INDEPENDENT AGENCY FOR ACCREDITATION AND RATING

EXTERNAL PEER COMMISSION

Independent agency for accreditation rating

Addressed to IAAR Accreditation Councils

REPORT

about the results of the external peer commission work assessing the correspondence to the requirements of the standards of special accreditation of the academic programs: 5B070400 – "Computing and Software", 6M070400 – Computing and Software", 5B070300 – "Information systems", 6M070300 – "Information systems", 5B071600 – "Instrument Making", 6M071600 – "Instrument Making", D. Serikbayev East Kazakhstan State Technical University May 4 – 6, 2015

Ust-Kamenogorsk
May 6, 2015

According to the Independent Agency for Accreditation and Rating Order No.9-15 ODI of 30.04.2015, the external peer commission assessed the correspondence of the academic programs, 5B070400 – "Computing and Software", 6M070400 – Computing and Software", 5B070300 – "Information systems", 6M070300 – "Information systems", 5B071600 – "Instrument Making", 6M071600 – "Instrument Making" to the standards of the IAAR accreditation in May 4-6, 2015 in D. Serikbayev East Kazakhstan State Technical University**,** Ust-Kamenogorsk.

The report of the external peer commission (EPC) contains the assessment of the shown academic programs of the educational organization to the IAAR criteria, EPC recommendations for the further improvement of the programs and the parameters of D. Serikbayev EKSTU academic programs profile.

EPC membership:

1 The chairman of the commission – Pak Yuriy Nikolayevich, Doctor of Techn.Sc, Professor, Co-Rector for AMO, Karaganda State Technical University (Karaganda);

2 Foreign peer – Gostin Alexey Michaylovich, Candidate of Techn.Sc., an associate professor, the Director of New Information Technologies Center of Ryazan State Radio and Technical University, a peer of "Peer Guild in the Sphere of Vocational Education (Ryazan, the Russian Federation);

3 Foreign peer – Grakovskiy Alexandr Vladimirovich, Professor, the dean of the department of Computer Sciences and Electronics, the Institute of Teansport and Communication (Riga, Latvia);

4 Peer – Khamrayev Sheripidin Itakhunovich, Cand. of Techn.Sc., Professor of the sub-department "Theoretical and Experimental Physics", deputy director of the Institute of Mathematics, Physics and Computer Science, Abay Kazakh National Pedagogical University (Almaty);

5 Peer – Smirnov Mikhail Borisovich, Cand. of Techn.Sc., Professor, head of methodological department of Shakarim State University (Semey);

6 Peer – Yensenbayeva Marzhan Zaitovna, Cand.of Phys-Math.Sc, and associate professor, head of QMS Coordination department of K.Satpayev Kazakh National Technical University (Almaty);

7 Peer – Karsybayev Yerzhan Yertayevich, Doctor of Techn.Sc., Professor of the sub-department " Lifting-and-Shifting Machines and Hydraulics", K.Satpayev Kazakh National Technical University (Almaty);

8 Peer – Akhmedyanov Abdulla Ugubayevich, Cand.og Techn.Sc., an associate professor of the sub-department "Standardization and Certification", L.Gumilev Eurasian National University (Astana);

9 Peer – Mustafayev Zhumakhan Suleymanovich, Doctor of Techn.Sc., an associate professor, head of the department "Melioration and Agricultural Science"of M. Dulaty Taraz State University (Taraz);

10 Employer – Kizeyeva Viktoriya Vladimirovna, acting head of the department for work with the educational institutions of the Board of Training and Development of LLP "Kazzink" Personnel (Ust-Kamenogorsk);

11 Student – Zhakupova Nazgul Aydynovna, graduate course student, 2 year, speciality 6M010900 – "Mathematics", S. Amanzholov East Kazakhstan State University (Ust-Kamenogorsk);

12 The Agency observer – Kanapyanov Timur Yerbolatovich, the Agency International Projects manager (Astana);

13 The Agency observer – Sadykova Aliya Mukhtarovna, the Agency Information-Analytical Project manager (Astana).

Contents

1 D. Serikbayev East Kazakhstan State Technical University presentation

D. Serikbayev East Kazakhstan State Technical University (EKSTU) is a higher educational institution having the juridical person status realizing professional academic programs of higher and post graduate education.

EKSTU has the necessary normative-juridical documents for the educational activity (Licence No. 12016669 of 02.11.2012 for the educational activity, EKSTU Regulations, the Package of Internal Normative Documents, professional academic programs).

The educational institution was founded in 1958 according to the Decree of the Ministry Councils of the USSR of August 5 августа No. 866 and the Decree of the Ministry Councils of the KSSR of August 30 No. 765, and it was named Ust-Kamenogorsk Civil and Highway Engineering Institute" (UKCHEI).

May 7, 1996 Decree of RK Government No. 573 reorganized UKCHEI into East Kazakhstan Technical University. It was Decree of RK Government, Rector's order No. 247 of 29.10.99 "About Establishing the Military Sub-Department at D.Serikbayev EKTU".

January 31, 2001 Decree of RK Government No. 163 renamed East Kazakhstan Technical University into Republic State government D. Serikbayev East Kazakhstan State Technical University.

In 2012 Decree of RK Government No. 544 of 28.04.2012 RSGE D. Serikbayev East Kazakhstan State Technical University reorganized into RSE on PKhV D. Serikbayev East Kazakhstan State Technical University. Now EKSTU is one of the largest HEIs in Kazakhstan. There are 5 departments, 28 sub-departments.

EKSTU has certified QMS. NQA Certificate (Great Britain) is in action till May 28, 2015

In 2014 D. Serikbayev EKSTU successfully passed the accreditation procedure in the Independent Agency of Accreditation and Rating (IAAR) *(Certificate No. AA0018, of May 21, 2014.)*.

In 2013-2014 academic year 13 *academic programs*, undergraduate and graduate, passed *international* specialized accreditation in ASIIN (e.V.) *and 20 academic programs* passed *national* specialized accreditation in NKAOKO.

10 undergraduate academic programs of D. Serikbayev East Kazakhstan State Technical University took the leading places in the academic programs rating according to the version of *Bologna Process and Academic Mobility Center of MES RK* in 2014. EKSTU takes the 4th position in the state HEIs rating of the number of prize places among the general number of applied undergraduate academic programs.

According to the results of RK HEIs ranging conducted by CBPAM 3 through (undergraduate-graduate-PhD) academic programs of EKSTU became among the three leaders.
Upon the results of the General rating of technical HEIs - 2014 (NKAOKO) *EKSTU took the 7th place.*

In IAAR-2014 rating *17 undergraduate academic programs, 16 graduate academic programs, 1 PhD program became among three leaders.*

Upon the results of the National Business-rating among the Republic of Kazakhstan enterprises "Sector Leader – 2014" D. Serikbayev East Kazakhstan State Technical University ***took the first prize (gold) in the nomination "Actives and Responsibilities Rates" among higher educational institutions in East Kazakhstan oblast*** and the ***13th place in the same nomination among the HEIs in the Republic of Kazakhstan (*** having entered into 40 top enterprises-leaders of the Republic of Kazakhstan in higher educational sphere according to state statistical rating of economy enterprises of their financial-economic activity ratings.

EKSTU is among 10 RK HEIs that train specialists for SPIID-2 realization in the area of mechanical engineering and metallurgy.

EKSTU conducts education activity in 84 academic programs, including: 41 undergraduate specialities, 36 – graduate specialities, and 7 – PhD specialities.

The HEI implemented the innovative mechanism of the graduates job placement monitoring based on the use of the information from Pension Payment State center. This allows to support credibility of the information about young specialists job placement.

According to data of East Kazakhstan oblast branch of Pension Payment State Center (PPSC) 87.3 % graduates of 2014 have been employed.

There poly-lingual groups in 7 academic programs there in the HEI.

There was established and has been developed the scientific-innovative structure uniting Techopark "Altay", business incubator "Bastau", 3 research institutes, 23 research laboratories, and 7 centers.

We notice the constant increase of research financing, the research have been carried out within the framework of state budget themes, and also to the order of enterprises and organizations. In 2014 252 agreements were concluded, general amount was 330 263.1 thousand KZ tenges.

An important rating of the research outcomes is the number of publications in the journals with impact factor. The number of publications in the rating journals with impact-factor higher than zero in 2012 included 28 papers in foreign high-rating journals, in 2013 there were 29 papers published, and in 2014 there were 33 papers published.

