**INDEPENDENT AGENCY FOR ACCREDITATION AND RATING**

**EXTERNAL PEER COMMISSION**

Независимое агентство
аккредитаций и рейтинга



# 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: 5B071300 – "Transport Engineering and Technologies" , 5B074500 – "Transport Construction", 6M074500 - "Transport Construction", 5B080500 – "Water Resources and Water Use"**
**D. Serikbayev East Kazakhstan State Technical University**
**May 4 – 6, 2015**

**Ust-Kamenogorsk, 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);





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**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).





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Независимое агентство аккредитаций и рейтинга

**CONTENT**







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**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





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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:





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- 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:

- 5B071300 – Transport, Transport Engineering and Technologies (No. 12016669, of 02.11.2012)
- 5B074500, 6M074500- Transport Construction (No. 12016669, of 02.11.2012)
- 5B080500 – Water Resources and Water Use (No. 12016669, of 02.11.2012)

Upon the results of CBP and AM rating 5B080500 - Water Resources and Water Use took the 1 place in 2014.

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 contents is shaped according to the requirements of SCES, we foresee studying general compulsory modules, in the speciality, elective modules.

The academic programs 5B071300 - Transport, Transport Engineering and Technologies, 5B074500, 6M074500- Transport Construction, 5B080500 – Water Resources and Water Use 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.

| Participants category | Number |
|---|---|
| Rector | 1 |
| Co-rectors | 3 |
| Deans, heads of the sub-departments, heads of structural sub-departments | 45 |
| Teachers | 30 |
| Students | 35 |
| Graduates | 73 |
| Employers | 59 |
| **Total** | **246** |

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 classes were visited according to the schedule;

- the documentations of the sub-departments realizing the being accredited academic programs was studied;

-the work experience bases – JSC “Azia Avto”, RSE «Шығыс жол Лаборатория” 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.

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**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 (61 people) the question "How is the HEI mission and strategy reflected" got the following responses:

- In the curricula: 45,9% - very good, 50,8%, – good; 1,6% - relatively bad; 1,6% - bad
- In the assessment procedure: 36.1% - very good, 60.7% - good; 3.3.% - relatively bad
- In the innovative programs: 39.3 % - very good, 54.1% - good; 4,9% - relatively bad; 1,6% - very bad

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 5B071300 – Transport, Transport Engineering and Technologies AP, for 5B074500/6M074500 – Transport Construction AP, for 5B080500 – Water Resources and Water Use.

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;

–National and international requirements for the competences of the academic programs graduates, European framework of qualifications, approved by the joint order of MT and CZN and MES RK of 28.09.2012 , No.444;

–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





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suggestion of the employers the WC of AP 5B071300 –Transport, Transport Engineering and Technologies included the disciplines "Electronic and Autothrone Equipment", "Automobiles Testing" and "Fundamentals of Production Technology and Automobile Repair", "Automobile Design", "The Design of Motor Transport Enterprise and Service Center", "Design of Manufacturing Equipment, Maintenance, and Automobiles Repair". For AP 5B080500 Water Resources and Water Use were the following disciplines "Water Economy of Industrial Enterprises", "Construction Structures", "Engineering Systems of Buildings and Structures", "Ecological Water Use" and others were introduced. For AP 5B074500 "Production Enterprises of Road Construction", "Design of Highways under Difficult Conditions", "Highways Examination, Diagnosis, and Certification", "Transport-Operation Rates of Highways" were introduced.

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.

Questioning of the teachers shows that the HEI administration pays a lot of attention to the content of the academic program (39.3% 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.

The academic programs management is according to the D. Serikbayev EKSTU requirements: DP EKSTU 701-I-2011 Educational-Methodological Work Management; DP EKSTU 702-I-2013 Training Undergraduates in D. Serikbayev EKSTU; DP EKSTU 703-III-2013 Organization of the Teaching Process Using Distant Educational Technologies; DP EKSTU 706-III-2013 Students Transfer and Reinstatement D. Serikbayev EKSTU; DP EKSTU 709-I-2014 Academic Mobility in D. Serikbayev EKSTU; DP EKSTU 807-II-2013 Students Progress Control; DP EKSTU 808-III-2013 Final Control and Students Progress Assessment; DP EKSTU 809-I-2014 Students Final Attestation; DP EKSTU 811-I-2012 Internal Monitoring of Educational Process Quality; I EKSTU 701.01- II-2015 Development and Shaping of the Discipline Educational-Methodological Complex; I EKSTU 702.04-III-2015 Порядок перезачета кредитов по типу ECTS в D. Serikbayev EKSTU; I EKSTU 808.01-II-2013 Examinations Order; P EKSTU 701.02-II-2013 Regulations about Academic-Methodological Councils of D. Serikbayev EKSTU; P EKSTU 701.03-I-2013 Module AP Development; P EKSTU 702.01-II-2013 Regulations about Serikbayev EKSTU Profile Sub-Department Branch at an Enterprise; P EKSTU 702.02-II-2013 Work Experience Regulations; P EKSTU 702.03-I-2011 Regulations of the Laboratory; P EKSTU 702.05-II-2013 Regulations about D. Serikbayev EKSTU Graduates Job Placement; P EKSTU 702.06-I-2013 Organization of Summer Semesters and Additional Classes; P EKSTU 702.07-I-2013 Regulations about EKSTU Pre-University Courses; P EKSTU 704.02-II-2013 Regulations about Students Research; P EKSTU 704.03-I-2013 Regulations about Scientific Laboratory.

Information technologies are used in the management: there are educational portal and informational site in three languages. Constantly operating automated informational systems are successfully used for selecting the information about internal and external environment of D. Serikbayev EKSTU. 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.

