«АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТІҢ ТӘУЕЛСІЗ АГЕНТТІГІ» КЕМ

НУ «НЕЗАВИСИМОЕ АГЕНТСТВО АККРЕДИТАЦИИ И РЕЙТИНГА»

INDEPENDENT AGENCY FOR ACCREDITATION AND RATING

REPORT

on the results of the external expert evaluation Commission work for compliance with the requirements of standards of specialized accreditation of study programs

6B05412 Mathematics and Mathematical Modeling
7M05411 Mathematics and Mathematical Modeling
6B07116 Materials Science and Technology of Light Industry Materials
7M07113 Materials Science and Technology
7M07111 Nanomaterials and Nanotechnology

M.Kh. DULATY TARAZ STATE UNIVERSITY

Site Visit Dates: from 28 to 30 November 2019

INDEPENDENT AGENCY FOR ACCREDITATION AND RATING
External Expert Commission

Addressed
Accreditation
Council of IAAR

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M.Kh. DULATY TARAZ STATE UNIVERSITY

in the period from 28 to 30 November 2019

Taraz, 2019

Content

(I) LIST OF DESIGNATIONS AND ABBREVIATIONS

SP	- Study program
GD	- General disciplines
RO	- Registrar's Office
SC	- Standard Curriculum
CSIT	- Center for scientific and information technologies
RW	- Research Work
QMS	- Quality Management System
RSE	- Republican state enterprise
REM	on the rights of economic management
AS	- Academic Staff
EDMS	- EDM system
MM	- Mass Media
NAS RK	- National Academy of Sciences of the Republic of Kazakhstan
IDC	- Intellectual debate club
IS IOS	- International Standard of the International organization for standardization
SMA	- Students Movement Accounting
EMCD	- -Educational and methodical complex of discipline
OH	- Office Hours
CNT	- Common national testing
CT	- Common testing
LLP	- limited liability partnership
JSC	- Joint Stock Company
SME	- state municipal enterprise
HE	- Higher Education
WI	- working instruction
SRW	- student research work
SSC	- students' scientific clubs
EESA	- external evaluation of students' achievements
ISC	- intermediate state control
SAC	- State attestation commission
WC	- Working Curriculum
RL	- Research Laboratory
RI	- Research Institute
RC	- Research center
EC	- Emergency Situation
SCT	- Students' Construction Team
HL	- Healthy Lifestyle
ZhRBRSE	- Zhambyl regional branch of the Republican State enterprises
SMCU	- Scientific and Methodological Council of the University
SMBF	- Scientific and Methodological Bureau of faculties
ISP	- Independent study project
CE	- Catalogue of Electives
SIC	- students' individual code

(II) INTRODUCTION

In accordance with the order No. 110-19-OD of 22.10.2019 of the Independent Agency for Accreditation and Rating from 28 to 30 November 2019 an external expert Commission assessed the compliance of study programs "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and Technology of Light Industry Materials", "7M07113-Materials Science and Technology of Materials", "7M07111-Nanomaterials and Nanotechnology" of M.Kh. Dulaty Taraz State University with the standards of specialized accreditation of the IAAR (approved by the order No. 10-17-OD of February 24, 2017).

The report of the External Expert Commission (EEC) contains an assessment of the submitted study programs to the criteria of the IAAR standards, recommendations of the EEC for further improvement of study programs and parameters of the profile of study programs.

The composition of the EEC:

1. The Chairman of the Commission - Turrtkaraeva Gulnara Bayanovna, candidate of pedagogical Sciences. Professor, associate Professor, Sh. Ualikhanov Kokshetau State University. (Kokshetau);

2. Foreign expert-Ignacio Menéndez Pidal de Navascués, Professor, Doctor in Civil Engineering, Polytechnic University of Madrid (Madrid, Spain);

3. Foreign expert-Livia Nistor-Lopatenco, Ph.Dr. in Engineering, Dean of the Faculty Constructions, Geodesy and Cadastre, Technical University of Moldova (Chisinau, Republic of Moldova);

4. Expert - Ismayilova Guzal Amitovna, PhD, Acc. Prof., al-Farabi Kazakh National University. (Almaty);

5. Expert - Kalymova Kulziya Akrashevna, M. T., PhD, L. Gumilev Eurasian National University. (Nur-Sultan);

6. Expert - Shaikenova Kymbat Khamitovna, Ph. D., associate Professor, S. Seifullin Kazakh Agrotechnical University. (Nur-Sultan);

7. Expert - Aldungarova Aliya Kairatovna, PhD, associate Professor, S. Toraigyrov Pavlodar State University (Pavlodar);

8. Expert - Idrisheva Zhanat Kabylbekovna, candidate of technical Sciences, D. Serikbaev East Kazakhstan State Technical University. (Ust-Kamenogorsk);

9. Expert - Mursalimova Elmira Askarovna, PhD, associate Professor, Kazakh National Agrarian University (Almaty);

10. Expert – Khamraev Sheripidin Itakhunovich, candidate of technical Sciences, Professor, Abay Kazakh National Pedagogical University. (Almaty);

11. Expert – Bulashev Berdibek Kabkenovich, candidate of agricultural Sciences, associate Professor, S. Seifullin Kazakh Agrotechnical University (Nur-Sultan);

12. Expert- Abenova Elena Anatolievna, Ph. D., associate Professor, Narkhoz University (Almaty);

13. Expert-Sarsenova Lazzat Kadirgalievna, PhD, al-Farabi Kazakh National University. (Almaty);

14. Expert - Kopishev Eldar Ertaevich, Ph. D., associate Professor, L.N. Gumilev Eurasian National University. (Nur-Sultan);

15. Employer – Akchalova Aigul Sagimbekova, head of IE "Akchalova" Restaurant "Marrakech", "Piala", "Monterey" (Taraz);

16. Employer – Ykasova Aida Khalilovna, head of IE "Rakhimov" (Taraz);

17. Student -Bitenova Ayana Bakytkyzy, 2nd year student of "5B080110-Plant Protection and quarantine" SP, Taraz Innovation and Humanities University (Taraz);

18. Student-Adilbek Kudaibergen Nazymbekuly, 4th year student 5B070400-Computer engineering and software SP, Taraz Innovation and Humanities University (Taraz)

19. Student-Kudaibergenova Zhamila Serikbaykyzy, 4th year student of "5B011200-Chemistry", SP Taraz State Pedagogical University (Taraz);

20. Student -Umiralkhanov Azizkhan Nazhimkhanuly, 4th year student of "5B010900 Mathematics" OP, Taraz State Pedagogical University (Taraz);

21. The observer from the Agency - Timur Yerbolatovich Kanapyanov, PhD, head of international projects and public relations of the IAAR (Nur-Sultan).

(III) REPRESENTATION OF THE EDUCATIONAL ORGANIZATION

Muhammed Haidar Dulaty Taraz State University (TarSU) was established by the Decree of the Government of the Republic of Kazakhstan No. 256 dated 24.03.1998 by reorganization and merger of Zhambul Land Reclamation and Construction Institute, Zhambul Technological Institute of Light and Food industry and Zhambyl University.

As Republican State Enterprise MES of the RK M. Kh. Dulaty TarSU was established in accordance with the Decree of the Government of the Republic of Kazakhstan "On reorganization of the Ministry of education and science of the Republic of Kazakhstan" No. 1879 dated 08.12.1999, In 2012, Government decree No. 544 dated 28.04.2012 state enterprise

"Muhammed Khaidar Dulaty Taraz State University" was reorganized into Republican State enterprise on right of economic management.

Training in TarSU is held in accordance with the State license for educational activity in the sphere of higher and postgraduate professional education No. 12020167 of 14.12.2012., and applications for licenses of 22.12.2017 G., order of MES RK № 237 from 23.05.2017.

In 2019, 192 study programs are included in the Register, including 106 bachelors', 81 masters' and 5 doctoral programs.

Within the framework of the program of multilingual education, academic groups have been formed in 13 specialties, where classes are conducted in three languages. WC is made in accordance with regulatory requirements (50: 30:20). The University plans to increase the share of study programs implemented in three languages to 30%.

Over the past 5 years, the University has trained more than 13,000 specialists for the region and the country. The quality of training and demand for graduates are determined by a fairly high level of their employment (in 2017-2018 academic year - 71.66%). In general, over the period from 2015-2018, on average, 77% of graduates were employed.

The contingent of full-time students as of November 05, 2019 is 6425 students (1489 of them on the basis of the state educational grant), correspondence students – 5239, distance learning students -1103, evening training – 388, 356 undergraduates and 44 doctoral students.

Currently, the total number of full-time academic staff at the University is 630 people, including 39 doctors of science, professors, 242 candidates of science, associate professors, 36 doctors of PhD, 262 Masters. The University employs 25 people who are members of the national Academy of Sciences, branch academies of Sciences and professional associations of the Republic of Kazakhstan.

The University consists of 9 faculties: Faculty of Economics and business; Law faculty; Faculty of Water Management, Ecology and Construction; Faculty of oil, gas and mechanics; Technological Faculty; Faculty of information technology, automation and telecommunications; Faculty of Humanities and social Sciences; Faculty of postgraduate education; faculty of distance learning. In the structure of these faculties there are 43 departments, including the Military Department.

M.Kh. Dulaty Taraz State University has a powerful modern material and technical base, which includes 56 objects with a total area of 161340.75 sq. m.

Educational and research processes are organized and held in 14 educational and laboratory buildings with a total area of 73924.4 square meters. The faculties have 88 laboratories equipped with the necessary equipment and measuring tools. For study and scientific purposes, the unique research laboratory "Nanoengineering research methods" is used, which is one of the 15 laboratories of engineering profile, opened in the 2007-2008 academic year in the leading universities of Kazakhstan on the initiative of the First

President of the country N. A. Nazarbayev and is equipped with unique modern foreign equipment.

M.Kh. Dulaty TarSU has a sufficient sports base, which consists of a set of various sports facilities of closed and open types. The total area of sports halls, playgrounds and auditoriums is 4564, 15m2. The University has 7 indoor sports halls equipped with appropriate sports equipment. The University also has a football field with a grass lawn and running tracks; a field hockey field with a regupol surface; 2 outdoor football fields; 2 basketball and 2 volleyball courts; 4 tennis courts and a sports and recreation camp. The area of open sports complexes is 22983sq. m.

Currently, the University has three dormitories with a total area of 18370,8 square meters with 804 beds. To organize student meals, the University operates a youth leisure center "Zhastar Alemi" with a total area of 3069.9 sq. m. for 400 seats, as well as a cafe in the main building for 60 seats, 2 canteens in the technological building for 80 seats, 2 canteens in the hydro complex for 60 seats. Medical care for employees and students is provided by the health center and the city polyclinic No. 3.

In 2014 TarSU was named "Industry Leader" (certificate of the National business rating of Kazakhstan), President was named "Best Executive of the year". In 2017, according to the results of the world ranking of the research group "Webometrics Ranking of World Universities "(www. webometrics.com) TarSU takes 11104 place in the ranking among 20 thousand universities in the world, and among 112 domestic universities -21st place. Since 2018, the University participates in the ranking of the most "environmentally friendly" universities in the world Greenmetric.

The University is a member of 5 international, national and regional professional associations: the University of the Shanghai cooperation organization (USOS, from 12.10.2012), the Eurasian Association of Universities (from 15.04.2015), the European Association of Higher Education Institutions (EURASHE) (from 01.07.2015), the Association of Central Asian Universities (from 15.03.2017), the Association of Asian Universities (from 25.06.2017).

November 10-15, 2014 M.Kh. Dulaty TarSU passed specialized accreditation for 22 undergraduate and 21 master's degree programs. 6 December 2014 Accreditation Council IQAA positive decision on accreditation of study programs 43 TarSU period from 06.12.2014 G. – 05.12.2019, Issued by the accreditation certificate SA # 0035/1-6, SA # 0038/1-4 indicate the status of the quality of education of the University.

In the period from April 13-16, 2015, 11 study programs of the University passed specialized accreditation. By the decision of the Accreditation Council of the IQAA, certificates were issued in three languages (Russian, Kazakh, English) on the passage of specialized accreditation of study programs. Accreditation certificate: SA no. 0057/1, SA no. 0057/2 of 25.04.2015, certificate validity period: from 25.04.2015 to 24.04.2020.

On December 11, 2015, 4 educational programs of the University passed specialized accreditation. By the decision of the Accreditation Council of the IQAA, certificates were issued in three languages (Russian, Kazakh, English) on the passage of specialized accreditation of study programs. Certificate of accreditation: SA no. 0073/1, SA no. 0073/2, certificate validity: 06.12.2014 to 18.12.2019 In 2019 the University passed a recertification audit for compliance with the requirements of the standard ISO9001: 2015, received certificates of the international standard Of the Association for certification "Russian Register" and the organization IQNet.

In November 2018, M.Kh. Dulaty TarSU successfully passed the international institutional accreditation in NU "Independent Agency for Accreditation and Rating (IAAR)". The decision of the Accreditation Council of M.Kh. Dulaty TarSU 20.12.2018 certificate no. AA0123 was issued, confirming the status of an accredited University. The validity of the certificate from 20.12.2018 to 19.12.2023

In the period from April 19 to May 3, 2019, TarSU passed specialized accreditation for 17 bachelor's and 18 master's degree programs. The decision of the Accreditation Council IQAA 08.06.2019 of M.Kh. Dulaty TarSU a certificate of specialized accreditation SA-A number 0166/1-8 was issued, for a period from June 10, 2019 to June 07, 2024.

Training in TarSU is carried out in accordance with the State license to engage in educational activities in the field of higher and postgraduate professional education:

According to the old classifier:

- State license No. 12020167 dated 14.12.2012, Appendix to license No. 024 dated 27.03.2017 for the list of licensed types of work and services included in the licensed type of activity, higher education on SP 5B060100 – " Mathematics»;
- State license No. 12020167 dated 14.12.2012, Appendix to license No. 025 dated 27.03.2017 for the list of licensed types of work and services included in the licensed type of activity, higher education on SP 6B071000- " Materials Science and technology of light industry materials»;
- Appendix No. 12 of 14.12.2012 to the State license No. 12020167 of 14.12.2012-postgraduate education: SP 6M060100 "Mathematics»;
- Appendix No. 13 of 14.12.2012 to the State license No. 12020167 of 14.12.2012-postgraduate education: SP 6M071000- «Materials Science and technology of light industry materials»;
- Appendix No. 18 of 14.12.2012 to the State license No. 12020167 of 14.12.2012-postgraduate education: SP 6M074000 - "Nanomaterials and nanotechnologies".

According to the new classifier:

- Appendix No. 34 of 03.07.2019 to the license for educational activities No. 12020167 of 14.12.2012, subspecies of licensed activities-higher education, group for M-6B054-Mathematics and statistics;
- Appendix No. 34 of 03.07.2019 to the license for educational activities No. 12020167 of 14.12.2012, subspecies of licensed activities-higher education, group for MTLP-6B071-Engineering and engineering;
- Appendix No. 32 of 03.07.2019 to the license for educational activities No. 12020167 of 14.11.2012, subspecies of licensed activities-postgraduate education, 7M054-Mathematics and statistics;
- Appendix No. 32 of 03.07.2019 to the license for educational activities No. 12020167 of 14.11.2012, subspecies of licensed activities-postgraduate education, 7M071-Technical Engineering Appendix 32 from 03.07.2019 to the license for educational activities №12020167 from 14.11.2012, subspecies of licensed activities-postgraduate education, 7M071- Technical Engineering

The unit of the organizational structure for the implementation of accredited study programs of bachelor's and master's degree "Mathematics and mathematical modeling" is the Department of Mathematics. Training of students on specialties 6B07116 – "Material Science and materials technology of light industry" and 7M07113 - "Material Science and technology of materials" is conducted at the Department "Technology of textile industry and material science", in SP 7M07111 - "Nanomaterials and nanotechnology" at the Department "Chemistry and chemical technology".