Today the university has 113 agreements about partner relations with foreign HEIs and organizations, within the framework of which we have foreseen the students, teachers exchange, joint educational and scientific-innovative activity.

The strategic partners of D. Serikbayev EKSTU are more than 100 foreign universities and organizations: JEOL company (Japan), Interactive Corporation (Japan), Micromine (Australia); Akita University (Japan), Munich Technical University (Germany), The Museum of Natural Sciences (Great Britain), Wroclaw University (Poland), Lublin Technical University (Poland), Otto von Guericke University (Germany), Klaustal Technical University (Germany), Moscow Institute of Steel and Alloys, the Institute of Computing Technology of SO RAS, Tomsk National Research Polytechnic University, Novosibirsk State Technical University, Siberian State Geodesy Academy, and others.

197 scientists from 14 countries (Russia, Ukraine, Hungary, Poland, Germany, the USA, Great Britain, Italy, Canada, Austria, Japan, Mongolia, Azerbaijan, and Kyrgyztan) were invited to the university through the Program of MES RK "Involving Foreign Scientists and Consultants in Leading HEIs of Kazakhstan" in 2014 26 foreign scientists visited the university through the Program.

Today EKSTU is a member of the consortiums of five TEMPUS scientific projects .

The Order of the Ministry of Education and Science of the Republic of Kazakhstan of December 19, 2014 No. 530 approved the membership of the board of guardians of the Republic State enterprise on the right of economy "D. Serikbayev East Kazakhstan State Technical University"

2 The academic programs general assessment

D. Serikbayev East Kazakhstan State Technical University carries out the activity according to:

- the Regulations of D. Serikbayev East Kazakhstan State Technical University of MES RKapproved by the Order of the Committee of State Property and Privatization of the Ministry of Finances of RK of August 20, 2012. No. 806.

- State Licence for Educational Services No. 12016669, given 02.11.2012. by the Committee for Control in the Sphere of Education and Science of MES RK and Appendixes:

– 5B070300, 6M070300– Information Systems (No. 12016669, of 02.11.2012);

– 5B070400, 6M070400 -"Computing and Software", (No. 12016669, of 02.11.2012);
– 5B071600, 6M071600- Instrument Making (No. 12016669, of 02.11.2012).

Upon the IAAR rating in 2014 5B070300- Information Systems took the first place , 6M070300- Information systems - 1 place, 5B070400- Computing and Software – 3 place, 6M070400 - Computing and Software - 3 place, 5B071600 – Instrument Making- 2 place, 6M071600- Instrument Making -1 place.

Being accredited academic programs are realized according to the State program of education development of RK for 2011 – 2020 years. State compulsory educational standards of RK, D. Serikbayev EKSTU Development Strategy for 2011-2020 years, the Strategic Plan of D. Serikbayev EKSTU Development for 2011-2015 years, the Strategic Plan of D. Serikbayev EKSTU Development for 2014-2018 years, the Plans of Corresponding Academic Programs Development.

The content of the academic programs was developed on the principle of continuity and succession taking into account modern achievements of science, engineering and production requirements.

The academic programs modules catalogs are annually renewed according to the employers recommendations.

The quality of undergraduates training is supported by the faculty high qualification, developed infrastructure, the use of modern teaching technologies and students progress control, integration of education, science and industry.

The being accredited academic programs content is shaped according to the requirements of SCES, we foresee studying general compulsory modules in the speciality, elective modules.

The academic programs 5B070300/6M070300 – Information Systems, 5B070400/6M070400 – « Computing and Software», 5B071600/6M071600 – « Instrument Making have the following advantages:

- module structure of the academic programs with the elements of competence approach; the academic programs foresee the opportunities of buildings the individual educational structures; in the academic programs we observe the balance of theoretical and practical modules; the academic programs management closely cooperates with the potential employers and representatives of work experience bases; the control forms are adequate to the shaped competences;

- the scientific library supports the access to the catalogs of Republic inter-university electronic library (RIEL)); multi-disciplinary electronic research platform Web of Knowledge (Thomson Reuters DB); virtual electronic library of dissertations and author's abstracts of the Russian State Library (RSL); Kazakhstan National Electronic Library; Polpred.com DB, Mass media review; "Paragraf" DB, scientific-engineering documentation;

- there the information-program complex SPORTAL functions (www.do.ektu.kz;), Electronic library, EKSTU site www.ektu.kz, the system of corporative documentation using Directum software.

3 EPC visit description

EPC work was based on the Program of Peer Commission for specialized accreditation of the academic programs visit in D. Serkbayev EKSTU in May 4 - 6, 2015 .

To get the objective information about the quality of the academic programs and all HEI infrastructure, clarification of the content of the self-assessment report, there were meetings with the rector, co-rectors, directors of the departments (administrative, academic, research and innovative activity, quality management system, production-economic, character building and social development, information technologies), heads of the departments (educational-methodological, registration office, post-graduation education, international cooperation, testing, library, educational-information technologies), the departments deans (Architecture and Civil

Engineering, Information Technologies and Power Engineering, Mechanical Engineering and Transport), heads of the sub-departments, teachers, students, employers. 231 people took part in the meetings (Table 1).

The information about the employees and students who took part in the meetings with IAAR EPC

Table 1.

Participant category	Number
Rector	1
Co-rectors	3
Deans, heads of the sub-departments, heads of structural sub-departments	45
Teachers	20
Students	33
Graduates	73
Employers	59
Total	**231**

During EPC work they saw the HEI infrastructure:

- academic and scientific laboratories of the departments - Architecture and Civil Engineering, Information Technologies and Power Engineering, Mechanical Engineering and Transport, the sub-departments of information systems, mathematical and computer modeling, instrument making and automation of technological processes, rational use of water and air basin, heat and gas supply, transport and logistics, construction of buildings and structures and transport communications, geological museum, registration office, student hub, scientific library, computer classrooms.

- the following classes were visited according to the approved schedule:

- 5B070300 “Information systems”, practical classes in the discipline ”Mathematical Analysis”, course 1, teacher Chi-Dun-Chi Yu.V..;
- 6M070300 – “Information Systems”, the lecture in the discipline “the Technology of Organization of Inter-program Interaction”, 1 year, Cand of Phys-Math. Sc., the head of the sub-department Denisova N.F.;
- 5B070400 “Computing and Software”, lecture in the discipline “Imitation Modeling”, 2 year, Cand of Tech.Sc., an associate professor Blinayeva E.V.;
- 6M070400 “Computing and Software”, lecture in the discipline “Infrastructure of Information Systems”, 1 year, Cand of Tech.Sc., an associate professor Vays Yu.A.;
- 5B071600 “Instrument making”, lecture in the discipline “Electronic and Measuring Tools”, 3 year, PhD Doctor Porubov D.A.
- 6M071600 “Instrument making”, lecture in the discipline “Software of Measuring Systems”, 1 year, Cand of Tech.Sc., an associate professor Shvets O.Ya.

- the documentation of the sub-department realizing the accredited academic programs was studied;

- the work experience bases of the being accredited programs at LLP “Kazzink”, LLP “Tekhnoanalit” were visited .

The event planned during IAAR EPC visit supported the detailed acquaintance with the educational infrastructure of the university, material-technical resources, faculty and employees, students, employers representatives, graduates. These allowed the IAAR EPC members to assess independently the correspondence of the data presented in the reports of the academic programs self-assessment, the criteria of the specialized accreditation standards.

4 Correspondence to the specialized accreditation standards

4.1 "Academic Program Management" standard

Being accredited academic programs are designed according to the normative documents of MES RK and standard curricula of the correspondent AP, are agreed with the HEI mission and the employers requirements.

Rendering qualitative educational services in the HEI, adequacy of the academic programs to the modern requirements are on the sufficient level.

In the result of anonymous questioning of the faculty (90 people) the question "How is the HEI mission and strategy reflected" got the following responses:

- In the curricula: 46% - very good, 51%, – good;
- In the assessment procedure: 36% - very good, 61% - good;
- In the innovative programs: 39% - very good, 54% - good.

The academic process planning is the structure of interrelated documents (standard curricula, elective disciplines catalog (EDC), working curricula, student individual curricula, AP working curricula) and the complex consisting of different types of academic and methodological documentation.

To realize the academic programs the HEI annually develops elective disciplines catalogs that contain the description elective component disciplines and brief content. EDC is available on printed and electronically. The structure and content of working curricula correspond to the normative documents of MES RK. The succession of the disciplines studying is according to pre and post requisits system.

