



INDEPENDENT AGENCY FOR  
ACCREDITATION AND RATING

Addressed  
to Accreditation  
Council of IAAR

# REPORT

**Results of the external expert committee on evaluation  
of meeting requirements of specialized educational  
programs accreditation standards  
5B070200 – “Automation and Control”  
5B070300 – “Information System”  
5B070400 – “Computer Engineering and Software”  
Kazakh-Russian International University**

from March 29 to March 31, 2016

Aktobe 2016

In accordance with the order of 6-16-OD of 23.03.2016 Independent Agency of Accreditation and Rating on 29-31 March 2016 in Kazakh-Russian the International University foreign expert committee evaluated an assessment of meeting the requirements to the educational programs 5B070200 “Automation and Control”, 5B070300 – “Information Systems”, 5B070400 – “Computer Engineering and Software” on the specialized accreditation standards IAAR.

Report of an external expert committee (EEC) provides an assessment of educational organization criteria of IAAR, EEC recommendations for further improvement of educational programs and profile settings of KRIU educational programs.

Members of EEC:

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2. **Foreign expert - Gostin Alexei Mikhailovich**, Candidate of Technical Science, Associate Professor, Ryazan State Radio Engineering University, an expert “Guild of experts in the field of vocational education” (Ryazan, Russia);

3. **Expert - Bodikov Seyfolla Zhamauovich**, Karaganda State University after E.A. Buketov, a member of Union of Designers of RK, a member of the Eurasian Union of Designers (Karaganda);

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6. **Expert - Aldungarova Alia Kayratovna**, Dr. PhD, associate professor of Pavlodar State University after S.Toraigyrov (Pavlodar);

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8. **The employer - Zhubai Shamshat Onaevna**, head of the administrative work of Department of Education Aktobe region (Aktobe);

9. **Student - Seytzhanova Elena Edigenovna**, student Aktobe State Medical University after M. Ospanov (Aktobe);

10. **The observer for the Agency - Kanapyanov Timur Erbolatovich**, head of international projects ziaar (Astana).

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## (I) PRESENTATION OF KAZAKH-RUSSIAN INTERNATIONAL UNIVERSITY

International higher education institution “Kazakh-Russian International University” is one of the first private higher education institutions in the Republic of Kazakhstan, founded in 1994.

University was founded as Aktyubinsk branch of the International Institute of Business and Law (1994-1996), then - Aktobe branch of the International University in Moscow (1996-1998), Aktobe Institute of Management, Business and Law “NUR” (1998-2000), providing the opportunity for young people in Aktobe region to obtain economic and legal education. Institute (then Aktobe Institute of Management, Business and Law “NUR”) for the first time in the region received a new name, which includes an international component - KRIU - at the suggestion of the President of Kazakhstan N.A. Nazarbayev expressed by him during the opening ceremony of the main academic building August 21, 1998. The proposal of the Head of State was taken in accordance with the Declaration on Eternal Friendship and Cooperation between Kazakhstan and Russia, focused in the twenty-first century.

KRIU carries out its activities on the basis of:

- Certificate of state registration (for the right to carry out activities in accordance with the constituent documents of the Republic of Kazakhstan in the framework of the law on 30 December 2011 980 640 003 395 BIN, registration number - 296-1904-01-LLP;
- Certificate of Accreditation as a subject of scientific and technical activities MK number 003448 dated July 15, 2013;
- State license to conduct educational activities AB №0142754 dated 27 February 2012 (without time limits) as part of the national education system in accordance with the legislation of the Republic of Kazakhstan.

Kazakh-Russian International University is a private educational institution and its founder is a private person - President Temerhan Baybosynovich Berdimuratov.

University implements educational programs 19 undergraduate and 5 graduate educational programs.

The contingent of students in the Bachelor is 2343 people, including 747 (31.9%) by part time courses. The number undergraduates are 170 people. Training is conducted on a contractual basis.

The University structure includes 5 departments, 1 Research Institute and six academic chairs.

Educational process is carried out by highly qualified teaching staff of 141 people, there is 119 - full-time teachers (84.4%). 71 full-time teachers have a degree. The proportion of teachers with scientific degrees and academic titles in the university on the whole is 59.7%.

In KRIU organizational structure is the structure of the matrix type, which represents a combination of two units: administrative and educational, with a vertical hierarchy that is formed by the interaction of an administrative unit (vice presidents) with an educational and suggests the possibility of double subordination. Collegial management body of scientific and educational activities in Kazakh-Russian International University is the Board of Trustees, Scientific Council, and Presidential Council.

University infrastructure includes 4 educational buildings with an atrium with a total area 10 727.15 m<sup>2</sup>, housing (7 apartments and residence) area of 1070 m<sup>2</sup>, 2 dorm area of 1305 sq.m. 144 beds, 2 Library complex with the printing press, culinary complex, Park health technologies, student clinic, own and rented sports halls, student service center (cooking, beauty salon, shopping areas and boutiques, studios, service center maintenance computer equipment). All buildings meet sanitary standards and fire safety requirements.

In order to ensure the quality of education in recent years, university established 31 laboratory, 1 SRI, 5 centers and 2 schools, 2 museums, mini-theater, theater of pantomime

“Buffonada”, disco hall. Compared with 2011-2012 academic year the number of laboratories increased by 2.2 times, which states positive dynamics of laboratory base development in university.

Kazakh-Russian International University passed state certification in 2011. In 2015, University successfully passed the institutional accreditation of Independent agency for accreditation and rating for 3 years and specialized accreditation for a period of 3-5 years, 5 undergraduate majors and graduate 3 specialties.

University actively develops activities for practice, providing the opportunity of practice in leading companies in Aktobe within 77 contracts. The percentage of employment in 2015 in the whole university was 67%.

University carries out international cooperation with universities and research centers in Europe and CIS countries. University signed 16 agreements with universities in Russian Federation and 13 agreements with universities in foreign countries, including European University (Switzerland, Montreux), University of Economics Euro regional after Alcide de Gasperi (Poland, Warsaw), Copernicus University (Poland, Toruń), Nielsen Brokk Business College of Copenhagen (Denmark, Copenhagen), Yerevan Telecommunication Research Institute (Armenia, Yerevan), the Centre of modern pedagogy “Education without borders” (Montreal, Canada), University of Hartford (Connecticut, USA), University of Pancasila (Jakarta, Indonesia).

University is included in TOP-50 as “Industry Leader – 2013” according to the National Business Rating (Astana, 2013). University in 2013 is included in the International Register “Best University / University of the Best” (Oxford). In 2015, he won a special award of the World Confederation of business “World confederation of businesses” Business - THE BIZZ 2015 Business Leader 2015. The University is defined as the best high school in the area for the contribution of socio-economic and cultural development of the region (Aktobe oblast akimat 2014)

Information about the university and educational programs is available on the official website of the University - [www.kriuu.kz](http://www.kriuu.kz).

## **(II) DESCRIPTION VISIT EEC**

Visit of the external expert committee in KRIU was organized in accordance with the approved program.

In order to coordinate the work of the Commission on 28 March 2016 there was meeting, during which the powers were distributed between members of the commission, updated schedule and program of the visit, agreed in the selection examination methods.

EEC meetings with focus groups were held in accordance with the updated program of the visit, in compliance with the established timetable. From the staff of KRIU all the persons mentioned in the visit program were available.

In order to assess the content of the materials provided by self-report, meetings were held with the President of the University and the Vice-Presidents, vice-rectors, heads of academic chairs, heads of chairs, teachers, students, graduates, employers, and employees from various divisions. The meeting was attended by 184 people (Table 1).

In order to obtain objective information on the evaluation of the University members of EEC used methods such as visual inspection, observation, meetings and discussions with the staff of different divisions, students and there was questioning of the teaching staff and students.

*Table 1 Information about staff and students who participated in the meetings with EEC*

<b>Category of participants</b>	<b>Number</b>
President	1
Vice-presidents	4
Pro rector on direction of activity	3
Heads of departments	4
Head of chairs	7
Teachers	34
Students, undergraduates	59
Graduates	18
Employers	8
<b>Total</b>	<b>138</b>

In general, the activities planned during the visit of the IAAR of EEC contributed to a detailed acquaintance of experts with university training infrastructure, material and technical resources, teaching staff, representatives of organizations of employers, learners, graduates.