The contingent of full-time/part-time and distance learning students accredited by SP on November 01, 2019 is:

- 5B060100-Mathematics (6B05412-MMM (1 course) - 1 student) - 124 students (35 of them on the basis of the state educational grant, 24 people on correspondence courses). Master's degree 6M060100 - "Mathematics" - 7 undergraduates, 7M05411 - "Mathematics and mathematical modeling" - 1 person.

- 5B071000-Materials Science and technology of new materials (6B07116- "Materials Science and technology of light industry materials" (1 course) - 7 students) - 54 students (of them on the basis of the state educational grant – 33 students studying on a paid basis-21 people). Master's degree 6M071000 –

"Materials science and technology of new materials" - 29 undergraduates (of them on the basis of the state educational grant – 26 students studying on a paid basis-3 people).

- Master's degree 6M074000 - "Nanomaterials and nanotechnologies" - 23 undergraduates (of them on the basis of the state educational grant – 22 students studying on a paid basis-1 person).

Information about the Department "Mathematics"

The Department of Mathematics has been organized since 1998 and trains specialists in the following bachelor's and master's degree programs:

5B060100/6B05412-Mathematics/ Mathematics and mathematical modeling (bachelor's degree);

6M0601007/M05411-Mathematics/ Mathematics and mathematical modeling (master's degree).

The Department conducts research in the following areas: "Incorrect and inverse problems of mathematical physics", "Mathematical modeling in environmental problems". "Differential geometry and dynamical systems", "Mathematical modeling in problems of mechanics and applied problems", "Methods of teaching mathematics".

International cooperation is developing: after the invitation to the Department of the southern mathematical Institute of the Vladikavkaz scientific center of the Russian Academy of Sciences and the RSO-A, Ph. D., Professor Yuri Gennadyevich Nikonorov, research work is continued.

The Department cooperates with the following universities and organizations: al-Farabi KazNU., Institute of mathematics and mathematical modeling of Almaty, Novosibirsk State University.

Within the framework of the SP "Mathematics and Mathematical Modeling" there are student scientific clubs" Lie Algebra and its applications", "Computer algebra", "Robotics", which involve 30 full-time students.

Information about the Department "Technology of textile industry and materials science"

The Department "Technology of textile materials" was established in 1994.

In 2013, the Department was renamed the Department of "Technology of textile industry and materials science" and provides training in the following bachelor's and master's degree programs:

5B071000/6B07116-Materials Science and technology of new materials/ Materials Science and technology of light industry materials;

6M071000/7M07113-Materials Science and technology of new materials/ Materials Science and technology of materials.

The Department conducts research using modern equipment of the laboratory of the Department: research of physical and mechanical properties of wool; research and development of knitwear with medicinal properties; innovative technology coloring of textile materials. The Department has scientific clubs "Ornek" and "Sheber".

The Department has established a close relationship with the leading enterprises of the textile industry of Kazakhstan, signed agreements on mutual cooperation in the field of production, science and education with JSC "Melange", JSC "Yu-Tex", LLP "STKZ" soshttexteline KZ (Shymkent), LLP "Factory Posh-Taraz", LLP "Tarazkozhobuv", IP "CHANCE" (Taraz), since 2005 the Department cooperates with the Directorate of the

Special economic zone (SEZ) "Ontustik", actively participates in annual seminars, meetings, conferences organized by the SEZ Directorate on the development of the textile cluster in Kazakhstan. Signed contracts with leading universities of the Republic of Kazakhstan: ATU (Almaty), SKSU (Shymkent); with K. G. Razumovsky Moscow State University of technology and management. (Russia); Kaunas University of technology (Lithuania), Akhunbabayev Tashkent Institute of textile and light industry. (Uzbekistan).

Information about the Department "Chemistry and chemical technology"

Since 1992, on the basis of the Department of analytical and physcolloid chemistry and the Department of inorganic chemistry, the Department of analytical and inorganic chemistry was organized, and then the Department of "Chemistry and chemical technology", which trains specialists in the following master's degree program:

- 7M074000/7M07111-Nanomaterials and Nanotechnology.

October 9, 2018 in honor of the 60th anniversary of M.Kh. Dulaty Taraz State University at the Department of chemistry and chemical technology, "Physicochemical research center" was opened in the name of the rector of the Zhambyl Technological Institute of Light and Food Industry (1972-1987).

The Department conducts research in the following areas:

"Development of technology for the production of nanostructured catalysts from metals and rare-earth elements from waste production of phosphates and phosphorus", "Synthesis and research of physical and chemical properties of environmentally friendly heteropoly nuclear complexes based on copper, titanium and chromium compounds", "Development of technology for the use of carboxide and amide functional polyelectrolytes in the phosphorus industry".

The results of research work of the faculty of the Department "Chemistry and chemical technologies" were published in various scientific publications, materials of international conferences, the results of research: 6 patents, 1 certificate of authorship were obtained.

An agreement was signed with LLP Kazphosphate with the Department of Chemistry and chemical technology on the establishment of a branch of the Department (Agreement No. 1887/13-OTO of 28.08.2013), which allows undergraduates to perform experimental research using the material base of the enterprise.

The Department of Chemistry and chemical technology has signed agreements with leading universities in Russia and abroad - "Agreement on cooperation" Novosibirsk national research state University ("Agreement on cooperation" of 14.04.2018), Braganza Polytechnic Institute ("Agreement" of 25.11.2015, "Agreement"), D. V. Sokolsky Institute of fuel, catalysis and electrochemistry. ("Agreement" of 16.03.2017).

Qualitative and quantitative composition of academic staff for each SP:

- Within the framework of *5B060100/6B05412 - "Mathematics and Mathematical Modeling"* SP: the educational process is provided by 12 teachers, including candidates of science-7; masters-5. The percentage of AS with academic degrees and titles is 58.3 %;

- Within the framework of *6M060100/7M05411 - "Mathematics and mathematical modeling*" SP, the educational process is provided by 9 teachers, including 9 candidates of science. AS with academic degrees and titles is 100 %;

- Within the framework of 5B071000/6B07116-Materials Science and Technology of New Materials/Materials Science and Technology of Light Industry Materials SP: the study process is provided by 11 teachers, including doctors of science -1, candidates of science-5; with an academic degree of doctor of PhD-1. The percentage of SS with academic degrees and titles is 63.6 %;

- Within the framework of *6M071000-materials Science and technology of new materials / materials Science and technology of materials SP*, the study process is provided by 6 teachers, including doctors of science -1, candidates of science-5. The percentage of SS with academic degrees and titles is 100 %;

- Within the framework of *6M074000 - "Nanomaterials and nanotechnologies*" SP, the study process is provided by 12 teachers, including doctors of science -2, candidates of science-7, with an academic degree of doctor PhD-3.AS with academic degrees and titles is 100 %.

Employment of graduates on accredited options:

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

- for bachelors *5B060100/6B05412- "Mathematics and mathematical modeling*" SP 2016-2017 - 100 %, 2017-2018 - 90.4 %, 2018-2019 - 77.7 %;

- for undergraduates *6M060100/7M05411 - "Mathematics and mathematical modeling"* SP - 2016-2017, 2017-2018, 2018-2019-100%;

- for bachelors *5B071000-Materials Science and Technology of New Materials* SP 2016-2017 - 2016-2017, 2017-2018, 2018-2019-100%;

- for undergraduates *6M071000- Materials Science and Technology of New Materials* SP -2016-2017-83%, 2017-2018 -100%;

for undergraduates *6M074000-Nanomaterials and nanotechnology* SP -2016-2017-75%.

Academic mobility for accredited SP for the period 2014-2019:

During the reporting period, undergraduate students of the "Mathematics and Mathematical Modeling" SP and the "Materials Science and Technology of Light Industry Materials" SP participated in the academic mobility program, information about which is shown in table 1.

Table 1. Information about the participants in the programs of academic mobility

№	SP	Student's full name	Training period	Country, city	Name of the University
1	Mathematics	Abenov Ular	2014-2015	Turkey, Kostomanu.	University of Kostomanu.
2	Mathematics	Sabdenbek Aida	2014-2015	USA, state of Columbia	Greenrider College
3	Mathematics	Sabdenbek Aida	2015-2016	Czech Republic, Ostrava	Ostrava Technical University
4	Mathematics	Bekmursaeva Asylai	2015-2016	Lithuania, Vilnius	Vilnius University
5	Mathematics	Bekmursaeva Asylai	2016-2017	Poland, Lodz	University Лодзи
6	MSTNM	Dauletbai Aigerim	2018-2019	Poland, Lublin	Lublin Technical University

Undergraduates of 6M071000-"Materials Science and Technology of Materials"SP, 6M074000 – "Nanomaterials and Nanotechnologies", 6M05411 - "Mathematics and Mathematical Modeling" did not participate in the academic mobility program.

Research and contractual projects of the departments of accredited SP cluster:

Department "Mathematics»

The Ricci flow on generalized spaces of Wallaga (grant of MES RK for 2015-2017). Performer: Ph. D. - N.A. Abiev (contract No. 299 of 12.02.2015 for 4.5 million tenge.);

The Ricci flow on generalized spaces of Wallaga (grant of MES RK for 2015-2017). Performer: Ph. D. Abiev N. A. (contract no. 278 of 03.05.2016 for 4.5 million tenge.);

The Ricci flow on generalized spaces of Wallaga (grant of MES RK for 2015-2017). Performer: Ph. D.-. N. A. Abiev (contract no. 223 of 03.03.2017 for 4 116 760 tenge.);

Department of Chemistry and chemical technology»

- "Influence of neutral electrolytes on the process of borrowing carboxide - amide" (2015-2018);
- "Development of technology for the use of carboxide and amide functional polyelectrolytes in the phosphorus industry" (2015-2018);
- "Development of technology for the use of carboxide and amide functional polyelectrolytes in the phosphorus industry(2015-2018);
- "Study of the process of concentration, purification of extraction phosphoric acid and production of diammonium phosphate" (2015-2018);
- "Synthesis and study of physico-chemical properties of environmentally friendly heteropolymeric complexes based on compounds of copper, titanium and chromium" (2015-2018).

Department "Ttechnology of textile industry and materials science»

- services for laboratory tests for determining the water permeability of skins in dynamic conditions on the device PVD-2, the amount of the contract for 15,000 tg 2018.;
- services for laboratory tests for determining the water permeability of skins in dynamic conditions on the device PVD-2, the amount of the contract for 100,000 tg, 2019

(IV) DESCRIPTION OF THE PREVIOUS ACCREDITATION PROCEDURE

Study programs "6B05412-Mathematics and mathematical modeling", "7M05411-Mathematics and mathematical modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", "7M07111-Nanomaterials and nanotechnology" have been accredited by the IAAR for the first time.

(V) DESCRIPTION OF THE EEC VISIT

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 study programs in TarSU in the period from 28 to 30 November 2019.

To coordinate the work of the EEC 27.11.2019 G. hosted a kick-off meeting, where the powers between the members of the Commission were distributed, the revised schedule of the visit, agreed in the choice of methods of examination.

To obtain objective information about the quality of study 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. A total of 157 representatives participated in the meetings (table 2).

Table 2-Information on target groups that participated in meetings with the IAAR EEC:

Category of participants	**Number**
Rector	1
Pro-rectors	5
Heads of structural divisions	30
Deans of faculties	6
Heads of departments	13
Academic staff	42
Students	35
Graduates	10
Employers	15
Total	**157**

During the visit, members of the EEC got acquainted with the material-technical base of accredited SP, visited: Department of Mathematics, Department "Technology of textile industry and science and the Department of Chemistry and chemical technology", section "Robotics"; laboratory "Ornek" and "Sheber"; laboratory for the HMC; laboratory of technology of leather and fur;, doctor of Economics, Professor Mukhametkaliev T. M. scientific center of physical-chemical studies; A. Akhmetov's research laboratory..

At the meeting of EEC IAAR with target groups of TarSU, the mechanisms of implementation of the University's policy and specification of individual data presented in the report on the self-assessment of the University were clarified .

EEC members attended training sessions:

- on the subject " Analytical computing systems in mathematical research", 4 course (group B16MAT-1,3), SP 5B060900-Mathematics, laboratory lesson on the theme "Detools packet: Analytical finding of solutions of differential equations of the 1st order", Ph. D., associate Professor Krakhmaleva Y. R.

- on the subject " Professional specialty applications ", the 3rd course, specialty 5B071000-MNT, practical lesson on the theme " Repairs using special raster graphics effects and filters ", PhD, Tashmukhamedov F. R.

During the work, the members of the EEC visited the following bases of practice on accredited SP: LLP "KazNIIVH" (Kazakh research Institute of water management); IE "Kozhabekova". In accordance with the accreditation procedure, a survey of 127 teachers, 198 students, including Junior and senior was conducted.

In order to confirm the information presented in the self-assessment Report, external experts analyzed the normative and educational documentation of the University. Along with this, the experts studied the Internet positioning of the University through the official website of the University www.tarsu.kz

Within the framework of the planned program, recommendations for improving the accredited study programs of TarSU, developed by EEC based on the results of the examination, were presented at a meeting with the management on 30.11.2019.

(VI) COMPLIANCE WITH SPECIALIZED ACCREDITATION STANDARDS

6.1. Standard " Study Program Management»

- The University must have a published quality assurance policy.

- Quality assurance policies should reflect the relationship between research, teaching and learning.

- The University must demonstrate the development of a culture of quality assurance, including in the context of SP.

Commitment to quality assurance should apply to all activities performed by contractors and partners (outsourcing), including joint/dual-degree education and academic mobility.

- Management of the SP provides transparency to the development plan of SP based on the analysis of its functioning, the actual positioning of the University and focus its activities to meet the needs of the state, employers, stakeholders and learners.

- The SP guide shows the mechanisms of formation and regular revision of the development SP plan and monitor its implementation, evaluate achievement of learning objectives, meet the needs of students, employers and society, decision-making aimed at continuous improvement of SP.

- The management of the SP should involve representatives of interest groups, including employers, students and AS in the formation of the plan for the development of the SP.

- The management of the SP must demonstrate the individuality and uniqueness of the SP development plan, its consistency with national development priorities and the development strategy of the education organization.

- The University must demonstrate a clear definition of those responsible for business processes within the framework of the SP, an unambiguous distribution of job responsibilities of staff, differentiation of functions of collegial bodies.

- The SP management must provide evidence of the study program transparency management system.

- The management of the SP must demonstrate the successful operation of the internal quality assurance system of the SP, including its design, management and monitoring, their improvement, and decision-making based on the facts.

- The management of the SP should carry out risk management.

- The management of the SP should ensure the participation of representatives of interested persons (employers, AS, students) in the collegial management bodies of the study program, as well as their representativeness in making decisions on the management of the study program.

- The University must demonstrate innovation management within the framework of the SP, including the analysis and implementation of innovative proposals.

The SP management must demonstrate evidence of openness and accessibility to students, faculty, employers, and other stakeholders

- The management of the SP must be trained in education management programs.

- The management of the SP should strive to ensure that the progress made since the last external quality assurance procedure is taken into account when preparing for the next procedure.