Major functions of the portal are:

- access to training modules and methodological subjects of the curriculum relevant specialty (electronic textbooks, lectures, manuals, guidelines, curricula);
- the organization of interactive communication between the participants of the educational process (an electronic bulletin board, forum, tele-video conference, e-mail);
- the implementation of different types of remote control of knowledge of students (different questions, questions-relations issues substitution);
- the organization of a diverse collection of statistics on the educational process with the use of OLAP technology for multidimensional data analysis;
- access to information related to the educational process (normative-reference information, curricula, training schedule, students' progress).

The research of the faculty realizing AP Transport, Transport Engineering, and Technologies for the last three years show that since 2011 till 2014 the research amount was annually 10 mln. KZ tenges, which proves the urgency and demand in the research. AP 5B080500 Water Resources and Water Use the amount of the research to order is 3 mln KZ tenges in average. AP 5B074500 the amount of the research to order is 17 mln KZ tenges in average annually .

The sub-department “Transport and Logistics” realizing AP “Transport, Transport Engineering, and Technologies” carry out the following research:

- «Improving the efficiency of motor vehicles», No.0114PK00004 (Supervisor – Cand.of Techn.Sc. Muzdybayev M.).
- «A study of traffic flows and the development of recommendations on the organization of traffic on the road network of the city of Ust-Kamenogorsk» (Supervisor – Cand.of Techn.Sc Vdovin V.).
- «Implementation of measures to ensure quality assurance of gasoline arriving in the oblast» (Supervisor – Doctor of Techn.Sc. Kulseitov Zh.).
- « Diagnostics for vehicle inspection, maintenance and repair of vehicles » (Supervisor – Cand.of Techn.Sc. Zavalko A.).

Interim results and key findings of the Progress published in the ISPC.

The sub-department “Transport and Logistics” has the circle “Avtomobilist”for students under the supervision of Cand.of Techn.Sc. Zavalko A. The research results have been reported at the International Scientific-Technical Conference “The Creativity of Young to the Innovative Development of Kazakhstan”. In 2015 28 students did their reports at the conference, upon the results two certificates of the 2nd and 3d grades were got as well as 2 thank you letters (scientific supervisors are: Muzdybayev M., Zavalko A., Muzdybayeva A.).

The sub-department “Rational Use of Water and Air Basin and Heat and Gas Supply” of AP 5B080500 has the circle “Aqua” for students, organized at scientific-production laboratory “Water Problems”.

The sub-department “Construction of Buildings, Structures, and Transport Communications” has the operating student design office “Engineering” for AP 5B074500 and 6M074500.

In cooperation with other universities, since 2011, foreign scientists have been lecturing, conduct trainings and consultations for young teachers of all AP.





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Makenov A., a professor of the sub-department “Transport and Logistics” took the scientific internship in Kyrgyz State University (Bishkek) in 2012. Muzdybayeva A., the associate professor of the sub-department took the scientific internship in «YEMAGROUPCo., LTD» (Urumchi, China).

At present the sub-department “Transport and Logistics” works at developing joint academic programs with foreign universities: Wroclaw Technological (Poland).

Besides, within the AP 5B071300 – Transport, Transport Engineering and Technologies framework we work for mutual cooperation in science and education between D. Serikbayev and relational sub-departments of the universities and scientific organizations of Russia, Kyrgyzstan (Polytechnic University), Altay State University (Barnaul), MAHI (Technical University), Trapeznikov Institute of Management Problems, RAS, (Moscow), SIBADI (Omsk) JSC «KazdorNII» (Almaty), Kyrgyz State University of Civil Engineering, Transport, and Architecture (Bishkek), Tuva State University (Kyzyl), Krasnoyarsk State Technical University, the Institute of Informatics and Management Problems, K. Satpayev KazNTU, Wroclaw Technological University (Wroclaw, Poland).

Between the HEIs there are concluded the cooperation agreements which allow the EKSTU graduates to enter the post graduate courses (Dmitriyev M., a graduate of 08-AA-1 group entered the post graduate course of ASU).

The AP sub-departments study the experience of graduates training in the leading technical HEIs of Poland and Russia. In the result of studying the experience the corresponding corrections are introduced into the academic programs.

The research outcomes are got innovative patents of RK, certificates of intellectual property, registered in RK Ministry of Justice, publishing papers in rating periodicals, collections of international and national conferences.

For the period of 2013-2014 the sub-department teachers got 6 patents and 1 certificate about the state registration of the intellectual property object. APs 5B074500 and 6M074500 - 12 patents and author’s certificates were got in 2012 .

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

The realized AP compliance of the labor market provides a sufficiently high percentage of graduate employment (an average of 96%), as well as positive feedback from employers who say graduates of the educational programs formed the core competencies, knowledge and professional skills of interpersonal communication, personal and general professional competences.

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, the presence on the faculties of the boxes for complaints and suggestions, Rector's blog on the website of the University.

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.

The management activities actively involve information technology: functioning educational portal and information site in three languages, information system support the educational process «S-Portal», distance learning portal, the portal of communication within the corporate environment of the university.

Questioning students about the usefulness of the web site of the organization in general and faculties in particular, showed that 89.6% of the respondents are fully satisfied, 9.1% - somewhat satisfied, 0% - partly satisfied, 1% – not satisfied.

*Strengths*:

- consistency of the development plan educational programs with national policies in the field of education, science and innovation development;
- shaping an individual development plan OP by its public discussions with representative groups of representatives of all interested parties, based on the proposals and amendments that authorized collective body of the university contributes to the project
- availability of automated electronic control systems for educational programs
- transparency of educational programs management;

*Weaknesses*:

- lack of cooperation with other universities, such as implementing education programs;
- insufficiently developed requirements for forms and levels of technology used in the educational process.