The experts visited teaching management center, library complex, Russian Center, simultaneous translation office center “psycho training”, student dormitory, a gym, a park of health technologies and student clinic.

EEC experts visited educational laboratories: biochemical laboratory, laboratory “Marketing technologies” laboratory “Economics and technology in socio-cultural service”, laboratory “Accounting and Auditing”, laboratory “Consumer behavior”, laboratory “Construction”, laboratory Nur-Soft, laboratory “Programming and databases” and “Automation control systems” laboratory.

EEC members visited the base of practice for accredited programs LLP “Engineering company StroyTehno”, LLP “BMT-Service”, as well as training sessions on the following subjects:

<b>Course/group</b>	<b>subject</b>	<b>theme</b>	<b>teacher</b>
2 course/AC-201 Russian	Elements of automation	Typical functional scheme of control, control, alarm, lock and protect	Dzhumabekova A.A.
2 course/CS-202 Russian	OS	Management process	Master Uderbayeva N.K.
3 course /IS-301 Kazakh	Artificial Intelligence Systems	Machine Intelligence and Robotics	Master Uderbayeva N.K.
3 course / AC -301 Russian	The theory of nonlinear systems of automatic control	Discrete automatic control system	C.t.s. Dayev Zh.A.
1 course / CS -101 Kazakh	Algorithmic and programming basics	Arrays	Master Tasbolatova S.T.

This allowed members of EEC IAAS conducting an independent assessment of compliance with the data contained in the reports on self-evaluation of educational programs of the University criteria specialized accreditation standards.

For EEC comfortable conditions were provided, organized access to all necessary information resources.

As part of the planned program at the meeting with management of 31 March 2016 there were recommendations for improving the accredited educational programs.

### **(III) OVERALL ASSESSMENT OF EDUCATIONAL PROGRAMS**

Training on 5B070400 – “Computer Engineering and Software”, 5B070300 – “Information Systems”, 5B070200 – “Automation and Control” at the chair “Technical and natural science subjects”, was founded with the early days of the university's founding and 1994 it was called the chair “Mathematics and Informatics”. Since 2010, chair was renamed to its present name - the chair “Technical and natural science subjects”.

Training in 5B070400 EP – “Computer Engineering and Software”, 5B070300 – “Information Systems”, 5B070200 – “Automation and Control” is carried out since 2002.

Training in 5B070400 EP – “Computer Engineering and Software”, there are two areas of training (specialization): “Software Management” and “Computer information processing systems”, Training in 5B070300 EP – “Information Systems”, there are two areas of training (specialization): “Information systems in economics and business” and “Information systems in management”.

Training for EP “Automation and Control”, there are two areas of training (specialization): “Automation of technological processes” and “Automation and computerization in management system”.

Educational program 5B070400 – “Computer Engineering and Software”, 5B070300 – “Information Systems”, 5B070200 – “Automation and control” implemented in accordance with the license for the right of conducting educational activity number 0111913 of 27.02.2012, and in accordance with State program of education development of RK for 2011-2020., State educational standards of RK, the Strategic development plan in KRIU 2014-2018.

Graduate bachelor on EP 5B070400 – “Computer Engineering and Software” is awarded the academic degree of Bachelor of engineering and technology in specialty 5B070400 – “Computer Engineering and Software”, on EP 5B070300 – “Information Systems” - academic degree of bachelor of engineering and technology in specialty 5B070300 – “Information systems”, on 5B070200 – “Automation and control” - academic degree of bachelor of engineering and technology in specialty 5B070200 – “Automation and control”.

In undergraduate programs conducted general mastering higher education competencies in accordance with the Dublin descript, including competence-oriented region.

Educational activities are carried out on credit technology in accordance with the “Rules of the organization of educational process on credit technology of training” № 152, approved by the MES of 20.04.201.

Training is carried out by full-time and part time courses. The content of educational programs adjusted annually through a catalog of elective disciplines (CED) and the updated working disciplines programs in accordance with the requirements of employers and labor market.

To ensure the quality of training, the relevant requirements of labor market, using modern educational technologies: design technology, critical thinking, technology, case studies, information and communication technology, problem-based learning technology, technology of context-based learning, interactive forms and methods of teaching.

Evaluation of educational achievements and level of students is ensured through the use of score-rating system, as well as through information and educational environment Platonus.

Educational programs 5B070400 specialty – “Computer Engineering and Software”, 5B070300 – “Information Systems”, 5B070200 – “Automation and Control” developed according the state obligatory standards of education. Learning languages are Kazakh and Russian.

Contingent enrolled in accredited programs is 278 people, including 52 (18.7%) by part time courses, in Russian - - 101 (36.3%) in the Kazakh language - 177 (63.6%).

## (IV) COMPLIANCE TO STANDARDS OF SPECIALIZED ACCREDITATION

### 1) Standard “Management of the educational program”

University defined objective of the strategic development.

EEC members discussed:

- A list of regulations for the development plan of EP;
- Uniqueness and individuality EP 5B070400 - CES, 5B070300 - IC according to the criteria;
- Information about TS degree;
- Educational path EP on accredited specialties;
- Information about the bases for practical training of students of accredited EP;
- Information about the material-technical base of the university, laboratories, intended to implement the EP;

The content cluster of EP corresponds to a national framework of qualifications, professional standards, and agreed with the Dublin descriptors.

The needs of the education market in the university are determined by the survey of employers in the region. The results of market requirements analysis used to identify areas of cooperation and drafting of contracts, memorandums with producers, employers, partners, etc.; development of the graduate model, CED, determining scientific direction of the department and for the study of urgent problems of the region; development of diploma projects. Graduates successfully work in the field of automation, computerization and control of technical systems involving the use of tools and methods of information processing for management in all spheres of the national economy.

EP students are characterized as positive during professional practices in different organizations. Professional practice is carried out in enterprises, with experience in the organization of today's businesses, government agencies, etc., using new information technologies in their daily activities.

Needs of IP and students at EP 5B070200 AC are determined on the basis of the survey, as well as on the results of the students passing the professional practices. Questionnaires revealed urgent needs of production and representatives of employers in the formation of future cadres. Professional competence of students, graduates is at high level on the major 5B070200 AC in KRIU, by employers' opinion.

Chair works closely with major industrial companies such as LLP “Engineering company StroyTehno”, JSC “Aktobe plant of chromium compounds” and others and it allows students to consolidate the knowledge and skills in EP 5B070200, AC. Market needs are changing every day, and without close cooperation with companies in the sector it is impossible to provide the market with competitive specialists. Therefore, manufacturing companies allow their employees to carry out laboratory and practical classes with students on their base. Head of the shop KIP Dzhumabekova A.A. conducts practical and laboratory classes with students majoring 5B070200 - AC and on the base of the plant JSC “APCC” and there is a dialogue with the engineers of the enterprise, and from which it was proposed to strengthen the study of issues on development and operation of automated control systems, as well as means of control instrumentation and automation.

Information System and the feedback are aimed at students and professionals, and include:

- Functioning official website of the university;
- A survey of employers about the quality of training of graduates, questioning students about the quality of educational programs, faculty and staff surveys on job satisfaction;
- Maintenance of the rector's blog on the website of the university;
- Publication of the newspaper “Student Meridian”, placement of visual information materials, scientific and methodological publications and articles in the central and local press;
- Survey results are considered at chair meetings, on the basis of organizational decisions.