The academic programs are supported by ECs, syllabi, AMDC which content is regularly upgraded and corresponds to the AP specific features and developed according to the normative documents in the Kazakh and Russian languages. The given documents are amended if agreed with the academic department of D. Serikbayev EKSTU, the university AMC decision.

The following AMDC were studied:

For AP 5B070300/6M070300 – "Information Systems", disciplines: Computer Nets, Programming Technology.

For AP 5B070400/6M070400 – "Computing and Software", disciplines: Toolkit for Developing Programs, High-Speed Computer systems.

For AP 5B071600/6M071600 – "Instrument Making", disciplines: Fundamentals of Electronics, Integral Microprocess Circuit Design, Measuring Systems Software.

Determining the competences, outcomes shaped during the AP realization and for further shaping the teaching content the following initial have been used:

– The requirements of the State compulsory standards of higher and post graduate and education, approved by the Decree of the Government of the Republic of Kazakhstan of August 23, 2012. No.1080;

–Requirements of the standard curricula for the corresponding training;

–Specific requirements of the potential employers for the graduates of the given profile, level, orientation;

–Labor market requirements;

– Questioning all stakeholders for determining competences.

To improve the level of the customs' satisfaction in getting qualitative education the sub-departments renew AP taking into account the employers opinion. Thus, taking into account the suggestion of the employers the WC of AP 5B070300 – "information Systems" (admission year 2014) has contained the following discipline: "Introduction in W3C Technologies".

Working curricula of AP 5B070400 – "Computing and Software" includes the elective disciplines: "Design and Development Web-Applications", "Reliability and Fault Tolerance of Program Complexes".

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According to the suggestion of employers from LLP “Sinetik”, “Airon Tekhnik”, “Open Technologies Plus” the curricula of AP 5B071600 – “Instrument Making” (for 2014) the following disciplines “Microcontrollers in Measuring Systems”, “Software Tools for Measuring and Control Systems”, “Mechanical Devices in Instrument Making and Automation Systems”, “Technical Control” were included/

Regular monitoring of completing and correcting the plans of developing the academic programs and their realization is done on the level of the HEI, department, sub-department on the basis of the acting quality management system.

Along with that, the commissions remarks that in the process of AP management the results of examining the changes in the internal and external environment are not taken into account .

During the academic programs realization we select and analyze the statistics of students contingent, resources, personnel, scientific and international activity, other directions and follow the degree of achieving the planned results according to the QMS procedures.

Questioning of the students shows that the HEI administration pays a lot of attention to the content of the academic program (40% of respondents)

The sub-departments realizing the AP pay special attention to the assessment and control of SIW. The schedule of SIW consulting was approved, there are methodological materials for SIW assignments.

The measures for the academic process quality control are discussed on the sittings of the sub-departments, AMC, the department councils. On the basis of the analysis and assessment of the control rating we develop the preventing and correcting measures. Their effectiveness and results are discussed at the meetings of sub-departments, AMC, the department councils.

But the mechanism of the analysis and assessment of the potential risks for the HEI and being accredited academic programs has not been opened..

The academic programs management is according to the requirements of D. Serikbayev EKSTU

ДП ВКГТУ 401-VII-2013 «Управление документацией», ДП ВКГТУ 402-VI-2013 «Управление записями», ДП ВКГТУ 503-I-2014 «Анализ со стороны руководства», ДП ВКГТУ 603-III-2013 «Управление электронными образовательными ресурсами. Электронная библиотека ВКГТУ», ДП ВКГТУ 607-I-2012 «Информационный сайт ВКГТУ», ДП ВКГТУ 701-I-2011 «Управление учебно-методической работой», ДП ВКГТУ 703-III-2013 «Организация процесса обучения с применением дистанционных образовательных технологий», ДП ВКГТУ 704-III-2013 «Научно-исследовательская работа и научно-производственная деятельность», ДП ВКГТУ 706-III-2013 «Перевод и восстановление обучающихся в ВКГТУ им. Д.Серикбаева», ДП ВКГТУ 807-II-2013 «Рубежный контроль знаний обучающихся», ДП ВКГТУ 808-III-2013 «Итоговый контроль и оценка знаний обучающихся», ДП ВКГТУ 809-I-2014 «Итоговая аттестация обучающихся».

EKSTU educational portal allows to create the unified academic-educational environment in the university and support its integration into the global educational space; supports high-technological academic process; allows to expand the platform for e-learning; forma the basis for building self-organizing system of the HEI management; creates the effective system of the university management, accountability; expands the availability and openness of education; supports the raising of the university rating on educational services market; increases the efficiency and quality of making management decisions, and also improving the control for their realization; gives the opportunity for distributing the research outcomes on the management system of other educational organizations.

The question about the usefulness of the web-site of the organization in general and the departments in particular shows that 90% of the questioned are completely satisfied, 9% are satisfied partially, and 1% are not satisfied.

The research of the faculty realizing APs “Information Systems”, “Computation and Software”, “Instrument making” have shown that for 2012 - 2015 years the amount of research is about 217 mln. KZ tenges, which testifies the urgency and demand in the research.

There are 9 subjects of research at the sub-department “Information Systems”:

- Customer: SE “National Center of Education Quality Assessment” MES RK “Service for Harmonization of Automated Information Systems of Rayon and Oblast Data Base of Educational Statistics”, 5.2 mln. KZ tenges. (research supervisor is Turganbayev E.M., Executors: Bayburin E.M., Denisova N.F., Rakhmetulina S.Zh., Nugumanova A. S., Valiyeva O.V., Novoselov A., Voronov A., Karimov A.);
- Customer: MES RK “Science Foundation” “Development of Information Technology of Assessing the Realization of Project Scientific-Technical Programs”, 8.3 mln. KZ tenges (research supervisor Balova T.G., Executors: Denisova N.F Urkumbayva A.M., Zhomartkyzy G.Zh., Zyryanov D., Zemlyznukhin N.);
- Customer: Public Foundation “My City” , Ust-Kamenogorsk, the Republic of Kazakhstan. “Development of Regional Automated System of Production Ecological Monitoring of Potentially Hazardous Enterprises and the Environment State, Ust-Kamenogorsk” 5.8 mln. KZ tenges (research supervisor Turganbayev E.M., Executors: Denisova N.F, Rakhmetulina S.Zh.,., Karimov A., Bitimbaev I., Bublikov A.);
- Customer: MES RK “Creating Infrastructure of Educational Statistics, Monitoring, and Assessing the Knowledge Quality in the Educational System of RK “, 10 mln. KZ tenges (research supervisors Temerbekov N.M., Turganbayev E.M., Executors: Bayburin E.M., Denisova N.F., Nugumanova A. S., Valieva O.V., Karimov A., Ekkert P., Zyryanov D., Auhanbayev A.);
- Customer: MES RK «The development of information technology and modeling of air pollution sources, localization impurities from measurements using variational algorithm», 5 mln. KZ tenges (research supervisor Turganbayev E.M. Executors: Denisova N.F Rakhmetulina S.Zh.,, Karimov A., Bitimbaev I., Bublikov A., Zemlyanukhin N.);
- Customer: MES RK "Development of an ontological knowledge base of e-University", 10 mln. KZ tenges (research supervisor Balova T.G, Executors: Rokhas Kriulko N.P., Tselischev A., Mokeov V., Shkarpetin A., Zhomartkyzy G.Zh.);
- Customer: MES RK «Development of models and methods of analysis and recognition of video streaming of highly scalable systems», 10 mln. KZ tenges. (research supervisor Denisova N.F., co-supervisor Baklanova O.E., Executors Kumargazhanova S.K., Garifullina Zh.R., Ilyin A., Kurochkin D., Rakysheva M., Astafyev A., Kasymkhanova D., Tlebandinova).
- Customer MES RK «Formation of three-language competence of college students using multimedia» (research supervisor Balova T.G.) 2 mln. KZ tenges.;
- Customer MES RK «Development of software - technical complex process of cleaning dust and gas streams using infrasound exposure» (research supervisor Balova T.G.) 2 mln. KZ tenges.

The teachers of the sub-department Teurganbaev E.M., Denisova N.F., and the student Soltan S. the involved in competing of ІРГЕТАС laboratory projects under supervision of Alontseva D.L.: « Development of technology for surface modification by irradiation for multifunctional nanostructured protective coatings with improved performance properties» NIF MES RK, « Study the formation of nanostructures in a plasma - detonation coatings based on Ni and Co and the search for science-based exposure modes modification coatings».