The evidence part

The quality assurance policy of TarSU is in the open access: it has placement as on open resources-the University's website www.tarsu.kz , and on internal-stands of departments and faculties, in libraries, in offices of heads of services, in educational buildings of higher education institution.

From September 2016 to September 2019, the University's activities were carried out in accordance with the third edition of the "M.Kh. Dulaty TarSU Development Strategy for 2016-2019" (developed on the basis of the President's Decree dated 01.03.2016 No. 205 "On approval of the State program for the development of education and science of the Republic of Kazakhstan for 2016-2019", reviewed and approved for publication by the Supervisory Board of the University order.

Since September 2019, the fundamental document defining the goals and priorities of the University in the future is the "Development Program of M.Kh. Dulaty Taraz State University for 2019-2022" (Or # 3 of the Academic Council of 26.03.2019). The quality assurance policy of TarSU is determined by the mission of the University, the strategic

development plan of the University for 2016-2019, the goals and objectives of the University and is aimed at ensuring high quality of educational services and research.

The current quality policy reflects the relationship between research, teaching and learning, taking into account the national and intra-University context. One of the indicators of the success of its implementation is the growth of the number of prize-winners and winners in the Republican student subject Olympiads. Moreover, over the past three years, 262 students of the University have won prizes on the results of competitions, Olympiads and scientific conferences held in Kazakhstan and the CIS countries (among them students of "Mathematics" SP Rai Gauhar, Taubayeva Karlygash, Dosybayeva Aziza). Over the past 3 years, 112 students of the University were awarded the qualification "student-researcher", including 32 students in 2017, 41 in 2018 (among them students of the SP" Mathematics " Talaybekkyzy Nazerke, Mekemova Diana).

In 2017, out of 1510 theses (projects) of University students, 179 works (projects) were recommended for introduction into production, of which 97 works containing the results of R & D were implemented. Mathematical products in the form of mathematical programs developed in the diploma papers of students SP 6B05412 - "Mathematics and mathematical modeling" and 5B060100 - "Mathematics" successfully pass the approbation in the teaching of disciplines and are further used in the study process. Students of the SP "Mathematics and mathematical modeling" develop mathematical programs in the environments of modern computer algebra in bachelor's theses: Satynbek A. (graduation 2015) "Construction of mathematical models of mechanical systems of high degree of mobility", Dalabay N. (graduation 2015) "Non-Local problems for model equations of biological processes", Zhumabekova A. (graduation 2015) "Application of computer algebra systems to problems of mathematical analysis", Dosybaeva A. (graduation 2016) "Mathematical modeling of economic and financial problems", Sabdenbek A. (2016 issue) "theory of finite-dimensional linear spaces in Maple packages", Esaliev E. (graduation 2016) "Using the Maple system for solving problems of probability theory"; in master's theses: Matskovskaya A. (graduation 2016) "Methods and algorithms for solving systems of differential equations with variable coefficients in the Maple system", Abenov U. (graduation 2016) "Application of Maple and Delphi systems to modeling problems of discrete mathematics", Master's degree In Maple "etc.

Undergraduates of SP 7M07113 - "Material Science and technology of materials"/6M071000-Material Science and technology of new materials) Amalbekova A. Zh., Balmaganbetova N. Zh., Rakhymzhankyzy A. (2017 graduates) completed their dissertations on the following topics: "Improving the technology of production of elastic leather with semi-aniline finish for the top of shoes made of cattle skins", "Development of rational technology for processing leather waste", "Study of the process of chrome tanning by restoring Cr+6 to Cr+3 directly on the fiber" directly related to the content of the disciplines of the working curriculum NMDO 5304- " New materials for shoes»; MPRMSZS 5316- "Method of obtaining leather materials with specified properties", TOWKKM 5317 "Technological support for the production of competitive leather and fur".

The results of master's theses SP 7M07111/6M074000 - "Nanomaterials and nanotechnologies" of master's student Shabrova P. (graduation 2016) are devoted to the problem of synthesis and research of precursors for obtaining metal nanocoats and is directly related to the content of the discipline "Methods of obtaining nanostructures and nanomaterials". The results of the study Shabrova P. introduced into the educational process and included in the teaching materials of this discipline.

The development of a culture of quality assurance is ensured through the systematic implementation of study programs of the University. Study programs are designed on the basis of new legal and educational acts of MES RK, 6B05412-"Mathematics and mathematical modeling" (5B060100-"Mathematics"), 6B07116-"Material Science and

technology of light industry" (5B071000-"Material Science and technology of new materials"),7M05411-"Mathematics and mathematical modeling" (6M060100-"Mathematics"),7M07113-"the Science and technology of materials" (6M071000 the Science and technology of new materials), 7M07111- "Nanomaterials and nanotechnology" (6M074000- "Nanomaterials and nanotechnology"), included in the register of study programs in 2019

Quality assurance of accredited study programs is manifested in awareness, openness, interaction with employers in the format of partnership and is expressed in their participation in determining the professional competencies of students, the list and content of disciplines, providing a base for research practices, practical training, providing methodological assistance to students.

All activities of the University are carried out independently without using outsourcing services, transferring them to partners and contractors. Collegial bodies of management of faculties are Councils of faculties, Methodical bureaus of faculties at which meetings questions of educational, educational-methodical, scientific and educational work are considered.

The transparency and collegiality of the processes of forming the SP development plan is confirmed by the participation of the entire team, students, interested persons, and employers. This is evidenced by their participation in the activities of the Academic Council, educational and methodological Council, meetings of the Department, providing management of the main processes of the University. For example, in the development of SP 6B05412 - "Mathematics and mathematical modeling" 4th-year student Talaybekkyzy N., SP 7M05411-" Mathematics and mathematical modeling " 2nd-year master's student Kairlieva D., SP 7M07111-" Nanomaterials and nanotechnology "2nd-year master's student Gadzhiva C, within SP 6V07116 -" Materials Science and technology of light industry materials " involved 4th-year students Kumarova A. and Kurbanbaev E.

Development of a study programs plan of the University is based on the analysis of the functioning of the SP, the real positioning of the University, and also taking into account human and scientific potential of the Department, implements the process, the demand in specialists of this profile in the region as well as years of experience educational activities of the University in national and international practice.

The mechanisms for the implementation of all the main processes, including the management of educational activities are described in detail in the internal regulations: Or 11/1. 19-2018 Academic rules for the organization of the educational process of M.Kh. Dulaty TarSU., RD 11/1-1.02-2016 Regulations on the organization of educational and methodical work at the University and in the standard "Development and approval of the study program".

Interaction between structural divisions and employees of the University is defined in the current organizational structure. The structure of the University's divisions is defined in the relevant regulations. The distribution of responsibilities and powers at the University is determined by internal regulations, University plans, orders of the rector, Regulations on divisions and job descriptions of employees.

To effectively take advantage of the process approach, process managers are identified. Responsible for the processes are appointed by the orders of the Rector, and in the framework of the SP at the Department level, the head of the Department.

The internal quality assurance system of study programs includes the following processes: development and publication of expected learning outcomes, monitoring of students ' progress and achievements, periodic analysis and adjustment of the content of the program, formal procedures for approving programs by higher organizations, external audits of program implementation on a regular basis, internal audits of program

implementation on a regular basis, interaction with consumers, employers and other stakeholders on an ongoing basis.

Analytical part

Analyzing the SP for compliance with the standard "Management of the study program" in the accredited areas, the Commission notes:

The University has a published quality assurance policy, the quality assurance policy reflects the relationship between research, teaching and learning (implementation acts, certificates, publications, publications).

When studying the documentation of the Department, the Commission was provided with plans for the development of the SP, drawn up on the basis of the development Program of M.Kh. Dulaty Taraz State University for 2019-2022.

The management of the SP involves representatives of groups of interested persons, including employers, students and academic staff to form a plan for the development of the SP (minutes of meetings of departments, acts-coordination with third-party organizations, interviewing). Thus, for the development and implementation of study programs for bachelor and master's degree in the direction of "Materials Science and technology of new materials" the main specialists of JSC "Tarazkozhobuv": chief technologist Kurmashev Zh. A., Director of LLP "Imstalkon" Nikulin A. N., Deputy Director of LLP "Factory Posh– Taraz" Aitkulov S. A were attracted.

The quality of the implementation of the development plan is carried out on the basis of semi-annual and annual reports of the faculty, the activities of departments in the main areas: study, teaching, scientific, educational. Control over the implementation of programs according to the development plan is carried out at several management levels – the head of the Department, the Dean of the faculty, heads of structural divisions, Vice-rectors in the field of activity, the rector of the University.

The heads of accredited companies have completed training courses in education management programs.

According to the results of the survey, 28.3% answered the question about the assessment of AS involvement in the process of making managerial and strategic decisions "very well", "good" - 63.8%, "relatively bad" - 5.5 %.

On the issue of encouraging innovation, AS rated" very good " - 40.2%," good " - 55.1%," relatively bad " - 4.7 %.

Strengths: not identified.

EEC recommendations for "6B05412-Mathematics and mathematical modeling" SP, "7M05411-Mathematics and mathematical modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:

- to carry out systematic work on the identification and formulation of individuality, and the uniqueness of the SP, the coherence of the development plan of SP with the University development strategy, in particular on the revision of the theoretical and practical component of the proposed trajectory accredited and disclosure SP appeal SP "6B05412 Mathematics and mathematical modeling".

- provide innovation management within the framework of the SP, including the analysis and implementation of innovative proposals. Identify mechanisms to support and encourage initiatives to commercialize research projects that have an innovative focus.

The conclusions of the EEC according to the criteria:

According to the "Study program Management" standard, 17 criteria are disclosed, of which 15 have a satisfactory position and 2 suggest improvements.

6.2. Information Management and reporting standard»

- The University should ensure the functioning of the system of collection, analysis and management of information based on the use of modern information and communication technologies and software.

- The SP management must demonstrate the systematic use of processed, adequate information to improve the internal quality assurance system.

- There should be a system of regular reporting within the SP that reflects all levels of the structure, including an assessment of the effectiveness and efficiency of departments and research.

- The University must establish the frequency, forms and methods of management evaluation of the SP, the activities of collegial bodies and structural units, senior management, implementation of scientific projects.

- The University must demonstrate the determination of the order and ensuring the protection of information, including the identification of responsible persons for the accuracy and timeliness of the analysis of information and the provision of data.

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

- The management of the OP must demonstrate that there is a mechanism for communication with students, employees and other stakeholders, including the presence of conflict resolution mechanisms.

- The University must provide a measure of satisfaction with the needs of the faculty, staff and students in the framework of the SP and demonstrate evidence to address the identified deficiencies.

- The University should evaluate the effectiveness and efficiency of its activities, including in the context of SP.

- Information collected and analyzed by the University in the framework of the SP should take into account:

- key performance indicators;

- dynamics of the contingent of students in the context of forms and types;

- academic performance, student achievement, and expulsion;

- satisfaction of students with the implementation of the SP and the quality of education at the University;

- availability of educational resources and support systems for students;

- employment and career development of graduates.

- Students , employees and staff must document their consent to the processing of personal data.

- The management of the SP should help to provide all necessary information in the relevant fields of science.

The evidence part

To automate the process of collecting, analyzing and managing information in. M.Kh. Dulaty TarSU implemented and operates systems for collecting, analyzing and managing information based on the use of modern information and communication technologies and software: information management within the official website of the University, a folder for the exchange of information between structural units " Public$", management of academic information within the framework of AIS "Platonus", a computer program for managing the study process under the credit system of training of own development "Sirius", an integrated library information system, programs" 1-C enterprise "and"1-C Personnel accounting".

The functioning of information systems for collecting, analyzing and managing information is regulated by the following normative documents of the University: Regulations on the educational and methodological Department; order on the creation of a resource group No. 109 of 27.11.2015; order on conducting a survey among students on the basis of AIS "Platonus" No. 28 of 14.04.2018.

The collection, analysis and management of academic information is carried out by AIS "Platonus". The work of the admissions Committee with applicants is completely transferred to the AIS "Platonus" - filling in the data in the database and the formation of orders for enrollment in academic groups. The "Diploma" module has been introduced,

through which state-issued diplomas and applications to the diploma (transcript) are printed. A survey of students is conducted on the questionnaire "Teacher through the eyes of students", the results of the survey form an automated report, formed by departments, disciplines, teachers.

Access to information in the AIS "Platonus" and "Sirius" is carried out for the authorized user and is differentiated depending on the needs of users and the functional responsibilities of the service personnel. The folder for information exchange between structural divisions "Public$" is public for all employees and teachers of the University.

The management of educational programs places information about all aspects of development, formation, approval and implementation in the local information network " Public$". The created working groups on development of educational programs carry out work on acquaintance with those or other questions arising in the course of development, adjustments, introduction of additions and changes of SP at meetings of Department and Council of faculty.

Placement of information about the SP and its development plan is carried out through information stands and the official website of the University www.tarsu.kz -site tab Learning process / Modular study program.

The results of the analysis and monitoring of information are reflected in the certificates, reports of structural divisions of the University and are provided to responsible persons for making decisions to improve the process. For example, based on the results of the analysis of the session, the Academic Council of the University makes decisions in the form of tasks to the relevant structural divisions of the University, develops action plans to eliminate shortcomings, improve academic performance and attendance.

To ensure the security of the University's information resources, measures are taken to back up data by creating backup copies of databases that provide the ability to restore information.

Processed information based on reliable and accurate input data is used in the future to improve the internal quality assurance system.

The results of the work done are reflected in the internal reporting documents, which are provided to the top management (rectorate), management of structural divisions. The faculties operate in the Councils of the faculties. Collection and analysis of information is regulated by the document STU 01-2017 "Management of documented information" from 23.11.2017.

Through the information and educational portal "Sirius" communication with students is carried out by publishing the necessary information and ads, which are duplicated on the website of TarSU in the "Student" section. The exchange of operational information between the structural divisions of the University is carried out on a local Intranet chat. Along with this, the University students and faculty of the Department, employers are involved in the process of collecting and analyzing information by means of questionnaires, interviews and making decisions based on them during the meetings of the departments. And also widely used practice of personal meetings of the rector with participants of the study process: students, undergraduates, doctoral students, faculty. In order to prevent conflict situations in the University approved and put into effect documents Or 11/1. 11-2017 " Rules of academic integrity of teachers, staff and students of. M.Kh. Dulaty TarSU", RI 15/1. 04-2016 "Working with complaints".

The evaluation process of students needs satisfaction is achieved using the methods of primary data collection – questionnaire ("Satisfaction of students with support of the University", "Satisfaction of student learning outcomes", "Student Satisfaction with creation of conditions for personal development and education"), test ("a Teacher by eyes of students" through the AIS "Platonus"), observation (curators, senior curator, Deputy Dean for educational work), the survey, interviews conducted during the academic year.

The mechanism of internal evaluation of the effectiveness and effectiveness of the study program of the University includes: current progress control, intermediate certification, state final certification; internal monitoring (students, faculty, departments, faculties, educational programs); quality system: internal audits. The external evaluation of the effectiveness and effectiveness of educational programs includes: control over compliance with licensing requirements, specialized accreditation of educational institutions, state control, monitoring of the education system, ratings, competitions, projects of educational programs.

Analytical part

Analyzing the SP for compliance with the standard "Information Management and reporting" in accredited areas, the Commission notes that TarSU has a system of information management and reporting on student recruitment, academic performance, contingent movement, personnel, etc., which is presented in regular reports at the meeting of departments and Academic Council. Regular questioning/interviewing of students, faculty and employers is carried out.