**The commission recommend**:

- to expand cooperation with other universities in order to harmonize the content of educational programs with educational programs of leading foreign and Kazakh universities;
-to increase the participation of faculty in research projects granted by MES RK;
- 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 AP with the definition of external and internal risks.

***EPC notes that AP 30 criteria are strong, 6 criteria positions are satisfactory, 1 criteria needs improvement.***

**4.2 Academic Program Specificity" Standard**





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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 are developed based on SCES specialties and are consistent with the mission of the university and the demands of the labor market, in accordance with the Dublin descriptors agreed with the European Qualifications Framework. The university implemented competence and student-centered approach.

Major sub-departments develop modular training programs to modular curricula as an annex are developed for the whole period of study based on model curricula specialty (SC) and approved by the Co-Rector for AMW based on the decision of the Academic Council

The program contains a complete list of academic disciplines, grouped into cycles of general education (GED), base (BD) and profile disciplines (PD) both compulsory and elective components, with an indication of the complexity of each academic discipline in credits and academic hours. Working curricula, providing modular study courses in compliance with the logical sequence of the study subjects are developed each year. The content of the educational program includes theoretical studies, different kinds of practices, etc. Learning trajectories are reflected in the modular academic programs (MAP), taking into account the logic of the relationship of academic disciplines, their consistency and continuity.

In addition to SC annually EKSTU developed a catalog of elective courses (ECC), which is a systematic annotated list of all the disciplines of the elective component. In ECC stated prerequisites and postrequisits for each academic discipline, and gives students the opportunity to select an alternate elective disciplines. ECC is available for students on the EKSTU educational portal

(http://www.do.ektu.kz/doektu/files/catalog.pdf ).

On the basis of SC and WC of the AP the student determines the individual educational trajectory along with the adviser, i.e., he/she makes an individual academic plan (IAP). The IAP includes core component disciplines and type of educational activity (work experience, state exam, writing and defense of the diploma work) from SC and elective components from EDC. Elective disciplines catalog is annually analyzed taking into account the changes in the labor market, appearance of of new advanced technologies and the interests of students and employers.

Educational programs include the possibility of building an individual educational trajectory, recording personal needs and capabilities of students. Catalogue of elective courses (ECC), for undergraduate, graduate and doctoral programs, is a systematic annotated list of all the disciplines included in the elective component.

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

AP management provides equal opportunity to study, regardless of the language of instruction on the shaping of individual educational program oriented towards the shaping 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 (colloquium), work control, combined survey, protection and presentation of abstracts, homework, discussion, workshops, round tables, panel discussion on





Republic of Kazakhstan Astana, Kabanbay Batyr ave. 42-17 EP ("Infinity 2" CC) Phone: +7 7172 45-24-02

the nature of the problem, tests (open and closed type), essays, semester tasks for independent solution, 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.

There is an annual 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.

There is an annual 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.

EPC members interviewed the faculty, employers, graduates of different years, students from different courses. Employers are attended by representatives of companies: JSC "Asia Auto", LLP "Bipek Auto" Ltd, "Height", JSC "Vostokmashzavod", LLP "taxis" STO "Avtooptika" SI "Irtysh basin inspection on regulation of use and protection of water resources of CWR MA Kazakhstan" SCE "-Vodokanal Oskemen "of East Kazakhstan center of hydrometeorology, TOO NPO" VK ECO ", LLC "Laboratory of Atmosphere ", RSE" KazAvtoZhol, RSE "KazhaAvtodor" LP "DSU-14," LLP "OblShyggysZhol" etc. according to the list.

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 show that the learning process regularly use interactive methods of training, as well as information and computer technology.

The AP systematically administer discipline, you always get the skills to work on the equipment used in the production. The Program includes modern achievements of science, engineering and technology management in the training direction.

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

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 the being accredited OP. 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* :

- provision of equal opportunities to students regardless of the language of instruction for the formation of an individual educational program;
- orientation of educational programs towards developed model of the graduate;
- Employers are involved in the design, implementation, and represent the interests and views in the AP development.

*Weaknesses*:

- no opportunity to get master degree (5B080500 – Water Resources and Water Use) and PhD of the being accredited specialities;

- no joint educational programs with other universities;
- insufficiently demonstrated the continuity of the content of educational programs at different levels of education;
- the implementation of an educational program does not enough effectively use innovative teaching method.

**The commission recommend:**

- to develop joint with other universities in educational programs;
- to provide a measure for obtaining a license for the specialty Magistracy 6M080500 – Water Resources and Water Use and PhD program of the being accredited specialities ;
- to implement actively the results of scientific research in the educational process;
- to ensure the involvement of domestic and foreign research institutions into the educational process.

***EPC notes that 19 criteria of the given standard of the academic program of all levels have high position, 12 criteria have satisfactory positions, 2 need 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.

12 full time teachers including 7 Candidates of Science support the educational process for the academic program 5B071300 "Transport, Transport Engineering and Technologies" The proportion of teachers with a degree and / or title is 58%.

The total number of teaching staff that train students for AP 5B071300 – "Transport, Transport Engineering and Technologies" is 46 people, including:

- GED - 12 people. 6 teachers with the scientific degrees and knowledge (50 %).
- PD and SD cycle is 34 people. 18 teachers with the scientific degrees and knowledge. (53 %).
- those teaching classes having the Master degree are 6 people.

For AP 5B080500 the proportion of teachers with a degree and / or title, the total number of teachers, providing educational process for AP is 43 people, including:

- GED - 12 people. 6 teachers with the scientific degrees and knowledge (50 %)).
- PD and SD cycle is 31 people. 18 teachers with the scientific degrees and knowledge. (58 %).