### **Strengths of educational programs:**

1. University clearly defined priorities of development directions;
2. University has demonstrated a clear division of responsibility for the administrative and academic activities, as expressed in the presence of educational scientific-industrial corporation “Nur” and the academic unit and determine responsible for the processes, unambiguous division of responsibilities, distinction among Board of Trustees, Academic Council and the presidential functions (provisions of collective bodies and work plans, job descriptions, work instructions).
3. University operates an effective mechanism for informing, communication and feedback that focuses on students, staff and IP (system of constant questioning, standard “processes associated with consumers”, open information about the program guide, open days, conferences and round tables, rector’s meeting with students on personal matters, annual job fairs on employment of graduates with an invitation to business leaders of the city and the region);
4. University management demonstrated its openness and accessibility for interested persons, as well as the availability of the communication channel for the innovative proposals in the form of a permanent open communication management with students and faculty;
5. Security control educational programs of internal normative documentation (105 regulations, 14 development programs and 26 other documents);
6. Participation of employers' representatives as part of the collective management bodies EP 5B070200 -Automate and control;

### **Commission recommends:**

1. Improve internal university system quality of EP:
  - To conduct comparative analysis of relevant development plans EP to current University Development Strategy and update development plans EP;
  - Ensure regular review and evaluation of the implementation of development plans EP;
  - Improve the design of mechanisms, control, internal quality assurance, assessment and monitoring EP.
2. Flip the individuality and uniqueness of EP cluster orientation for the preparation of IT-training on the needs of the market, results of the survey of employers, teaching staff and students for the analysis to assess the success of the implementation of EP cluster development strategy.
3. Refine the structure and content of the MEP, taking into account the formation of general and specific competencies of trainees.
4. Improve EP for each of the educational trajectories of these EP, and forms for describing the modules.
5. Flip the participation of interested persons in the educational programs of EP approval procedure development plan.
6. EP 5B070400 - CES, 5B070300 - IS recommended to introduce elective courses aimed at the formation of professional competencies in the area of the Web-programming, object-oriented design and programming.

*EEC notes that for EP 5B070300 – “Information system”, 5B070400 – “Computer engineering and software” on 5 criteria of this standard University has strong position, on 26 satisfactory position, on 6 there is a need to improve.*

*For EP 5B070200 – “Automation and control” on 6 criteria of this standard University has strong position, on 27 satisfactory position, on 4 there is a need to improve.*

## **2) Standard “Specifics of educational program”**

Model of graduate EP was formed in the University, TS, alumnus and students take part in the development of this model. Professional competency is included in this model.

The chair formulated graduate model in each educational program. Models on accredited program included general and professional competency and enter into the structure of corresponding model educational program.

Effectiveness of this model is proved by high level of employment of EP graduates. Employment indicator on EP 5B070400 – CES in 2015 was 75%, 5B070300 – IS -78%, 5B070200 –AC -69%. Best indicators of employment were in 2013 5B070200 –AC and 5B070300 – IS - 100%.

There are following curriculums at the university: standard curriculum (TUP), working curriculum (WC). Curricula are developed on the basis of model curricula in the field for the entire period of study, the State obligatory standards of education and the organization of educational process on the Regulation of credit technology. In accordance with the SES RK in the curriculum maintained the ratio of subjects.

Curricula are developed on the basis of model curricula in the field for the entire period of study, State obligatory standards of education and organization of educational process on Regulation of credit technology. In accordance with SES RK in the curriculum maintained the ratio of cycles of disciplines volume GSS, BS of majors.

Content and structure of accredited EP 5B070400 - CES, 5B070300 - IS are formed in accordance with the requirements of Model Regulations on the activities of higher and postgraduate education, approved by the Government of RK of May 17, 2013 №499, SES RK approved by Government Resolution №1080 of 23.08. 2012, Rules of organization of educational process on credit technology of training were approved by order of the Minister of education and science №152 of 20.04.2011. For objective assessment of knowledge is used a complex method: tests, traditional methods (card exams, interviews, receiving reports, etc. e). For assessment of students' professional competence also used a complex method. Taking into account a purely formal criteria: the ability to clearly and accurately the student to express thoughts, overall literacy.

During interviews with members of EEC students confirmed the possibility of filing an appeal in the case of the using poor-quality test and measurement materials during the rating control. Control of knowledge, skills and competencies of graduates is carried out during the final evaluation of students.

Tasks on IW included in EMCS, which in turn are placed in the electronic library of the university and are available to students. Types of independent work of students, their labor input in hours, the form and control the terms regulated in the relevant sections of the syllabus (the working of the curriculum) for each subject.

From 2014-2015 academic years the university has started implementation of modular training programs (MTP). MTP EP provides development of 138 credits, including 129 theoretical training credits, 6 credits of professional practice, 3 credits of final certification.

Structure and content of modular educational programs for the entire period of study developed producing departments based on model curricula specialty graduates models.

MTP are considered at meetings of graduating chairs and approved by the rector. The curriculum is approved for each year of admission. On the basis of annual training plans are drawn up and approved working curricula. Catalogs of elective disciplines (CED) are developed and approved by the Department produces educational-methodical council of the university. CED provides a brief description of the subjects, indicating prerequisites and prerequisites of the subjects. CED is available at the chairs in the scientific library.

Involving employers is realized on the basis “Regulation on accounting opinions of employers about graduates of professional competency of KRIU” approved by AC of 23.04.2012, №10 protocol. *At the same time, experts note that in the documents regulating the learning process there are no signatures of employers' representatives.*

Experts point out that an important role in training, namely in the development of their professional competencies play different kinds of practices envisaged by SES RK 2012 of 23.08.12 № 1080. At the end of practice students submit to the department report and diary, signed by the head of the practice base profile according to employer's poll.

At anonymous questioning of students by respondents full satisfaction with the general quality of training programs – 82,7%, partial satisfaction – 13,5%, experiential learning as a whole - 80.8%.

Teachers of department develop new, author's courses for EP 5B070200 – AC, for example, "IEC 61131 programming languages", "Supervisory Control and Data", "Design and development of systems of safety" which are offered trained for the choice according to the catalog of elective disciplines.

**Strengths of educational programs:**

1. the commission notes existence and effective functioning of the individual help and consultation of students, individual academic support (institute of curators and edvayzer, availability of TS, close connection of TS and students at the solution of the academic questions);
2. the management of university in every possible way stimulates use of advantages, specific features, requirements and cultural experience of students at realization of educational programs;
3. the maintenance of EP 5B070200 – "Automation and management" with participation of employers is regularly updated, the graduate's model is created;
4. contents 5B070200 – "Automation and management" provides the existence of a professional context, the competence which are trained, formed by EP 5B070200 – "Automation and management", are demanded at the industrial enterprises of the region.

**The commission recommends:**

1. to develop the principles and mechanisms of harmonization of maintenance of EP with programs of the leading foreign and Kazakhstan higher education institutions.
2. to expand cooperation with foreign higher education institutions in the sphere of creation of joint EP;
3. to update the contents and the list of disciplines for choice according to modern scientific and technical achievements in the IT area on EP 5B070400 – CS, 5B070300 – IS;
4. to provide introduction of results of scientific researches in educational process on EP 5B070400 – CS, 5B070300 – IS.

*EEC notes that for EP 5B070300 – "Information systems", 5B070400 – "Computing and the software" on 4 criteria of this standard the university has a strong positions, on 24 criteria-satisfactory positions, 5 criteria need improvements.*

*For EP 5B070200 – "Automation and management", on 12 criteria of this standard university has a strong positions, on 18thcriteria- satisfactory positions, 3 positions need improvements.*

### **3) Standard "Faculty and Efficiency of Teaching"**

Educational programs are provided with the qualitative faculty, to the corresponding profiles of programs. The system of selection of shots in higher education institution is carried out on the basis of the comprehensive analysis of requirements of educational programs by results of which the competition on replacement of vacancies of TS is announced. Data on the faculty of departments, information on qualification, professional experience of each teacher in the form of a portfolio are posted on the website of higher education institution. During realization of EP is considered the characteristic of qualitative and quantitative structure of TS EP. The system of development of young teachers, system of stimulation of TS on the basis of a rating works.

The staffing of the department, for example, for the 2015-2016 academic year specialty 5B070400-CS, TS-30, full-time- 90%, steppificated -56.7%; 5B070300 - IS - TS-25, full-time, 84%, steppificated -57.1%; 5B070200 -Automate and management - TS-39, full-time, 82%, steppificated -56.25%;

The Commission notes that all the teachers of the department implementing the EP, have a basic education, their profile corresponds to the readable disciplines of the educational program, the average age of the staff of the department implementing the EP is 48 years old.

