – Civil Engineering** 1. Calculation and design of reinforcement of building

KM»object»Administrative Complex located at the intersection of Obagan A. Baitursynov, Nazhimetdinova in Astana»				structures 2. Automated calculations of building structures **6M072900 –** **Civil Engineering** 1 Modern methods of calculating foundations 2 Numerical methods for calculating building structures 3 Calculation and design of special metal building structures **6D072900 –** **Civil Engineering** 1 Modern settlement software systems 2 Reliability, monitoring and safety of buildings and structures 5 Eurocode 1990 Fundamentals of the design of buildings and structures **6D073000 - PBMPaS** 1 Modern technologies of building materials science
"A comprehensive study of the strength and stability of load-bearing building structures of the building of the GKKP "Schoolchildren's Palace" akimat of Astana. Blocks 1, 2, 3, 4, 5, 6, located at the address: B. Momyshuly Avenue 5, Astana "	Nuguzhinov Zh.S.	08/23/2015	No. 15.IR.26 February 23, 2015 GKKP»Palace of schoolchildren»of the Akimat of Astana	**5B072900 –** **Civil Engineering** 1. Inspection of building structures and reconstruction of buildings and structures 2. Quality control, inspection and testing in construction **6M072900 –** **Civil Engineering** 1 Quality control and testing of building materials and structures 2 Modern test methods for building materials and structures 3 Basics of building engineering 4 Modern methods for calculating foundations 5 Numerical methods for calculating building structures 6 Calculation and design of special metal building structures **6D072900 –** **Civil Engineering** 1 Reliability, monitoring and safety of buildings and structures 2 Modern settlement software systems 3 Geomonitor and safety in

				construction 4 Numerical calculation methods in geotechnics **6D073000 - PBMPaS** 1 Physical chemistry of building materials 2 Modern technologies of building materials science
A comprehensive study of strength, stability, fracture toughness of existing bearing structures residential building №1 block section №1,2,3 to elevation . + 15,000m (up to the fifth floor) located at the address: Karaganda, Oktyabrsky District, the»Голубые пруды»micro district.	Nuguzhinov Zh.S.	12/25/2016	Contract No. 16.IR.28 of 08/09/2016. LLP»OLIVIA"	**5B072900 – Civil Engineering** 1. Inspection of building structures and reconstruction of buildings and structures 2. Quality control, inspection and testing in construction **6M072900 – Civil Engineering** Quality control and testing of building materials and structures 2 Modern test methods for building materials and structures 3 Basics of building engineering 4 Modern methods for calculating foundations 5 Numerical methods for calculating building structures **6 D 072900 – Civil Engineering** 1 Reliability, monitoring and safety of buildings and structures 2 Modern settlement software systems 3 Geomonitor and safety in construction 4 Numerical calculation methods in geotechnics **6D 73000 - UCS** 1 Physical chemistry of building materials 2 Modern technologies of building materials science
Technical inspection of load-bearing building structures of a residential building in 4, Shakhan, micro district 3	Nuguzhinov Zh.S.	03/25/2017	Contract No. 17.IR.01-1 dated January 4, 2017 TABO LLP	**5B072900 – Civil Engineering** 1. Inspection of building structures and reconstruction of buildings and structures 2. Automated calculations of building structures **6M072900 – Civil Engineering** Quality control and testing of building materials and structures

				2 Modern test methods for building materials and structures 3 Basics of building engineering 4 Modern methods for calculating foundations 5 Numerical methods for calculating building structures **6D072900 – Civil Engineering** 1 Reliability, monitoring and safety of buildings and structures 2 Modern settlement software systems 3 Geomonitoring and safety in construction 4 Numerical calculation methods in geotechnics **6D073000 - PBMPaS** 1 Physical chemistry of building materials 2 Modern technologies of building materials science
Modeling of the stress-strain state of floor slabs at elev. +3.750 in the axes M-N-1/6 MZHK Altyn Shar	Nuguzhinov Zh.S.	09/25/2018	18.IR. 18 dated 03.07.18. Shar-Kurylys LLP	**5B072900 – Civil Engineering** Automated calculations of building structures **6M072900 – Civil Engineering** Numerical methods for calculating building structures **6 D 072900 – Civil Engineering** 1 Modern settlement software systems 2 Eurocode 1990 Fundamentals of the design of buildings and structures **6 D 073000 - UCS** 1 Modern technologies of building materials science
		Total funding	**70 500 000 tg**	

Table 14 - Initiative NIR PPS of the Department of BMaT

Name of research work	Leader of the initiative topic	Number, date of contract and contractor	Discipline
Obtaining a clinker-free binder from industrial waste	Prof. Dr. Baijanov D.O.	For the enterprises of the Karaganda's industry	The technology used is, tone
The study of the stress-strain state of problematic soils	Prof. Dr. Zhakulin A.S.	For the enterprises of the Karaganda's industry	Geomonitor and safety in construction

In 2018, applications for grant financing were submitted in the following areas:

1. The technology of obtaining high-strength modified concrete. Scientific adviser: Doctor of Technical Sciences, prof. Baijanov D.O.;

2. Investigation of the properties of structurally unstable soils. Scientific adviser: Doctor of Technical Sciences, prof. Zhakulin A.S.

Also, work is currently underway to prepare applications for participation in the competition for grant financing in the following areas:

3. Development of innovative construction methods with an adaptive effect. Scientific adviser: Doctor of Technical Sciences, prof. Utenov E.S .;

4. Multilayer building structures. Scientific adviser: Ph.D., Assoc. Kasimov A.T.

The teaching staff of the Department "Building Materials and Technologies" for the implementation of grant research attract students in OP, consistently introduce the results of research work into the educational process, complementing the curriculum of the disciplines, motivating students to take an active role in the joint creation of the learning process. The teaching staff of the department is interested in publishing their scientific achievements in rating foreign and national scientific journals, preparing patents, and participating in scientific conferences. R&D indicators are presented in table 15.

Table 15 - Statistical indicators of research in the department of»Building the mother and ly and technology"

No.	NIR indicators	Qty				
		2014 y.	2015 y.	2016 y.	2017 y.	2018 y.
1.	Availability of patents, qty	3	2	4	6	8
2.	Issue of monographs \ including with le in English, qty	2	3	2	2	6
3.	Issue of textbooks \ including in English, qty	-	-	1	2	1
4.	Issue of teaching aids \ including in English, qty	12	10	14	7	12
5.	Articles recommended by KKSON MON RK	48	51	50	53	59
6.	Articles in peer-reviewed foreign scientific journals indexed in the RSCI, Web of Science. With zero impact scopus	11	10	12	17	20

Further training of teachers is carried out through courses, seminars, individual internships, trainings, master classes. Further education curricula take into account current trends in the development of education and science, promote the development of innovative teaching technologies by teachers and their implementation in the educational process.

For the faculty annually, a professional development plan is drawn up as part of the Integrated Development Program of KSTU. (http://www.kstu.kz/wp-content/uploads/2012/10/Kompleksnaya-programma-2018.pdf)

During the 2015–2016 academic year, 12 teachers on 6 topics completed advanced training; for 2016–2017 - 5 teachers on 3 topics; for 2017–2018 - 18 teachers on 7 topics; for 2018–2019 - 9 teachers on 2 topics;

Since 2015 to 2018 20 teachers on 9 topics passed advanced training in the field of information and telecommunication technologies at KSTU.

Since the academic year 2018, students of the 2nd and 3rd courses of specialty 5B072900 - "Construction»have been studying at the Department of BMAT according to the multilingual education system. The preparation of multilingual groups at the department is carried out in majors. In this regard, there were advanced training in language courses (Kazakh, English) at KSTU teachers of the department:

1. Assoc., Ph.D. Zhakulina A.A. - passing the language level courses "Basic English (Module 2)" on the basis of the Center for Engineering Pedagogy at KSTU in the amount of

40 hours, corresponding to the level of Elementary A2, Kazakh language courses "Karagandy bald sons ң tilderdy қytu ortaly орту" ZhK.

2. Art. teacher Zhautikova S.A. - passing language level courses of the language "Basic English (Module1)", "Basic English (Module 2)" on the basis of the Center for Engineering Pedagogy at KSTU in the amount of 40 hours, corresponding to the level of Beginner A1;

4. teacher, master Khan M.A. - English language courses English Language sesdions (Ben Taylor).

5. teacher Imanov E.K.- English language courses English Language sesdions (Ben Taylor).

6. Assoc., Ph.D. Kropachev P.A. - Kazakh language courses»Қарағанды облысының тілдерді оқыту орталығы»ZhK.

7. Associate Professor, Ph.D. Kalmagambetova A.Sh. - Kazakh language courses»Қарағанды облысының тілдерді оқыту орталығы»ZhK.

The BMAT department has the appropriate material and technical base for organizing the process of learning languages: (textbooks, manuals, guidelines, monographs, electronic textbooks, dictionaries).