The sub-department “Instrument Making and Technological Processes Automation” realizing the AP Instrument Making is realizing the following grant projects financed by JSC HATP and MES RK:

- «Development of technology for surface modification by irradiation for multifunctional nanostructured protective coatings with improved performance properties», 9 mln. KZ tenges (Supervisor – Alontseva D.L.);

- «Development of an integrated system of energy saving industrial and commercial buildings based on LED technology», 12.306 mln. KZ tenges (Supervisor – Baklanov A.E.);
- «Development of technology for multifunctional nanostructured protective coatings with improved performance properties», 19.940 mln. KZ tenges (Supervisor – Alontseva D.L.);
- «nvestigation of nanostructure formation in plasma-detonation coatings based on Ni and Co and the search of evidence-based modes of radiation modification coatings», 3 mln. KZ tenges (Supervisor – Alontseva D.L.);
- «Development of scientific bases of innovative technologies and the modification of protective coatings and plasma electron irradiation», 25 mln. KZ tenges (Supervisor Alontseva D.L.);
- «Optimization of energy consumption in LED lighting installations combined with automatic control: algorithms, software, demo layout at Expo 2017»,16 mln. KZ tenges. (Supervisor Baklanov A.E.);
- «Development of a new automated technologies on the typical hydraulic ash thermal power plants and the mining industry in Kazakhstan with hydrocyclones with variable geometry», 16 mln. KZ tenges. (Supervisor Kvasov A.I.);
- «The development of scientific and technical bases improve the reliability and durability of LED lighting devices for increased efficiency interior lighting», 1 mln. KZ tenges. (Supervisor Baklanov A.E.).

For 2012-2014 years the sub-department teachers published:4 monographs, 178 papers, 26 of them with impact factor. 2 patents for the invention and the certificate about State registration of software were got :

- Innovative patent for the invention 29284, reg. No. 2013/1284.1 «A method of modifying the structure of the electron beam and the properties of the protective coating of nickel powder». Author Alontseva D.L.
- Innovative patent for the invention 29155, reg. No. 2013/1062.1 of 07.08.2013 «A method of modifying the structure of the plasma jet and the properties of the protective coating of nickel powder». Автор Alontseva D.L.
- Certificate of state registration of rights to the object of copyright No.1090 of August 15, 2012 on the subject of intellectual property under the name «TSmonitor» Analysis of the parameters of thermal point "(the computer program). Authors: Baklanov A.E., Rybakova D.A., KvasovA.I.

The scientists from Hungary, South Korea, Poland, Russia, the USA, Czechia, Germany, Brazil were involved to teach, consult master students for 2011 - 2014 years.

Concerning IT technology orientation EKSTU is the basis HEI for coordinating the programs of Shanghai Cooperation Organization (SOO). At present we have concluded the agreements with the leading Russian and NIS universities within the SOO framework for master programs: Astrakhan State University, Novosibirsk State University, Kyrgyz State University of Construction, Transport and Architecture. Within the framework of the cooperation with Russian HEIs 9 EKSTU master students studied there for 2010-2014 years. In 2014-2015 academic year Troyeglazova N and Sapargaliyev A. (13-МИС-2) studied there (HEI partner is Novosibirsk State University). Sapargaliyev A. studied for the MES RK grant .

There are the following cooperation agreements:

– Tomsk State University of Control Systems and Radio Electronics (TSUSRE), Russia , agreement of 05.09.2012;

– Tomsk Polytechnic University, Russia, Agreement of 11.10.2012 ;

– Novosibirsk State Technical University, Russia, Agreement of 24.06.2014 ;

– Obuda University, Hungary, Agreement of 15.11.2011 ;

–St. Petersburg Research University of Information Technologies, Mechanics and Optics, St. Petersburg, Russia, Agreement of 11.08.2013;

–University of Applied Sciences, Amberg-Weiden, Germany, Agreement of 01.09.2014 ;

– olytechnic University of Lublin, Poland, Agreement of 11.03.2012,

The uniqueness lies in accredited AP is their orientation on the region labor market. Individual Development Plans of AP are due to studying the possibility of building an individual educational trajectory by choosing subjects, taking into account personal preferences and changing needs of the labor market.

Implementing AP compliance of the labor market provides a sufficiently high percentage of graduate employment (average 80%), as well as positive feedback from employers who say graduates of educational programs formed the core competencies, knowledge and professional skills of interpersonal communication, personal and general professional competence.

A system of feedback and informing students, employees and other stakeholders is provided by regular meetings with the staff of the rector, the functioning of government and the institution of supervision, a blog on the website of the University Rector.

The anonymous questioning of students (77 respondents) showed the complete satisfaction with:

- general quality of the academic programs (81.8%);
- teaching quality (77.9%);
- fairness of exams and attestation (81.8%);
- the level of library resources availability (76.6%);
- existing training resources (76.6%);
- deanery availability (88,3%);
- objectivity and fairness of teachers (75,3%);
- timely assessment of students (80,5%).

The anonymous questioning of teachers (61respondents,) showed:

- good (55.7%) and very good (27.9 %) an opportunity for potential continuous development of the faculty;
- good (41%) very good (55,7%) the ability to use their own innovations in the teaching process;
- good (54,1%) and very good (39,3%) the level of attention of the leadership of the university for educational programs;
- relatively bad (9,8%) provision with the necessary scientific and educational literature in the library for teachers;
- good (45,9%) and very good (45,9%) management availability for teachers;
- good (68,9%) and very good (16,4%) the level of feedback from the faculty to the administration;
- good (55,7%) and very good (14,8%) conditions for the improvement of professional skills;
- good (65,6%) and very good (31,1%) the level of students knowledge meeting the requirements of the modern labor market.

Strengths :

- consistency of the development plan educational programs with national policies in the field of education, science and innovation development;
- transparency of educational programs management;
- availability of information systems and databases that use the Internet for information, available in the Internet portal site containing information reflecting the planning and the evaluation of its effectiveness for students, staff and the public.

Weaknesses :

- AP management based on the results of studies of changes in the internal and external environment is carried out insufficiently;

- assessment of potential risks to the educational program implemented are considered not fully.

The commission recommend for the standard:

- to enhance the role of QMS Department to improve the interaction of parties involved in the implementation of the AP, based on the results of the study of changes in the internal and external environment.

- to improve the system of analysis of the implementation of the developed plans and evaluating the effectiveness and efficiency of the parties involved in the design and implementation of the OP with the definition of external and internal risks;

- to strengthen vocational guidance in schools and colleges to expand the geography of D. Serikbaev EKSTU entrants

EPC notes that AP 21 criteria are strong, 14 criteria positions are satisfactory, 2 criteria need improvement.

4.2 Academic Program Specificity" Standard

The implementation of educational programs aimed at the formation of professional competence of the future graduates, the relevant frameworks of qualifications BA and MA, and meet the needs of the labor market.

Educational programs include the possibility of building an individual educational trajectory, recording personal needs and capabilities of students. The formation of individual educational trajectories performed on the basis of ДП ВКГТУ 702-I-2013 Подготовка бакалавров в ВКГТУ им. Д.Серикбаева, ДП ВКГТУ 705-II-2014 Формирование контингента магистратуры и докторантуры, ДП ВКГТУ 708-II-2014 Подготовка магистров в ВКГТУ им.Д.Серикбаева.

Planning educational trajectory (record on the discipline) is carried out in accordance with the academic calendar. The procedure for recording to the discipline of choice specialties organized office of the Registrar in electronic form, with methodical and counseling departments and advisors.

AP management provides equal opportunity to study, including, regardless of the language of instruction on the formation of individual educational program aimed at the formation of professional competence.

There is a system for monitoring the progress of students on an educational path and their achievements. To evaluate the knowledge in the current control, the following forms and methods: oral questioning, work control, combined survey, computer testing, protection and presentation of papers, homework, group discussion of the nature of the problem, tests (open and closed), essays, semester assignment self-help, etc..

AP management creates a mechanism to monitor the satisfaction of students of the university in general and the individual services in particular, the functioning of the system feedback, which includes rapid provision of information on the evaluation of students' knowledge.

Review of the content of curricula and training programs, taking into account current trends in science, changes in the labor market, the wishes of students and teachers takes place annually.