Much attention is paid by the management of EP to involvement of teachers – practitioners: Dzhumabekova A.A. gives practical and laboratory classes with students of specialty 5B070200 –

Automation and management. Ph.D. Daev JA involved with the production, he proposed an elective course on "Devices and methods for quality control process" for students of the 3rd course of EP 5B070200 -Automate and management.

The total amount of load full-time teacher, a full-time, subject to fulfillment of educational, methodical, research, organizational, methodological, educational and other types of work within a six-hour working day is between 450-720 hours per academic year. The annual volume of academic work on TS departments established by the Scientific Council, based on the approved standard for the academic year, faculty staff and the need to meet all kinds of educational work resulting from the curriculum.

The quality of teaching is ensured by: the development of guidelines for the teaching of the discipline, including specific recommendations for the study of subjects (or some of its themes and topics); guidelines for the study of subjects (including - for the organization of independent work of students), by the presence of the full range of educational publications on the subject (textbooks, manuals, courses, lectures and other.); the selection of informational handouts on the subject and a complex demonstration materials (presentations, practical work samples, essays, projects, etc.). For all disciplines of the department developed educational-methodical complexes, which shows the syllabus of training courses, lectures, seminars, plans, according to the IWS assignment, types of control, questions and tasks, the rating assignment, exam materials.

The results of scientific works of teachers published in the form of monographs, collections of scientific papers and conference papers, articles, theses in various scientific publications.

Publication of articles: for the 2012-2013 academic year - 8 articles, for the 2013-2014 academic year - 17, for the 2014-2015 academic year - 24.

*However, the commission notes that for 2012-2015 TS are published by the letting-out department only 2 articles with magazines with a nonzero impact-factor.*

For three years TS published 1 monograph, 4 textbooks, 11 teaching aids.

Research work of faculty is an applied nature, aimed at the needs of the region. TS are involved in the scientific project of the department "Development of the automated control systems and information measuring systems of technological processes for industrial enterprises of Aktobe region", funded by the founder: 2013. - 45 thousand tenge. 2014 90 th. KZT, 2015-12,46 million tenge.

The university pursues a transparent, democratic policy towards teachers, aimed at creating a favorable atmosphere for fruitful work. For conscientious performance of functional responsibilities, continuous trouble-free operation, innovation in work and other achievements of the employees are encouraged to: the issuance of the award; awarded the certificate of honor, a sign of "Golden Wings", the Order "For valor in labor."

TS has full access to the leadership of the university, faculties, as well as documents regulating the legal activity of the teacher in all aspects of the educational process and science of establishing the social and material conditions of employment.

The 97, 3% of the questioned teachers was estimated availability of the management on "good" or "excellent".

*Teachers say the full satisfaction: promoting innovation (62.2%); the possibility of continuous development (70.3%); support research initiatives (73.3%).*

The university created the optimal conditions for the organization of cultural and personal growth, living conditions, a sports entertainment: functioning club of young scientists, there is a health technology park with a massage room, sauna and swimming pool, student clinic, helpline operates, legal clinic, with TS regularly hosts cultural events.

Monitoring TS activity is carried out in a systematic manner, it is an objective tool for evaluating results and includes a rating system of evaluation of TS, TS appraisal procedure, questioning students, visits organization of training sessions.

The university implemented a rating system TS estimate of labor, the results of which made bonuses. *Teachers at the meetings with the experts noted satisfaction with the system.*

Manual EP also provides monitoring of TS through an annual satisfaction survey.

In order to improve efficiency and improve the learning process in accordance with the specific educational program faculty regularly take refresher courses.

Improvement of professional skills are also held in the form of participation in scientific-methodical seminars, conferences, exhibitions and other events.

The department provides targeted action for the development of young teachers, works council of young scientists. Young teachers are actively involved in the work of the academic departments with specialized departments.

According to the Department for 2013-2014 acad. year 17 raised the qualification of the teacher, which is 57% of the total number of full-time teachers in 2014-2015 acad. year - 22 teachers, representing 63%.

Teachers improve their skills at the Institute of Advanced Training Al-Farabi Kazakh National University, the University of E.A. Buketov, JSC "InterGazTsentralnaya Asia", RSE REG "Information Technology Centre Statistics Committee of the Ministry of National Economy of Kazakhstan Aktobe region."

*Work of the guide to professional development of 83, 8% of the questioned TS was estimated on "good" or "excellent".*

*When an anonymous survey of students respondents noted a complete satisfaction with the quality of teaching - 82.7%.*

#### **Strengths of educational programs:**

1. The involvement of teachers - practitioners for practical and laboratory classes with students majoring 5B070200-Automation and Control;

2. on the university website and in the AIS «Platonus» program placed TS profiles and management, including personnel information, scientific publications, teaching disciplines;

3. transparency of personnel procedures provided by internal regulations, the availability of guidance for teachers and staff, the Charter on free competition among the faculty and staff of corporate ethics and etiquette of the university community;

4. the Commission notes the active promotion of professional and personal development of teachers and employees through bonuses, creating comfortable working conditions;

5. at the university successfully operates a school of young teachers and the council of young scientists at the University, which contributes to the professional growth of the TS.

#### **The commission recommends:**

1. strengthen the development of academic mobility of faculty and conduct joint research with leading domestic and foreign scientists in the implementation of accredited educational programs;

2. strengthen the work on self-financing RW programs of grant financing of MES RK and other sources of funding.;

3. actively attract foreign faculty to deliver lectures.

4. strengthen TS publication of scientific articles with non-zero impact factor;

5. enable TS to work within EP 5B070400 - CS, 5B070300 - IS for advanced training in the development of the modern tools of software development and web programming.

***EEC notes that EP 5B070300 - "Information Systems", 5B070400 - "Computer Engineering and Software" on 5 criteria of the standard university has a strong, on 15 criteria- satisfactory positions, 1 criteria need improvement.***

***For EP 5B070200 - "Automation and Control", on 7 criteria of the standard university has a strong presence, on 13 criteria- satisfactory position, 1 criteria need improvement.***

#### **4) Standard "Students"**

In the description of the standard, see policies and principles of the contingent of students, the principles of creating the educational environment for learners to achieve the required professional level, representation of students in the Faculty of collective management bodies, methods of feedback and inform students, aspects of cultural and social life of students.

Admission to higher education institutions is carried out on the applications on a competitive basis according to points of the certificate issued by results of uniform national testing (UNT) or complex testing conducted on the technologies developed by the National Testing Center of the Ministry of Education and Science of the Republic of Kazakhstan (NCT) on based on the Model rules of admission to the organization of education, realizing professional training programs of higher education approved by the Government Resolution of 19.01.2012, the number 111 and the Model rules of admission to the organization of education, realizing professional training programs of postgraduate education, approved by the Decree of the Government of 19.01.2012, the number 109.

On specialty accredited EP credited graduates of general secondary education this year, passed UNT and participants of complex testing who received the results of testing of at least 50 points. Applicants are tested on the following subjects: Kazakh or Russian language (language of instruction), history of Kazakhstan, mathematics and physics. The students enrolled in the event, if they receive at least 7 points in a profile subject, and in other subjects - at least 4 points. In the case of one of the items handed over within the UNT or complex testing, less than 4 points, the person to be enrolled in the paid training or participate in the competition for awarding educational grants are not allowed.

*Table 2 - Training load in the last 3 years*

Code and speciality	2013-2014 acad.y		2014-2015 acad.y		2015-2016 acad.y	
	total	gr	total	gr		
5B070400-CS	121	-	82	-	49	-
5B070300 – IS	68	-	42	-	25	-
5B070200 –AC	215	-	199	-	204	-
Total	404	-	323	-	278	-

*Table 3-Information about acceptance of students in the last 3 years*

Code and speciality	2013-2014 acad.y		2014-2015 acad.y		2015-2016 acad.y	
	total	gr	total	gr	total	gr
5B070400-CS	9	-	4	-	3	-
5B070300 – IS	5	-	-	-	4	-
5B070200 –AC	18	-	13	-	20	-
Total	32	-	17	-	27	-

For the purpose of career guidance operates the following program: involvement of pupils of schools of the Aktyubinsk region, students of higher education institutions, college, final years, employees of PO to participation in actions "Open Day", scientific and practical conferences, holdings target seminars in OU during a trip on professional orientation work, MSO in higher education institution, the edition of special release to "Entrant", "broadcast commercials for regional TV channels:" RIKA ".