In 2018, the teachers of the Department of BMAT developed the following textbooks in English, Kazakh and Russian:

- Zhakulina A.A. "Architecture 1»(Zhakulina A.A. "Architecture I");
- Serova R.F., Khan M.A., Imanov E.K.»Использование отходов промышленности в производстве строительных материалов»(Serova R.F., Khan M.A., Imanov E.K. "Using Industrial Waste in Producing Construction Materials");
- Baijanov D.O., Rakhimov M.A., Ikisheva A.O., Sadirbaeva A.M.»Бетон және керамикалық материалдар өндірісін жобалау»;
- Baijanov D.O., Rakhimov M.A. Textbook»Проектирование предприятий бетонных и керамических материалов»;;
- Rozhkov A.V., Beketova M.S., Tungyshbaeva S.Zh. Оқу құралы»«Гидравлика, гидрология және гидрометрия»;
- Kasimov A.T., Қojas A.K., Pchelnikova Yu.N. Оқу құралы»Құрылыс өндірісінің технологиясы»;
- Namen V.N. Textbook»Основы проектирования конструкций зданий (EN 1990: Еврокод)»,
- Zhakulin A.S., Kropachev P.A., Zhakulin A.A. Textbook»«Научно-техническое сопровождение объектов строительства»;;
- Ikisheva A.O., Sadirbaeva A.M., Serova R.F. Оқу құралы»Бетон және керамика өндірісіндегі стандартизация мен метрология».

For the purpose of the high-quality organization of the educational process, RUEs of specialties that provide multilingual training, teaching materials of disciplines in Kazakh, Russian and English (100%), QEDs, MOSs have been developed.

Teachers of foreign universities participating in the training of multilingual specialists are partners: Doctor of Technical Sciences, professor of MGSU Tkach E.V., doctor of PhD USA Constance Dever, doctor of PhD University Bolton (England) Nelson Margaret and others.

The total number of teachers who have undergone further training is shown in table 16.

Table 16 - Analysis of advanced training faculty of the Department of BMaT

Academic year	PPS faculty	Past training at the national level	Passed training at the international level	% advanced training

2016-2017	36	2	2	11,1
2017-2018	34	3	2	14,8
2018-2019	36	9	2	30,6

Consultations, lectures and seminars with the participation of Kazakhstani and foreign scientists also contribute to the improvement of qualifications. Over the past 5 years, scientists from leading foreign universities conducted classes at the SM&T department:

1. Ilyina L.V. - Doctor of Technical Sciences, professor of Novosibirsk State University of Architecture and Civil Engineering (Russia) - lectures on the topics “Structuring of concrete” and “Mechanics of strength and fracture of building materials”;

2. Slavcheva G.S. - Doctor of Technical Sciences, professor of the Voronezh State University of Architecture and Civil Engineering (Russia) - lectures on the topics “Chemistry and Physics of Inorganic Hardening Systems»and “Mechanics of Strength and Fracture of Building Materials”;

3. Margaret-Mary Lilian Nelson Dr. PhD, University of Bolton (Great Britain) - lectures on “Designing pile buildings and structures”; Between 11/07/19 to 12/06/19, online lectures were organized and conducted on the topic»Modern Methods of Improving Teaching and the Learning Process",»How to Find the Right Magazine in Scopus. Predatory Magazines", “ How to Publish in Magazines Indexed by Scopus and the Web of Science ”. Consultations were held for undergraduates and doctoral students on writing a dissertation.

4. Joseph Kangwa (Joseph Kangwa) - PhD of the University of Leeds (UK), lectured on»Advanced principles for the construction of multi-storey buildings";

5. Constance Dever - PhD, University of Detroit (USA) - classes for doctoral students EP 6D072900 - Civil Engineering, 6D073000 - Production of building materials, products and structures in the discipline»Strategic Management";

6. Weaver E.V. - Doctor of Technical Sciences, professor at Moscow State University of Civil Engineering (Russia) - lectures on the topic “Development of modern building materials»and advised undergraduates and doctoral students with specialties 6D072900 - “Civil Engineering»and 6D073000 - “Production of building materials, products and structures”.Leading industry experts, Professor V.E., were also involved in lecturing. Absimetov (Russia), V.I. Soloviev (Almaty, Honorary Professor of KSTU);

The university provides advanced training courses for young teachers and staff in the areas of educational programs, in technical pedagogy, strategic management, and free English courses that enhance the professionalism and competence of young specialists. The competitions»Best Young Scientist",»Best Young Innovator»are held annually, in which young scientists under 35 take part.

In order to assist young teachers, mentoring is used, so young teachers S. Beisembaeva assigned to Ph.D., associate professor A. Kalmagambetova, S. Tleubergenova for candidate of technical sciences, associate professor Rakhimova G.M. Thus, assistance is provided to young teachers in their professional development, in the development of work-based curricula, syllabuses, and the completion of training journals.

A feature of staffing faculty is academic continuity - the training of their own personnel through the involvement of masters and doctoral students in scientific and pedagogical activities. The replenishment of the full-time faculty of the university is carried out by a set of young teachers, from among the masters of sciences who have studied here at the university and in Kazakhstani universities. (Akhmetov B.B., Beisembaeva S.A., Tleubergenova S.Қ.)

One of the forms of involvement in the scientific field is the participation of faculty of KSTU as experts attracted by ministries, departments, and other organizations, which indicates a high degree of trust in the University, recognition of its expert potential. So, for the period from 2016 to 2018. attracted as experts 2 people from the teaching staff:

A high level of professional competence of teachers is provided by the university's representation in various events of the Ministry of Education and Science of the Republic of Kazakhstan, akimats of regional, city and district significance, the NurOtan party, the Assembly of the people of Kazakhstan, cultural institutions, etc.

The scientific qualifications of professors and associate professors, ensuring the implementation of accredited educational programs, made it possible to open a dissertation council on EP 6D072900 – Civil Engineering and 6D073000 - Production of building materials, products and structures in accordance with the order of KKSON MES RK No. 207 dated March 4, 2019, the chairman of which was elected Associate Professor, Professor Baijanov D.O., Deputy Chairman Doctor of Technical Sciences, Professor Zhakulin A.S., Scientific Secretary Ph.D., Associate Professor Rakhimov M.A. In addition, three teachers of the department are members of this council.

Analysis and monitoring of the use of innovative teaching methods takes place at the meetings of the departments and during the discussion of classes attended by teachers. The application of the most successful methods is demonstrated by teaching staff in open classes.

In the framework of educational programs, practical teachers are: university teachers who have experience in the relevant industry or work concurrently in the relevant organizations; Highly qualified employees of enterprises and organizations working at the university part-time.

The need to attract practitioners to conduct classes is determined by the head of the department together with the teaching staff of the department. To this end, an analysis of the content of disciplines is carried out, for each specialty and discipline, the share and type of classes conducted by practitioners are individually established. Practitioners are involved in conducting separate cycles of disciplines, lectures and practical exercises.

In the implementation of accredited educational programs, full-time teachers with experience in the relevant industry participate (table 17). For example:

Table 17 - Compliance of personnel potential with the specifics of EP 6D073000 "Production of building materials, products and structures"

№	Full name	Qualification	Work place out of the university structure by specialty
1.	Baijanov Dzhumageldy Omarovich	engineer - builder - technologist	1. "Krasnovodsk Oil Refining factory" 2. Factory»Trust Kazmetallurgstroy" 3. «Karagandaorgtyazhstroy" 4. JSC "KARAGANDA"INDUSTRYPROEKT»
2.	Shaykezhan Amankeldy	Civil engineer	1.»Construction sanitary installation management" 2.»Giprogascenter" 3.»State Farm named after 40 years of October" 4.»Akchatau state farm" 5. "No. 5 Combine Karaganda coall" 6. No. 6"Mining regulatory research station» 7.»Chelyabinsk Promstroyproekt Karaganda branch"

			8.»Chemical and Metallurgical Institute AiKaz SSR"

Confirmation of highly qualified teachers is the effectiveness and quality of teaching, assessed by conducting open training sessions, mutual attendance of classes, as well as conducting a survey of students on the questionnaire "Teacher through the eyes of students" http://www.kstu.kz/wp-content/uploads/2012/11/Anketa-PPS-glazami-stud..doc; Faculty Satisfaction http://www.kstu.kz/wp-content/uploads/2012/11/Anketa-udovletvorennosti-PPS.doc; UVP Satisfaction http://www.kstu.kz/wp-content/uploads/2012/11/Anketa-udovl-UVP.docx; Ethics of the relationship between teachers and students http://www.kstu.kz/wp-content/uploads/2012/11/Anketa-Etika-vzaimootnoshenij-student-PPS.docx.

Analytical part

Teachers implementing accredited programs have participated in various academic mobility programs. For example:

- Senior teacher of the department Kusainov E.B. during the period from February 25 to June 1, 2019, lectured to students of the Karaganda State Industrial University on the EP "Construction".

- Candidate of Technical Sciences, Associate professor, Rakhimov M.A. from February 22 to 26, 2016, gave a lecture course on the topic: "Modification of the surface of materials»at Sarsen Amanzholov East Kazakhstan State University for students and undergraduates.

- Candidate of Technical Sciences, Associate professor, Konakbaeva A.N. from Karaganda State Industrial University, from February 25 to June 01, 2019 held classes for students of the Karaganda State Technical University by specialty»Construction».

However, teachers who implement accredited educational programs do not participate in academic mobility programs abroad and poorly realize this opportunity in Kazakhstani universities, although a high level of their professional competence is in demand and will be effective in other universities. During the interview, an answer was given about the influence of family circumstances and unplanned material expenses in the implementation of the academic mobility program.

The EEC Commission also notes a good opportunity to implement the academic mobility program of teaching staff through knowledge of a foreign language, which they study in the framework of the university's grant financing project from the World Bank and the Ministry of Education and Science of the Republic of Kazakhstan. At the expense of the grant, the faculty group of the BMaT department is learning English and preparing to pass the IELTS exams.