The methods used to collect information were confirmed during the interviewing of focus groups and viewing the documentation of departments. Based on the results of the analysis of the current progress of students, decisions are made on the organization of additional classes, consultations, administrative warning or incentive measures for students.

As one of the methods of analysis, the University uses rating analysis, the purpose of which is to stimulate the growth of qualification, professionalism, productivity of pedagogical and scientific work, the development of creative initiative of teachers. For example, every year the University conducts a rating assessment of faculty departments. The results of the rating analysis are used by the management of the University when making decisions on the extension of contracts, personnel appointments and when determining the amount of allowances to the salary of teachers, heads of departments, deans, deputies.

All participants in the study process and interested persons have the opportunity to complain about the quality of the organization of the study process and social, creative development, as well as to request their permission ("rector's blog", personal reception hours of the rector's office).

In general, the Commission notes that the University uses modern information systems, information and communication technologies and software tools to effectively manage information and reporting. *However, no mechanisms have been demonstrated to measure the satisfaction of the needs of AS and students in the SP.*

Strengths: none identified.

EEC recommendations for SP "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and Nanotechnology»:

- systematically analyze the results of the survey of stakeholders development of corrective action plan in the context of the SP, maintaining control over their execution and seeing the results of decisions taken.

The conclusions of the EEC according to the criteria:

The standard "Information Management and reporting" disclosed 17 criteria, of which 17 have satisfactory positions.

6.3.Standard " Development and approval of study programs»

- The University should define and document the procedures for the development of SP and their approval at the institutional level.

- The management of the SP must ensure that the developed SP meets the established goals, including the expected learning outcomes.

- The management of the SP should ensure that the developed models of the SP graduate describing the learning outcomes and personal qualities are available.

- The management of the SP must demonstrate the conduct of external expertise of the SP.

- The qualifications obtained at the end of the SP must be clearly defined, explained and correspond to a certain level of NSC.

The management of the SP 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 SP must provide evidence of the participation of students, AS and other stakeholders in the development of the SP, ensuring their quality.

- The labor intensity of the SP should be clearly defined in Kazakhstan loans and ECTS.

- The management of the SP should ensure the content of academic disciplines and learning outcomes to the level of training (bachelor's, master's, doctoral).

- The structure of the OP should include various activities corresponding to the results of training.

- An important factor is the presence of joint projects with foreign educational organizations.

The evidence part

TarSU has developed a procedure for approval, periodic review and monitoring of educational programs and documents regulating this process. Quality assurance SP formulated in RD 11/1. 10-2017 Regulations on planning, control and reporting in the educational process and other documents of the University QMS.

Study programs are made on the basis of legal acts in force in the field of education. The procedure for the development and approval of study programs is regulated by the "Regulations on the design of modular study programs" (from 14.02.2018).

To unify the requirements in RD 11/1. 18-2018 "Regulations on the design of modular study programs" developed a special layout of the SP, a separate section provides methodological requirements for the evaluation of the SP, in particular, the SP is evaluated using 4 groups of criteria (compliance with the SES, compliance with the SP, updatability and development of the SP, stakeholder involvement). These criteria are evaluated on a 5-point system (all points are summed up on all indicators) and additionally written comments are given.

The SP is evaluated by both external and internal experts. Such methods as organization of round tables, questionnaire survey, extended meeting of the Department and faculty are used to assess the quality of the SP. So, in 2018, the external examination 6B05412 - "Mathematics and Mathematical Modeling" / 5B060100 - "Mathematics", conducted by NCE RK "Atameken" in the Rating of study programs in 2018, Natural Sciences took 3rd place out of 15 SP universities in Kazakhstan. On SP 6B07116- "Material Science and technology of light industry materials" and 7M07113 – "Material Science and technology of materials" of. M.Kh. Dulaty Taraz State University, expert opinions were given by the General Director of "Tarazkozhobuv" LLP G. A. Kenbaev.

Indicators of external evaluation of quality of education are the results of the inspection fees the education Ministry, the reports of the State attestation Commission, the results of the Final certification, EESA, rating of study programs, achievements of students in subject Olympiads and scientific conferences, etc. Internal evaluation methods - evaluation of the activities of the Department and certification of staff and faculty; internal audits of the quality management system; check the readiness of the Department for the new academic year; quality of the study process; evaluation of educational achievements of students; survey of employers, students, employees, AS.

Participation of representatives of interested persons is carried out through the Supervisory Board, the academic Council of TarSU, the faculty Council, the scientific and methodological Bureau of the faculty. Interested persons with their comments, innovative proposals to improve the activities of the SP can contact any convenient communication channel. All proposals received are carefully considered by the relevant structural unit as soon as possible from the moment of receipt of the letter.

Ongoing changes in the labor market and requirements for the results of training SP are reflected in the specific proposals of employers through adjustments to the content of the studied disciplines and professional practices, which were discussed at the meetings of the Department and made to the SP. Updates to the SP are also made in connection with the need to implement certain government programs (for example, "Digital Kazakhstan", etc.) or at the initiative of a group of stakeholders.

Specification of goals is carried out using professional standards for groups of OP. In the absence of PS in some areas of training, the expected results of training are formed using the qualification requirements for the positions of the industry. Educational programs implemented in TarSU are aimed at 6, 7 and 8 levels of the NRC of the Republic of Kazakhstan.

The SP with all its modules is verified and validated in accordance with the above procedure. Thus, the model of a University graduate is a list of developed General and professional competencies that must be mastered in the learning process and subsequently demonstrated in practice (www.tarsu.kz).

The organization of practice at all stages is aimed at ensuring the continuity and consistency of mastering students ' professional skills in accordance with the requirements for the level of training of the graduate.

The compliance of the achieved level of training with the qualification levels of the NRC and ORC is evaluated during the FSA by the state certification Commission.

The mechanism of participation of students in the formation of the SP is to include senior students in the working group at the graduating departments. As a rule, the most active students engaged in scientific activities are included in the working group.

To identify the needs of employers, the University annually conducts a survey "Employer's Opinion on the quality of training of graduates of M.Kh. Dulatiy TarSU. ".

On the basis of RD 11/13. 04-2017 «Regulations on the policy of academic recognition in M.Kh. Dulatiy TarSU" the University has adopted a system for converting Kazakh loans into ECTS loans.

The widespread availability of study programs content provided by a location on the University website GOSO, WC, guide book, class schedules, CED, the presence in the library of training materials, delivery to the students of the syllabus, CED, IWC.

Analytical part

The Commission, having studied the report on compliance with the standard "Development and approval of the study program" notes:

EEC members had conversations with faculty, employers, graduates of different years and students of different courses. The assessment of the quality of study programs was carried out on the basis of the analysis of curricula, the catalog of elective disciplines, EMCD, questioning of students, academic staff, visiting classes, departments, computer classes. The results of visiting departments, practice bases, studying documents and interviewing stakeholders showed that students, teachers and employers take part in the development of the SP. At the same time, the system of justification of representativeness of the employers participating in design and implementation of the program is not fulfilled. For example, it is not clear how the main partners of the University are chosen as employers for graduates of individual universities.

The peer-reviewed SP "Mathematics and mathematical modeling" is one of the most popular and popular programs in the world related to the direction of information and communication technologies (ICT), for which there is a certain unification of the set of learning outcomes, subjects and their content recommended by professional associations. Therefore, experts note that along with the SES, NRC and SC of MES RK it is more appropriate to use industry professional standards and recommendations of IEEE and ACM, known as Computer curriculum (CS-2013, CE-2016, IS-2010_Bachelor, IS-2013_Master, etc.).

TarSU has a practice of implementing joint study programs. According to the Memorandum with the Lublin Polytechnic University (Poland) on the creation of joint bachelor's and master's degree programs, the Department of Automation and telecommunications has been operating a joint study program "Mechatronics" since 2017 (on the basis of the order of the Ministry of education No. 237 of 23.05.2017).

With the participation of foreign partners from the Polytechnic Institute of Braganza (Portugal), a joint master's degree program in the areas of "Chemical engineering" and "Information systems» has been launched since the 2018-2019 academic year.

However, there is no partnership with foreign educational organizations on joint OP for accredited SP at the moment.

Strengths for SP "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Mmodeling", "6B07116-Mmaterials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:

- the qualification obtained at the end of the SP corresponds to a certain level of the NSQ.

EEC recommendations for S "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Mmodeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and Nanotechnology»:

- in order to harmonize the content of the SP to conduct a comparative analysis with similar programs of leading domestic and foreign universities;

Additional recommendations of EEC for SP "6B05412-Mathematics and Mathematical Modeling", " 7M05411-Mathematics and Mathematical Modeling»:

- to develop, approve and start implementing by 2021-2022 academic year a joint SP with one of the foreign universities on SP "6B05412-Mathematics and Mathematical Modeling", SP "6B07116-Materials Science and technology of light industry materials".

The conclusions of the EEC:

According to the standard "development and approval of the educational program" 12 criteria are disclosed, of which 1 has a strong position, 10 a satisfactory position and 1 suggests improvements.

6.4. Standard «Continuous monitoring and periodic evaluation of study programs»

- The University should monitor and periodically evaluate the SP in order to ensure that the goal is achieved and meet the needs of students and society. The results of these processes are aimed at continuous improvement of the SP.

- Monitoring and periodic evaluation of the SP should consider:

- the content of programs in the light of the latest scientific achievements in a particular discipline to ensure the relevance of the taught discipline;

- changes in the needs of society and the professional environment;
- workload, academic performance and graduation of students;
-effectiveness of student assessment procedures;
-expectations, needs, and satisfaction of students with SP training;
-educational environment and support services and their compliance with the goals of the SP.
- The University and the management of the SP must provide evidence of the participation of students, employers and other stakeholders in the revision of the SP.
- All interested parties should be informed of any planned or undertaken actions in relation to the SP. All changes made to the SP must be published.
- The management of the SP should ensure that the content and structure of the SP is reviewed in accordance with changes in the labor market, the requirements of employers and the social demand of society.

The evidence part

In M.Kh. Dulaty TarSU an effective system that carries out the processes of monitoring was created, analysis and improvement of study programs in order to demonstrate the compliance of educational services with the requirements of SES, stakeholders, QMS standards and constantly improve its effectiveness. The monitoring system is based on the " development Strategy of M.Kh. Dulaty TarSU for 2016-2019" and "quality Guide".

The University has created a mechanism for monitoring the progress of students based on the analysis of the results of examination sessions, sociological research, the results of EESA and in accordance with the normative documents of the University (Or 11/1. 19-2018 " Academic rules of the study process in M.Kh. Dulaty TarSU ", RD 11/13. 05-2017 ("Order of organization and technology of intermediate certification of students"). To store and process information about the progress of students, information about the results of examination sessions, records in the transcript, the information system AIS "Platonusv3.0" is used, which has all the necessary information for the student, "Electronic journal of the teacher" as part of the module " Web-teacher "(RD 11/14. 05-2017 Regulation "Management of the information infrastructure of the University"). "Electronic journal of the teacher" is also used for entering accumulative, examination points, skipping classes.

Load planning, monitoring and analysis of progress, graduation of students at the University is carried out in accordance with RD 11/1. 10-2017 "Regulations on planning, control and reporting in the study process".

At the meetings of the Department, scientific and methodological seminars, SMCU consider issues to improve the SP, changes are made. In addition, conducted surveys of students: "Student Satisfaction with quality of implementation of the study program", which included characteristics of quality educational programs such as: learning environment, quality of educational process and quality of learning outcomes.

Taking into account the interests of employers is laid down at the level of defining the goals of training specialists. Employers annually formulate their needs for specialists and give suggestions for improving their competencies. The training programs of the disciplines are approved by the representatives of the industry. In this regard, a collective discussion of the received recommendations is practiced, which serve as a basis for taking corrective actions on the SP.

To enhance cooperation of the University with employers and to strengthen the practical orientation of the teaching process a number of departments on the basis of mutually beneficial cooperation organized branches of the Department, using the production base of the employer to arrange training, professional practices, and conduct joint scientific researches and introduction of their results into production and educational process. Taking into account the interests of students is taken into account in the preparation of modular study programs.

To meet the requirements of the labor market, employers, representatives of business structures, specialists with extensive experience and managers of enterprises and organizations of the Zhambyl region take an active part in the development of the SP and the formation of the CED. The departments organize extended meetings, round tables, conclude agreements on cooperation and conduct all types of practices, and conduct continuous monitoring of graduates. All these activities are documented.

Continuous monitoring of the quality of educational programs is carried out by reviewing the list and content of elective courses, active involvement of external stakeholders (industry enterprises, universities partners) in policy implementation of quality assurance programs, taking into account their recommendations each year is the catalog of elective courses in areas of study SP.

To assess the effectiveness of defined objectives of the educational program carried out systematic internal audits of the Department relevant internal services, the analysis of their effectiveness.

Analytical part

The University strives to develop objective tools for assessing students ' knowledge, using the recommendations of the latest version of ECTS and a clear anti-corruption policy of the University.

Students enrolled in accredited programs participate in procedures for independent evaluation of learning outcomes.

On the basis of specialized research centers, students of accredited SP acquire practical skills and abilities, as well as implement the results of scientific research in the process of dissertations, research papers, etc.

Evaluation of the effectiveness and efficiency of the implementation of study programs is due to the feedback provided by employers, applications, expansion of the practice base, etc.

But at the same time, the Commission notes that the management of the SP should provide more information on the official website of the University for coverage of all necessary information reflecting the formation, improvement, changes and monitoring of study programs.

Strengths: none identified.

EEC recommendations for SP "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and Nanotechnology»:

When reviewing the content and structure of the SP:

- systematically publish changes made to the content of the SP on the University's website for all interested parties;

- analyze and select the range of attracted employers and other stakeholders involved in the design and implementation of the SP;

- review the content of academic disciplines and learning outcomes, eliminating duplication of disciplines and observing their continuity. Update the name of the disciplines of the master's modules "Basics of quality control of materials", "basics of Lie algebra".

The conclusions of the WEC according to the criteria:

According to the standard ***"Continuous monitoring and periodic evaluation of educational programs"***, 10 criteria are disclosed, of which 10 have a satisfactory position.

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

- The management of the SP should ensure respect and attention to different groups of students and their needs, providing them with flexible learning paths.

- The management of the SP should ensure the use of various forms and methods of teaching and learning.

- An important factor is the availability of own research in the field of teaching methods of educational disciplines of the SP.

- The management of the SP should demonstrate that there is a feedback system for the use of various teaching methods and evaluation of learning outcomes.

- The management of the SP must demonstrate support for student autonomy while providing guidance and assistance from the teacher.

- The management of the SP must demonstrate that there is a procedure for responding to student complaints.

- The University must ensure the consistency, transparency and objectivity of the learning outcomes assessment mechanism for each SP, including the appeal.

- The University must ensure that the procedures for evaluating the learning outcomes of students are consistent with the planned learning outcomes and program goals. The evaluation criteria and methods for the SP should be published in advance.

- The University should determine the mechanisms for ensuring the development of each graduate SP learning outcomes and ensure the completeness of their formation.

- Evaluators should be familiar with modern methods of evaluating learning outcomes and regularly improve their skills in this area.

The evidence part

The academic policy of the University is aimed at meeting the needs of different categories of students. The University has various groups of students, including students with special educational needs; foreign students.