A number of complaints by the Examinations Control, the current (rating) control, governed by the "Regulations on the organization of educational process at WHO." Students can also submit complaints and suggestions to the rector and vice-rectors in the framework of the annual meetings.

Transfer points are set based on the "Rules of the organization of educational process on KRMU CTE", approved by the CSS. For students on the accredited OD average pass rate in the translation from the first year to the second it is not less than 1.7 from the second year on the third - 2.3, from the third year on the fourth -2.5.

Manual EP provides a representation of students in collegial EP administration. Participation of students in the management of the university is carried out in areas such as membership in the committees of the student government, DC, the Council on curriculum and programs, CHO council, student organizations. At the level of the department, university students participate in CHO, SMU, eldership, CTE, student parliament, the university youth wing "ZhasOtan" youth student council, perform different functions (management, advisory), and others.

KRIU has its sports traditions: ALL UNIVERSITY holds annual tournaments KRIU President Cup with an invitation to teams EPA; Health Day; Health Festival; KRIU Championship Chess togyskumalak, basketball among boys and girls; Games among faculty and students.

Special contribution to the promotion of healthy lifestyle contributes HTP KRIU "Fit" with swimming pool, relaxation parlor, aromatherapy, etc.

The formation of patriotic, spiritual and moral qualities of students system is implemented in accordance with the institution of a joint venture for the socio-educational activities, and includes special occasions to important days and national holidays (Constitution Day, Independence Day, Day of State Symbols Day of languages of people of Kazakhstan t. d.).

Disclosure of the spiritual, the creative potential of young people contribute to the CMI games, a beauty contest "Miss and Mister KRIU", "Dedication to students", the New Year holidays, the celebration of Nowruz, International Women's Day, Days of Culture of Kazakhstan nations, participating in student theater, choir, dance ensemble, sports sections.

The traditional annual gathering of the president and rector of students, anti-corruption measures, charity events to support the elderly.

Students take part in the activity of public youth associations, who also initiated activities on education and youth association. Public association "Alliance of Students" held a concert for the Day of the elderly and the competition for the month of anti-corruption.

The department operates Student Council academic groups, which is chaired by the student specialty IC Zhanpeysov NM Student Council held KRIU event socio-political, civil, cultural and mass character during the entire academic year.

Students accredited EP actively participate in various seminars, courses, conferences, national and international competitions. For example, in 2014 year student of 3rd majoring 5B070400 - CS Zhanpeysov N. participated in the regional competition of scientific works of young scientists and "Zhasgalym" specialists with the theme "Opportunities and Efficiency" Rinnaclestudio "" and took the 3rd place.

Students majoring 5B070200 AC Mukanov M. Krasovsky Yu, Dautov E. Karimsakova D., M. Salyhova, Panaeva A. Abdigazi D. Knyazbaev A. Haziyeu Sh.uchastvovali in the Republican scientific seminar on the theme " 3D third industrial revolution, the code on the example of the titanium industry "and received certificates.

In the scientific contest "The best student research project" participated students were awarded diplomas accredited EP Tungatarov R. Batutin B. and M. Fly 3rd year student majoring 5B070400 - CS M. Mucha participated in the International Seminar on the theme «Spatian Cognition, Education and Virtual Reality »and received a certificate of participation. 2nd year student majoring 5B070200 - AU Berdimuhambetov M., J. Mamakova, Bishanova A., B. Umba, Haziyeu Sh.uchastvovali in the First International scientific and practical seminar, devoted to the 20th anniversary of KRIU on the theme "The role of the influence of the quality of education in the development of new science and industry of the republic "and got the certificates of the participant.

Students majoring 5B070400 - CS Zeynolla A. Shalyk A. Tungatarov R.uchastvovali in the subject Olympiad "Programming Technology" awarded diplomas of I, II, III degree. Students majoring 5B070200 AC Imangazina A. Nurup T. Knyazbaev A. participated in the subject physics Olympiad and were awarded diplomas of I, II, III degree.

According to the EP, as well as research and studying RWS plans involved all RW activities carried out by the university. Activities of scientific circles is aimed at familiarizing students with the research plans and RWS the department and the university, allowing students to choose the direction and participate in research. As part of the scientific circles SNO students conduct research, receive counseling, as well as published and put into practice the results of research. For each selected R & D fixed supervisors from among the teaching staff.

The R & D Department of 69 students involved. The department operates mugs "Automated control systems" on the EP 5B070200 AC, "Robotics" by EP 5B070400 - CS, 5B070300 - IP

"Program" on the EP 5B070400 - CS. The results of the research are published by students and put into production, including as part of the diploma work.

As a base for a variety of practices selected industrial enterprises and organizations, whose activity corresponds to the profile of the university training of specialists, such as LLP "Engineering company StroyTehno", JSC "Aktobe plant of chromium compounds", LLP «TKM Service» and others.

University were concluded 35 agreements on academic mobility of students and academic staff, 3 of them - with Kazakh universities, 32 - with foreign universities and organizations. 3rd year student majoring 5B070200 - AC Sapargali IR He trained in the Caspian University in Almaty, the 2nd year student specialty 5B070400 - CS Shalkar NN He trained in South Kazakhstan Humanitarian Institute. M.Saparbaeva, Shymkent.

- However, the Commission notes the lack of ongoing work within the university contracts, the small number of students involved in internal and external academic mobility.

- The department annually organizes job fairs, meetings with experts of the Office of Youth Policy of Aktobe region and heads of organizations and enterprises, established links with organizations, institutions and employment agencies. Heads of leading enterprises and organizations of the region are invited to the scientific and practical student conferences, subject Olympiads and competitions.

- The main directions of work for the promotion of employment of graduates are:

- Involvement as leaders of graduate design professionals of the real economy and practitioners;

- The involvement of employers in the learning process, giving lectures, conducting practical and laboratory classes, master classes by leading practitioners;

- The organization of laboratory employment-based organizations and businesses;

- The organization of temporary employment of students.

*Table 4-Graduates employment*

Code and speciality	2012-2013 acad.y			2013-2014 acad.y			2014-2015 acad.y		
	Total	Employed	%	Total	Employed	%	Total	Employed	%
5B070400 – CS	35	34	97	38	32	84	34	25	75
5B070300 – IS	13	13	100	18	15	83	18	14	78
5B070200 –AS	22	22	100	34	26	76	55	38	69

*Students mark their complete agreement: with a teacher effective teaching methods (76.7%), it is clear assessment criteria used by teachers (76.7%), the organization of the university sufficient opportunities for sports and other leisure activities (70%).*

*At the same time, there is no possibility of accredited programs of professional certification of students in the area of specialization.*

**Strengths of educational programs:**

1. the Commission notes that the University provides the opportunity for additional professional competences during the learning created in the Department the problematic groups;

2. the University clearly defined the policy of contingent forming, including the system of benefits and discounts, pricing policies, competition for the purpose of awards "Best student of the year", "Best student scientific projects", financial support to students-orphans, students from large families, students from the same family, the establishment of corporate grants and scholarships, scholarship sponsors, scholarships of Aktobe region akim, awarding students with medals "For valor in study", order "Golden wings";

3. the University successfully implemented a support program of gifted students, including the creation of a creative atmosphere, aesthetic subject-spatial environment, monthly art competitions, financial support and social protection of gifted students, involvement in creative teams, creation of conditions for creative realization;

4. constant monitoring of students satisfaction through questionings, interviews, meetings with management, prompt solution of current problems.



**The Commission recommends:**

1. to launch the development program of internal and external academic mobility of students with the reflection of funding arrangements;
2. to establish the Department for the efficient operation of employment and career growth;
3. to ensure prompt weekly submission of information from faculty on the evaluation of students' knowledge in the AIS "Platonus";
4. actively engage students to RWS.