Strengths/best practice for EP 5B072900 "Civil Engineering", 6M072900 "Civil Engineering", 6D072900 "Civil Engineering", 6D073000 "Production of building materials, products and structures":

- The staff potential of teaching staff corresponds to the development strategy of the university. Ensuring personnel potential in accordance with the EP specifications is confirmed by the data on the experience of teaching staff in production, which is directly related to the direction of specialties.

- The presence in the staff of the department of teachers-practitioners of relevant industries, having extensive experience in production in accordance with the specifications of accredited EP.

The EEC recommendations on EP 5B072900 "Civil Engineering", 6M072900 "Civil Engineering", 6D072900 "Civil Engineering", 6D073000 "Production of building materials, products and structures":

- In the development plans for accredited OP 5B072900 / 6M072900 / 6D072900 - Civil Engineering, 6D073000 "Production of building materials, products and structures" in the section "Priority 3. Modernization of the content of the educational program in the context of global trends", define indicators for the implementation of the program "Academic PPP mobility" and begin to implement them.

The conclusions of the EEC on the standard»Teaching staff": accredited educational programs accredited educational programs 5B072900»Civil Engineering», 6M072900»Civil Engineering», 6D072900»Civil Engineering», 6D073000»Production of building materials, products and structures» have 2 - strong, 9 - satisfactory, 1 - suggesting improvement in positions.

6.8. Standard "Educational Resources and Student Support Systems"

✓ *EP management must demonstrate the adequacy of material and technical resources and infrastructure.*

✓ *EP management must demonstrate the existence of support procedures for various groups of students, including information and counseling.*

✓ *EP management must demonstrate compliance of information resources with EP specifics, including compliance with:*

- *technological support for students and faculty in accordance with educational programs (for example, online training, modeling, databases, data analysis programs);*
- *library resources, including a fund of educational, methodological and scientific literature on general education, basic and majors in paper and electronic media, periodicals, access to scientific databases;*
- *examination of the results of research, final works, dissertations on plagiarism;*
- *access to educational Internet resources;*
- *WI-FI functioning in the territory of the educational organization.*

✓ *The university should strive to ensure the educational equipment and software used to master educational programs are similar to used in the relevant industries.*

✓ *The university must ensure compliance with safety requirements in the learning process.*

✓ *The university should strive to take into account the needs of various groups of students in the context of EP (adults, workers, foreign students, as well as students with disabilities).*

Evidence part

The university has 6 educational buildings, a health center, a sports complex, 3 dormitories, a sports and recreation camp»Polytechnic", the Palace of Students»Zhastar Alemi", service and support facilities (work centers, carpentry workshop, garage and others). All of them comply with sanitary and epidemiological standards and requirements.

The material and technical base of the university ensures the conduct of all types of laboratory and practical classes, scientific research work of students envisaged by the curriculum, and meets the current sanitary standards, as well as the requirements of GOSO specialties. The working environment conditions meet the requirements of ST RK 1158-2002 "Higher professional education. The material and technical base of educational organizations."

The total area of buildings owned by the University is 91,268.6 square meters, including a useful educational area of 57,494.9 square meters or 63% of the total.

For the effective organization of educational and scientific activities, the university has an extensive classroom fund, there are research institutes and centers where students receive knowledge, abilities and skills in research work. The areas of the main educational

premises are adopted in accordance with the requirements of SS RK 1158-2002, building code RK 3.02-02-2009 “Public buildings and structures”.

The university is provided with drinking and industrial water, thermal and electric energy, and telephone communications centrally. All engineering networks comply with the requirements of building code RK 3.02.-43-2007 “Residential buildings”, building code RK 4.02.-42-2006 “Heating, ventilation, air conditioning”, building code RK 3.05.01.2010 “Main pipelines”.

For the organization of the educational process, research work in the academic department of the building materials and technologies department and the creation of appropriate conditions in the areas of bachelor's and postgraduate professional education (master's, doctoral) teaching staff use the following resources:

Table 18 - the List of laboratories and specialized classrooms of the department»Building materials and technologies"

№ audience	Audience assignment	Area, m^2	Multimedia equipment technique
Subject Cabinets			
1-111	Department of BMaT	85,0	
I-120	Subject audience	20,0	
I -213	Computer class	80 м2	13 computers
I-215	Lecture audience	72,0	Video projector
1-217	Office of the Head of the BMaT Department	20,0	-
1-218	Laboratory assistant	20,0	-
1-219	BMaT department	40,0	
I-236	Subject audience	40,0	
I -238	Cabinet of course and diploma design	70,0	Video projector
I-239	Subject audience	70,0	Video projector, interactive board
Training laboratories			
I-130	Construction Laboratory ACF	110,2	
I-132	Construction Laboratory ACF	113,1	
I-134	Laboratory assistant	26,6	
I-134a	Laboratory assistant	24,0	
I-136	Laboratory of the BMAT department	101,0	
I-138	Laboratory of the BMAT department	96,0	Video projector
I-142	Construction Monitoring Laboratory	106,2	

Each specialized cabinet has a cabinet passport and equipped with safety instructions. A journal is kept of the work of teachers and students in specialized classrooms. At the beginning of the school year, the head of the laboratory conducts an introductory briefing for 1st year students on the rules for using these rooms. Laboratories are equipped at a sufficient level.

On the basis of the university for the implementation of accredited EP: laboratory equipment is used:

- Laboratorystirrer**ML-1A** ;
- Machine for static testing of materials **MII-100**;

- Device for determining the specific surface area of **Pskh-12**;
- Laboratoryhydraulicpress**PSU-125** ;
- Laboratoryhydraulicpress**PSU-10** ;
- Hydraulicmeasuringpress**PGI-500** ;
- Electronic concrete strength meter **IPS MG 4 .03**;
- Electronic meter of thermal conductivity **IT P- MG4**;
- Laboratorystirrer**MTZ** ;
- Circleofabrasion**LCI-3** ;
- Cone for determining the rigidity by the»Skramtaev»KA method;
- Cone shape for shaking table;
- Universalsteamingchamber**KUP-1** ;
- Ring for determining the water-holding capacity of the **WU** solution;
- A device for establishing the density of the **PGR** solution;
- The device for determining the norms of cement slurry density;
- Drying cabinet **ShSP** 0.25-10 ;
- Steel cylinder with removable bottom and plunger for defining we crush the KA-116 with a diameter of 75 mm;
- Laboratory vibrating platform for **CSF** ;
- A device for determining the rigidity of concrete mix in forms;
- Viscometer KP 134 ;
- (Web) to determine the stiffness of concrete;
- Device for Shtatele M-ODA -th cement density and fillers;
- Device for determining the water resistance of concrete»Agama-2";
- Measuring instrument of the protective layer of concrete IZS-10n;
- Laboratory shaking table KP-111F (KP-111A0 automatic);
- Vibrating table VM-6.4 (80 kg / 2900 / 0.35 ... 0.55) with weights;
- Stirrer (laboratory PM-1A915L) ;
- Furnace for firing ceramic materials and products PK 60 / 12.5;
- Ultrasonic tester UK1401m (concrete strength);
- Compression device with force sensor KPPA 60/25 DS (or odometer 40/20);

- Device2170P-6 (6Kn / 600 kg) ;
- Ultrasonic device GSP UK-10PM and UK-14P;
- Digital deformation meter IDTs-1 for measuring static deformations (for carrying out and testing the mechanical strength of materials of structures);
- Electronic moisture meter EV-2k ;
- Electronic concrete strength meter IPS-MG4.03;
- Ultrasonicdevice UKS-MG4s ;
- Measuring instrument of the protective layer of concrete IP A- MG4.01;
- Deflectionmeter PSK-MG4 ;
- Light meter + Brightness meter»TKA-PKM»(02) .

The above equipment passed the verification procedure in 2015 and is used in the educational process, when performing scientific research and conducting experimental work by students of accredited EP.

In addition, additional equipment was purchased:

Table 19 - Information about the purchased equipment after 2015.

N / a	Name
Purchasedequipment	
1	Typical set of educational equipment»Fluid mechanics»TMZH 2V-09-12LR-01m

2	Electronicbalance
3	DigitalIlluminationMeter MS6612
Specialized software	
1	Educational version of SP LIRA-SAPR 2016
2	"ACADEMIC set 2016", which includes in itself without restrictions Lira-CAD system 2016 and specialized estimated o- graphics system
3	PC MONOMACH-SAPR 2013
4	PC ESPRI 2014
five	SAPPHIRE-3 D 2015 (Network license for 20 working places + 1 local license for facilitator)
6	Educational version of the design system IndorCAD / Road Maximal 2018

The department»SM&T»has an approved procurement plan for the purchase of equipment for a total amount of 15,259,011 tenge until the end of 2021 **.**

In addition, for the implementation of the educational process of students of accredited EP, the production equipment of the branches of the department is used as part of the organization of dual training at enterprises. The department»Building materials and technologies»has 12 branches, 5 of them conduct academic studies. At the branches of the Department of Building Materials and Technologies, there is an Agreement on the Innovative and Educational Consortium»Corporate University", an agreement, a schedule of classes, and discipline documentation. The management of the EP presented the approved schedule of occupations in production, the EEC commission, when visiting the practice bases, made sure that there were specialized premises for conducting training sessions for students in production.