Special Department of the developed models have demonstrated the presence of graduate degree programs, including knowledge, skills, competencies and personal qualities to all educational programs. The analysis of the model indicates a particular AP.

EPC members talked with the faculty, employers, graduates for different years, students of different courses. There were the employers representatives: LLP «Predpriyatie KC», JSC «Ulba», LLP «Technoanalit», LLP «Kazzink», LLP «Kazakhstan Solar Silicon», LLP «Ayron-Technik», LLP «Sinetik», JSC «AZIA AVTO», LLP «1C-Reyting», LLP «Otkrytye Technologii Plus», JSC«Kaspii Bank», «ESPINM», «MASHZAVOD» marketing agency «Shturman Marketing Group» и др.

Assessment of the quality of educational programs was based on a review of curricula, the catalog of elective disciplines UMKD, questioning students and teachers, attendance.

Questioning of students, interviews with participants in the educational process, viewed from the material and technical base shows that the learning process is regularly used interactive methods of training, as well as information and computer technology.

They systematically administered discipline, you always get the skills to work on the equipment used in the production. Program of basic and majors include modern achievements of science, engineering and technology management in the direction of preparation.

For example, for the formation of professional competencies in students over the past three years, new disciplines were introduced to meet the requirements of the labor market, the wishes of interested parties.

There is a balance between the theoretical and practice-oriented disciplines, the name and content of the courses correspond to the actual directions of AP.

However, the Commission notes the lack of harmonization of the content of educational programs with the educational programs of leading foreign and Kazakh universities. Identifying common features of education systems of foreign countries and Kazakhstan universities defines the necessary framework for the further development of integration projects in the field of education. The most obvious characteristic feature common to all countries are the high rate of reform and modernization of education systems. Despite the diversity of educational programs and differences in the duration of education at all levels, regardless of the differences, the overall goal of these reforms should be the orientation to achieve the same level of preparation of graduates of accredited AP. This in turn will facilitate another important aspect of the integration of academic mobility, and moreover contributes to finding solutions to the problems of recognition and equivalence of diplomas.

Strengths :

- disciplines influence on the formation of students professional competence, skills and knowledge blocks.

- possibility of regular updating of educational programs taking into account the interests of employers in the development of educational programs of disciplines, aimed at developing the professional skills.

- a system for monitoring the progress of students in the educational trajectory and achievement of students.

- implementation of research results in the educational process.

Weaknesses :

- insufficiently wide range of lighting urgent scientific problems in the maintenance unit majors AP.

The Commission recommends:

- expand the range covers urgent scientific problems in the maintenance of majors through the harmonization of their content with similar programs of other universities;

- continue to expand the range of majors.

EPC notes that 18 criteria of the given standard of the academic program of all levels have high position, 14 criteria have satisfactory positions, 1 needs improvement .

4.3 Faculty and Teaching Effectiveness" Standard

Training of teachers, their number of respective areas of training of students of accredited AP meet licensing requirements. Qualification requirements for teaching staff identified in job descriptions, documented procedures for QMS.

According to the educational program "Information Systems" and "Computing and Software" at the Department of "Information Systems" training process is provided by 19 full-time teachers, including 10 Candidates of sciences, 2 - Dr. PhD, 4 masters. Faculty with academic degrees and titles is 50.2%.

According to the educational program "Instrument Making" educational process is provided by 37 teachers, including a special department - 21 people, including full-time teachers - 18 people, including 1 doctor of sciences, 2 doctors PhD, 8 PhDs. The proportion of full-time faculty with academic degrees and titles - 52%.

The teachers of the AP having the academic degrees in 2014 is: for graduate students – 54 %, master students – 100%.

Head of "Information Systems" and "Instrument Making and Technological Processes Automation " have a PhD degree, the academic rank of associate professor. In addition, it should be noted that the heads of departments have the sufficient scientific and pedagogical experience in higher school. Personal information about the faculty is available on the University website.

Each teacher developed a portfolio with all the necessary information and supporting documents about qualification, professional development, a list of the main works, read the list of subjects and their presentation.

Chairs accumulate and analyze information on their activities, carry out an assessment of strengths and weaknesses. According to its activity report regularly (the faculty individual reports, reports on scientific and methodological seminar of the Department, the annual reports of departments). Providing monitoring activities of the faculty is determined based on its rating, peer visiting occupations of public employment.

The site of the university in the "Departments" provides information about the leaders of educational programs (deans, heads of departments) indicating audiences phones and e-mail addresses, functioning virtual reception.

Calculation of hours of training department is carried out on the basis of working curriculum. At the end of the school year the faculty provides a report on the implementation of the teaching load, which is then considered at a meeting of the Department.

Professional development and training of teaching staff is held once in 5 years, in accordance with the approved plan of the university. The main purpose of training and internships is the formation and consolidation of practical professional knowledge and skills derived from the theoretical training. From 2010 to 2014 the 65 faculty realizing the AP have taken the advanced training courses.

For the past period the teachers of AP special sub-departments took various forms of advanced training (PC courses, internships, seminars, trips to near and far abroad). The number of teaching staff, taken training courses for the 2011-2012. was 24 teachers, 2012-2013. - 16 teachers, 2013-2014. - 25 teachers

As a result of the survey the faculty respondents note good or very good assessment of the university opportunities for continuous development of faculty potential 64% and 31%, respectively

Monitoring of the faculty satisfaction is ensured through regular survey, testing, and management of personal interviews with employees

s part of the academic mobility programs over the study period, were invited foreign scholars from the University of Óbuda, Hungary, Lublin University of Technology, Altay Polzunov State Technical University, Barnaul, Russia.

The faculty implementing AP conduct scientific research, the results of which are published in domestic and foreign publications, materials, national and international conferences. A significant step towards international integration is the publication of articles in journals with impact factor, in particular teachers, accredited by implementing educational programs for 2012-2014, the teachers of the department "Machine and process automation" published 4 books, 178 scientific articles, 26 of them with impact -factor. According to the Department of "Information Systems" faculty published 332 scientific papers, including the rating journals with non-zero impact factor 26 articles.

The AP faculty actively used in educational process innovative methods and forms of training and pays great attention to the introduction of modern teaching methods and means of cognitive activation of students. Teachers of the accredited educational programs used in the learning process simulation games, blitz interviews, presentations, development of research projects and their protection. For all special subjects students perform ongoing projects, which are small, specialized applied research on specific topics of the discipline. The use of these techniques allows to make the learning process fast and effectively, to develop the skills needed to work in the professional activity.

When asked, "How high school teachers may use their own strategies, methods and innovations in the learning process?" we got the following results:

- strategies: 36,1% – very good, 59% – good, 4,9% – relatively bad;
- methods: 57,4% – very good; 42,6% – good;
- innovations in the academic process: 55,7% – very good; 41% – good; 3,3% – relatively bad.

The level of stimulation and attraction of young specialists to the educational process more than 26% of respondents noted an insufficient management attention to the young teacher.

AP faculty respect the principles of ethical behavior and adhere to the rules of the corporate culture of the university. The moral and psychological climate in the departments to ensure the implementation of educational programs, characterized by stability and goodwill.

Strengths :

- correspondence of faculty qualification to the requirements, the level and specificity of the educational program.
- IT competence of the faculty, application of innovative methods and forms of education.
- possibility of academic mobility, attracting the best foreign and domestic lecturers, joint research with the implementation of the AP.

Weaknesses :

- underdeveloped mechanisms of targeted support to young teachers.

The Commission recommends:

- intensify efforts to target support for young teachers through additional incentives;
- organize refresher courses or training seminars on planning learning outcomes of educational programs and the implementation of the basic principles of the Bologna Process.

EPC notes that 15 criteria of the given standard of the academic program of all levels have high position, 5 criteria have satisfactory positions, 1 needs improvement

4.4 “Students” standard

The total number of students of the being accredited AP are students and rgraduates enrolled in the state order and on a paid basis of full-time education. Information about the contingent of students is presented in Table 2.