*EEC notes that for EP 5B070300 – Information systems, 5B070400 – Computing and software, on 4 criteria of this standard the University has strong positions, on 7 criteria - satisfactory positions and 4 criteria need improvements.*

*For EP 5B070200 – Automation and control, on 4 criteria of this standard the University has strong positions, on 7 criteria - satisfactory positions and 4 criteria need improvements.*

**5) Standard "Resources available for educational programs"**

During the verification the Commission has ascertained the sufficiency of material-technical base for maintenance of educational process and implementation of the mission, goals and objectives of accredited programs. The University has modern material-technical base and resources to provide quality educational services.

In total, KRIU has 17 computer labs, 4 classrooms have an interactive whiteboard, 14 classrooms and the lobby is equipped with 19 projectors, there are 8 TVs; in the lobby installed PDO (laser projector and the projector for the slide show), QwickShow software for creating and displaying laser effects; IIT, consisting of 2 PCs with touch screens and 2 TVs with the ability to view schedules, KRIU News, background information of faculty, staff, students and visitors of the University, 10 units of existing tools and systems of automation etc.

*For specialties 5B070400 – CS, 5B070300 - IS and 5B070200 –AC purchased new computer equipment that spent 12150660 tenge.*

The library has a premise with a total area of 896 sq.m., there are reading rooms for 358 seats, the hall periodicals for 15 seats with a total area of 35,8 sq. m., Department "Subscription" that covers an area of 35.6 sq. m., Department of acquisition and processing with a total area of 35,8 sq. m., reading room – 450 sq. m.

The dynamics of the overall book stock in the EP (2013-2014 academic year increased by 26%; 2014-2015 academic year increased by 25 %; 2015-2016 academic year increased by 27 %). The library stock in the EP meets the requirements.

MTB and IR used in the educational process, and are sufficient to meet the established core activities requirements, as well as provide comfort conditions and quality of education EP:

- 7 buildings with an area of 10 914, 62 sq. m. Educational buildings area is 6188 sq. m., per student given contingent given the shift of the classroom – 8,1 sq. m, that meets the requirements. For the implementation of the EP in the field of "Automation and control", "Information systems", "Computing and software" allocated academic area buildings – 617,96 sq.m., per student given contingent given the shift of the classroom – 7,4 sq. m., that corresponds to the requirements;

- 7 apartments and residence. The total area of housing stock – 1 071,7 sq. m., that fully meets the requirement for residential foundations to ensure that visiting scientists arriving in KRIU on academic mobility to give lectures, provide guidance, educational seminars, participation in conferences. 2 dormitories with an area of 1305 sq. m, that fully meets the requirements of living in a dormitory of nonresidents and students arriving at the University on academic mobility. Total enrollment at the University - 1172 nonresident students, including enrolled full - time- 518 and the needy in the dormitory – 100, number of seats in the University dormitory – 144;

- 2 catering facility: Winter garden with an area of 600 sq.m. for 120 seats; cooking complex with an area of 659 sq. m., culinary shop in the market square – 1214,7 sq. m., that fully meets the need to provide food and other needs of all aspects of life of students, staff and TS during the working day in the University;

- Library complex with a printing house includes an electronically-book, thread-operating line extraction processing, storage and playback of educational information with a total area of 896 sq.m. and the number of seats in the reading rooms – 358, that provides the regulatory requirements in the amount of seats on the existing population of students a full-time office and staff, taking into account the shift of classes and is 23.9 % while the norm is 15%;

- Park health technologies (with sauna and swimming pool) and the student health center with an area of 522 sq. m. to provide high quality medical care, timely and comprehensive therapeutic and preventative support, preservation and strengthening of health of students, staff and faculty;

- Own sports hall with an area of 226,3 sq. m. and rented sports hall - 540 sq. m., that meets the regulatory requirement - 1 sq. m. per 1 student full-time tuition, given the shift of classes;

- 70 computers on accredited EP, 19 projectors, 4 interactive boards, 8 TVs, 4 video surveillance system, 2 interactive information terminal, that is aimed at providing appropriate information and communication learning environment in accordance with the requirements of the State program of education development in Kazakhstan for 2011-2020.

For automation of educational process management at the University used AIS "PLATONUSv3.0".

In 2015 was completed construction of a new academic building with an area of 3752,32 sq. m., that spent about 400 million tenge. Educational buildings and equipment of the University correspond with current sanitary rules, norms and requirements of fire safety. Special attention is paid to the aesthetic design of the existing buildings that instills in students a high sense of taste, creativity, patriotism to their University.

In 2013-2014 University held a modern overhaul with the design of the facade and lobby that spent more than 25 million tenge. For specialty "Automation and control", "Information systems", "Computing and software" allocated facilities with area of 617,96 sq. m., renovated, allocated funds for equipping the laboratories about 3 million tenge.

The Department that implements EP, operate laboratories and specialized classrooms:

– teaching and research laboratory "Automated control systems. The availability of technical equipment: stands equipped with leading manufacturers of automation systems; analog instrumentation; electronic oscilloscope; transducers and transmitters pressure and temperature; ultrasonic level gauge Siemens; measuring diaphragm.

– office-laboratory "NUR-SOFT";

– teaching and research laboratory "Centre for computer-based testing";

– laboratory of physics, mathematics and electrical engineering.

– multimedia language laboratory. Available technical equipment: computers; LCD projector PLC-XW200; interactive whiteboard Promethean ActivBoard 378; Linko V. 6.5. – 11 licenses;

- cabinet of the Kazakh language. Available technical equipment: projector, interactive whiteboard WhiteBoard, DAEWOO TV, computer, VCR, video;

- "Russian center". Available technical equipment: TV LG 4 computer, video projector, DVD player, educational-methodical literature;

- office-laboratory "Programming and databases". The availability of technical equipment 7 computers with the software Delphi, C++Builder, AutoCAD 2010;

- classroom laboratory "Metrology and measurement systems". Available technical equipment: pressure gauges, oscilloscope, transducer differential pressure, twin-tube differential pressure gauge glass;

On the creation of compliant resources, the University allocates funds, planned in the General financial plan of the University.

Information and analytical data presented in the report indicate adequate provision of classroom fund, computer equipment used in the educational process.

The University allows access to the global scientific database: "Thomson Reuters". The University concluded contracts on cooperation with the scientific library funds: Aktobe branch of JSC "Republican scientific and technical library", JSC "National cent of scientific and technical

information", Republican interuniversity electronic library, Almaty, Republican center of legal information of the database "Law", Association of libraries of higher educational institutions.

Results of RWS, master's thesis are required to undergo a check for plagiarism.

To ensure free access to educational Internet resources in the University there is a unified computer network connected to the Internet, with unlimited access, operates wireless Wi-Fi. Background readings and methodical materials are posted on the website of the University.

To replenish the library stock and ensure the educational process annually allocated funds.

Library support of educational process on disciplines of EP are presented in the table.

*Table 6. Books provided on EP.*

Educational program	Number of students Kaz/Rus	In Kazakh lang.(units)	In Russian lang.(units)	Provision % Kaz/Rus
5B070400 – CS	23/13	5581	6556	242/504
5B070300 – IS	16/5	3290	9116	205/1823
5B070200 – AC	116/69	12520	12997	108/188
TOTAL	155/87	21391	28669	555/2515

Support of the educational process with textbooks, teaching aids, teaching materials, methodical recommendations is also carried out through the publishing house of the University. *However remains a lack of appropriate textbooks and modern professional literature in English and Kazakh languages.*

**Strengths of educational programs:**

1. The functioning of a unified campus that includes classrooms, dormitory, student health center, owned and leased athletic facilities, student service centre (cooking, beauty salon, shopping area and boutiques, ateliers, service center for computer equipment maintenance).
2. Creative design of educational buildings, oriented on the formation of a highly cultured personality, aesthetic education and development of creative abilities of students.
3. A sufficient number of computer classes, reading rooms, language laboratories. The availability of educational funds for students.
4. Training equipment and software tools used to develop EP 5B070200 – "Automation and control", similar to those used on industrial enterprises of the region
5. The availability of electronic versions of published journals, personal pages of TS.
6. The University gives sufficient conditions for the adoption and use of ICT by TS and students (17 classrooms, 4 classrooms with interactive whiteboards, 19 projectors, laser projector and the projector for the slide show in the lobby, QwiekShow software for creating and displaying laser effects, conducting a seminar on it on a regular basis).