Implementation of inclusive education is one of the priority tasks of the University. The University is improving the infrastructure of the University, taking into account the needs of students with disabilities and special educational needs, since the 2017-2018 academic year additionally operates a specialized office "center for psychological adaptation" (KE 11/1. 16-2017 Inclusive Bilim berudin psihologiyalyk-pedagogikalyk koldauy erezhesi), which has 5 computers, 10 seats, upholstered furniture, special devices, specialized literature. For example, the services Of the "center for psychological adaptation" were used by students 6B05412 - "Mathematics and mathematical modeling" Kadyrov A. and Duysenov N. with groups of foreign students conducted language training during the 1st year of study. Important importance is given to the opinion of students in the development of OP, for example, involved in SP 6b05412- "Mathematics and mathematical modeling" 4th-year student Talaybekkyzy N., Abduraimov R., SP 7M05411- "Mathematics and Mathematical Modeling" 2nd-year undergraduate Kairlieva D., SP 7M07111- "Nanomaterials and Nanotechnology" 2nd-year undergraduate Gadzhiva S., for SP 6B07116 – "Mmaterials Science and technology of light industry materials" 3rd year student Dauletbay A. and 2nd year student Kusmukhambetov A.

In order to improve the effectiveness of educational activities in the learning process, teachers use a variety of forms and methods of training that ensure the development of communicative, organizational and managerial skills of future masters. Both traditional and innovative methods are widely used. Traditional: lectures, seminars, practical, consultations. Innovative technologies: case study method, video lectures, discussions, trainings, creative reports and presentations, business games, etc. Issues of innovative technologies implementation are considered annually at the Department meetings.

In the framework of SP 6B05412 - "Mathematics and mathematical modeling" teachers use the author's mathematical products of computer algebra in the classroom in the disciplines of "Linear algebra", "Equations of mathematical physics", "Mathematical analysis", "Complex analysis".

For 6B07116–"Material Science and materials technology of light industry" introduction of innovations takes place through the use of modern author's e-textbooks, for example "Metallurgy EU" (Professor Badanov K. I.), "Textiles Materialdary jalpa technologies" (associate Professor Mukhanbetkaliyeva K. T.), as well as an introduction to WC disciplines "Professional application programs", etc.

Teaching staff of the graduate departments "Mathematics", "Technology of textile production and materials", "Chemistry and chemical technology" necessarily conduct demo classes with the use of modern interactive technologies, which are discussed at the meetings of the departments.

Feedback from students with the purpose of analyzing the effectiveness of certain methods, evaluating the control of the educational process is carried out through their personal appeals to the teacher. In addition, in order to establish such a connection, according to the requirements of the QMS, students are systematically interviewed on the conditions, organization of the educational process, the use of which allows to improve the quality of training. Assessment of the work of the AS in the implementation of the SP is carried out by means of questionnaires and feedback of students after completion of the course.

To work with complaints and appeals of students, a feedback system was created with the Department of management of the University on the basis of the document WI 15/1. 04-2016 "Working instructions for working with complaints" (ed. 4, Protocol No. 25 of 19.01.2016). At the University there are: urns for collecting written complaints and appeals of students; the rector's blog on the University website, where not only students, but also employees can ask a question of interest to them; trust mail senim_tarsu@mail.ru ; procedure for applying students through the Dean's office.

The transparency of the evaluation procedure is ensured by both the publication of the criteria in the syllabus and the publication of the results of the control on the student's Portal www.portal.tarsu.kz, operating on the basis of the AIS system "Platonusv3. 0". There is all the necessary information for the student, which is associated with the system "Electronic journal of the teacher" as part of the module " Web-teacher "(RD 11/14. 05-2017 Regulation "Management of information infrastructure of the University").

The mechanism for ensuring the development of each graduate learning results is regulated by the following documents: "Regulations on diploma design" № 13 from 20.12.2015; "Regulations on the activities of the state certification Commission" №141 from 25.01.2017; P 11/1. 19-2018 " Academic rules of the educational process in M.Kh. Dulaty TarSU. "; RD 11/13. 05-2017 Regulation "Order of organization and technology of intermediate certification of students".

To organize effective work on employment and career development, the University operates a career and professional development Center.

In addition to the above, the Registrar's Office, together with the Department for UMR, conducts seminars at the University for teaching staff aimed at informing teachers of new methods of teaching and evaluating the achievements of students, the introduction of new rules, new forms of syllabuses and EMCD, and innovations in the study process.

Analytical part

The Commission notes:

Professional development of teachers is carried out through internal and external courses, individual production internships, trainings, master classes with the participation of production workers. For example, at the Department of "Mathematics" there is a good dynamics of professional development of teaching staff in the field of their professional disciplines (certificates of teaching staff, minutes of meetings).

During interviews with faculty and study documentation at the departments revealed that the staff of SP release textbooks and training manuals on taught subjects, but do not own the members of academic staff on teaching.

However, the Commission notes that the following questions were not confirmed during the visit to the Commission. The possibility of elective disciplines, teachers; the possibility of training on remote technologies has not been proved. The additional modules presented in the SP are formal and do not apply in practice. Little attention is paid to the introduction of student-centered learning in the educational process.

According to the results of the AS survey:

- 6-9 % of students answered the questions of satisfaction with the content, relevance, evaluation system, methods of teaching disciplines " partially disagree»;

- 15 % of teaching staff rate" relatively poorly " the possibility of combining teaching with research;

- 11 % of AS rate" relatively poorly " the possibility of combining teaching with practical activities.

Strengths: none identified.

EEC recommendations for SP "6B05412-Mathematics and Mathematical Modeling", "7M05411- Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and Nanotechnology»:

- to ensure the conduct of their own research in the field of teaching methods of educational disciplines in the context of SP;

- ensure equal opportunities for students, including regardless of the language of study, when choosing an individual educational program aimed at the formation of professional competence.

The conclusions of the EEC according to the criteria:

According to the standard "Student-Centered learning, teaching and assessment of progress", 10 criteria are disclosed, of which 10 have a satisfactory position.

6.6 Standard " Students»

- The University must demonstrate the policy of forming a contingent of students in the context of the SP from admission to graduation and ensure transparency of its procedures. Procedures governing the life cycle of students (from admission to completion) must be defined, approved, published.

- The SP management should demonstrate that special adaptation and support programs are being implemented for newly enrolled and foreign students.

- The University must demonstrate the conformity of the actions of the Lisbon Convention on recognition.

- 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 information centers of Recognition " ENIC / NARIC in order to ensure comparable recognition of qualifications.

The management of the SP 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 training.

- The University should provide an opportunity for external and internal mobility of students, as well as assist them in obtaining external grants for training.

The management of the SP should make maximum efforts to provide students with places of practice, promote employment of graduates, maintain communication with them.

- The University must provide graduates with documents confirming the received qualification, including the achieved results of training, as well as the context, content and status of the received education and certificates of completion.

- An important factor is the monitoring of employment and professional activity of graduates of SP.

The management of the SP should actively encourage students to self-education and development outside the main program (extracurricular activities).

- An important factor is the existence of an active Association / Association of graduates.
- An important factor is the availability of a support mechanism for gifted students.

The evidence part

Admission of applicants to M.Kh. Dulaty TarSU is conducted according to the Standard rules of admission to education organizations that implement professional training programs of higher education, approved by the government of the Republic of Kazakhstan.

Guide to bachelor's degree programs 6B05412 - "Mathematics and mathematical modeling", 6B07116 – "Materials science and technology of light industry materials", 7M05411- "Mathematics and mathematical modeling", 7M07113 - "Materials Science and technology of materials", 7M07111 - "Nanomaterials and nanotechnologies" defines the order of students 'education at the University on credit technology, regulate the procedure for registering students for academic disciplines, conducting current, intermediate and final controls, final certification, organization of students' practice, transfer, restoration, deduction, appointment of state scholarships, assessment of students ' knowledge, etc.

A favorable factor for admission to the University is the system of benefits for training depending on the educational achievements of students, discounts for socially unprotected students (orphans, disabled people of groups I and II). The system of social support for students, developed by the University, quickly responds to changes in the economic environment associated with a decrease in the solvency of the population (RD 11/1. 01-2018 Regulations on the provision of discounts on payment to students M.Kh. Dulaty TarSU). Students can apply for translation and restoration in deaneries, departments, the Registrar's Office, in the Central office.

The most important indicator of the quality and effectiveness of educational activities of the University, recognition of its prestige at the national and international levels is the presence of foreign students. In 2017-2018, 50 students from Turkmenistan and 3 students from Uzbekistan were enrolled in the bachelor's program "Mathematics and mathematical modeling", in 2018-2019 academic year. students of the 1st year of the educational program "Mathematics and teaching mathematics" 15 boys and girls from Uzbekistan and Turkmenistan on SP 6B07116- "Materials Science and technology of light industry materials" in the 2016-2017 and 2017-2018 academic year studied 2 students from Turkmenistan: Saparova Laura Rashidovna student MSTNM 2016-1 and student B17MSTNM-1 Sabyrov Dovran Oraevich, which indicates the demand for these SP abroad.

The University actively cooperates on the recognition of qualifications with the center of the Bologna process and academic mobility of the MES of Kazakhstan, which is part of the ENIC-NARIC information network. The University has developed a document RD 11/13. 04-2017 " Regulations On the policy of academic recognition in M.Kh. Dulaty TarSU (approved by the order of the rector No. 451 of 23.11.2017), which prescribes the procedures for recognition and nostrification.

SP students successfully participate in academic mobility programs. For example, in the SP "Materials Science and technology of light industry materials" in the 2018-2019 academic year, a student of the group B17MSTNM-1Dauletbay Aigerim. She studied at the Lublin technical University, Lublin, Poland. In 2013, a Memorandum of understanding was signed between M.Kh. Dulaty TarSU and Lublin technical University.

In the course of academic mobility with students is maintained regular individual communication OBP and AM via e-mail, SKYPE, WhatsApp. Each student creates their own group in Whatsapr, which includes the Dean, Department, curator, OBP and AM.

Organization and practical training at the Department is held in accordance with the RD 11/1-3.03-2016 "Regulations on professional practice". Practice is an integral part of the educational program. Departments within the framework of SP 7M07113 - "Materials Science and technology of materials", 7M07111 - "Nanomaterials and nanotechnologies"

signed contracts with leading enterprises of the industry: "Factory Posh - Taraz" LLP, "Taraz Kozhobuv" LLP, "Imstalkon" LLP, where students undergo practical training. On the basis of "Factory posh - Taraz" LLP and "Kazphosphat" JSC, branches of departments are opened, where production, pre-graduate and research practices, laboratory and practical classes are held. In the conditions of production, students study technological processes and equipment, some of the course and diploma projects are carried out by graduates on orders of enterprises. Students who managed to show a high level of knowledge and skills, the company invites to work. Graduates of the Department successfully work in leading enterprises of light and chemical industry of the Republic of Kazakhstan. In the framework of the SP "Mathematics and mathematical modeling" students undergo practical training on the basis of KazNIIVH. Cooperation of the University with employers helps future specialists to choose the sphere of their further professional activity.

To maintain feedback and monitor the professional activities of graduates of different years, the University website is used (http://www.tarsu.kz) in the category Association of graduates of tarsu(http://asv.tarsu.kz/) and widely used social networks (VK, Instagramm, Facebook). Departments also actively maintain contact with graduates. For example, it was revealed that graduates of the Department of materials Science and technology of new materials work both at the enterprises of the Republic and in educational institutions of the country. Thus, graduates of the master's degree program Bolysbekova Raikhan works at ATU as Deputy Dean of the faculty of light industry and design, Kasymova G. A. is a doctoral student of the Russian state University. Auezov, Kulymbetova Ameir has worked as a methodologist at the University them.Buketova. Graduates of the SP "Mathematics and mathematical modeling" Kozhakhmetov N. works in school # 17 Taraz, Serikbaev N.-in school#9 Taraz, Talaspaev A.-NISH Taraz, Bekmurzaeva A.-in the international travel company Western Air senior Manager of the Department of cooperation with foreign companies.

Students who study outside of school can participate in student self-government, which is of great importance for the implementation of youth policy. According to the results of research, students prepare publications in journals and participate in conferences. In 2018, students of the OP "Mathematics and mathematical modeling" took part in conferences, the results of which were published 18 reports, and in the framework of the OP "materials Science and technology of light industry materials" together with teachers published 26 reports, 6 of them in collections outside the University. In 2018, students of the University took part in conferences. Students of SP " N&N " have access to laboratories for experimental work on scientific projects and dissertations in their free time.

According to the survey, students Express complete satisfaction with the availability of academic counseling (68.2%); the quality of student health services (65.2%); the availability of library resources (83.3%); existing educational resources (74.2%); the overall quality of educational programs (75.3%); the relationship between student and teacher (86.8%).

Analytical part

The information presented in the self-report in the context of this standard was mainly confirmed during the visit to the EC. However, the external Commission notes that, as shown by the interview with graduates, not all of them are aware of the fact that the University operates the Association of graduates of M.Kh. Dulaty TarSU. Graduates working in various fields can make adjustments and innovations in the image, educational and other activities of the University (personal scholarships for successful students, practice-oriented training, advanced information and communication technologies, etc.). In addition, the experts found that due to the new requirements for admission to the master's program,

bachelor graduates have difficulties in entering. The University has the possibility of external and internal mobility for students, but the Commission notes the lack of academic mobility of students in the considered areas. In this regard, experts emphasize the need to assist students in obtaining external grants for training (to involve them in various competitions, motivating them with positive experience of previous years and future career growth). Also during the interview, students note about the inconvenient schedule of classes (lack of flexible schedule). According to the results of interviewing, familiarization with various documentation, it was not possible to find out how students ' satisfaction with the possibility of extracurricular activities is tracked.

Strengths*: *none identified.

EEC recommendations for SP "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:

- develop an action plan for the development of external and internal academic mobility of students, for example: summer schools in the leading universities of Kazakhstan and foreign partner universities in the framework of master's programs;
- as part of the implementation of the bachelor's program, provide for the possibility of obtaining level certificates in a foreign language for admission to the master's program;
- inform and systematically work on the development of the Association of graduates.

The conclusions of the EEC:

According to the "Students" standard, 12 criteria are disclosed, of which 10 have a satisfactory position and 2 suggest improvements.

6.7 Standard «Academic staff»

The University must have an objective and transparent personnel policy, including in the context of SP, including hiring, professional growth and development of staff, ensuring the professional competence of the entire staff.

- The University must demonstrate the compliance of the personnel potential of the AS with the strategy of the University development and the specifics of the SP.

The management of the SP must demonstrate a sense of responsibility for their employees and provide them with a favorable working environment.

The management of the SP should demonstrate the change in the role of the teacher in connection with the transition to student-centered learning.

The University must determine the contribution of the AS SP in the implementation of the development strategy of the University, and other strategic documents.

- The University should provide opportunities for career growth and professional development of AS SP.

The management of the SP should involve practitioners of the relevant industries in teaching.

ОП the management of the OP should provide targeted actions for the development of young teachers.

The University must demonstrate the motivation of professional and personal development of teachers of the SP, including the promotion of both the integration of scientific activities and education, and the use of innovative teaching methods.

- An important factor is the active use of AS and information and communication technologies in the educational process (for Example, on-line training, e-portfolio, etc.).

- An important factor is the development of academic mobility within the SP, attracting the best foreign and domestic teachers.

- Important factor is the involvement of the AS SP to society (the role of AS in education, in science, in the region, creating cultural environment, participation in exhibitions, creative competitions, charity programs, etc.).