Being accredited programs students contingent

Table 2

Academic year	Form of	Students	Grant students	Payment basis	Studying in the

	study	number		students	Kazakh language
5B070300 – Information Systems					
2012/2013	Full time	99	35	64	18
2013/2014	Full time	82	36	46	19
2014/2015	Full time	61	30	31	24
6M070300 - Information Systems					
2012/2013	Full time	23	18	6	-
2013/2014	Full time	20	16	4	-
2014/2015	Full time	16	12	4	-
5B070400 – Computation and Software					
2012/2013	Full time	138	52	86	38
2013/2014	Full time	100	41	59	27
2014/2015	Full time	65	38	27	23
6M070400 - Computation and Software					
2012/2013	Full time	9	7	2	-
2013/2014	Full time	2	2	-	-
2014/2015	Full time	8	7	1	-
5B071600 – Instrument Making					
2012/2013	Full time	116	99	17	62
2013/2014	Full time	97	93	4	61
2014/2015	Full time	106	98	8	74
6M071600 – Instrument making					
2012/2013	Full time	7	4	3	0
2013/2014	Full time	10	10	-	2
2014/2015	Full time	9	7	2	2

Based in Table 2 one can judge of the stability of the contingent of students on educational programs 5B070300/6M070300 – Information Systems, 5B070400/6M070400 – Computation and Software и 5B071600/6M071600 – Instrument Making

The AP students progress as the last examination period showed:

for 2014/2015 academic year:

- 5B070300 – “Information Systems” - 71,8%, progress quality - 64,1%;
- 6M070300 - “Information Systems” - 100%, progress quality - 100%;
- 5B070400 – “Computation and Software” - 84,3%, progress quality - 75,7%;
- 6M070400 - “Computation and Software”- 90%, progress quality - 90%;
- 5B071600 – «Instrument Making» - 81,3%, progress quality - 75,8%;
- 6M071600 – «Instrument Making» - 100%, progress quality - 100%;

for 2013/2014 academic year

- 5B070300 - “Information Systems”- 90,8%, progress quality - 75,7%;
- 6M070300 - “Information Systems”- 98,3%, progress quality - 82,0%;
- 5B070400 - “Computation and Software” - 100%, progress quality - 100%;
- 6M070400 - “Computation and Software” - 100%, progress quality - 100%.
- 5B071600 - «Instrument Making» - 77,3%, progress quality - 69,8%;
- 6M071600 - «Instrument Making» - 100%, progress quality - 100%.

VOUD average grade of the being accredited APs is 75.48 in 2014/2015 academic year («IM»-64.81, «C&S»- 81.05 , «IS»- 80.58).

he average percentage of quality of public examinations in the period from 2012 to 2014 amounts to 62% of the undergraduate, master's at 100%. The average percentage of quality degree designing for the period from 2012 to 2014 for undergraduate is 70%. The average percentage of quality for the protection of master's theses in the period from 2012 to 2014 was 100%

Analyzing the results of the final certification of Bachelor may be noted that students pass the state exam on the "good" and "excellent" (85-100 points).

In general, the University operates a system of preventive measures and elimination of academic debts to help students.

Preventive measures are:

– individual interviews with students who have truancy;

– invitation underachieving students at faculty meetings and the meetings of the Board of the Faculty;

– sending letters of notification to the students parents.

In order to eliminate the academic student debt, regardless of training, he/she should re-examine this discipline in the terms established by the dean's office. To re-study of discipline allow the students paid retraining.

Students of D.Serikbayev East Kazakhstan State Technical University have rights and obligations defined by the Law of the Republic of Kazakhstan" On Education ", regulations of the Ministry of Education and Science of the Republic of Kazakhstan, the Charter of the university, the internal regulations of the university.

The university has a student collegial bodies.

he structure of the Youth Committee include:

- Student Government;

- Student construction teams and groups «Жасыл Ел».

The purpose of the functioning of the student collective bodies is the formation of personality, as a specialist, a landmark in the highly cultured civilized space, the armed state, national, spiritual and moral principles.

D.Serikbaev EKSTU Student Government. Is a structural unit of the Committee on Youth, established in accordance with the concept of youth policy of the Republic of Kazakhstan.

The activists of the D.Serikbayev EKSTU student government. carry out their activities in the following areas: research and development activities, moral and patriotic education, the development of the creative potential of students, promotion of healthy lifestyles.

The students of being accredited AO are the members of the debate club «Еркін сөз», EKSTU dance team “Sharmel”, “Extasy”, the department KVN team.

To develop students’ research there is students design bureau “SUNKAR” where representatives of sub-department work.

There is students design bureau “Zhuldyz”. SDB structure includes the circles: “Elecntronocs”, “Digital Engineering”, “Microcontrollers”, “IS Design”, “Programming”which allows the students to select the SR orientation accoeding to their interests .

AP Students are actively involved in the implementation of state-funded research, funded by the MES, actively participate in competitions, Olympiads and scientific conferences at regional, national and international levels. The research results obtained as a result of work on projects within scientific circles, reported at national and international conferences.

In April 2014 22 reports were made in the sub-section "ICT in Education, Science and Engineering” of " XIV Republic STC of Students and Young Scientists “The Creation of Young to the Innovative Development of Kazakhstan”. 22 reports were published (2.75 p.sh.) in the conference materials. Upon the conference results Kantsevich A (11-ИС-1) was awarded with the 1st grade certificate, Maratova G.(10-ИСК-1) was awarded with 2nd grade diploma, Nurimanova N (10-ИСК-1) was awarded with 3d grade diploma

Every year undergraduates of the Department "Information systems" are involved in the scientific-practical interuniversity Olympiad on information technology. The participation of undergraduates in international conferences: VIII Annual International Scientific and Practical Conference "Modern Information Technologies and IT-Education », November 8-10 ноября 2013, MSU, Moscow; 8th International Symposium on Applied Informatics and Related Areas, November 7, 2013, Budapest, Hungary; Scientific-practical seminar on actual problems of mathematics and information technologies, in Astana, LLP « Company of System Studies "Factor »; 5th International Conference “Radiation Interaction with Materials: Fundamentals and Applications 2014”, 12-15 May, 2014, Kaunas, Lithuania.

In 2013 the following students were awared with the certificates for participating in the Republican competition for the best students research:

I place – Zinchenko A., graduate course students 2 course speciality «Instrument Making» (Supervisor – Arinova N.). Subject: «The development of the control algorithm processing informative signal measurement circuit multiparameter moisture»;

III place – Logovtsova E., student of 4 course speciality «Instrument Making» (Supervisor – Kornev V.). Subject: «Rapid diagnosis of the technical state of diesel engines»;

I place - Kurochkin D., student of 4 course speciality “Computation and Software” (Supervisor – Denisova N.F.). Subject: «Development of a client-server system for monitoring the status of servers»;

II place – Bogatyrev V. student, 4 course speciality «“Computation and Software” (Supervisor – Denisova N.). Subject: «Software development for the study of the formation of nanostructured layers on the surface of metals»;

II place- Rodin M. Student, 4 course speciality «“Computation and Software” (Supervisor – Blinayeva N.). Subject: «Automation of calculation of the amount of electricity that determines the amount of heat energy for the maintenance of lead refining process for a certain period of time».

In 2014 the following students were awared with the certificates for participating in the Republican competition for the best students research:

III place – Mamyrbekov D., graduate student, 2 course speciality «Instrument Making». Subject «Creating virtual instrumentation to develop an automated climate control system metallurgical plant» (Supervisor Arinova N.).

III place – Sizov V., student, 4 course speciality «Instrument Making» (Supervisor Prokhodova L.). Subject: «Drive control unit renKZ tengesenovskogo spectrometer SRV1-In».

I place- Rib Yu., student, 4 course speciality «Вычислительная техника и программное обеспечение» (Supervisor – Denisova N.). Subject: «Indicative assessment of the quality of education on the basis of data analysis»;

II place- Bedash D., student, 4 course speciality “Computation and Software” (Supervisor – Denisova N.). Subject: «Monitoring of Moving Platforms State »

Since 2013 till 2015 49 students of the AP cluster took part in in the republican scientific-technical conference of students, graduates and young scientists. Of these, 28 reports of bachelors and 19 masters reports were recommend for publishing in the collection « Creativity of young innovative development of Kazakhstan ».

Following the conference, 4 students received the diploma of 1 st degree, 3 students received the diploma of the 2nd degree and four students received a diploma of the 3rd degree.

In the HEI there is a positive trend in the number of student publications in various journals. IT-technology direction EKSTU is the basic institution in coordination of programs of the University of Shanghai Cooperation Organization (SCO). Currently, agreements with leading universities in Russia and the CIS for the implementation within the framework of SCO University Master's programs: Astrakhan State University, Novosibirsk State University, Kyrgyz State University of Construction, Transport and Architecture. As part of these agreements, 2010-2013 5

master's theses are protected. In 2013, the program double degree graduate thesis defended speciality «6M070300- Information Systems" Gurlev IV, AT Kusainova (partner university Novosibirsk State University).