The proportion of the faculty with the academic and scientific degrees realizing APs 5B074500/6M0074500 is more than 50%. The total number of the faculty teaching students of AP 5B074500 "Transport Construction" is 29 including:

- GED cycle is taught by 14 teachers. 7 of them have scientific degrees and titles (50%)
- BD and PD are taught by 15 teachers. 8 of them have scientific degrees and titles (53.3%)

Each teacher develops portfolio with the necessary information and supporting documents about the qualification, qualification improvement , list of published papers, the list of taught discipliners and their presentations.

The sub-departments accumulate and analyze information on their activities, carry out an assessment of strengths and weaknesses. According to the results of activity twice a year the teachers are individual reports, and the department provides an annual report and a report on the scientific and methodological seminars. Providing monitoring activities EPS is determined based

on its rating, peer visiting sessions of open sessions. Peer visiting and open faculty sessions are carried out in accordance with the approved schedule.

The site of the university in the "Departments" provides information about the history of divisions of the department, the head of educational programs (deans, head of. departments) indicating phones and e-mail addresses. On the personal pages of the rector and vice-rector for directions information on hours reception on personal matters is provided. The site of the university is actively functioning.

Calculation of hours of training department is carried out on the basis of working curriculum. At the end of the school year at a meeting of the department we listen to the reports of the implementation of the faculty training load. Load the teacher taking into account the performance of the training, teaching, research, organizational and methodical, educational, training and other types of work within a six-hour working day is 1250 hours, including classroom load of 43 credits (650) hours in an academic year.

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. he number of teaching staff, held training for the 2011-2012. - 7, 2012-2013. 9, 2013-2014. 5 people. The university is actively working to improve the IT-competence of employees. So in the 2012-2013 academic year, training courses were held 87 teachers in 2013 -2014 academic year -53 instructors.

As a result of the survey respondents say the faculty assess as good or very good the university opportunities for continuous development of the faculty potential is 55.7% and 27.9%, respectively.

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

As part of the program "Involving of foreign scientists and consultants in the leading universities of Kazakhstan" according to the specific research areas of the department "Transport and Logistics" in 2012-2014 invited Russian scientists in the field of transport intelligent systems directly involved in a number of projects implemented in recent years, from large Russian cities (Moscow, Sochi, Novosibirsk). Postolit A. – deputy general director of LLP"GIS" (Moscow), Doctor of technical sciences, professor of Moscow Motor-Highway Institute, Bykodorov S. Doctor of Economics, professor of Siberia State University of Communication Lines (Novosibirsk).

Visiting lecturers from the USA, Germany, Russia, Poland have worked at "Rational Use of Water Air Basin and Heat and Gas Supply" sub-department, AP ОП5В080500. The scientists lectured in poly-lingual groups in English and in the academic groups in Russian. The outcome of the cooperation was publishing joint textbooks: "Water Supply of Industrial Enterprises", "Technical Maintenance of Water Supply Systems", "Emergency Situations on Water Objects", "Increasing Head in Building Internal Plumbing", "Physical Modeling of Water Flows".

AP 5В074500/6М074500, Titov M., Doctor of Tech.Sc., professor of NSACEU (Novosibirsk, Russia) was invited.

Teachers of the sub-departments took part in the round table with the professors of the Wroclaw University of Technology (Poland) (23.09.2013). Scientific directions of the department of international cooperation were identified in the cooperation agreements concluded with the listed universities. Realization of the program of academic mobility in the form of students internship in high schools in Poland and Russia is carried out at the stage of preparation of the master.

The AP teachers conduct scientific research, the results of which are published in domestic and foreign publications, materials, national and international conferences. During 2011-13 the faculty published more than 100 scientific and methodical works. 6 monographs, 3 textbooks and 12 manuals have been published. The results of research carried out by the department, are used in the educational process.

A significant step towards international integration is the publication of articles in journals with impact factor, and particular teachers', implementing the being accredited education programs have published 10 articles for the last 3 years in collections with impact factor on the basis of Thomson Reuters, three papers with RINTS index.

AP faculty actively use innovative methods and forms of training and pays great attention to the introduction of modern teaching methods and means of cognitive activation of students in educational process. achers use the following methods: case-study, designed as an example of Kazakhstan and international companies, business games, blitz interviews, presentations, peer review of scientific articles, essays, reports, a glossary, an essay on the topics taught courses, the development of research projects and their defense. For all special subjects students perform ongoing projects (individual and group), which are small, specialized applied research on specific topics of the discipline. There is a mandatory presentation of the results, attention is paid to the art of presentation. 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 AP faculty respect the principles of ethical conduct 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* :

- an educational program provided by highly qualified staff;
- compliance personnel potential to the strategy and specific educational programs;
- compliance with basic education subjects to profile disciplines;
- the mechanism to stimulate personal and professional development of teachers and staff in accordance with the objectives of AP;
- the faculty compliance with the qualification requirements, the level and specificity of AP.

*Weaknesses* :

- insufficient use of innovative teaching methods;
- lack of academic mobility of majoring sub-department faculty;
- underdeveloped practice of involving foreign and domestic scientists for joint research with the implementation of the AP

**The commission recommend:**

- to expand the use of innovative teaching methods;
- to improve the work on the development of academic mobility of teachers;
- to increase the number of scientific papers of the faculty of the sub-department in journals with high impact factor.
- to develop the forms of academic mobility and international cooperation with partner universities.