The evidence part

The selection of the academic staff in the departments is based on the competition on the basis of requirements of normative document "Rules of competitive replacement of posts of AS", approved by the MES.

Personnel policy is reflected in the documented procedure (Or 4.01-2016 Rules of internal labor regulations of M.Kh. Dulaty TarSU of 19.01.2016, STU 08-2016 "Personal Management").

Competence model of AS formed to meet the requirements of standard qualification characteristics of teachers and persons equated to them, industry frameworks and National qualifications frameworks. Recently, special attention has been paid to improving the language training of teaching staff in order to introduce educational programs in the format of multilingual training.

The academic staff that provides the study process for accredited SP, mostly meets the qualification requirements. Personal information about the faculty is available on the University's website http://www.tarsu.kz. the Quantitative and qualitative composition of AS is determined by normative indicators.

During the reporting period, there is a tendency to improve the quality of the Department that implements the bachelor's and master's degree programs "Mathematics". So, at the beginning of the reporting period 2014-2015, the Department's degree was 54%, and in 2018-2019 academic year increased by 10 % and amounted to 64%. The share of settled teachers of the Department "technology of textile industry and materials science", implementing the bachelor's degree program "material Science and technology of light industry materials" and master's degree program "material Science and technology of materials" increased and amounted to 77.8% in 2018-2019 academic year. At the Department of Chemistry and chemical technology, implementing the SP "7M0711-Nanomaterials and nanotechnology" in 2017-2018.G. there is an increase in settling down to 58%. At the same time, there is a growing number of students who have the opportunity to make a greater contribution to the science of Kazakhstan, holders of the highest scientific degree of doctor of philosophy (PhD). Thus, senior lecturer of the Department "technology of textile industry and materials science" Tashmukhamedov F. R. in 2018 graduated from the target doctorate of Almaty technological University, and in June 2019 defended his thesis for the degree of PhD; senior lecturer Sarybaeva E.E. enrolled in doctoral studies in the 3rd year, the defense is scheduled for 2020; lecturer Kasimov A. G. study on 2 course the target of the doctorate; senior lecturer of the Department "Chemistry and chemical technology 124" Mamedova S. enrolled in the doctoral program.

The Academic Council of the University regularly examines the compliance of personnel potential AS strategies and specific study programs, care is taken to create and maintain a favorable psychological climate among the faculty and employees of structural divisions. All employees are provided with jobs equipped with modern equipment and office equipment; there is a medical center. The work of the University in this direction are reflected in the Labour Code, the collective agreement of employees of M.Kh. Dulaty TarSU, in the wage system. The remuneration of the AS is carried out in accordance with applicable provisions and regulations and of the Charter and "Regulations on awarding bonuses to employees M.Kh. Dulaty TarSU "

Within the framework of student-centered education, teachers of the departments that implement SP regularly improve their skills through short-term seminars, refresher courses, internships in the best educational centers of the Republic of Kazakhstan and abroad. To improve the professional competence and quality of the educational process at the required level, production internships are held. The University annually organizes training seminars by leading professors of educational institutions of the near and far abroad. Teachers constantly update their knowledge by participating in national and

international scientific conferences and symposiums. Professional development of teaching staff is planned, based on the needs of the Department and in accordance with the improvement of technology and technology of the textile industry, with the introduction of new training technologies. Teachers of the Department "Mathematics" participated in seminars on "Commercialization of technologies"; - scientific seminar on advanced training in mathematics "Scientific and methodological foundations of numerical methods" in 2018.; international geometric seminar dedicated to the 100th anniversary of the birth of Professor V. I. Vedernikov February 12-14, 2019, Minsk, Belarus-associate Professor Abiev N. A. faculty of the Department of "Chemistry and chemical technologies" took part in the following training courses in 2015: 1) Tsoi I. G. - 63 – hour course "English in Context" Upper-Intermediate Level, certificate number 224; 2) Sadieva H. R.-16 – hour two-day course, organized by The "center for technology commercialization" under the Ministry of education and Science of Astana, received a certificate. Also, in addition to the plan, teachers of the Department participated in various courses and improved their professional skills: B. K. Masalimova, S. Z. mateeva - "International Workshop" RESEARCH DEVELOPMENT AND PUBLICATIONS " at M. Kh. Dulaty Taraz Sate University" and received certificates of M. Kh. Dulaty Taraz Sate University and Kastamonu University; Saitbekova G. A. - "Innovately of tekhnologiyalar and interactive Tatana 131 multimediali mmchat". (June 23, 2017). In the 2017-2018 academic year, head of the Department, Ph. D. Masalimova B. K. participated in the interuniversity competition "Best multimedia product of the University-2017" and took 3rd place in the category "Best educational laboratory". On the basis of the contract on professional development, concluded with LLP "Factory 132 posh - Taraz" and LLP "Tarazkozhobuv" in the period from January 27 to February 10, 2015. PhD doctor, acting associate Professor Makhanbetalieva K. T. and master Tulendieva G. O. passed an internship in LLP "Factory posh Taraz", senior lecturer of the Department Kopbaeva E. S. and acting associate Professor Halmetova sh.T. from 16.01.2017 to 30.01.2017. Tarazkozhobuv". For targeted training in the PhD doctorate of Almaty technological University in 2017, the master's degree Sarybaeva E. E. (Order on admission to the PhD program On the basis of the state educational order from 25.08.2017) On the results of the GNIR published articles in the materials of international scientific conferences and in the database Scopus. Took part in the contest of the Committee for science of MES RK for grant funding for 2018-2020 for the topic: "Innovative technology of coloring textile materials", project head PhD., Professor K. I. Badanov; registered in NCGNTE with the assignment of IRN AR05130218 with a final score of 28.33.

There is a positive trend in the publication activity of PPP accredited OP. So, according to the Department of "Mathematics" the number of articles in peer-reviewed foreign scientific publications, indexed in the databases of RSCI, Web of Science. Scopus with zero impact factor is 16 units, there is 1 patent; in the Department of "technology of textile industry and materials science" there are four patents, 5 articles KKSON MES RK and 7 Web of Science. In the Department of "Chemistry and chemical technology": 32 patents, 10 monographs, 32 articles KKSON MES RK and 34 articles with zero impact factor RSCI, Web of Science. Scopus.

In addition, acting associate Professor Nurlybaeva A. N. participated in the competition for The awards of the Foundation of the First President of the Republic of Kazakhstan-the Leader of the Nation. Professor, Department of Sakha and M. A. Asanov participated in the Republican competition "Best teacher of high school-2015", the results of which Professor B. M. Sakhy won the nomination "Best University teacher-2015". The number of cash receipts under the "Attracting foreign specialists" program increased by 9 % compared to 2013. Under this program, 19 080,0 thousand rubles were spent in 2014. tenge, in 2016 - 14 939,6 thousand tenge.

Supporting initiatives in the field of education, teachers take an active part in the development of the regulatory framework, standard curricula of bachelor's, master's and PhD doctoral studies, test tasks; conducting external evaluation of educational activities of universities; preparation of expert opinions on the quality of dissertation research, textbooks, scientific monographs.

The AS survey conducted during the visit to the IAAR office showed that:

- the University provides opportunities for teaching staff to use innovations in training-very good and good-63.8% and 35.4% respectively;
- AS meets the content of the study program-very good and good-50.4 % and 48.8%, respectively;
- the level of feedback from the AS leadership meets 29.9%;

29.9 % of AS are satisfied with the organization of academic mobility, and 42.5% are satisfied with the work plan for improving the skills of AS.

Analytical part

In general, we can conclude that the activities of the departments meet the criteria of the standard. The faculty serving accredited students makes a significant contribution to the implementation of the University's development strategy. Created the opportunity for career growth and professional development of AS SP. Heads of departments take active purposeful actions to attract and professional development of young teachers. The University encourages the integration of research and education, and the use of innovative teaching methods by faculty. At the same time, the Commission notes the insufficient level of use of innovative teaching methods and the use of AS information and communication technologies in the educational process. Also, the AS is experiencing difficulties in implementing new SP included in the register. According to the results of interviewing, familiarization with various documentation, material and technical base and information and methodological resources of the University and departments, questionnaires of students and faculty, EEC IAAR notes a low level of involvement of scientists, public, political, honored figures as a teacher.

Strengths: none identified.

EEC recommendations for SP "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and Nanotechnology»:

- specify the role of the teacher in connection with the transition to student-centered learning (seminars, trainings, round tables, annual methodological conferences, etc., involvement of advanced methodologists);
- the management of the SP, taking into account the needs of the modern labor market, is more likely to involve practitioners of the relevant industries in teaching;
- purposefully develop and use AS and information and communication technologies in the educational process (for example, on-line training, e-portfolio, etc.);
- to provide measures for the development of academic mobility within the framework of the OP, attracting the best foreign and domestic teachers;
- to increase the number and quality of applications for grant funding of research works with subsequent participation in the project competition.

The conclusions of the WEC according to the criteria:

According to the "Academic staff" standard, 12 criteria are disclosed, of which 9 have a satisfactory position and 3 suggest improvements.

6.8 Standard " Educational resources and student support systems»

- The management of the SP must demonstrate sufficient material and technical resources and infrastructure.

- The SP management should demonstrate that there are procedures in place to support various groups of students, including information and counseling.

- The management of the SP must demonstrate compliance of information resources with the specifics of the SP, 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 the fund of educational, methodical and scientific literature on General education, basic and profile disciplines on paper and electronic media, periodicals, access to scientific databases;*

** examination of research results, graduation papers, dissertations on plagiarism;*

** access to educational Internet resources;*

** functioning of WI-FI in the territory of the organization of education.*

- The University should strive to ensure that the educational equipment and software used for the development of study programs are similar to those used in the relevant industries.

- The University must ensure compliance with the safety requirements in the learning process.

The University should strive to take into account the needs of different groups of students in the context of SP (adults, working, foreign students, as well as students with disabilities).

The evidence part

The University has 14 academic buildings that meet sanitary and epidemiological standards and requirements. Material-technical base of the University provides all types of laboratory and practical classes, research work of students, provided educational plans, and complies with sanitary standards and requirements. The conditions of the production environment meet the requirements of SNiP II68-78 "Higher education institutions" for the effective organization of educational and scientific activities, the University has an extensive classroom fund. For example, the University operates the Educational and scientific production site "SCHEBER", The laboratory of atomic emission spectrometry, etc. Accredited SP equipped with specialized classrooms and laboratories, personal computers. So at the time of the visit were demonstrated offices with personal computers of the following configurations: computer HP WU202EA Compad 500B MT Pentium Dual-Core E55002 8GHz204MB320GBDVD+R W (LS) Free DOSRUSS+LC, computer Assembly CORE 2DUO E 4300, 1.86 GHz Mat plateau-Elitegroup G 31, memory operas 1024 Mb, computer Assembly 151 emission spectrometry; CORE 2DUO E 4300, 1.86 GHz Mat plateau-Elite group G 31, etc. There is a Manual carpet weaving machine 1 table carpet weaving machine "Emilia" 1 Overlock on knitted, croeobetochny, role-playing. The lock 204D, Knitting machine SilverReed SK840 / SRP60N+BY Knitt Styler USB 5 class "Circular" knitting machine 152 PRYM-MAXI Overlock. The premises are maintained temperature, aesthetic and environmental standards, conducted daily wet cleaning and annual repairs. Medical care for employees and students is provided by the health center of the University, city polyclinic No. 3. To organize student meals, the University operates a youth leisure center "Zhastar Alemi" with a total area of 3069.9 sq. m. for 400 seats, a cafe in the main building for 60 seats, as well as 9 canteens in all buildings of the University. The University has 3 student dormitories with a total area of 12,742. 10 sq. m. with 840 beds. Places in dormitories are issued in accordance with the standard "On granting places in 158 dormitories to University students". In the 2018-2019 academic year. 27 students of the Department "Mathematics", 5 students of the Department "Technology of textile industry and materials science" lived in the house of students. Students from different countries live in the University dormitories: Turkmenistan-15; Uzbekistan-1. In 2016, the dormitories were renovated. For students living in dormitories, night reading rooms, Internet, Wi-Fi resources are available, sports and cultural events are held, and the staff is on duty. The Library and information center operates a local library computer network consisting of 70

computers, of which 46 computers are available to users in 2 electronic and specialized reading rooms, 24 units are used to work with the modules of the system "KABIS" ("Administration", " Acquisition (with support for bar-coding)", "order periodicals", "Cataloging", "Card Library of articles", "Knigovydacha" (with support for barcode-database "Readers" (with support for bar coding), database "book Security", "Web-module for search and order", " KABIS.BookScan", "Electronic library"). In 2019, a system of RFID technologies will be developed to ensure the quality of service and safety of the Fund. The library Fund includes books and periodicals. The total library Fund is 1.326.567 copies. Funds spent in 2019 on the purchase of traditional periodicals for all accredited OP 6000000. Of these funds spent on the following OP: 6B05412/ 7m05411mathematics and mathematical modeling -3 749 256 tenge, 6B07116/ 7m07113materialovedenie and technology of new materials -13212 tenge, 7m07111 Nanomaterials and nanotechnology-38814 tenge. Electronic resources for students SP available on the website http://lib.tarsu.kz (ecat.tarsu, rmebrk, iprbooks, e. lanbook).In order to support students, faculty and employees in accessing modern databases under a national license, open access to the world resources of scientific publications of foreign companies Clarivate Analytics in the Web of Science platform is provided. (http://webofknowledge.com), SpringerLink www.link.springer.com, Scopus (https://www.scopus.com), ScienceDirect (https://www.sciencedirect.com) Elsevier (http://www.elsevier.com). Since 08.04.2018, full access to the "Premium" version of EBC IPRbooks has been opened. To activate access to other foreign resources of scientific publications in the 2017-2018 academic year, test accesses to the electronic full-text databases EVSSO Discovery Service, CNKI, POLPRED, EBS "University library online", EBS "LAN"were organized. Access to the full-text domestic resources of the RMEB electronic libraries is also provided www.rmeb.kz, (KazNEB) www.kazneb.kz; literary portals "Adebiet", portalshttp: / / adebiportal.KZI http://kitap.kz/, " Patents of Kazakhstan. Inventions. Bibliography».

The University provides great support to socially vulnerable students (orphans and children left without parental care, students with disabilities). For this category of students, social support mechanisms have been created; including benefits for tuition fees (RD 11/1. 01-2018 position on the provision of discounts on payment to students of M.Kh. Dulaty TarSU). At the Department of Mathematics for the 2018-2019 academic year, a total of 17 students received assistance in the form of discounts on tuition fees.

The survey of students conducted during the visit to the IAAR University showed that the satisfaction of students:

- the availability of library resources is 83.3%;
- existing educational resources of the University-74.2%;
- availability and availability of computer classes and Internet resources-72.7%.

Analytical part

As a result of visual inspection of the objects of the material base by the members of the EEC, it should be noted that the University has the necessary educational and material assets to ensure the study process of accredited SP. Classroom and laboratory facilities, classrooms meet the established standards and rules. However, the Commission notes that the monitoring of the adequacy and modernity of the resources used, planning for the development of material resources for accredited OP is carried out non-systemically. It is not clear how to ensure compliance with copyright when placing educational literature and educational and methodological support in the open access.

The University provides academic support to students in the process of learning SP, providing them with information and reference materials that allow you to get a holistic view of the rules of internal regulations, the principles of academic regulation, the format of educational programs, the trajectory of study of academic disciplines, the academic

calendar. However, the University should improve the technical capabilities for people with disabilities, add to the number of special literature in the areas of training, update the descriptions of laboratory work, especially in electronic format.