For the implementation of academic mobility of students is working with domestic and foreign universities. Thus, during the reporting period, undergraduates speciality «6M070400 - Computing and software" were short-term internships at these universities. In the Lublin Technical University of Lublin, Poland were trained 17 undergraduates accredited OP; in Swenson College of Science and Engineering of the University of Minnesota passed a ten-trained undergraduates 3 (A. Sablin, bagels A. A Auganbaev.).

Foreign scientific training (exit) undergraduates made in accordance with the plan of the University and on the basis of international cooperation Agreements. s the base of foreign universities for OP "Information Systems" are: Lublin University of Technology, Lublin (Poland), Novosibirsk State University, Novosibirsk (Russia), St. Petersburg Research University of Information Technologies, Mechanics and Optics, St. Petersburg (Russia), University of Applied Sciences Amberg-Weiden (Germany), University of Minnesota USA. With all of these universities signed bilateral Agreements. E.

In 2011-2012 academic year student Zhanabayev E. Studied in Wroclaw University. In B 2013-2014 academic year the students Nukhayev M, Soltan S studied in Wroclaw University. Student Baydeldinova R., speciality «5B070400 – Computing and Software took the work experience through DAAD program in 2013 in Hagen Applied Sciences university, Germany. Graduate student Sablin A. took the internship in University of Applied Sciences Northwestern Switzerland, FHNW. Work place was Windisch. Signed in 2013 the Agreement with University of Applied Sciences Amberg-Weiden (Germany), allowed the students of speciality «6M070400 – "Computation and Software" to study within the academic mobility network (Kurochkin D.).

However, the university is not fully used, available Agreements cooperation with foreign universities and institutions of higher education of the Republic of Kazakhstan, for the expansion of academic mobility of students.

Students satisfaction with the quality of the university work. As part of the monitoring a scheduled basis we systematically carry out a survey of different groups of students: the annual survey of graduates, in order to improve the quality of the educational process internal monitoring is carried out. Systematic surveys of students, targeted surveys, assessment of student educational activities of the faculty is also carried out.

Assistance in employment of graduates of the department have an analysis and forecast of the labor market of the Department of monitoring and quality management. Since 2014 the database is supplemented by information of SCPP.

Activities on employment of graduates is carried out by special departments and heads of departments. Due to the high demand for skilled workers in the region every year the university receives an application for employment of graduates from enterprises in the city and region.

In 2014 5B070300 – "Information Systems" AP graduates job placement was 95 %, 6M070300 - Information Systems" AP - 100%, 5B070400 –"Computation and Software – 92 %, 6M070400 - "Computation and Software - 100%, 5B071600 - «Instrument Making» AP - 100 %, 6M071600 - «Instrument Making» AP- 100%.

The data about job placement of the being accredited AP for the last three years are shown in Table 3.

Rates of job placement of the being accredited AP

Table 3

Academic year	The number of graduates	The number of employed graduates	The graduates enrolled in the graduate course	Unemployed graduates / maternity leave

Academic year	The number of graduates		The number of employed graduates		The graduates enrolled in the graduate course		Unemployed graduates / maternity leave	
5B070300 – Information Systems								
2011/2012	25	100%	25	100%	2	8%	-	-
2012/2013	40	100%	38	95%	5	12.5%	2	5%
2013/2014	35	100%	32	95%	7	20%	3	5%
6M070300 - Information Systems								
2011/2012	5	100%	5	100%	-	-	-	-
2012/2013	10	100%	8	80%	-	-	2	20%
2013/2014	5	100%	5	100%	1	20%	-	-
5B070400 – "Computation and Software"								
2011/2012	34	100%	32	94%	3	8.8%	2	6%
2012/2013	57	100%	56	98%	8	14%	1	2%
2013/2014	51	100%	47	92%	4	7.8%	4	8%
6M070400 - "Computation and Software"								
2011/2012	3	100%	3	100%	-	-	-	-
2012/2013	7	100%	7	100%	2	28%	-	-
2013/2014	2	100%	2	100%	-	-	-	-
5B071600 - «Instrument Making»								
2011-2012	71	100%	68	95.77%	3	4,23	-	-
2012-2013	42	100%	39	92.8%	3	7,2	-	-
2013-2014	30	100%	30	100%	-	-	-	-
6M071600 - «Instrument Making»								
2011-2012	5	100%	5	100%	-	-	-	-
2012-2013	5	100%	5	100%	-	-	-	-
2013-2014	7	100%	7	100%	-	-	-	-

Strengths :

- functioning of the feedback system, which includes prompt submission of information on the evaluation of students' knowledge.

- possibility of continuing education on educational programs of postgraduate and further education.

- creation of conditions for employment of graduates and liaison with alumni.

Weaknesses :

- lack of internal and external mobility of students;

- lack of supporting the program of the target supporting of talented students.

The Commission recommends:

- create the conditions for internal and external mobility of students;

- empower targeted support of gifted students through additional incentives.

EPC notes that 8 criteria of the given standard of the academic program of all levels have high position, 5 criteria have satisfactory positions, 2 need improvement

4.5 Resources Available for the Academic Programs" Standard

When training for implemented in D.Serikbayev EKSTU educational program used as a specially equipped laboratory and general purpose auditorium. For high-quality training sessions, they perform laboratory research papers provided with the necessary equipment. Laboratories are used in the process of carrying out laboratory activities in the relevant disciplines, to perform research and experimental-research work of students.

Material laboratory facilities of AP 5B070300, 6M070300 - "Information Systems" and 5B070400, 6M070400 - "Computation and Software" consists of 11 specialized laboratories, 2 research laboratories, 35 training and specialized computer classes, the business incubator "Bastau" - the total area of more than 4279.4 sq.

In the educational process of AP 5V071600, 6M071600 - «Instrument Making» there involved 5 educational laboratories 1 Scientific - Innovation Centre, 1 training and production site on the basis of scientific and production association "Energy"

Laboratories are equipped with modern computers (processor-based Core i7, Core i5, Celeron), server hardware, software licenses, equipment and specialized equipment in an amount sufficient for carrying out laboratory works to the extent provided by the AP curriculum. Of particular note is a well-equipped research laboratories, "MaSubjectticheskih and Information Technology (MIT)," laboratory of engineering profile "IRGETAS" computer classes. Lecture halls are equipped with projection equipment.

Laboratory facilities comply with safety regulations and fire safety. Square laboratory facilities allow to accommodate laboratory equipment and have enough number of seats.

he university operates a corporate computer network, which included seven university buildings, including 5 educational and research buildings and dormitories, connected via fiber optic lines. Park of computer hardware is 1992 units, including computers - 1468. Effective 33 servers, 16 of them are of dedicated configuration. Today in EKSTU there are 20 computer, 28 multimedia and 2 specialized classrooms, 15 classes of possible simultaneous testing of students during examinations. Connection to the Internet is performed via a dedicated channel with a capacity of 88 and 16 Mbit / s. In the corporate network we use wireless, fiber optic and Wi Fi technology. Constant access to the Internet can be used on-line-funds in the educational process. Information terminals installed in all buildings with a touch screen for access of students to the educational portal. n order to create a unified information space of the university, as well as the transition to electronic interaction of all participants in the educational process DOT EKSTU. EKSTU developed and operates information and educational environment - educational portal of the university (http://do.ektu.kz), based on modern information and telecommunication technologies and providing a new level of access to education, while maintaining its quality.

A special role in the provision of information resources is an educational portal of the University SPORTAL. SPORTAL provides construction of communication space and information and educational fields through the corporate network and Internet technologies, which implies the provision of information and means of communication, to improve links between existing resources, protection of intellectual property, the provision of various services, promoting e-learning, education and training efforts.

PORTAL information is available to registered users. Students and their parents also have the opportunity to receive information on educational achievements through terminals located in educational buildings.

Key Features of the SPORTAL complex:

- management of educational process: the creation of basic, individual, group training schedules (curriculum), the control of the current, intermediate and final performance of students, etc..;

- training, separated in time and space, monitoring and evaluation of the results: the creation and maintenance of a data bank of test questions, the creation and maintenance of a data bank examinations, assessment of learning outcomes, ie, testing and verification of control works;

- the creation of teaching materials on the subjects of the curriculum: creating, updating teaching materials in accordance with the curriculum speciality, such as lectures, methodical instructions for laboratory, practical, term papers, essays, etc..;

- administration: user access to various system functions defined categories to which the user belongs (Specialist deanery, a specialist of department etc.).