For the implementation of online education, KSTU conducts online lectures by leading foreign scientists, for example, PhD. PGCE. BSc (Hons) MBIFM FHEA Margaret-Mary Lillian Nelson (United Kingdom, University of Bolton, Faculty of Advanced Engineering and Sciences) on the topic»Modern methods of improving teaching and learning process",»How to find the right journal in Scopus. Predatory journals»,»How to publish correctly in journals indexed by Scopus and Web of Science»(http://www.kstu.kz/priglashenie-smt/).

Also, the department signed agreements on cooperation with manufacturing enterprises on the passage of professional and research practices for students of accredited EP: 5B072900»Construction»- 6, 6M072900 / 6D072900»Construction»- 6, 6D073000»PBM&C»- 4. Visiting the practice base confirmed the high organization in creating conditions for practical training, ensuring safe working conditions for students and guidance, assistance and advice from representatives from production.

For the implementation of the academic mobility program, teaching practice and scientific internships, students accredited by EP 5V072900 / 6M072900 / 6D072900»Construction", EP 6D073000»PBM&C»signed memorandums of cooperation with foreign educational organizations:

1. Moscow State University of Civil Engineering (Russian Federation);
2. St. Petersburg State University of Architecture and Civil Engineering (Russian Federation);
3. St. Petersburg State Polytechnic University (Russian Federation);
4. Novosibirsk State University of Architecture and Civil Engineering»Sibstrin»(Russian Federation);
5. National Research Tomsk Polytechnic University (Russian Federation);
6. Tomsk State University of Architecture and Civil Engineering (TSASU) (Russian Federation);
7. Tomsk Polytechnic University (Russian Federation);
8. Vilnius State Technical University Gediminas (Lithuania);
9. Voronezh State University of Architecture and Civil Engineering (Russian Federation);

10. Belgorod State Technological University V.G. Shukhova (Russian Federation);
11. SlovakTechnicalUniversity (Slovakia);
12. IncheonNationalUniversity (Korea);
13. Ostrava Technical University (Czech Republic);
14. KrakowTechnicalUniversity (Poland);
15. Poznan University of Technology (Poland);

Table 20 - Information about the library resources of the university, in the context of accredited EP

No.	Indicatorname	Index
1	Total number of seats in the library, including computer labs	270
2	The total number of copies of educational and methodological literature in the library for students EP 5B072900 / 6M072900 / 6 D 073000 - Construction, 6D073000PBM&C	130
3	Funds spent on the purchase of periodicals for all accredited EP 5B072900 / 6M072900 / 6 D 073000 - Construction, 6D073000PBM&C	1 436 914.38 tg
4	Total library fund, including literature on electronic media for students EP 5B072900 / 6M072900 / 6 D 073000 - Construction, 6D073000PBM&C	71325
five	Book provision for 1 student of the reduced contingent 5B072900»Construction"	223
6	Book provision for 1 master student of the reduced contingent 6M072900 - Construction	37
7	Book availability per 1 doctoral student of the reduced contingent 6 D 073000 - Construction	145
eight	Book availability per 1 doctoral student of the given contingent 6D073000PBM&C	479

Within the framework of the National Subscription, access is provided to the International Scientific Databases of the Web of Science Core Collection by Clarivate Analytics, Springer Nature Publishing House, Elsevier (Scopus DB, ScienceDirect DB). The term of the agreement is prolonged annually in accordance with the National License.

The electronic library includes full-text resources of its own generation (Proceedings of the University), an electronic portfolio of a freshman containing educational publications on the languages of instruction (http://www.kstu.kz/wpcontent/uploads/docs/restricted/lib/portfolio/indexru .html).

The availability of the network WI - the FI in the territory of KSTU on a high level, the information network of the Institute is the speed of access to the Internet at least 500 Mb \ c on the basis of the contract №190209 / 00 with JSC»Trans Telecom»of 20 .03.2019, the In trunks the required number of access points for high-quality network coverage are placed . In interviews with students, we also received confirmation of the full coverage of the WI - FI network broadcasting area on the territory of the university and student hostels, which confirms the provision of high-speed Internet to all students, teachers and university staff.

The reliability of graduation theses, master's theses, research results presented by the teaching staff in monographs, scientific articles and reports is assessed by checking them for plagiarism using the»Antiplagiat»system. Research reports of doctoral students' dissertations and monographs are subject to external verification through JSC.

The University provides support to socially unprotected students (orphans and children left without parental care, students with disabilities). For this category of students established mechanisms of social support, including free accommodation in a hostel, the benefits of paying for training (the decision of the Academic Council), material assistance. In

order to meet the requirements of the work guides students, foreign students, as well as students with limited possibilities is realized remotely - educational technology training.

A survey of students, conducted during the visit of the IAAR EEC, showed that satisfaction:

- the availability of library resources is 98.4%;
- the existing educational resources of the university - 99.3%;
- availability and availability of computer classes and Internet resources - 93%.

Analytical part

In order to make it possible to obtain higher education on educational programs for disabled people and people with visual impairments, the university provides the following opportunities: at the request of students, individual curricula are formed and schedules for studying disciplines are drawn up; individual lessons are provided, including remote consultations with teachers; programs are adapted to the student's discipline study schedule; e-learning resources (video lectures, virtual laboratory works) are actively used; midterm and current controls are carried out in the form of testing with remote access; equipped with a specialized classroom for individual work with a student with a disability. In the 2017-2018 academic year, a specialized office located on the first floor of the 1st building of the university, equipped in accordance with the requirements for premises for people with disabilities, is connected to the classroom fund used during the period of classes and during the session.

There are no students with disabilities at the Department of Health and Mass Media.

The EEC Commission notes the need to continue targeted work to provide conditions for training people with disabilities.

Strengths / best practice for EP 5B072900»Construction", 6M072900»Construction", 6D072900»Construction", 6D073000»Production of building materials, products and structures":

- High characteristics of the functioning WI-FI network on the territory of the educational organization.

EEC recommendations for EP 5B072900»Construction", 6M072900»Construction", 6D072900»Construction", 6D073000»Production of building materials, products and structures":

- Organize work on the installation of guiding markings and color signs and signs for visually impaired students and staff in the university buildings.

Conclusions EEC n of the standard of»Educational resources and student support system": accredited by the educational programs 5B072900»Construction", 6M072900»Construction», 6D072900»Construction», 6D073000»Production of building materials, products and structures»are 1 strong, 9 - satisfactory position ...

6.9. Public Information Standard

published by the university within the EP must be accurate, objective, relevant and must include:

- *programs being implemented, indicating the expected learning outcomes;*
- *information on the possibility of qualifying at the end of the EP;*
- *information about teaching, learning, assessment procedures;*
- *information about passing scores and learning opportunities provided to students;*
- *information about the employment opportunities of graduates.*

✓ *management should use a variety of ways to disseminate information, including mass media, information networks to inform the general public and stakeholders.*

✓ *Public awareness should include support and explanation of national development programs of the country and the system of higher and postgraduate education.*

✓ *university must publish audited financial statements on its own web resource, including in the context of EP.*

✓ *university must demonstrate the reflection on the web resource of information characterizing the university as a whole and in the context of educational programs.*

✓ *An important factor is the availability of adequate and objective information about the teaching staff of the EP, in the context of personalities.*

✓ *An important factor is informing the public about cooperation and interaction with partners within the EP, including with scientific / consulting organizations, business partners, social partners and educational organizations.*

✓ *university should post information and links to external resources based on the results of external evaluation procedures.*

✓ *An important factor is the participation of the university and implemented EP in various external assessment procedures.*

Proof part

The purpose s of informing the public and all interested parties from the Karaganda State Technical University, the producing department of building materials and technology publish full details of all ongoing educational programs: Bachelor 5B072900 - Construction, graduate 6M072900 - Construction, PhD 6D072900 - Construction 6D073000 - »Manufacturing of construction materials, products and designs»(http://www.kstu.kz/kafedra-stroitelnye-materialy-i-tekhnologiya/).

Plans for the development of educational programs are also freely available on the website (http://www.kstu.kz/wp- content / uploads / 2017/09 / Stroitelstvo.pdf, http://www.kstu.kz/wp-content/ uploads / 2017/09 / PSK.pdf).

Information about teaching, assessment procedures is presented in the IS»Univer 2.0". The section»Applicant»provides information on passing scores and educational opportunities.

The university has determined the order of publication of news on the main page and in sections. News about the activities of the university is posted on a memo in the DRCU. The site development center checks the information received, makes adjustments and publishes on the site according to the topic in 3 languages in the appropriate sections of the site. News by department is posted by responsible persons of departments and faculties. Information to the Site Development Center is provided in the form of a text document with photographs. If the news does not meet the requirements, then the material is sent for revision. To assess satisfaction with information about the university's activities, a survey was conducted on Google Forms. Analysis and weekly monitoring of work in this area is carried out by the Site Development Center. Information on the progress of the EP implementation is posted on the websites of the departments.

Informing the general public is carried out through interaction with the media, open days, job fairs, alumni meetings, career guidance events. The publication of materials about all important events occurring in the life of the university is carried out through the website, the university newspaper, and is also covered in republican and regional newspapers and television. The total circulation of the newspaper»For Polytechnic Knowledge", published at the university, the university is 350 copies.

The teachers of the department»Building materials and technologies»published the following articles in print media informing the public about the everyday life of the department, university and educational programs (Table 21).