***EPC notes that 6 criteria of the given standard of the academic program of all levels have high position, 134 criteria have satisfactory positions, 2 need improvement .***

### 4.4 "Students" standard

The general students contingent of the being accredited AP study for the state grants and on the payment basis, full-time. The data of students contingent are shown in Table 2

Being accredited programs students contingent

Table 2

| Academic year | Form of study | Students number | Grant students | Payment basis students |
|---|---|---|---|---|
| **5B071300 "Transport, Transport Engineering and Technologies** | | | | |
| 2012/2013 | Full-time | 31 | 6 | 25 |
| 2013/2014 | Full-time | 42 | 10 | 32 |
| 2014/2015 | Full-time | 51 | 15 | 36 |
| | | | | |
| 2012/2013 | Correspondence | 50 | | 50 |
| 2013/2014 | Correspondence | 40 | | 40 |
| 2014/2015 | Correspondence | 33 | | 33 |
| **5B080500 Water Resources and Water Use** | | | | |
| 2012/2013 | Full-time | 140 | 80 | 60 |
| 2013/2014 | Full-time | 102 | 69 | 33 |
| 2014/2015 | Full-time | 95 | 73 | 22 |
| | | | | |
| 2012/2013 | Correspondence | 18 | | 18 |
| 2013/2014 | Correspondence | 17 | | 17 |
| 2014/2015 | Correspondence | 7 | | 7 |
| **5B074500 Transport Construction** | | | | |
| 2012/2013 | Full-time | 205 | 72 | 133 |
| 2013/2014 | Full-time | 163 | 53 | 110 |
| 2014/2015 | Full-time | 102 | 75 | 27 |
| | | | | |
| 2012/2013 | Correspondence | 128 | | 128 |
| 2013/2014 | Correspondence | 59 | - | 59 |
| 2014/2015 | Correspondence | 44 | - | 44 |
| **6M074500 Transport Construction** | | | | |
| 2012/2013 | Full-time | 8 | 8 | 0 |
| 2013/2014 | Full-time | 11 | 8 | 3 |
| 2014/2015 | Full-time | 8 | 8 | 0 |

The HEI proves to carry out active profession orientation work among the schools of the region, popularizing the AP.

The information about AP students progress is shown in Table 3.

Table 3 – The results of progress of full-time and correspondence students

| AP 5B071300 | Full-time | Correspondence |
|---|---|---|





Republic of Kazakhstan Astana, Kabanbay Batyr ave. 42-17 EP ("Infinity 2" CC) Phone: +7 7172 45-24-02

| | | | | | | |
|---|---|---|---|---|---|---|
| Transport, Transport Engineering and Technologies | 2011-2012 | 2012-2013 | 2013-2014 | 2011-2012 | 2012-2013 | 2013-2014 |
| | 75 % | 63 % | 67% | 55 % | 56% | 55 % |
| Including the year of study: | | | | | | |
| 1 | 73 | 63 | 65 | 56 | 56 | 56 |
| 2 | 69 | 62 | 63 | 55 | 56 | 55 |
| 3 | 75 | 68 | 69 | 55 | 55 | 55 |
| 4 | 78 | 70 | 71 | 56 | 56 | 56 |
| AP 5B080500 Water Resources and Water Use | Full-time | | | Correspondence | | |
| | 2011-2012 | 2012-2013 | 2013-2014 | 2011-2012 | 2012-2013 | 2013-2014 |
| | 74.17% | 76.09% | 80.95% | 73.3% | 76.7% | 86.33% |
| Including the year of study: | | | | | | |
| 1 | 55.56% | 62.96% | 76.19% | 40.00% | 16.67% | 60.00% |
| 2 | 71.43% | 69.23% | 73.08% | 100.00% | 100.00% | 100.00% |
| 3 | 78.00% | 60.53% | 72.00% | - | - | - |
| 4 | 100.00% | 100.00% | 96.97% | 58.33% | 27.27% | - |
| 5 | - | - | - | 100.00% | 100.00% | 100.00% |
| AP 5B074500 Transport Construction | Full-time | | | Correspondence | | |
| | 2011-2012 | 2011-2012 | 2012-2013 | 2011-2012 | 2012-2013 | 2013-2014 |
| | 76.5% | 74.7% | 75.01% | 74.7% | 75.01% | 82.1% |
| Including the year of study: | | | | | | |
| 1 | 55.56% | 62.96% | 76.19% | 40.00% | 46.67% | 60.00% |
| 2 | 71.43% | 69.23% | 73,08% | 84.00% | 78.65% | 86.3% |
| 3 | 78.00% | 60.3% | 72,00% | 100.00% | 100.00% | 100.00% |
| 4 | 100.00% | 100.00% | 100,00% | - | - | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| 6M074500 – Transport | Full-time | | | Correspondence | | |
| | 2011-2012 | 2012-2013 | 2013-2014 | - | - | - |





Republic of Kazakhstan Astana, Kabanbay Batyr ave. 42-17 EP ("Infinity 2" CC) Phone: +7 7172 45-24-02

| | | | | | | |
|---|---|---|---|---|---|---|
| Construction | 100% | 100% | 100% | - | - | - |
| Including the year of study: | | | | - | - | - |
| 1 | 100% | 100% | 100% | - | - | - |
| 2 | 100% | 100% | 100% | | | |

The students of AP “Transport, Transport Engineering and Technologies” show stable results during VOUD: the average grade amount of the AP students was: 60 points in Kazakh and 70 points in Russian (06.11.2014). The VOUD average grade of the speciality “Water Resources and Water Use” was 76.0.

This indicates that teaching at the University complies with SCES for the specialties, other regulatory documents of MES RK, modern level of teaching at the university.

Analyzing the results of the final certification of Bachelor may be noted that students pass the state exam on the "good" or "excellent." The average percentage of quality of public examinations in the period from 2011 to 2014 is 96%, while absolute performance is 100%. The average percentage of quality degree designing for the period from 2011 to 2014 is 96%, the absolute performance - 100%. EKSTU students did not received unsatisfactory ratings for state examination and defense of the graduation projects for the last three years.