**The Commission recommends:**

1. to improve the control of originality of final qualification works through the program "Antiplagiat";
2. to intensify the use of information networks to sensitize the public and stakeholders;
3. to provide modern laboratory equipment, professional development tools software EP 5B070400 – CS, 5B070300 – IS.

*EEC notes that for EP 5B070300 – Information systems, 5B070400 – Computing and software, on 8 criteria of this standard the University has strong positions, on 21 criteria - satisfactory positions and 3 criteria need improvements.*

*For EP 5B070200 – Automation and control, on 9 criteria of this standard the University has strong positions, on 21 criteria - satisfactory position and 2 criteria need improvements.*

**6) Standards in the context of individual specialties. Natural and Technical Sciences**

To familiarize students with the professional environment and relevant issues in the field of specialization, as well as the acquisition of professional skills for students majoring AC, CS and IS carried out the following activities:

- conducted an excursions in the calibration laboratory Aktobe branch of JSC "National center of examination and certification", in the laboratory of computing center Committee of the RK on statistics, as well as in the departments of LLP "TKM-Service".

- lecturer Dzhumabekova A. A. conducts laboratory and practical classes on discipline "Microprocessor complexes in control systems" on the basis of JSC "APCC" for students majoring 5B070200 –AC.

TS consists of staff with long experience at the enterprises in the field of AC, CS and IS such as:

- Daev Zh. A. has about 10 years experience in the Department of instrumentation and automation and Metrology of the JSC "INTERGAS Central Asia";

- Dzhumabekova A. A. has experience more than 10 years, working as an Instrumentation foreman;

According to the requirements of SES the content of the disciplines of EP 5B070400 – CS, 5B070300 - IS and 5B070200 –AC are based on the knowledge, skills and abilities obtained at the previous stage of education, and is aimed at obtaining knowledge in the field of fundamental natural sciences, and scientific and professional skills and competences.

The composition of EP 5B070200 - AC includes a large number of disciplines related to mathematics and physics. For example, staff of the Department hold a course in "Complex variable theory", which is a continuation of the study of mathematical analysis. In the process of studying the discipline the student acquires the skills and knowledge that can help to successfully study such subjects as "Theoretical bases of electrical engineering", "Electronics", "Theory of linear automatic control systems", "Theory of nonlinear automatic control systems".

For EP 5B070300 – IS is also possible to bring the discipline "Basics of computer simulation", which is based on knowledge in mathematics and computer science, and in the process of studying the discipline, students acquire skills of mathematical modelling, processing large data amount, making computer calculations, which will further contribute to the accomplishment of scientific researches and professional activities.

In the frame of laboratory works and IWS has projects, underway standard calculations, makes mathematical and geometric modeling, deals with physical and chemical processes for EP 5B070200- AC.

Accredited educational programs are fully compliant with the standard in the context of the specialty.

**Strengths of educational programs:**

- TS involved in EP 5B070200 - AC has two teachers – practitioners;
- for the acquisition of practical skills of students EP 5B070200 - AC run field laboratory work at the industrial enterprises of the EP profile.

**The Commission recommends:**

- to strengthen the work on attracting teachers- practitioners for the implementation of the EP 5B070400 – CS, 5B070300 - IS.

*EEC notes that for EP 5B070300 - Information systems, 5B070400 – Computing and software, on 1 criteria of this standard the University has strong positions, on 2 criteria - satisfactory positions.*

*For EP 5B070200 – Automation and control, on 2 criteria of this standard the University has strong positions, on 1 criteria - satisfactory positions.*

## **(V) RECOMMENDATIONS FOR EDUCATIONAL PROGRAMS 5B070200 – "AUTOMATION AND CONTROL", 5B070300 – "INFORMATION SYSTEMS", 5B070400 – "COMPUTING AND SOFTWARE"**

### **1) Standard "Management of educational program"**

1. To improve the University quality assurance system of EP:
  - to conduct a comparative analysis of the compliance of development plans of EP the current development Strategy of the University and to update development plans of EP;
  - to ensure regular review and assessment of the implementation of development plans of EP;
  - to improve mechanisms for planning, management, internal quality assessment, examination and monitoring of EP.
2. To reflect the individuality and uniqueness of EP cluster with its focus on the training of IT-personnel for the needs of the market, the results of the questioning of employers, academic staff and students for analysis and assess the success of implementation of the development strategy of EP of the cluster.
3. Detail the structure and content of the MEP, taking into account the formation of general and specific competencies of students.
4. To improve EP for each of the educational trajectories and forms for description of the modules.
5. To reflect the participation of interested parties of educational programs in the process of formation and approval of the development plan of EP.
6. For EP 5B070400 – CS, 5B070300 – IS recommended to introduce elective courses directed on formation of professional competences in the field of Web-programming, object-oriented design and programming.

### **2) Standard "Specifics of educational program"**

1. to develop the principles and mechanisms of harmonizing the content of EP with programs of leading foreign and Kazakhstani universities;
2. to expand cooperation with foreign universities in the sphere of creating joint EP;
3. to update the contents and the list of optional disciplines in accordance with modern scientific and technical achievements in the IT sector for EP 5B070400 – CS, 5B070300 – IS;
4. to provide introduction of results of scientific researches in educational process at EP 5B070400 – CS, 5B070300 – IS.

### **3) Standard "Teaching staff and teaching effectiveness"**

1. to strengthen the work on development of academic mobility of teaching staff and joint research with leading domestic and foreign scientists in the implementation of accredited educational programs;
2. to strengthen the work on self-supporting research programs grant funding of MES RK and other sources of funding;
3. to actively attract foreign faculty to give lectures;
4. to strengthen the publication of TS scientific articles with non-zero impact factor;
5. to activate the work of the TS in the framework of EP 5B070400 – CS, 5B070300 – IS for advanced training in the field of learning modern tools of software development and web programming.

### **4) Standard "Students"**

1. to develop the program of development internal and external academic mobility of students with the reflection of funding arrangements;
2. to establish the Department for the efficient operation of employment and career growth;
3. to ensure prompt weekly submission of information from faculty on the evaluation of students' knowledge in the AIS "Platonus";

4. actively engage students to RWS.

**5) Standard "Resources available for educational programs"**

1. to improve the control of originality of final qualification works through the program "Antiplagiat";

2. to intensify the use of information networks to sensitize the public and stakeholders;

3. to provide modern laboratory equipment, professional development tools software EP 5B070400 – CS, 5B070300 – IS.

**6) Standards in the context of individual specialties. Natural and Technical Sciences**

1. to strengthen the work on attracting teachers- practitioners for the implementation of the EP 5B070400 – CS, 5B070300 – IS.



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accreditation and rating

**(VI) PARAMETERS OF THE SPECIALIZED (5B070300 – “Information System”, 5B070400 – “Computer Engineering and Software”)**

№	Evaluation Criteria	Position of the educational organization			
		Strong	Satisfactory	Needs improving	Unsatisfactory
	<b>Standard 1 "Education Program Management"</b>				
1	The HEI demonstrates an elaboration of the EP’s development plan based on an analysis of EP’s functioning, the real positioning of the HEI and its focus on satisfaction of the needs of government, stakeholders and students.			+	
2	The HEI should demonstrate the individuality and uniqueness of the EP’s development plan, their consistency with national development priorities and development strategy of the HEI.		+		
3	The HEI should ensure adequacy of the EP’s development plan in relation to available resources (including financial, information, personnel structure, the material and technical base), to the market needs and educational policy of the Republic of Kazakhstan.		+		
4	The HEI should attract the representatives of stakeholder groups, including students, academics and employers to the formation of the EP’s development plan.		+		
5	The HEI demonstrates the transparency of the processes of formation of the EP’s development plan. The HEI provides the awareness of stakeholders on the content of the EP’s development plan and processes of its formation.		+		
6	The HEI should determine mechanisms of formation and regular review of the EP’s development plan and monitoring of its implementation.			+	
7	The HEI carries out processes of strategic, tactical and operational planning of the EP and resource allocation in line with the EP’s development plan.		+		