By means of the portal it is provided by accounting and systematization of different resources involved in the implementation of educational programs, analyzes and other procedures. Prompt and timely processing of large volume of information increases the effectiveness of the work of the university to achieve certain educational program learning outcomes.

To improve the quality of employment in the disciplines embodied in the pulpit, "Information systems" in the educational programs, in accordance with the plan to replenish and upgrade laboratory facilities the following equipment was acquired for the 2014:

- monoblock, 3 units.;
- licence for PO MS SQL Server 2008 R2 (7);
- projector EPSONEB-W 12 and wall screen 2,40*1,80 (4);
- 3D-printer;
- server 2 ЦП (Intell Xeon 4 ядра)16 ГБ ОЗУ300 ГБ ГЗУ X 4 (RAID 5).

The material basis of «Instrument Making and Technological Processes Automation" sub-department includes the laboratories equipped with modern tasting equipment:

- automation of telecommunications systems;
- analog and digital electronics;
- Radio receivers and antenna systems;
- Radio Engineering and Electronics;- Programming controllers of «MITSUBISHI».

Research and Innovation Center "Energy Future", which features of 3D-printers, color laser printer, the new personal computers, welding equipment, CNC milling machines.

In assessing the adequacy of the equipment goals of the educational program, it may be noted that in general, laboratory chairs, leading training in this educational program, have the necessary equipment for the organization and conduct of laboratory work and achieve the objectives of the program.

Scientific library of D. Serikbaev EKSTU. is a modern library and information center, l which aims are providing educational and research process with its own resources as well as providing access to the resources of other libraries and organizations.

the library consists of 16 units, including 6 reading rooms on 425 seats, 2 computer rooms for 17 seats; Hall 7 automated directory sites.

Diversified fund of the library at 01/01/14 totaled 987,899 copies, incl. - 58950 copies. - In the state language. Including:

- academic literature - 537327 units., including in the Kazakh language – 50993 units.;
- academic literature - 162258 units., including in the Kazakh language – 4479 units.;
- periodicals - 58315 units, including in the Kazakh language – 7722 units.;
- e-publications - 3198 units.

Provision of discipline curriculum of the being accredited AP UMKD EKSTU educational portal is 100%. Availability of fund educational, methodical and scientific literature in relation to the reduced number of students in the full cycle of training complies Book Supply.

However, there is a lack of books providing accredited education programs in the state language.

The Library organizes access to the resources of other libraries and institutions: electronic library Polpred. com; Electronic Resources Oxford University Press; electronic Resources East Vie;

digital library (IEL) IEEE/IET; lectronic publishing and library system "DOE ». Currently, users of our University have the opportunity to work with the scientific electronic editions of Thomson Reuters, placed in Web of Knowledge, SciVerse Scopus и SciVerse Science Direct of Elsevier and Springer Link, eLibraru, RMEB, KazNEB, POLPRED References. Electronic access to library resources is carried out by the University of pages http://www.lib.ektu.kz/. In addition to studying the educational and scientific literature include official publications - the laws, regulations, government regulations bibliographic books - dictionaries, encyclopedias, reference books and periodicals in the educational process

The university has access to educational online resources, free Wi-Fi operates.

According to the students questioning:

- 85,7% are completely satisfied
- 13% are partially satisfied;
- 1,3%. Are partially not satisfied with the existing computer classrooms
- 67,5% are completely satisfied
- 24,7% are partially satisfied;
- 5,2%; are partially not satisfied

With the existing laboratories;

- 2,6%. did not answer

Questioning about the computer classrooms and the Internet resources availability showed that 79,2%, are satisfied, 14,3% are partially satisfied , 3,9% are partially not satisfied, 2,6% are not satisfied.

On the issue of equipping classrooms, classrooms for large groups surveyed said that they are fully satisfied – 81,8%, partially satisfied – 15,6%, partially not satisfied – 2,6%.

Strengths :

- accessibility of the maximum possible number of structured, organized information on readable disciplines - presentation materials, lecture notes, mandatory and additional literature, practical tasks, etc. to students.

- availability of advanced learning environment, providing academic access - students have access to a personalized online resources (available also outside the classroom), as well as training materials and assignments, and it is possible to self-test students' knowledge through remote access to the portal (website) .

- conditions are created for the development and use of information and communications technology staff, faculty and students in the educational process and the activities of the university.

Weaknesses :

- insufficient book supply for modern teaching methods and scientific literature on the main subjects in the national language.

- there is no examination of the R & D, final papers, theses for plagiarism.

- the absence of external publications on the portal of educational programs.

The commission recommends:

- to increase book supply for the educational programs in accordance with the requirements of multilingual education.

- intensify efforts to implement the results of the examination of scientific and educational activities for plagiarism.

- provide a mechanism for placing on the external website, publications about educational programs.

EPC notes that 21criteria of the given standard of the academic program of all levels have high position, 8 criteria have satisfactory positions, 3 need improvement

4.6 Standards in the section of definite specialities.

Natural and engineering sciences.

Development of the academic programs 5B070300/6M070300 – Information Systems, 5B070400/6M070400 – "Computation and Software" is oriented towards graduates getting the necessary theoretical and practical training.

Current state of training in the framework of AP is supported by the active use of ICT annual update projects and dissertations subjects as well as the introduction of new elective subjects taking into account the recommendations of the employers.

One of the priorities of the university is to develop interactive and information and communication technologies (ICT). To teach, perform ISW tasks, including course projects, theses there is a specially equipped classrooms.

In order to familiarize students with the professional environment and current issues in the field of specialization, as well as to acquire skills based on theoretical training education program includes subjects and activities aimed at obtaining practical experience and skills speciality in general and in particular majors.

Practical training of students through excursions to enterprises, organization of professional practices, conducting individual disciplines at the branches of departments "Kazzinc" Ltd, "1C Rating", is focused on systematic deepening, generalization and specification of the theoretical knowledge acquired at the university, to improve professional skills significantly with the issuance of professional certificates upon graduation.

Strengths:

- Educational program includes subjects and activities aimed at obtaining practical experience and skills in general and speciality majors, including.:

- excursions to the enterprises in the area of specialization (factories, workshops, research institutes, laboratories, etc.)

- conduct certain activities and disciplines in enterprises specialization;

- workshops for solving practical problems relevant to enterprises in the area of specialization, etc.

No remarks.

EPC notes that 2criteria of the given standard of the academic program of all levels have high position, criteria have satisfactory position.

RECOMMENDATIONS

EPC of the academic programs specialized accreditation

5B070300 – "Information Systems", 6M070300 – "Information Systems", 5B070400 – Computation and Software, 6M070400 – Computation and Software, 5B071600 – «Instrument Making», 6M071600 – «Instrument Making» recommends:

- to enhance the role of QMS Department to improve the interaction of parties involved in the implementation of the AP, based on the study outcomes, changes in the internal and external environment.

- to improve the analysis system of the developed plans implementation and evaluating the effectiveness and efficiency of the parties involved in the design and implementation of the AP with the definition of external and internal risks;

- to expand the range covered urgent scientific problems in the supporting majors through the harmonization of their content with similar programs of other universities;

- to intensify efforts to target support for young teachers through additional incentives;

- **to** create the conditions for internal and external mobility of students, targeted support of gifted students through additional incentives.

- to increase book supply for educational programs in accordance with the requirements of multilingual education.

RECOMMENDATION TO THE ACREDITATION COUNCILS

The members of the external peer commission came to the unanimous opinion, that the academic programs **5B070300 – "Information Systems", 6M070300 – "Information Systems", 5B070400 – "Computation and Software", 6M070400 – "Computation and Software", 5B071600 – «Instrument Making», 6M071600 – «Instrument Making» of D. Serkbayev East Kazakhstan State Technical University** can be accredited for the period of 5 years

Chairman : _____ Pak Yuriy Nikolayevich

Omission members:

_____ Alexandr Grakovskiy
_____ Alexey Gostin
_____ Sheripidin Khamrayev
_____ Mikhail Smirnov
_____ Marzhan Yesenbayeva
_____ Yerzhan Karsybayev
_____ Abdulla Akhmedyanov
_____ Zhumakhan Mustafayev
_____ Viktoriya Kizeyeva
_____ Nazgul Zhakupova
_____ Aliya Sysykova
_____ Timur Kanapyanov