Speciality 5B071300 “Transport, Transport Engineering, and Technologies” there were “excellent” grades for the diploma projects (works):

2011/12 academic year - 62.0% (Full-time 65.9,6 % and 58.5 % correspondence);
2012/13 academic year –39.4% (Full-time 67.6 % and 23.7 % correspondence);
2013/14 academic year – 25.3% (Full-time 30.8 % and 16.1 % correspondence),
For state exams:
2011/12 academic year – 40.7% (Full-time 79.5% и correspondence 14.1 %);
2012/13 academic year - 22.3% (Full-time 44.1% и correspondence 10 %);
2013/14 academic year – 22.4 % (Full-time 26.9 и correspondence 16.1 %).

The overall progress of graduates AP 5B080500 can be seen in the results of the IGA. Analyzing the results of the final certification of the undergraduates, it may be noted that the students pass the state exam on 4 and 5, i.e, 85 - 100 points. The average percentage of quality for the periods: 2011 - 2012 - 95.7%, 2012-2013 - 97.8%, 2013-2014 - 100%. The opportunities for students’ comfortable training are created according to the current requirements of the educational process.

In D.Serikbayev EKSTU there is the information portal where the following is placed for students 1) the guide (with the general rules of admission, transfer from one year to another, the transfer from other universities, and vice versa, about counting credits, got in other universities, expulsion, etc.) 2) SC, 3) EDC, 4) the teaching staff in the disciplines; as well as registration for the program discipline and shaping IEP.

The student has the opportunity to view the schedule of classes and examinations to monitor the academic achievements (performance for the current semester of the previous academic period), may be tested in the disciplines for self-knowledge. The student's personal office has educational and methodological materials for specialty disciplines.

The University has the system of measures to help students who have problems with studying. For example, students who have not passed intermediate or final control for good reason, get individual deadlines. Individual schedule of examinations is allowed in case of confirmation of force majeure: sickness, maternity and others, according to the rules of the credit program, the internal regulations and the University regulations.

Preventive measures are:

- individual talks with the students skipping the classes;
- inviting students with poor grades at the sittings of the departments and sub-departments;
- sending letters to the students' parents.

To eliminate the academic debt, regardless of training from, the student should re-examine this discipline in the terms established by the dean's office. The student can re-study the discipline on the paid basis.

Students are involved in the research. They are involved in the projects and make presentations at various academic conferences and competitions.

The academic program students annually participate in university and republican competitions of scientific works. Students publish papers together with the faculty, as well as individually, student collections for the period under review were 80 publications. In the university there is a positive trend in the number of student publications in various journals. This contributes to attracting students to participate in research grants from MES RK.

In accordance with the Regulations on SR and USR approved by the rector of the university, all full-time students starting from the 2nd and 3rd courses are assigned to supervisors and are involved in various forms of scientific and research work. The educational process widely practices forms of active learning, involving students in problem-oriented educational and research activities with the creation of a competitive environment and the participation of students in the department research.

The students of being accredited AP actively participate in various competitions, exhibitions. The share of students participation in on contractual topics in temporary creative teams is 25%. The results of students' research work are submitted for internal and external competitions, reported at conferences and published in the press.

12 undergraduates and 14 graduates took part in XIII Republican Scientific-Technical Conference "Creation of the Young to the Innovative Development of Kazakhstan", April 11-12, 2013 with the reports and test presentations. In the result, Baygereyev S., 12-НУД-1, took the 1st place; Smagzamov B., 09-ТАК-1 and Rogovskiy V., 12-NAA-1, took 2nd place.

D.Serikbayev EKSTU students research is organized in accordance with the DP EKSTU 704 "Research and Scientific-Production Activity" and DP EKSTU 704.02 "Students' Research". The research goes on in the laboratories of the sub-department "Rational Use of Water Air Basin and Heat and Gas Supply", all research forms involve 45 students, 7 students take part in the contractual research. 14 students took part in STC, 12 reports were done. Annually the students take part in the Republican contest of Students' Research. 10 students' research have been presented for 3 years. Chebotkova I, 09-BP-2 took the 2nd place in the Republican contest of Students' Research.

For the implementation of academic mobility of students we work with domestic and foreign universities.

At present, the University has more than 80 agreements on the establishment of partnerships with foreign universities and organizations, within which includes exchanges of students, teachers, co-educational, scientific and innovative activities.

The strategic partners of the D.Serikbayev EKSTU are: Akita University (Japan), Munich Technical University (Germany), Otto von Guericke University (Germany), Khoceo University (South Korea), Wroclaw University (Poland), Lublin University (Poland), Robert Gordon University (Great Britain ), Moscow Institute of Steel and Alloys, JEOL (Japan), Interactive Corporation (Japan), Micromine (Australia), etc.

International organizations representatives function in the HEI:

- Institute of Information Technologies and Education – UNESCO IITE;

- East department of Kazakh National Committee of IAESTE. Today IAESTE East department gives students the opportunity to have work experience and language practice abroad;

- MicrosoftITAcademy;

- the university is a full member of University International Association.

“Transport and Logistics” sub-department work for mutual cooperation in science and education with relational sub-departments of the universities and scientific organizations of Russia, Kyrgyzstan (Polytechnic University), Altay State University (Barnaul), MAHI (Technical University), Trapeznikov Institute of Management Problems, RAS, (Moscow), SIBADI (Omsk) JSC «KazdorNII» (Almaty), Kyrgyz State University of Civil Engineering, Transport, and Architecture (Bishkek), Tuva State University (Kyzyl), Krasnoyarsk State Technical University, the Institute of Informatics and Management Problems, K. Satpayev KazNTU, Wroclaw Technological University (Wroclaw, Poland).