Strengths: none identified.

EEC recommendations for SP "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and Nanotechnology»:

- install guide markings and color signs, signs, purchase pictograms and place on the University's website programs for reading visually impaired students;
- to bring the content of the site in accordance with the provision of updated information and the definition of common requirements and forms of presentation of information;
- keep a record of the entry in the safety log during training.

The conclusions of the EEC:

According to the standard "Educational resources and student support systems", 10 criteria are disclosed, of which 10 have a satisfactory position.

6.9 Standard "Public relations»

- The information published by the University in the framework of the SP must be accurate, objective, relevant and must include:

** implemented programs, indicating the expected results of training;*
** information about the possibility of qualification at the end of the SP;*
** information about teaching, training, evaluation procedures;*
** information about the passing score and the educational opportunities provided to students;*
** information about employment opportunities for graduates.*

The management of the SP should use a variety of ways to disseminate information, including the media, information networks to inform the General public and stakeholders.

- Public awareness should include support and clarification of the country's national development programs and the system of higher and postgraduate education.

- The University must publish on its own web resource audited financial statements, including in the context of SP.

- The University must demonstrate the reflection on the web resource of information that characterizes the University as a whole and in the context of educational programs.

- An important factor is the availability of adequate and objective information about AS SP, in the context of personalities.

- An important factor is to inform the public about cooperation and interaction with partners within the framework of the SP, including scientific/consulting organizations, business partners, social partners and educational organizations.

- The 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 SP in a variety of external evaluation procedures.

The evidence part

The policy of the departments is aimed at constantly providing students with quality educational services through continuous improvement, through the introduction of innovative technologies in the educational process and effective feedback from students and staff.

The University pursues a policy to support and explain the national development programs of the country and the system of higher and postgraduate education: articles,

addresses, speeches of the University's management are published in the media. So, there are publications of the rector of tarsu: "in the conditions of new time". "Znamya truda". http://www.tarsu.kz/ru/statirektora/item/5730.html; "keeping up with the times". " Znamya truda ". 177 http://www.tarsu.kz/ru/video/itemlist /category/15-blog-rektora.html; "The University should become the driver of the region" "Educated country" http://www.tarsu.kz/ru/video/item/8172 - makhmetgali-sarybekov-rektor-tarazskogo-gosudarstvennogo-universiteta-imeni-m-kh-dulatiuniversitet-dolzhen-stat-drajverom-regiona.html; "Imty of universiteter innovately Sud center Bolu tis", "ARAI"http://www.tarsu.kz/ru/video/item/8169-makhmet-alisarybekov-am-orly-zhasaudy-zha-a-adamy.html the Website provides access of stakeholders to information for applicants, students, researchers, foreign teachers, commercial organizations, etc. The audited financial statements of the University on study programs for interested parties are available at the link http://www.tarsu.kz/ru /finansovoekonomicheskaya-slujba/finansovyj-otchet.html

The University's website is a universal tool for information www.tarsu.kz.

The site provides the student with content containing the academic calendar; the schedule of classes and sessions, study programs, catalogs of elective disciplines, requirements for registration and implementation of educational tasks and projects, data on students, including employment indicators. Departments on the site have information about the personalities and contact details for feedback.

The University annually participates in various ratings, the results of which are published in open sources. So according to the results of 2018 in the world ranking of the research group "Webometrics Ranking of Word Universities" M.Kh. Dulaty TarSU took the 21st place among 112 national universities. The University has regularly participated In the national ranking of the NCAA since 2015. (www.nkaoko.kz). among the multi-profile universities of the Republic of Kazakhstan,TarSU took the 6th place in 2015-2017, and the 8th place in 2018. In 2018 took part in the rating of universities of Kazakhstan, for 41 study program conducted by the NCE "Atameken" (www.atameken.kz). The University also participates in the annual national rating research WELL IAAR and RK among universities is on the 3rd place in the specialty "Mathematics". The results of the ranking according to the directions and levels of training M.Kh. Dulaty TarSU for three years are presented in reference books, as well as posted on the website of the NAAR of the Republic of Kazakhstan in the section "Rating" Links: http://www.iaar.kz/ru/rejting/rejting -2019, 2018, 2017.

Analytical part

However, the Commission notes that the following questions regarding this standard are not fully reflected in the self-report and were not confirmed during the visit to the Commission.

To represent the interests of the University in the global network and create a holistic positive image of M.Kh. Dulaty TarSU a corporate website of the University was created in the world community (http://www.tarsu.kz), which provides the site's target audience with information about various aspects of the University's activities. In addition to providing users with access to information resources of the University, the corporate website of the University serves for the development of scientific and educational relations with universities and potential partners, the development of academic mobility of students and teachers, increasing the competitiveness and investment attractiveness of the University.

However, the analysis of the content of the University's website allowed us to establish that the information posted on http://www.tarsu.kz it is not presented in full volume and does not reflect the results of the University's activities, in particular, there are

no references to the availability of adequate and objective information about the staff of the SP in the context of personalities.

The Commission also notes that full, adequate and confirmed information on SP "7M05411-Mathematics and mathematical modeling", 7M07111 - "Nanomaterials and nanotechnology" is not reflected in the external evaluation procedures.

Strengths: none identified.

EEC recommendations for SP "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:

- provide information on the web resource that characterizes the University as a whole and in the context of educational programs.

- provide adequate and objective information about the AS SP, in the context of personalities.

The conclusions of the EEC:

According to the "Public relations" standard, 13 criteria are disclosed, of which 13 have a satisfactory position.

6.10 Standard " Standards in the context of individual specialties»

NATURAL SCIENCES, TECHNICAL SCIENCES AND TECHNOLOGIES

The evidence part

Preparation for study programs of bachelor's and master's degree "Mathematics and mathematical modeling" involves the use of mathematical methods that are necessary for solving professional problems, as well as the development of mathematical abilities to professional activity. The organization of the educational process includes training using the model of the professional environment. In order to familiarize students with the professional environment, excursions are conducted to the organization of KazNIIVH LLP, which is the base of practice of the programs, meetings with the scientific staff of the Institute. Current issues and prospects for the development of mathematics are discussed at scientific seminars. For acquisition of skills on the basis of theoretical preparation of programs includes such disciplines as "Mathematical and computer modeling of applied problems", "Applications of nonlinear differential equations", "Mathematical modeling of discrete systems", which are aimed at obtaining practical experience and skills in the specialty. The practice of conducting separate classes on the discipline "Theory and methods of teaching mathematics in higher education" in Taraz innovative state University is applied. So, associate Professor A. T. Jakes in 2007-2010 academic years worked as a math teacher at school – gymnasium № 8 of the city of Taraz. According to the educational program "materials Science and technology of materials of light industry" Evtyushkina M. I. in the period from 1976 to 1979g.g. worked as a sorter, in 1986 to 1990. - chief technologist of LLP "Tarazkozhobuv", Shardarbek M. Sh. from 1989 to 1995 worked as a design engineer at the Jambul leather factory.

Students of thestudy program "Mathematics and mathematical modeling" develop mathematical programs in the environments of modern computer algebra in bachelor's theses: Satynbek A. (2015) "Construction of mathematical models of mechanical systems of high degree of mobility", Sandibekova M. (2015) "Methods for solving linear differential systems with variable coefficients", Dalabay N. (2015) "Nonlocal problems for model equations of biological processes", bachelor Zhumabekova A. (graduation 2015)

"Application of computer algebra systems to problems of mathematical analysis", Dosybaeva A. (issue 2016; in master's theses: Matskovskaya A. (graduation 2016) "Methods and algorithms for solving systems of differential equations with variable coefficients in the Maple system", Abenov U. (graduation 2016) "Application of Maple and Delphi systems to modeling problems of discrete mathematics", master's degree in 2017 "Construction of solutions to non-uniform problems of mathematical physics in the Maple system", etc.

The material and technical, library and information resources used for the organization of the learning process are sufficient and meet the requirements of the implemented educational programs. The analysis allows us to conclude that educational activities carried out within the framework of educational programs 6B05412 - "Mathematics and mathematical modeling", 7M05411 - "Mathematics and mathematical modeling" comply with the legislation of the Republic of Kazakhstan in the field of education and meets the requirements and criteria of accreditation standards of educational programs of higher professional education.

Department "technology of textile industry and materials science" of tarsu. M. H. provides comprehensive training for specialists and masters. Research work of students (NIRS) is the main part of training of qualified specialists. The subject of research is annually updated and approved, each student is assigned scientific supervisors, defined deadlines, which are reflected in the plan of research. At the Department there are scientific circles "Ornek" and "Sheber", students, starting from the 1st year actively participate in scientific research, make presentations at student conferences of the University, participate in national competitions and Olympiads, taking prizes.

Familiarization of students with the real professional environment is an important part of the training of any qualified specialist-technologist. The largest regional production base of Kazphosphate LLP provides such an opportunity for magistrates of the educational program 7M07111 - "Nanomaterials and nanotechnologies". The agreement concluded by the Department of "Chemistry and chemical technology" with this enterprise on the establishment of a branch of the Department (Agreement No. 1887/13-OTO dated 28.08.2013) allows students to perform experimental research using the material base of the enterprise. Getting acquainted with the existing problems of an existing enterprise, undergraduates focus on solving practical problems that are relevant to the enterprise. There are no specialized enterprises in the field of specialization of undergraduates studying this educational program in the region and in General in Kazakhstan. Therefore, great support in the preparation of undergraduates in this direction is provided by scientific institutions in Russia and Kazakhstan, with which the Department also has concluded cooperation Agreements (Agreement With the Institute of fuel, catalysis and electrochemistry. D. V. Sokolsky, Almaty from 16.03.2017 and the cooperation Agreement with the Novosibirsk national research State University from 03.2018), where undergraduates have the potential to go for an internship.

To ensure the appropriate training of undergraduates in the study program introduced such discipline as "Methods of research of nanostructures and nanomaterials", "Electron microscopy and X-ray structural analysis", as well as the discipline of choice "Fundamentals of structural analysis of materials", etc. The content of the disciplines involves the use of special applications for processing experimental data in the study of the structure of nanoobjects. Currently, the Department of Chemistry and chemical technology has a number of devices used for nanotechnology research: Ajilent-atomic emission spectrometer, IR-Fourier spectrometer. To master the application programs for working on these devices, the Department conducts training seminars. Unfortunately, due to financial difficulties, the instrument Park of the Department is not enough to fully meet the needs of this educational program. Therefore, magistrates who are trained in SP 7M07111-

Nanomaterials and nanotechnology, mainly use the services of third-party organizations. Nevertheless, the University is carrying out systematic work on the acquisition of modern applications, software for equipment and teaching staff. So, the teacher Musrepbekova Sh. was trained in a workshop "Modern information technologies in the field of education" (Certificate EL NO. FS77-43-102 of 30.12.2015). The analysis allows us to conclude that educational activities carried out within the framework of the educational program 7M07111 - "Nanomaterials and nanotechnologies" corresponds to the legislation of the Republic of Kazakhstan in the field of education and meets the requirements and criteria of accreditation standards of educational programs of higher professional education.

Analytical part

Learning outcomes for *"6B05412 Mathematics and Mathematical Modeling", "7M05411 Mathematics and Mathematical Modeling", "6B07116-Material Science and materials technology of light industry", "7M07113-Material Science and technology of materials", "7M07111-Nanomaterials and nanotechnology*" are: the formation of students ' competencies demanded in the labor market, formation of readiness for professional activity, personal, professional and social development of students, promoting socialization, formation of general culture of personality.

According to the criteria of the considered standard, the content of all disciplines of the SP should be based to some extent and include a clear relationship with the content of fundamental natural Sciences, such as mathematics, chemistry, physics. To achieve this goal, the management of the SP should take into account the interdisciplinary connection when developing the SP, and consider the possibility of attracting both domestic and foreign scientists for the development of accredited SP.

Strengths: none identified.

Recommendations for OP "6B05412-Mathematics and mathematical modeling", "7M05411-Mathematics and mathematical modeling", "6B07116-materials Science and technology of light industry materials", "7M07113-materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:

- to strengthen practical training in the field of specialization, consider the possibility of cooperation with other domestic universities that lead a similar program corresponding to its profile for practical training on their bases.

The conclusions of the WEC according to the criteria:

According to the standard "Standards in the context of individual specialties" revealed 5 criteria, of which 5 have a satisfactory position.

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

Standard "Study program Management»

For SP *"6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology*»:

- it is not revealed.

Standard "Information Management and reporting»

For SP "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:

- it is not revealed.

Standard "Development and approval of study programs»

For SP "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:

- the qualification obtained at the end of the SP corresponds to a certain level of the NSC.

Standard "Continuous monitoring and periodic evaluation of study programs»

For SP "6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:

- it is not revealed.

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

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- it is not revealed.

Standard "Students»

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- it is not revealed.

Standard "Academic staff»

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry*

materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:

- it is not revealed.

Standard "Educational resources and student support systems»

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- it is not revealed.

Standard "Public Information»

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- it is not revealed.

Standards in the context of individual specialties

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- it is not revealed.

(VIII) REVIEW OF QUALITY IMPROVEMENT RECOMMENDATIONS FOR EACH STANDARD

According to the standard "Study program Management»:

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- to carry out systematic work on the identification and formulation of individuality, and the uniqueness of the SP, the coherence of the development plan of SP with national development priorities and development strategy of the University, in particular on the revision of the theoretical and practical component of the proposed trajectory accredited and disclosure OP appeal SP "6B05412 Mathematics and mathematical modeling".

- provide innovation management within the framework of the SP, including the analysis and implementation of innovative proposals. Consider mechanisms to support and encourage initiatives to commercialize research projects that have an innovative focus.

According to the standard "Iinformation Management and reporting»:

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- systematically analyze the results of the survey of stakeholders development of corrective action plan in the context of the SP, maintaining control over their execution and seeing the results of decisions taken.

According to the standard "Development and approval of the study program»:

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- in order to harmonize the content of the SP to conduct a comparative analysis with similar programs of leading domestic and foreign universities;

Additional recommendations of EEC for SP *"6B05412-Mathematics and mathematical modeling", " 7M05411-Mathematics and mathematical modeling»:*

- to develop, approve and start implementing by 2021-2022 academic year a joint SP with one of the foreign universities on SP *"6B05412-Mathematics and mathematical modeling", SP "6B07116-Materials Science and technology of light industry materials*".

According to the standard "Continuous monitoring and periodic evaluation of study programs»

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- systematically publish changes made to the content of the SP on the University's website for all interested parties;

- analyze and select the range of attracted employers and other stakeholders involved in the design and implementation of the SP;

- review the content of academic disciplines and learning outcomes, eliminating duplication of disciplines and observing their continuity. Update the name of the disciplines of the master's modules "Basics of quality control of materials", "Basics of Lie algebra".

According to the standard "Student-Centered learning, teaching and assessment of progress»:

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- to ensure the conduct of their own research in the field of teaching methods of educational disciplines in the context of SP;
- ensure equal opportunities for students, including regardless of the language of study, when choosing an individual educational program aimed at the formation of professional competence.

According to the standard " Students»:

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- develop an action plan for the development of external and internal academic mobility of students, for example: summer schools in the leading universities of Kazakhstan and foreign partner universities in the framework of master's programs;
- as part of the implementation of the bachelor's program, provide for the possibility of obtaining level certificates in a foreign language for admission to the master's program;
- inform and systematically work on the development of the Association of graduates.