Table 21 - Publication of the teaching staff of the department of SM&T through the media

No.	Name of the print publication and TV channel	Articletitle	No., date of publication, speech	FULL NAME. author
1	State Regional Information Newspaper OrtalyқKazakstan	«BilimMenGylymOrdasy»	June 27, 2018	UtenovEsenSydanovich Doctor of Technical Sciences, Professor of the Department of Building Materials and Technologies, KSTU
2	State Regional Information Newspaper OrtalyқKazakstan	«Academician»	December 10, 2015	UtenovEsenSydanovich Doctor of Technical Sciences, Professor of the Department of Building Materials and Technologies, KSTU
3	State Regional Information Newspaper Industrial Karaganda	«SchoolofSolovyov»	May 22, 2018	Rakhimov Murat Amanzholovich, candidate of technical sciences, associate professor of the department»Building materials and technologies»KSTU
4	Republican educational socio-political newspaper B i l imdi el	"The Faculty of Architecture and Civil Engineering of KSTU is 60 years old"	April 30, 2019	Sarsenbaeva AnarZhakanovna Chief editor of KSTU

Every year, it creates a media plan on the calendar and the school year, in which is reflected the schedule published in various media vehicles (TV, press, internet). The plan also indicates the place, size, time, number and intensity of publications, placement of thematic materials in several media at once.

The University sends all information messages to the media of various spectrum and topics: print (newspapers, magazines, bulletins, almanacs); electronic (radio, television); Internet portals (Internet resources of news agencies, print and television media, websites, etc.).

On the pages of popular social networks, information is published on the results of the educational and educational activities of the university, it is reported on the holding of public events; online contests and promotions are organized. In the Internet space, KSTU is represented by the following accounts:

-Vkontakte https://vk.com/kstu_life more than 3000 subscribers,

- Facebook (https://www.facebook.com/KSTUpoliteh/) - more than 400,

- Instagram (https://www.instagram.com/kstu.kz/) - more than 3000,

- YouTube (https://www.youtube.com/channel/UCtfFfZ8_AOxrqnrT0yHGYxA) - about 1 115,

- Twitter (https://twitter.com/KSTUpoliteh) - 300.

The university website http://www.kstu.kz is a universal information tool . The publication of news releases, events, concert programs, conferences held at the university is carried out through the functioning of the Site Development Center. Any incoming information is carefully checked, analyzed, and then placed in a special block of the site.

The information resource of the site is open and publicly available. Each faculty has its own sections on the site with materials on disciplines and the learning process. The site contains the following information:

- general information about the university, its history; mission, goals and objectives of the university; list of specialties, contacts; a description of the structure of the university and the main documents regulating its activities.

Informing the public provides for support and explanation of the national development programs of the country and the system of higher and postgraduate education by posting information on the slider of the university website and in the relevant sections.

Work on publications that contribute to the clarification of educational policy is planned and carried out by the university on an ongoing basis. The website of KSTU publishes information on the progress of the implementation of the Comprehensive Development Program of the University, which is based on the indicators of the GPD.

The chief accountant at the Site Development Center provides a memo and financial statements for posting on the site. This information is available to the public in the section»Rector's blog-reports".

The university website publishes information characterizing the university as a whole and in the context of educational programs. On the main page of the site there is a tab»University", which provides detailed information about the mission, structure, history, faculties, departments, etc. Detailed information about the EP is in the public domain and is grouped by faculties and departments. http://www.kstu.kz/fakultety/

The university pays great attention to the placement of information on cooperation and interaction with partners, including scientific organizations, business partners, social partners and educational organizations. The main tool for publishing this information is the»Partners»section, where the information is structured by the type of information provided. In the section»International cooperation»information about foreign partner universities of KSTU is grouped by country: http://inter.kstu.kz/14511615/?lang=ru .

The university determines its contribution to support the implementation of national development programs of the country through the development and implementation of the Strategic Development Plan of the Karaganda State Technical University for 2014-2023, which states that the University has created and is implementing a Model of Patriotic Education of Students on the example of the First President of the Republic Kazakhstan N.A. Nazarbayev, which was twice discussed in Parliament and recommended for distribution in the country's universities . In 2014, in accordance with national idea»Mangilik E L 'is transformed into a Model»New Forming Kazakhstan Patriot».

Also, the university has developed and is implementing a Comprehensive Program for the Development of the Karaganda State Technical University for 2019 in the light of the strategic tasks of the Messages of the President of the Republic of Kazakhstan - Leader of the Nation N.A. Nazarbayev to the people of Kazakhstan “New opportunities for development in the context of the fourth industrial revolution”, “Five social initiatives of the President»and “Growing prosperity of Kazakhstanis: increasing income and quality of life”.

In the context of the implementation of the state program»Digital Kazakhstan", the Academic Council of KSTU adopted the Concept of transition of KSTU to the model of»Digital KSTU". In support of the state program»Digital Kazakhstan»and the national project»Intellectual Nation - 2020", proclaimed by the President of the Republic of Kazakhstan NursultanNazarbayev, work is underway to operate the Cisco Academy.

Informing the public on this criterion is provided by posting all documents on the university's website in the public domain and discussing at the councils of collegial governing bodies with the participation of stakeholders . The university annually takes part in the National rating of the best universities in Kazakhstan, information on the results is published in the news block on the official website of the university. Karaganda State

Technical University in the Worldwide Professional University Rankings RankPro 2017/2018 took the 577th place in the world and 2nd place in Kazakhstan.

In 2017, Karaganda State Technical University, according to the IQAA, took one of the leading positions, ranking second among technical and agro-technical universities.

Strengths / best practice for EP 5B072900»Construction", 6M072900»Construction", 6D072900»Construction", 6D073000»Production of building materials, products and structures":

- n Support of and explanation of national programs for the country's development and higher and postgraduate education system is provided by an active public information on the university's website, the development of strategic documents of the university based on them and placing them in the public domain .

- The EP management provides information to interested parties with accurate, objective, relevant information through the publication of all strategic documents, development plans, modular educational programs in the context of languages and level of education in the public domain on the university website.

EEC recommendations for EP 5B072900»Construction", 6M072900»Construction", 6D072900»Construction", 6D073000»Production of building materials, products and structures":

- none according to this standard

According to the " Public information " standard: accredited educational programs 5B072900 "Construction", 6M072900 "Construction", 6D072900 "Construction", 6D073000 "Production of building materials, products and structures" have 2 - strong, 11 - satisfactory positions.

6.10. Standard»Standards in the context of individual specialties"
NATURAL SCIENCES, TECHNICAL SCIENCES, AND TECHNOLOGIES

Proof part

To familiarize students with the professional environment, with production equipment, production processes, as well as for the acquisition of skills, practical experience and familiarization with the functional responsibilities of engineering and technical personnel, classes, industrial and pre-diploma practices are held annually for students, undergraduates and doctoral students of accredited educational programs. enterprises of the Corporate University:»Karaganda Construction Laboratory»at LLP»KaragandaTechnoService",»Krylysekspertproekt", LLP»Institute»Karaganda Promstroyproekt», PC»ASPAP»and others.

For example, for 2nd year students of EP 5B072900»Construction»in the course of studying the discipline»Building materials",»Artificial building conglomerates»in the»Karaganda Construction Laboratory»laboratory research is carried out on certified high-precision devices. For the purpose of a deeper study of disciplines related to architectural design, classes are organized for the same students at enterprises engaged in design activities - LLP»Krylysekspertproekt", LLP»Institute»Karaganda Promstroyproekt», which are equipped with offices necessary for design and construction activities, architectural workshops, professional PCs and office equipment.

4th year students studying the disciplines»Quality control of inspection and testing in construction",»Inspection of building structures and reconstruction of buildings and

structures»visit the Research Institute KazMIRR, which is equipped with modern equipment that allows to carry out scientific research and monitoring of structures of buildings and structures in order to master skills carrying out expert work and assessing the reliability of the functioning of existing buildings and structures.

Excursions to construction sites erected by the production cooperative»ASPAP", which has a modern production and technical base, to familiarize themselves with construction processes, machines and equipment, are conducted for third-year students studying the disciplines»Technologies of building production",»Technologies for the construction of buildings and structures».

For students on EP 6M072900 - Construction, classes in the discipline»Geotechnical problems of construction»are held in LLP»Karaganda GIIIZiK *". Doctoral students EP 6D072900 - Construction carry out research work in the Test Center of the Institute»Karaganda Promstroyproekt»LLP. Doctoral students OP 6D073000 -»Production of building materials, products and structures»carry out research work on the basis of testing laboratories LLP»KKK Beton", LLP»ZhBI Karaganda".

The organization of the production and pre-diploma practice is attended by graduates of the department (now employees of enterprises), who demonstrate the capabilities of production and share their experience. As a result, students get an idea of the work of industrial enterprises, design organizations, research laboratories, and also gain practical skills in professional activities.

The implementation of educational programs 5B072900 / 6M072900 / 6D072900»Construction", 6D073000»PSMiK»involves university teachers with experience in the construction industry, as well as part-time employees in construction industry organizations. For example: Director of NII KazMIRR - Doctor of Technical Sciences, Professor NuguzhinovZh.S.; Head of KazMIRRZhylkibaev D. K, junior researcher KazMIRREichner AV .; shop manager of KKK Beton LLP - S. Kulinskiy; Chairman of the Board of Directors»KaragandaTechnoService»- Ph.D., Assoc. Abildin S.K .; Director of POWER BETON LLP - Zhanakov K.A.