To improve the quality of the educational process organization there is the internal monitoring of 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.

The university implemented the program "Job Placement", which allows to monitor the distribution and employment of graduates. For all the graduates there is a data bank of their distribution, including the following information: name, address of the organization, which hires a graduate, as well as the estimated position. For communication with alumni we formed the bank of e-mail addresses.

The AP job placement information is shown in Table 4 and placed in EKSTU site

.

Table 4 - Rates of job placement of the being accredited AP

| **AP 5B071300 Transport, Transport Engineering, and Technologies** | | | | | |
|---|---|---|---|---|---|
| Academic year | | | | | |
| 2012 | | 2013 | | 2014 | |
| Graduates ,number | Job placement, % | Graduates ,number | Job placement, % | Graduates ,number | Job placement, % |
| 108 | 96.3 | 92 | 98.9 | 84 | 97.6 |
| **AP 5B074500 Transport Construction** | | | | | |
| 2012 | | 2013 | | 2014 | |
| Graduates ,number | Job placement, % | Graduates ,number | Job placement, % | | |
| 24 | 97 | 46 | 96 | 30 | 96 |
| **AP 6M074500 Transport Construction** | | | | | |
| 2012 | | 2013 | | 2014 | |
| Graduates ,number | Job placement, % | Graduates ,number | Job placement, % | Graduates ,number | Job placement, % |
| 4 | 100 | 4 | 100 | 4 | 100 |
| **AP 5B080500 Water Resources and Water Use** | | | | | |
| | | | | | |
| 2012 | | 2013 | | 2014 | |





Republic of Kazakhstan Astana, Kabanbay Batyr ave. 42-17 EP ("Infinity 2" CC) Phone: +7 7172 45-24-02

| Graduates ,number | Job placement, % | Graduates ,number | Job placement, % | Graduates ,number | Job placement, % |
|---|---|---|---|---|---|
| 108 | 96.3 | 92 | 98.9 | 84 | 97.6 |

*Strengths*:

- A mechanism for monitoring the activities of the university students' satisfaction in general and individual services.
- formed professional competence model which is the basis for the requirements for learning outcomes;
- demand in AP graduates;
- quality educational services,
- availability of material and technical base (specialized and interactive classrooms, literature, computer rooms).
- the availability of online resources for students and teachers (Wi-Fi throughout the University);

*Weaknesses*:

- lack of internal and external mobility of students;
- lack of supporting the program of the target supporting of talented students
- lack of motivation to self-education students in extracurricular activities.

**The commission recommends**:

- to strengthen the involvement of students in research activities;
- to expand the geography of universities to provide academic mobility of students;
- to raise awareness among students about the decisions of collegial bodies on the AP;
- to develop measures to identify talented young people and stimulating the development of creativity.

***EPC notes that 9 criteria of the given standard of the academic program of all levels have high position, 3 criteria have satisfactory positions, 3 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 resources specialized classrooms are presented by computers, interactive whiteboards, language equipment, audio-video equipment, multimedia projectors, copiers, software products.

To realize AP 5B074500/6M074500 "Transport Construction" there are two laboratories: "Construction Structures", "Soil Mechanics"; three research laboratories: "NADOSK", "BOSKOR", Certification Test Center". There is also SDO "Engineering". Soil mechanics laboratory is in the same building where the laboratory of construction structures is.

To realize AP 5B071300 "Transport, Transport Engineering, and Technologies", "Transport and Logistics" sub-department has 7 laboratories, 7 classrooms for conducting all kinds of classes (lectures, practical and labs).

Laboratory facilities for AP "Water Resources and Water Use" are: an educational laboratory "Pumping Station", "Hydraulics". The Laboratories are equipped with the existing installations, display stands and instrumentation and have sufficient capacity to conduct laboratory studies.

These classrooms are used for training in the disciplines of the department, as well as for independent work of students, to provide basic teaching materials for teaching disciplines.

The laboratory facilities comply with safety regulations and fire safety. The laboratory area allows to accommodate laboratory equipment and have a sufficient number of seats.

Software and information support of the educational process, implemented by the Department of "Transport and Logistics", contains basic computer software, including the operating system and office suites, specialized third-party software products, such as MathCad, AutoCAD, Compass used for any laboratory work and workshops. These software products are used by students to automate labor-intensive calculations in the performance of course projects, in the course of graduate design

The laboratories are equipped with the existing installations, display stands and instrumentation and have sufficient capacity to conduct laboratory studies. The content and number of laboratory operations comply with standard curricula and work programs.

The laboratory and training stands simulators are equipped on planned basis.

By analyzing the presence and condition of the equipment, it may be noted that to achieve the objectives of the program the sub-department of the University has the appropriate material and technical base, which allows to train of the academic program 5B071300- “Transport, Transport Engineering , and Technologies” with sufficient knowledge, skills, and competences for the correct setting and solving design, operation, experimental, and research problems.

To work during out of classes time the students use library, computer labs, and Internet classes. The housing has terminals with access to the local network of the University.

The book fund of educational, methodical and scientific literature on the basic and core subjects of the being accredited AP attributable to the 2013/2014 academic year, there are more than 140 copies per 1 student.

In addition to studying the learning process educational and scientific literature include official publications - the laws, regulations, government regulations bibliographic books - dictionaries, encyclopedias, reference books and periodicals.

For speedy execution of user requests and enhance the maintenance of discipline in the library have acquired full-text electronic databases:

- full-text online version of the reference and legal system "Paragraph”;
- AIPS program;
- An electronic version of the program «SANA 2001»;
- DB Patents of Kazakhstan from 1993 to 2012.
- Information Retrieval System «ZERDE-INFO».