According to the standard "Academic staff»:

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- specify the role of the teacher in connection with the transition to student-centered learning (seminars, trainings, round tables, annual methodological conferences, etc., involvement of advanced methodologists);
- the management of the SP, taking into account the needs of the modern labor market, is more likely to involve practitioners of the relevant industries in teaching;
- purposefully develop and use AS and information and communication technologies in the educational process (for example, on-line training, e-portfolio, etc.);
- to provide measures for the development of academic mobility within the framework of the OP, attracting the best foreign and domestic teachers;
- to increase the number and quality of applications for grant funding of research works with subsequent participation in the project competition.

According to the standard "Educational resources and student support systems»

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- install guide markings and color signs, signs, purchase pictograms and place on the University's website programs for reading visually impaired students;
- to bring the content of the site in accordance with the provision of updated information and the definition of common requirements and forms of presentation of information;
- keep a record of the entry in the safety log during training.

According to the standard "Public relations»

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- provide information on the web resource that characterizes the University as a whole and in the context of educational programs.
- provide adequate and objective information about the PPS OP, in the context of personalities.

According to the standard "Standards in the context of individual specialties»:

For SP "*6B05412-Mathematics and Mathematical Modeling", "7M05411-Mathematics and Mathematical Modeling", "6B07116-Materials Science and technology of light industry materials", "7M07113-Materials Science and technology of materials", " 7M07111-Nanomaterials and nanotechnology»:*

- to strengthen practical training in the field of specialization, consider the possibility of cooperation with other domestic universities that lead a similar program of the appropriate profile to conduct practice on their bases.

(IX) REVIEW OF RECOMMENDATIONS FOR THE DEVELOPMENT OF THE ORGANIZATION OF EDUCATION

(These recommendations do not apply to measures to improve the quality and compliance with IAAR standards)

- Develop a number of measures aimed at increasing the number of students in accredited master's degree programs.

Appendix 1. "SPECIALIZED PROFILE PARAMETERS»

№	№	Evaluation criterion	Assessment accordances			
			strong	satisfactory	implies improvement	unsatisfactory
Standard "Study program Management»						
1	1	The University must have a published quality assurance policy.		+		
2	2	Quality assurance policies 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 SP context		+		
4	4	Commitment to quality assurance should apply to any activity performed by contractors and partners (outsourcing), including the implementation of joint dual-degree education and academic mobility		+		
5	5	The management of the SP provides transparency to the development plan of SP based on the analysis of its functioning, the actual positioning of the University and focus its activities to meet the needs of the state, employers, stakeholders and learners.		+		
6	6	The SP guide shows the mechanisms of formation and regular revision of the development plan of SP and monitor its implementation, evaluate achievement of learning objectives, meet the needs of students, employers and society, decision-making aimed at continuous improvementof SP.		+		
7	7	The management of the SP should involve representatives of stakeholder groups, including employers, students and AS in the formation of a plan for the SP development.		+		
8	8	The management of the SP should demonstrate the individuality and uniqueness of the SP development plan, its consistency with national development priorities and development strategy			+	

		of the educational organization				
9	9	The University should demonstrate a clear definition of those responsible for business processes, within the framework of the SP, an unambiguous distribution of staff duties, differentiation of functions of collegial bodies.		+		
10	10	The management of the OP should provide evidence of transparency of the educational program management system.		+		
11	11	The management of the SP must demonstrate the successful functioning of the internal quality assurance system of the SP, including its design, management and monitoring, their improvement, decision-making on the basis of facts.		+		
12	12	SP management must manage risks		+		
13	13	The management of the SP should ensure the participation of representatives of stakeholders (employers, teachers, students) in the collegial bodies of management of the study program, as well as their representativeness in making decisions on the management of the study program		+		
14	14	The University should demonstrate innovation management within the framework of the SP, including the analysis and implementation of innovative proposals.			+	
15	15	SP management must demonstrate evidence of openness and accessibility to students, AS, employers and other stakeholders.		+		
16	16	The management of the SP must be trained in education management programs		+		
17	17	SP management should strive to ensure that progress made since the last external quality assurance procedure is taken into account in preparation for the next procedure.		+		
Total for standard				**15**	**2**	
Standard "Information Management and reporting »						
18	1	The University should ensure the functioning of the system of collection, analysis and management of information based on the use of modern information and communication technologies and software.		+		
19	2	SP management should demonstrate the systematic use of processed, adequate information to improve the internal quality assurance system.		+		
20	3	A system of regular reporting reflecting all levels of the structure, including the evaluation of the effectiveness and efficiency of the departments and departments of scientific research, should exist within the framework of the SP.		+		

21	4	The University should establish the frequency, forms and methods of evaluation of the SP management , the activities of collegial bodies and structural units, senior management, implementation of scientific projects.		+		
22	5	The University must demonstrate the determination of the order and ensuring the protection of information, including the identification of responsible people for the reliability and timeliness of information analysis and data reporting.		+		
23	6	An important factor is the involvement of students, employees and staff in the process of collecting and analyzing information, as well as decision-making based on them		+		
24	7	Management should demonstrate that there is a mechanism for communication with students, employees and other stakeholders, including conflict resolution mechanisms.		+		
25	8	The University must measure the satisfaction of the needs of the academic staff, personnel and students in the SP and demonstrate evidence to address the deficiencies found.		+		
26	9	The University should assess the effectiveness and efficiency of activities, including in the context of the SP		+		
		The information collected and analyzed by the University in the framework of the SP should be taken into account:				
27	10	key performance indicator;		+		
28	11	dynamics of the contingent of students in the context of forms and types;		+		
29	12	the level of academic achievement, student achievements, etc;		+		
30	13	satisfaction of students with the implementation of the program and the quality of education at the University;		+		
31	14	доступность образовательных ресурсов и систем поддержки для обучающихся		+		
32	15	employment and career development of graduates		+		
33	16	Students, employees and academic staff must document their consent to the processing of personal data		+		
34	17	The management of the SP should facilitate the provision of all necessary information in the relevant fields of science.		+		
Total for standard				**17**		
Standard «Development and approval of the study program»						
35	1	The University should define and document the procedures for the SP development and their		+		

		approval at the institutional level.				
36	2	The management of the SP should ensure that the developed SP meets the established objectives, including the expected learning outcomes		+		
37	3	The management of the SP should ensure the availability of developed models of the SP graduate, describing the learning outcomes and personal qualities		+		
38	4	The management of the SP must demonstrate the conduct of external expertise of the SP		+		
39	5	The qualifications obtained at the end of the SP must be clearly defined, explained and correspond to a certain level of the NSQ.				
40	6	Management should determine the impact of disciplines and professional practices on the formation of learning outcomes		+		
41	7	An important factor is the possibility of preparing students for professional certification.		+		
42	8	Management of SP should provide evidence of participation of students, AS and other stakeholders in the SP development, ensuring their quality.		+		
43	9	The complexity of the SP should be clearly defined in Kazakhstan's and ECTS credits		+		
44	10	The management of SP shall provide the content of educational disciplines and results of training to the level of training (bachelor's, master's, doctoral studies).		+		
45	11	The structure of the SP should include various activities relevant to the learning outcomes.		+		
46	12	An important factor is the presence of joint projects with foreign educational organizations.			+	
Total for standard			**1**	**10**	**1**	
Standard «Continuous monitoring and periodic evaluation of SP»						
47	1	The University should monitor and periodically evaluate the SP in order to ensure that the goal is achieved and meet the needs of students and society. The results of these processes are aimed at continuous improvement.		+		
		Monitoring and periodic evaluation of SP should consider:				
48	2	the content of programs in the light of the latest science achievements 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	Teaching load, academic performance and graduation of students;		+		
51	5	Effectiveness of student assessment procedures:		+		
52	6	Expectations, needs and satisfaction of students with training on SP;		+		

53	7	Educational environment and support services and their compliance with the objectives of the SP;		+		
54	8	The University and the management of the SP must provide evidence of the participation of students, employers and other stakeholders in the revision of the SP.		+		
55	9	All interested persons should be informed of any planned or taken action in relation to the SP. All changes made in the SP must be published.		+		
56	10	The management of the SP should provide a review of the content and structure of the SP taking into account changes in labour market requirements of employers and social demands of society.		+		
Total for standard				**10**		
Standard «Student-centered learning, teaching and performance assessment»						
57	1	SP management should ensure respect and attention to different groups of students and their needs, providing them with flexible learning paths.		+		
58	2	The management of the SP should ensure the use of different 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 educational disciplines of the SP.		+		
60	4	The SP management should demonstrate the existence of a feedback system on the use of different teaching methods and evaluation of learning outcomes		+		
61	5	SP management should demonstrate support for student autonomy while providing guidance and assistance from the teacher.		+		
62	6	SP management must demonstrate that there is a procedure to respond to student complaints.		+		
63	7	The University must ensure consistency, transparency and objectivity of the learning outcomes assessment mechanism for each SP, including appeal.		+		
64	8	The University must ensure that the procedures for assessing the learning outcomes of students are consistent with the planned learning outcomes and program objectives. The evaluation criteria and methods under the SP should be published in advance.		+		
65	9	The University should determine the mechanisms for ensuring the development of each graduate of the results of training and ensure the completeness of their formation.		+		
66	10	Evaluators should be familiar with modern methods of assessing learning outcomes and		+		

		regularly improve their skills in this area.				
Total for standard				**10**		
Standard «Students»						
67	1	The University should demonstrate the policy of formation of the contingent of students in the context of education from admission to graduation and ensure transparency of its procedures. Procedures governing the life cycle of students (from admission to completion) must be defined, approved and published.		+		
68	2	The management of the SP should demonstrate the implementation of special adaptation and support programs for newly enrolled and foreign students		+		
69	3	The University must demonstrate compliance with the Lisbon recognition Convention.		+		
70	4	The University should cooperate with other educational organizations and national centres" European network of national information centres for academic recognition and mobility /National academic information centres for Recognition " ENIC / NARIC to ensure comparable recognition of qualifications»		+		
71	5	Management should demonstrate the existence and application of a mechanism to recognize the results of academic mobility of students, as well as the results of additional, formal and informal learning		+		
72	6	The University should provide opportunities for external and internal mobility of students, students, as well as assist them in obtaining external grants for training.			+	
73	7	The management of the SP should make maximum efforts to provide students with places of practice, promote employment of graduates, maintain communication with them.		+		
74	8	The University must provide graduates with documents confirming the qualification, including the results of training, as well as the context, content and status of education and certificates of completion.		+		
75	9	An important factor is the monitoring of employment and professional activity of graduates, SP.		+		
76	10	The management of the SP should actively encourage students to self-education and development outside the main program (outside of educational activities).		+		
77	11	An important factor is the presence of a functioning Alumni Association			+	
78	12	An important factor is the availability and support		+		

		mechanism for gifted students				
Total for standard				**10**	**2**	
Standard «Academic staff»						
79	1	The University should have an objective and transparent personnel policy, including in the SP context, including hiring, professional growth and development of personnel, ensuring the professional competence of the entire staff.		+		
80	2	The institution must demonstrate compliance with academic staff potential development strategy of the University and the specifics of the SP.		+		
81	3	The management of the SP must demonstrate an awareness of responsibility for its employees and provide them with a favorable working environment.		+		
82	4	The management of the SP 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 the AS SP in 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 development ofacademic staff.		+		
85	7	The management of the SP should involve the teaching practices of the relevant industries			+	
86	8	The management of the SP should provide targeted actions for the development of young teachers.		+		
87	9	The University should demonstrate the motivation of professional and personal development of SP teachers, including the promotion of both the integration of scientific activities and education, and the use of innovative teaching methods.		+		
88	10	An important factor is the active use of information and communication technologies in the study process.(for example, on-line training, portfolio, etc.)			+	
89	11	An important factor is the development of academic mobility within the SP, attracting the best foreign and domestic teachers.			+	
90	12	An important factor is the involvement of the AS SP to society (the role of AS in education, in science, in the region, creating cultural environment, participation in exhibitions, creative competitions, charity programs, etc.)		+		
Total for standard				**9**	**3**	

Standard «Educational resources and student support systems»						
91	1	The management of the SP must demonstrate the adequacy of material and technical resources and infrastructure.		+		
92	2	Management should demonstrate that there are procedures in place to support different groups of learners, including information and counselling		+		
	3	Management of the SP must demonstrate compliance of information resources with the specifics of the SP, including				
93	4	technology support for students and faculty according to SP (e.g. online learning, modeling, databases, data analysis programs)		+		
94	5	library resources, including the fund of educational, methodical and scientific literature on general education, basic and profile disciplines on paper and electronic media, periodicals, access to scientific databases;		+		
95	6	examination of the results of research, final papers and dissertations for plagiarism;		+		
96	7	access to educational Internet resources;		+		
97	8	functioning of WI-FI in the territory of the education organization.		+		
98	9	The University should strive to ensure that the educational equipment and software used for the development of study programs are similar to those used in the relevant industries.		+		
99	10	The University must ensure compliance with safety requirements in the learning process.		+		
100	11	The University should strive to take into account the needs of different groups of students in the context of education (adults, working, foreign students, as well as students with disabilities).		+		
Total for standard				**10**		
Standard «Public awareness»						
		The information published by the University in the framework of the SP should be accurate, objective, relevant and should include:				
101	1	implemented programs, indicating the expected learning outcomes;		+		
102	2	information about the possibility of qualification at the end of the SP;		+		
103	3	information about teaching, training, evaluation procedures;		+		
104	4	information about entrance points and educational opportunities provided to students		+		
105	5	information about opportunities, employment of graduates.		+		
106	6	Management should use a variety of ways to disseminate information, including media, information networks to inform the general		+		

		public and stakeholders				
107	7	Public awareness should include support and clarification of the country's national development programmes and the higher and postgraduate education system		+		
108	8	The University should publish on its own web resource audited financial statements, including in the context of the SP		+		
109	9	The University must demonstrate the reflection on the web resource of information that characterizes the University as a whole and in the context of the SP		+		
110	10	An important factor is the availability of adequate and objective information about AS SP, in terms of personalities.		+		
111	11	An important factor is to inform the public about cooperation and interaction with partners within the framework of the SP, including scientific and 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 the various external evaluation procedures implemented by the SP.		+		
Total for standard				**13**		
Standards in the context of individual specialties						
NATURAL, TECHNICAL SCIENCES AND TECHNOLOGIES						
		Study programs in the areas of "Technical Sciences and technologies", "Natural Sciences", such as ***"Materials Science and technology of light industry materials", "Mathematics and mathematical modeling", "Nanomaterials and nanotechnology",*** 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 on the basis of theoretical training, the education program should include disciplines and activities aimed at obtaining practical experience and skills in the specialty in General and in the profile disciplines in particular, including: - excursions to enterprises in the field of specialization (factories, workshops, research institutes, laboratories, educational and experimental farms, etc.), - conducting individual classes or entire disciplines in the enterprise specialization, - conducting seminars to solve practical problems		+		

		relevant to enterprises in the field of specialization, etc.				
115	2.	The academic staff involved in the education program should include full-time teachers who have long-term experience as a full-time employee at enterprises in the field of specialization of the education program.		+		
116	3.	The content of all SP disciplines should be based to some extent and include a clear relationship with the content of fundamental natural Sciences, such as mathematics, chemistry, physics.		+		
117	4.	The management of the SP should provide measures to strengthen practical training in the field of specialization.		+		
118	5.	The management of SP should provide training of students in the field of application of modern information technologies		+		
		Total forstandard		**5**		
		TOTAL	**1**	**109**	**8**	