In the learning process, special attention is paid to the practical aspect, implemented within the framework of classes in the areas of accredited EP. Students are given the opportunity to communicate professionally with practitioners who have experience in real production conditions. Such interaction is implemented through the existing branches of departments at enterprises and organizations corresponding to the profile of training specialists. For example, Institute Karaganda Promstroyproekt LLP, an engineering company, created conditions for conducting classes for ASF students: a computer class for 24 seats each, 2 classrooms equipped with interactive whiteboards and projectors for 18 seats each, classrooms after major repairs and reconstruction are equipped with modern ICT with the corresponding software:»Arhicad",»Autocad",»LiraSapr 2013",»FOK»and others. Also provided a laboratory for laboratory work and scientific research of bachelors and undergraduates accredited by the EP. The base of the branch is equipped with an architectural and design studio for 20 seats with modern material and technical equipment. In addition to training sessions at the branch of the department, at the enterprise, students of 2, 3, 4 courses of EP 5B072900»Construction»undergo industrial and pre-diploma practice in accordance with the schedule.

"Karaganda Construction Laboratory»at LLP»KaragandaTechnoService»is equipped with modern equipment that meets the requirements in the field of construction materials science and engineering. The training and industrial equipment is used to train bachelors EP 5B072900»Construction", master students OP 6M072900»Construction»and doctoral students OP 6D072900»Construction", OP 6D073000»PSMiK".

Students of the 3rd and 4th courses of EP 5B072900»Construction»are sent to undergo practical training at the KazMIRR Research Institute, which is equipped with

modern mobile equipment that allows them to carry out research and monitoring of buildings and structures. Material and technical base of enterprises»Krylysekspertproekt»LLP,»Uksproekt - 2006»LLP,»Nurkhan»LLP, PC»ASPAP",»KKK Beton»LLP,»Karaganda-Giproshakht and K»LLP,»Santekhenergoproekt and K»LLP, JSC»Ecostroyservice",»Oplot LTD»LLP allows developing the practical skills of bachelors OP 5B072900»Construction", master's students OP 6M072900»Construction»and doctoral students OP 6D072900»Construction", OP 6D073000»PSMiK".

For students of EP 5B072900»Construction", dual training is organized within the framework of laboratory classes at the enterprise»Karaganda Construction Laboratory»at LLP»KaragandaTechnoServis»in the disciplines»Building structures I",»Building materials»,»Artificial building conglomerates",»Control quality, inspection and testing in construction»; In Institute Karaganda Promstroyproekt LLP in the discipline»Computer-aided design of technological processes", in the SRI KazMIRR in the disciplines»Building structures III",»Automated calculations of building structures",»Inspection of building structures and reconstruction of buildings and structures",»Calculation and design of reinforcement building structures»; in PK»Aspap»for EP 5B072900»Construction", R&D of master students EP 6M072900»Construction", R&D of doctoral students EP 6D072900»Construction»and EP 6D073000»PSMiK»in the discipline»Construction of buildings and structures in regional conditions."

The teachers of the department conduct seminars, for example, for employees of KaragandaTechnoService LLP in February, December 2018. advanced training courses were held in the field of solving practical problems that are relevant for representatives of enterprises in the field of specialization.

According to the requirements of the State Educational Standard, the content of disciplines EP 5B072900 / 6M072900 / 6D072900»Construction»and OP 6D073000»PSMiK»are based on the knowledge, skills and abilities acquired at the previous stage of education, and are aimed at obtaining knowledge, both in the field of fundamental natural sciences and scientific -professional skills and competencies.

As confirmation for EP 5B072900»Construction", you can cite the disciplines»Engineering Mechanics",»Building Structures",»Building Materials", which are based on knowledge in the field of mathematics, physics, chemistry, computer science, and in the process of studying the discipline, students acquire skills mathematical modeling, processing large amounts of data, carrying out computer calculations, which will further contribute to the implementation of scientific research and professional activities. Within the framework of practical, laboratory work, term papers and SRSP, there are computational and graphic, standard calculations, mathematical and geometric modeling, physical and chemical processes are considered.

The management of EP 5B072900 / 6M072900 / 6D072900»Construction»and EP 6D073000»PSMiK»in the learning process provide students with skills in the development of design, design and survey and design and estimate documentation using modern information technologies. As part of the compulsory training sessions, students study graphic packages (AutoCAD), calculation programs (LIRA) and many others.

Analytical part

When conducting interviews with employers and graduates of EP 5B072900»Construction", a *wish was made* to strengthen the training course for students to study estimated programs. The analysis of this request showed that the direction»Estimated business»is taught to students of EP 5B072900»Construction", *but the* training is provided not by the department»SM&T", but by the department of economic direction.

Strengths / best practice for EP 5B072900»Construction", 6M072900»Construction", 6D072900»Construction", 6D073000»Production of building materials, products and structures":

- Stably established system of dual training for accredited EP. Updating the accredited EP, taking into account the specifics of operating large enterprises in the region with periodic visits to production both during school hours and in additionally allotted time (excursions, seminars, etc.).

- The presence in the staff of the department of employees (50% of the staff) with long-term experience in production.

EEC recommendations for EP 5B072900»Construction":

1 In the OP 5B072900 Construction 2017, 2018, 2019 receipts, include the section»Estimated business»in the study of disciplines»Organization of construction production", or»Organization, management and planning in construction", or»Calculation and development of elements of a building general plan", or»Organization, management and planning in construction». The teaching of the discipline must be provided by the teachers of the department of SM&T.

Conclusions EEC n about with tandartu»standards in the specialty section": accredited by the educational programs 5B072900»Construction", 6M072900»Construction», 6D072900»Construction», 6D073000»Production of building materials, products and structures»are 2 - strong, 3 - satisfactory position ...

(VII) OVERVIEW OF STRENGTHS / BEST PRACTICES FOR EACH STANDARD

Standard»Management of the educational program»

Strengths / best practice for EP 5B072900»Construction", 6M072900»Construction", 6 D 072900»Construction", 6D073000»Production of building materials, products and structures":

- Ensuring transparency in the development of development plans for accredited EP through the constant involvement of all interested parties to discuss and implement the proposal, publication of development plans on the university website in the public domain.

Information Management and Reporting Standard

Strengths / best practice for EP 5B072900»Construction", 6M072900»Construction", 6 D 072900»Construction", 6D073000»Production of building materials, products and structures":

- not identified according to this standard

Standard»Development and approval of educational programs"

Strengths / best practice for EP 5B072900»Construction", 6M072900»Construction", 6D072900»Construction", 6D073000»Production of building materials, products and structures":

- an increase in the indicators of learning outcomes of students of accredited EP due to the influence of disciplines conducted by the competent staff of the teaching staff of the department and excellent practice-oriented teaching in general in the areas of EP.

Standard»Continuous monitoring and periodic evaluation of educational programs"

Strengths / best practice for EP 5B072900»Construction", 6M072900»Construction", 6D072900»Construction", 6D073000»Production of building materials, products and structures":

- The content and structure of the accredited EP are periodically updated due to the proposals of the main employers of graduates, partners of the department from the Corporate University.

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

Strengths / best practice for EP 5B072900»Construction", 6M072900»Construction", 6D072900»Construction", 6D073000»Production of building materials, products and structures":

- not identified according to this standard

Standard»Students"

Strengths / best practice for EP 5B072900»Construction", 6M072900»Construction", 6D072900»Construction", 6D073000»Production of building materials, products and structures":

- Providing the management of the EP with places of practice for students with the subsequent employment of graduates, well-established, focused on practice-orientation, work on dual training, support of communication with graduates through the club of graduates of the Department of Health and Mass Media.

"Teaching staff»standard

Strengths / best practice for EP 5B072900 "Civil Engineering", 6M072900 "Civil Engineering", 6D072900 "Civil Engineering", 6D073000 "Production of building materials, products and structures":

- The personnel potential of the Faculty corresponds to the university strategy development. Ensuring personnel potential in accordance with the EP specifications is confirmed by the data on the experience of teaching staff in production, which is directly related to the direction of specialties.

- The presence of teachers-practitioners in the department, having extensive experience in production following with the specifications of accredited EP.

"Educational Resources and Student Support Systems»standard

Strengths / best practice for EP 5B072900 "Civil Engineering", 6M072900 "Civil Engineering", 6D072900 "Civil Engineering", 6D073000 "Production of building materials, products and structures":

- High characteristics of the WI-FI functioning network in the territory of the educational organization.

"Public Awareness»standard

Strengths / best practice for EP 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000»Production of building materials, products and structures":

- Support and clarification of the country national development programs and the system of higher and postgraduate education is provided by actively informing the public on the university website, developing strategic documents of the university based on them and posting in public domain.

- The EP management ensures that interested parties are informed with accurate, objective, relevant information through the publication of all strategic documents, development plans, modular educational programs in the context of languages and the level of education in the public domain on the university website.

Standards in the context of individual specialties

Strengths / best practice for EP 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000»Production of building materials, products and structures":

- A well-established system of dual training for accredited EPs. Updating accredited EPs taking into account the specifics of existing large enterprises in the region with periodic visits to production both during school hours and during the allotted time (excursions, seminars, etc.).

- The presence in the staff of the department of employees (50% of the staff) with long experience in the workplace.