Library organizes access to the resources of other libraries and organizations. Students have the opportunity to work with the scientific electronic editions ThomsonReuters, located on the platform WebofKnowledge, SciVerseScopus and SciVerseScienceDirect of the company Elsevier and SpringerLink, eLibraru, PMEB, KazNEB, POLPRED, references. Access to databases from any computer is provided by the university network.

Students and teachers have access to the database from any computer campus network. In the library there is a free internet Wi-Fi zone.

The students have access to full-text electronic library on the platform of the information system IRBISpo using the individual identification password for the library page. The Digital Library contains the full texts of 562 papers. Implementation DL system IRBIS meets international standards and does not prevent the infusion into the global information space. Digital Library is designed to provide each student the necessary teaching materials in on-line mode

In 2 computer classrooms there are available electronic textbooks of the university scientists, and other publications on electronic media (CD, DVD, audio and video tapes), which are widely used by students, undergraduates and faculty of the university in the educational process.

Electronic access to library resources is carried out by the university site pages http://www.lib.ektu.kz/.

The work on data provision makes it possible for widespread use in the educational process of modern information and communication technologies.

Park of computer hardware includes 1992 units, including computers – 1468, 33 effective servers, 16 of them are of dedicated configuration.

Today EKSTU has 20 computer, 28 multimedia and 2 specialized tutoring class, 15 classrooms for possible simultaneous testing of students during examinations period.

Constant access to the Internet can be used on-line-funds in the educational process. On student workstations installed applications for special purposes. Information terminals installed in all buildings with a touch screen for access of students to the educational portal.

Constant access to the Internet allows to use on-line-funds in the educational process. Applications for special purposes are installed on student workstations. Information terminals with a touch screen for access of students to the educational portal are installed in all buildings.

In order to create a unified information space of the university, as well as the transition to electronic interaction of all participants in the EKSTU. D.Serikbayev DOT educational process information and educational environment - educational portal of the university has been developed and operates (http://do.ektu.kz), it is based on modern information and telecommunication technologies and provids a new level of access to education, maintaining its quality.

Educational portal of the university allowed to create a unified educational and learning environment at the university and ensure its integration into the world educational space; it supports high-tech educational process; it allows to deploy a platform for e-learning.

Access to information - educational portal EKSTU is via the Internet, LAN and access terminals which are the university property.

EKSTU corporate network use network service functions: access to the Internet; access to electronic educational and scientific resources on the corporate network; own electronic boxes for internal use; the possibility of rapid communication in instant messaging; access for owners of e-mail accounts from any point of the world network; network "EKSTU radio"; network anti-virus system.

All workstations have access to the sites of EKSTU:www.ektu.kz; www.do.ektu.kz; student portal - www.std.ektu.kz.

There are areas of general and special free internet access.

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. Questioning about the computer classrooms and the Internet resources availability showed that 85.7 % are satisfied, 13% are partially satisfied , 1.3% are partially not satisfied, 1.3% 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 structured, organized information on readable disciplines, including personalized online resources and Wi-Fi;

- appropriate training equipment and software tools used in the production, including safety requirements for their operation;

- presence of branches of AP departments at industrial enterprises;

- the learning environment that promotes the formation of professional competence taking into account the individual needs and possibilities of students.

*Weaknesses* :

-insufficient book supply for poly-lingual groups and in the Kazakh language;

- laboratory material base needs to be updated.

- systematic assessment of the dynamics of development of material and technical resources and information systems OP, efficient use of evaluation results to adjust the planning and budget allocation

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- develop measures for technology support of students and teaching staff in accordance with innovative programs.

**The commission recommends**:

- to increase book supply of AP in accordance with the requirements of multilingual education and the Kazakh language;

- to develop a program for the development of material and technical basis of the priority areas of economic development in the region;

- to update the material and technical basis for the possibility of carrying out laboratory work and research of AP students.

***EPC notes that 25 criteria of the given standard of the academic program of all levels have high position, 5 criteria have satisfactory positions, 2 need improvement***

**4.6 Standards in the section of definite specialities.**

**Natural and engineering sciences.**

Development of the academic programs 5B071300 – "Transport, Transport Engineering, and Technologies", 5B074500/6M074500 – "Transport Construction", and 5B080500 "Water Resources and Water Use" is oriented towards graduates getting the necessary theoretical and practical training

The academic programs development is oriented towards graduates getting high 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.

No remarks.

***EPC notes that 3criteria of the given standard have high position.***

**RECOMMENDATIONS**

**EPC of the academic programs specialized accreditation**

5B071300 – "Transport, Transport Engineering, and Technologies", 5B074500/6M074500 – "Transport Construction", and 5B080500 "Water Resources and Water Use" recommends:

- to achieve efficiency of social partnership university-employer towards improving educational programs and gain practice-oriented training in a systematic manner
- to expand cooperation with other universities in order to harmonize the content of educational programs with educational programs of leading foreign and Kazakh universities;
- to provide a measures for obtaining a Master course license for 5B080500 specialty - "Water Resources and Water Use" and PhD for the being accredited specialties;
- to provide target work to increase the scientific publications in journals with high impact factor;
- to continue to equip the educational process with modern equipment, adequate content of educational programs;
- to activate the university activity for better of the better supporting the educational process with methodical literature in the Kazakh language.

**RECOMMENDATION TO THE ACCREDITATION COUNCILS**

The members of the external peer commission came to the unanimous opinion, that the academic programs 5B071300 – "Transport, Transport Engineering, and Technologies", 5B074500/6M074500 – "Transport Construction", and 5B080500 "Water Resources and Water Use", **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

_____ **V**iktoriya Kizeyeva

_____ Nazgul Zhakupova

_____ Aliya Sysykova

_____ Timur Kanapyanov





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