(VIII) OVERVIEW OF QUALITY IMPROVEMENT RECOMMENDATIONS BY EACH STANDARD

"Management of the educational program»standard

"EEC recommendations for EP 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000 "Production of building materials, products and structures":

1. In accordance with the Strategic Development Plan of KSTU for 2014-2013 include a section describing possible risks in the implementation of accredited EPs, to the development plans indicating the names of risks, possible consequences in case of failure to take and (or) timely response measures, as well as a description of risk management mechanisms and measures.

2. EP management must take into account all the criteria of the IAAR Standards and, when passing the following accreditation procedure, in the self-assessment documents, carry out a description of the progress achieved when implementing the recommendations received following the previous accreditation procedure.

"Information Management and Reporting»standard

EEC recommendations on EP 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000 "Production of building materials, products and structures":

- none according to this standard

"Development and approval of educational programs»standard

EEC recommendations for EP 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000 "Production of building materials, products and structures":

1. Developing modular educational programs 5B072900/6M072900/6D072900 – "Civil Engineering", 6D073000 "Production of building materials, products and structures", establish individual goals for the implementation of MEP taking into account the specifics of specialties and levels of training.

EEC additional recommendations on EP 5B072900»Civil Engineering":

2. Developing an accredited educational program, conduct an analysis on the EP 6M072900»Civil Engineering»content harmonization with foreign educational organizations and consider the possibility of developing joint educational programs with partner universities.

"Continuous monitoring and periodic evaluation of educational programs" standard

EEC recommendations on EP 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000 "Production of building materials, products and structures":

1 To develop a mechanism for periodic analysis of the survey results with the development of a plan of corrective actions in the context of educational programs and ensuring control over their implementation by supervising structural unit of the university

"Student-centered Learning, Teaching and Assessment»standard

EEC recommendations on EP 5B072900»Civil Engineering", 6M072900»Civil Engineering", 5B073000 "Production of building materials, products and structures",

6M073000 "Production of building materials, products and structures", 6D073000 "Production of building materials, products and structures":

- none according to this standard

"Students»standard

EEC recommendations on EP 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000 "Production of building materials, products and structures":

The university management must update the activities of the Graduates Association by developing a regulation and an operational plan for the work of the KSTU Graduates Association.

"Teaching staff»standard

EEC recommendations on EP 5B072900»Civil Engineering", 6M072900»Civil Engineering", 6D072900»Civil Engineering", 6D073000 "Production of building materials, products and structures":

In the development plans of accredited EP 5B072900 / 6M072900 / 6D072900 – "Civil Engineering", 6D073000 "Production of building materials, products and structures": in the section "Priority 3. Modernization of the content of the educational program in the context of global trends", define indicators for the implementation of the program "Academic Mobility of the Faculty»and begin to implement them.

"Educational Resources and Student Support Systems»standard

EEC recommendations on EP 5B072900 "Civil Engineering", 6M072900 "Civil Engineering", 6D072900 "Civil Engineering", 6D073000 "Production of building materials, products and structures":

- Organize work on the installation of guiding markings and colorographic signs and signs for visually impaired students and staff in the university buildings.

Public Awareness Standard

EEC recommendations on EP 5B072900 "Civil Engineering", 6M072900 "Civil Engineering", 6D072900 "Civil Engineering", 6D073000 "Production of building materials, products and structures":

- none according to this standard

Standards in the context of individual specialties

EEC recommendations on EP 5B072900»Civil Engineering":

1 In EP 5B072900 "Civil Engineering»2017, 2018, 2019, the revenues should include the section "Estimated business" studying the disciplines "Organization of construction production", or "Organization, management and planning in construction", or "Calculation and development of elements of a general building plan", or "Organization, management and planning in construction.»The study of the discipline must be provided by teachers with a civil engineering education and those ones who are employees of BMaT department.

Appendix 1. Evaluation table»SPECIALIZED PROFILE PARAMETERS"

№	№	Evaluation criteria	Education Organization Position			
			Strong	Satisfactory	Suggests improvement	Unsatisfactory
"Management of the educational program»Standard						
1	1.	The university must have a published quality assurance policy.		+		
2	2.	Quality assurance policy should reflect the link between research, teaching and learning.		+		
3	3.	The university should demonstrate the development of a culture of quality assurance, including the EP context		+		
4	4.	A commitment to quality assurance should apply to any activity carried out by contractors and partners (outsourcing), including the implementation of joint / double degree education and academic mobility.		+		
5	5.	The EP management ensures transparency in the development of the EP development plan based on an analysis of its functioning, the actual positioning of the university and its focus on meeting the needs of the state, employers, interested individuals and students.	+			
6	6.	EP management demonstrates the functioning of the mechanisms for forming and regularly reviewing the EP development plan and monitoring its implementation, assessing the achievement of learning goals, meeting the needs of students, employers and society, making decisions aimed at continual improvement of EP.		+		
7	7.	EP management should involve representatives of stakeholder groups, including employers, students and faculty members, in the formation of the EP development plan.		+		
8	8.	EP management must demonstrate the individuality and uniqueness of the EP development plan, its consistency with national development priorities and the development strategy of the educational organization.		+		
9	9.	The university should demonstrate a clear definition of responsible for business processes within the framework of the EP, an unambiguous distribution of the duties of the staff, and delimitation functions of collegial bodies.		+		

10	10.	EP management must provide evidence of the educational program management system transparency.		+		
11	11.	EP management must demonstrate the EP successful functioning of the internal quality assurance system, including design, management and monitoring, improvement, decision-making based on facts		+		
12	12.	EP management must manage risk.			+	
13	13.	EP management should ensure the participation of interested parties (employers, teaching staff, students) in the collegial bodies of the educational program management, as well as their representativeness in making decisions on educational program management		+		
14	14.	The university should demonstrate innovation management in the framework of the EP, including the analysis and implementation of innovative proposals.		+		
15	15.	EP management should demonstrate evidence of openness and accessibility for students, faculty, employers and other interested parties.		+		
16	16.	EP management must be trained in education management programs.		+		
17	17.	EP management should strive to ensure that progress made since the last external quality assurance procedure was taken into account in preparation for the next procedure.			+	
		Outcomes on the standard	**1**	**14**	**2**	**0**
"Information Management and Reporting»standard						
18	1.	The university should ensure the functioning of a system for collecting, analyzing and managing information based on the use of modern information and communication technologies and software.		+		
19	2.	EP management must demonstrate the systematic use of processed, adequate information to improve the internal quality assurance system.		+		
20	3.	Within the framework of EP, there should be a system of regular reporting, reflecting all levels of the structure, including an assessment of the effectiveness and efficiency of the departments and departments, and scientific research.		+		
21	4.	The university should establish the frequency, forms and methods of evaluating the management of EP, the activities of collegial bodies and structural units, senior management, and the implementation of scientific projects.		+		
22	5.	The university should demonstrate the definition of the order and ensuring the information protection, including the responsible persons definition for the accuracy and analysis timeliness of information and		+		

		the data provision.				
23	6.	An important factor is the involvement of students, employees and faculty in the processes of collecting and analyzing information, as well as making decisions based on them.		+		
24	7.	EP management should demonstrate the existence of a communication mechanism with students, employees and other interested parties, including the existence of conflict resolution mechanisms.		+		
25	8.	The university should provide a degree measure of faculty needs satisfaction, staff and students in the framework of the EP and demonstrate elimination evidence of the discovered deficiencies.		+		
26	9.	The university should evaluate the effectiveness and efficiency of activities, including in the context of EP.		+		
		Information collected and analyzed by the university should take into account:				
27	10.	key performance indicators;		+		
28	11.	the students contingent dynamics in the context of forms and types;		+		
29	12.	level of academic achievement, student achievement and expulsion;		+		
30	13.	students' satisfaction with the educational program implementation and the education quality at the university;		+		
31	14.	the availability of educational resources and support systems for students;		+		
32	15.	employment and career growth of graduates.		+		
33	16.	Students, employees and faculty must document their consent to the processing of personal data.		+		
34	17.	EP management should facilitate the provision of all necessary information in relevant fields of science.		+		
		Outcomes on the standard	**0**	**17**	**0**	**0**
"Development and approval of educational programs»standard						
35	1.	The university should determine and document the procedures for the development of EP and their approval at the institutional level.		+		
36	2.	EP management should ensure that developed EPs are consistent with established goals, including intended learning outcomes.		+		
37	3.	EP management should ensure the availability of developed models of the graduate of the EP that describe the learning outcomes and personal qualities.		+		
38	4.	EP management must demonstrate the conduct of external expert reviews.		+		

39	5.	The qualifications obtained upon completion of the EP must be clearly defined, explained and consistent with a certain level of NSC.		+		
40	6.	EP management should determine the impact of disciplines and professional practices on the formation of learning outcomes.	+			
41	7.	An important factor is the ability to prepare students for professional certification.		+		
42	8.	EP management must provide evidence of the participation of students, faculty and other stakeholders in the development of EP, ensuring their quality.		+		
43	9.	The complexity of the EP should be clearly defined in kazakhstan credits and ECTS.		+		
44	10.	EP management should ensure the content of academic disciplines and learning outcomes for the level of training (bachelor's, master's, doctoral).		+		
45	11.	The structure of the EP should provide for various types of activities corresponding to the learning outcomes.		+		
46	12.	An important factor is the presence of joint EPs with foreign educational organizations.			+	
		Outcomes on the standard	**1**	**10**	**1**	**0**
"Continuous monitoring and periodic evaluation of educational programs" standard						
47	1.	The university should conduct EP monitoring and periodic evaluation in order to ensure the achievement of the goal and meet the needs of students and society. The results of these processes are aimed at continuous improvement of the EP.		+		
		Monitoring and periodic evaluation of EP should consider:				
48	2.	the content of the latest scientific achievement programs in a particular discipline to ensure the relevance of the taught discipline;		+		
49	3.	changes in the needs of society and the professional environment;		+		
50	4.	load, academic performance and graduation of students;		+		
51	5.	the effectiveness of student assessment procedures;		+		
52	6.	students' expectations, needs, and satisfaction with EP learning;			+	
53	7.	educational environment and support services and their compliance with the goals of the EP.		+		
54	8.	The university and the EP management must provide evidence of the participation of students, employers and other stakeholders in the revision of the EP.		+		
55	9.	All interested parties should be informed of any planned or taken actions regarding the EP. All		+		

		changes made to the EP should be published.				
56	10.	EP management should ensure that the content and structure of the EP are reviewed taking into account changes in the labor market, requirements of employers and the social request of the company.	+			
		Outcomes on the standard	**1**	**8**	**1**	**0**
"Student-centered Learning, Teaching and Assessment»standard						
57	1.	EP management should ensure respect and attention to various groups of students and their needs, providing them with flexible learning paths.		+		
58	2.	EP management should ensure the use of various forms and methods of teaching and learning.		+		
59	3.	An important factor is the availability of own research in the field of teaching methods of EP educational disciplines.		+		
60	4.	EP management should demonstrate the existence of a feedback system for the use of various teaching methods and learning assessment outcomes.		+		
61	5.	EP management should demonstrate support for students' autonomy while guiding and assisting the teacher.		+		
62	6.	EP management should demonstrate the existence of a procedure for responding to student complaints.		+		
63	7.	The university should ensure the consistency, transparency and objectivity of the mechanism for assessing learning outcomes for each EP, including the appeal.		+		
64	8.	The university should ensure that the procedures for evaluating the learning outcomes of students of EP study are in line with the planned learning outcomes and program objectives. Evaluation criteria and methods within the framework of the EP should be published in advance.		+		
65	9.	The university should determine the mechanisms for ensuring the mastery of each learning outcome by each graduate of the study program and ensure the completeness of their formation.		+		
66	10.	Evaluators must be proficient in modern methods of assessing learning outcomes and regularly improve their skills in this area.		+		
		Outcomes on the standard	**0**	**10**	**0**	**0**
"Students»standard						
67	1.	The university should demonstrate a formation of the students contingent formation policy from admission to graduation and ensure the transparency of its procedures. Procedures governing the life cycle of students (from admission to completion) must be		+		

		defined, approved, published.				
68	2.	EP management should demonstrate the implementation of special adaptation and support programs for newly arrived and foreign students.		+		
69	3.	University must demonstrate compliance with Lisbon Recognition Convention		+		
70	4.	The university should cooperate with other educational organizations and national centers of the European Network of National Information Centers for Academic Recognition and Mobility / National Academic Recognition Information Centers ENIC / NARIC in order to ensure comparable recognition of qualifications.		+		
71	5.	EP management should demonstrate the existence and application of a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and non-formal learning.		+		
72	6.	The university should provide an opportunity for external and internal mobility of students of EP, as well as assist them in obtaining external grants for training.		+		
73	7.	EP management should make every effort to provide students with places of practice, facilitate the employment of graduates, and maintain contact with them.	+			
74	8.	The university should provide graduates of the study program with documents confirming the qualifications obtained, including the results of training, as well as the context, content and status of the education and evidence of completion.		+		
75	9.	An important factor is the monitoring of employment and professional activities of graduates of EP.		+		
76	10.	EP management should actively encourage students to self-education and development outside the main program (extracurricular activities).		+		
77	11.	An important factor is the presence of an existing graduates union / association.		+		
78	12.	An important factor is the availability of a support mechanism for gifted students.		+		
		Outcomes on the standard	**1**	**11**	**0**	**0**
"Faculty»Standard						
79	1.	The university should have an objective and transparent personnel policy, including hiring, professional growth and staff development, ensuring the professional competence of the entire staff.		+		
80	2.	The university should demonstrate the staff potential compliance with the university development strategy and the academic program specifics.	+			

81	3.	EP management should demonstrate awareness of responsibility for employees and ensure favorable working conditions for them.		+		
82	4.	EP management should demonstrate a change in the role of the teacher in connection with the transition to student-centered learning.		+		
83	5.	The university should determine the contribution of faculty staff to the implementation of the development strategy of the university, and other strategic documents.		+		
84	6.	The university should provide opportunities for career growth and professional faculty staff development.		+		
85	7.	EP management should involve practitioners in relevant industries in teaching.	+			
86	8.	EP management should provide targeted action to develop young teachers.		+		
87	9.	The university should demonstrate EP teachers' motivation for the professional and personal development, including encouraging the integration of scientific activity and education, as well as the use of innovative teaching methods.		+		
88	10.	An important factor is the active use of teaching staff of information and communication technologies in the educational process (for example, on-line training, e-portfolio, MEP, etc.).		+		
89	11.	An important factor is the development of academic mobility in the framework of EP, the involvement of the best foreign and domestic teachers.			+	
90	12.	An important factor is the involvement of teaching staff in public life (the role of teaching staff in the education system, in the development of science, the region, the creation of a cultural environment, participation in exhibitions, creative contests, charity programs, etc.).		+		
		Outcomes on the standard	**2**	**9**	**1**	**0**
"Educational Resources and Student Support Systems»standard						
91	1.	EP management must demonstrate the adequacy of material and technical resources and infrastructure.		+		
92	2.	EP management should demonstrate the existence of support procedures for various groups of students, including information and counseling.		+		
		EP management must demonstrate compliance of information resources with EP specifics, including compliance with:		+		
93	3.	technological support for students and faculty in accordance with educational programs (for example, online training, modeling, databases, data analysis programs);		+		

94	4.	library resources, including a fund of educational, methodological and scientific literature on general education, basic and majors in paper and electronic media, periodicals, access to scientific databases;		+		
95	5.	access to educational Internet resources;		+		
96	6.	examination of the results of research, final works, dissertations on plagiarism;		+		
97	7.	WI-FI functioning in the territory of the educational organization.	+			
98	8.	The university should strive to ensure the educational equipment and software, used to master the educational program, are similar to used in the relevant industries.		+		
99	9.	The university must ensure compliance with safety requirements in the learning process.		+		
100	10	The university should strive to take into account the needs of various groups studying in the context of EP (adults, workers, foreign students, as well as students with disabilities).		+		
		Outcomes on the standard	**1**	**9**	**0**	**0**
"Public Awareness»Standard						
		Information published by the university within the framework of the EP should be accurate, objective, relevant and should include:				
101	1.	ongoing programs indicating expected learning outcomes;	+			
102	2.	information about the possibility of qualification at the end of the EP;		+		
103	3.	information on teaching, training, assessment procedures;		+		
104	4.	information about passing grades and educational opportunities provided to students;		+		
105	5.	information on job opportunities for graduates.		+		
106	6.	EP management should use a variety of disseminating information methods (including media, web resources, information networks, etc.) to inform the general public and interested parties.		+		
107	7.	Public awareness should include support and clarification of national development programs of the country and the system of higher and postgraduate education.	+			
108	8.	The university should publish audited financial statements on own web resource.		+		
109	9.	The university should demonstrate the reflection on the web resource of information characterizing the university as a whole and in the context of EP.		+		
110	10.	An important factor is the availability of adequate and objective information about the faculty of education, in terms of personalities.		+		

111	11.	An important factor is informing the public about cooperation and interaction with partners within the framework of EP, including scientific / consulting organizations, business partners, social partners and educational organizations.		+		
112	12.	The university should post information and links to external resources based on the results of external evaluation procedures.		+		
113	13.	An important factor is the participation of the university and implemented EPs in various external assessment procedures.		+		
		Outcomes on the standard	**2**	**11**	**0**	**0**
Standards in the context of individual specialties						
TECHNICAL SCIENCES AND TECHNOLOGIES						
		Educational programs in the areas of»Technical Sciences and Technologies", such as»Civil Engineering",»Production of building materials, products and structures", etc., must meet the following requirements:				
114	1.	In order to familiarize students with the professional environment and relevant issues in the field of specialization, as well as to acquire skills based on theoretical training, the education program should include disciplines and activities aimed at gaining practical experience and skills in the specialty in general and majors in particular, including: - excursions to enterprises in the field of specialization (factories, workshops, research institutes, laboratories, educational experimental farms, etc.), - conducting individual classes or entire disciplines at the enterprise of specialization, - conducting seminars to solve practical problems relevant for enterprises in the field of specialization, etc.	+			
115	2.	The teaching staff involved in the education program should include full-time teachers who have long-term experience as full-time employees in enterprises in the field of specialization of the education program.	+			
116	3.	The content of all EP disciplines should be based to one degree or another and include a clear relationship with the content of fundamental natural sciences, such as mathematics, chemistry, and physics.		+		
117	4.	EP management should provide measures to strengthen practical training in the field of specialization.		+		
118	5.	EP management should provide training for students in the application of modern information technologies.		+		

Outcomes on the standard	**2**	**3**	**0**	**0**
TOTAL	**11**	**102**	**5**	**0**