8	The HEI should regularly collect, store and analyze information about implementation of the EP and conduct self-evaluation in all directions, based on the elaboration and implementation the processes of measurement and the analysis for assessing the success of realization of development strategy of the EP through such indicators as “productivity” and “efficiency”, develop and reconsider the EP’s development plan.		+		
9	The EP’s development plan undergoes public discussion with representatives of all interested parties, on the basis of proposals and amendments to the project made by authorized collegial body of the HEI.		+		
10	An important factor is to ensure the representativeness of stakeholder group delegates.		+		
11	The HEI should demonstrate compliance of the priorities of the research work completed by the faculty of the EP to national policies in the sphere of education, science and innovation development.		+		
12	The HEI demonstrates the implementation degree of the principles of sustainability, efficiency, productivity, priority, transparency, accountability, authority delegation, separation and independence of the HEI funding system.		+		
	<i>EP Management is expected to include:</i>				
13	the activity management through processes;		+		
14	the mechanisms of planning, development and continuous improvement;		+		
15	the risk assessment and identification the ways to reduce these risks;			+	
16	monitoring, including creation of reporting processes, which allows to determine the dynamics in the activities and the implementation of plans;			+	
17	the analysis of the revealed discrepancies, the implementation of the corrective and preventive actions;		+		
18	the analysis of the effectiveness of change;		+		
19	the assessment of productivity and efficiency of activity of divisions and their interaction;		+		
20	In HEI all major business processes, which regulates the implementation of the EP should be documented.		+		
21	The HEI should define its own requirements for the various forms (full-time, evening, correspondence), levels (BA – MA – PhD) and technology (including remote).		+		
22	The HEI should demonstrate an accurate designation of those responsible for business processes, a clear allocation of staff duties, and delimitation of responsibilities of collegial bodies participating in implementation of the EP.		+		



23	The HEI should demonstrate the order for approval, periodic review (revision), and monitoring of educational programs and documents that regulate this process.		+		
24	The HEI should ensure the existence and effective operation of the system of informing and feedback focused on students, employees and stakeholders.	+			
25	The HEI should demonstrate the existence of mechanism of communication with students, staff and other interested in the HEI's activity parties, including the presence of deadlines for processing complaints, appeals and inquiries.	+			
26	The HEI should establish the frequency, forms and methods of evaluation of the education program.		+		
27	An important factor is the cooperation with other HEIs implementing the same education program and an exchange of experience.			+	
28	The EP's management must make decisions that are justified and based on the facts.		+		
29	The EP's management should demonstrate the successful operation of the EP quality assurance system, which includes designing, management and monitoring, their improvement, making decisions based on facts.			+	
30	An important factor is the existence of information systems and databases, using the Internet for informing, the presence of portal and/or Internet site containing information reflecting the planning processes and the evaluation results of its effectiveness for students, staff and the public.		+		
31	The EP's management should provide evidence of transparency in the educational program management system.		+		
32	An important factor is the participation of representatives of interested parties (employers, faculty, and students) in the collegial governing bodies of the educational program.		+		
33	The HEI should demonstrate the presence and evidence of an intensive use in the processes of the EP management the system for collection and analysis of statistics on the contingent of students and alumni, on resources, personnel, research and international activities and other areas.		+		
34	An important factor is the EP management based on research results of changes in internal and external environment.		+		
35	The EP's management should provide a measurement of the degree of satisfaction with the needs of faculty, staff and students and to demonstrate evidence of removing shortcomings found in the measurement process.		+		

36	The EP's management should demonstrate an evidence of openness and accessibility for students, teaching staff, and parents (the official reception hours on personal matters, e-mail communications, etc.).	+			
37	The HEI should demonstrate the existence of communication channel by which any interested person can give innovative proposals on the improvement of the EP's activity to the HEI's management and the governing bodies. The HEI should demonstrate examples of the analysis of these proposals and the implementation of such proposals in the life of the HEI.	+			
	<b>Subtotal</b>	<b>5</b>	<b>26</b>	<b>6</b>	<b>0</b>
	<b>Standard 2 "Specificity of Education Program"</b>				
	<b>Evaluation Criteria: the content of the EP</b>				
38	The HEI should demonstrate the existence of developed models of the graduate education program, including knowledge, skills, competencies and personal qualities.			+	
39	The HEI should provide evidence of the participation of teaching staff and employers in the development and management of educational programs, ensuring their quality.		+		
40	The HEI should prove that employers involved in design and implementation of the EP are typical representatives of employers (representativeness) and express the interests and views, which is common for most employers.		+		
41	The HEI should determine the content, scope, logic of constructing individual educational trajectory of students, the influence of disciplines and professional practices on formation of professional competence of graduates.		+		
42	The HEI should demonstrate a continuity of content of educational programs at different levels (bachelor's, master's, doctorate degrees, additional education), including the logic of academic interdependence of disciplines, sequence and continuity.		+		
43	The EP's management should demonstrate the influence of discipline on the formation of students' professional competence, skills and knowledge blocks.		+		
44	The EP's management should demonstrate a clear definition of the logical sequence of discipline courses and reflection in the work study program of basic requirements for learning outcomes.		+		
45	The EP's management should demonstrate the existence of professional context in the content of academic disciplines.		+		
46	The EP's management should demonstrate the existence of an effective balance between the theoretical and practice-oriented disciplines.		+		

47	The EP's management should demonstrate the logic and reasons for drafting of curriculum and teaching programs, in particular the reasons for including a particular discipline to the curriculum list, the reasons for assigning the status of post-or prerequisite, matching the names and content of the courses to the topical areas of study of science/society and etc.		+		
48	The EP's management should ensure that the content of academic disciplines is congruent with study level (bachelor's, master's, doctorate degrees) and offered learning outcomes.		+		
49	The list and content of disciplines should be available for students. Disciplines should contain the most relevant results of research and other information of the teaching field. Disciplines should comprehensively cover all the issues, problems existing on the agenda of teaching field.			+	
50	An important factor is a harmonization of content of educational programs with educational program soft he leading foreign and Kazakh HEIs.			+	
51	In structure of the educational program should be envisaged different activities, the content of which should contribute to the development of students' professional competences taking into account their personal features.		+		
52	An important factor is updateability of educational programs, taking into account the interests of employers during the elaboration of educational programs designed to develop professional skills.		+		
53	The EP's management must provide an annual revision of the content of curriculum and teaching programs, taking into account changes of the market, the wishes of students and teachers and with the involvement in decision-making representatives of employers, students, teachers and stakeholders.		+		
<b>Evaluation Criteria: Individualization of EP</b>					
54	The EP's management must provide equal opportunities for students, regardless of the language of instruction on the formation of an individual educational program aimed at developing professional competence.		+		
55	The EP's management should ensure the existence and effective functioning of the individual support system and consulting of students on the educational process.	+			
56	The EP's management creates conditions for the effective promotion of student on individual learning path, including consultations of advisors.	+			
57	The EP's management should demonstrate the use of advantages, individual characteristics, needs and cultural experience of students in the implementation of the EP.	+			

58	The EP's management should demonstrate an individual academic support for students in the implementation of EP.	+			
59	The EP's management must prove the existence of monitoring system for the effective promotion of student on individual learning path and students' achievements.		+		
<b>Evaluation Criteria: Student Assessment Results</b>					
60	The EP's management should ensure the existence and effective operation of the mechanism of objective, accurate and comprehensive assessment of the knowledge, skills and qualities acquired by students in the process of studying the course, as well as collective mechanism of the appeal and professional assessment appeal.		+		
61	The EP's management must provide an objective assessment of knowledge and degree of development of students' professional competence, transparency and adequacy of tools and evaluation mechanisms.		+		
62	The EP's management should provide compliance of procedures of assessment of students' knowledge level to the planned learning outcomes and program's goals.		+		
63	The EP's management should carry out diagnostics of students' knowledge at the beginning of training of the course and the study of academic disciplines.		+		
64	The processes and criteria for assessment of knowledge must be transparent.		+		
<b>Evaluation Criteria: teaching methodology</b>					
65	The EP's management must provide a systematic development, implementation and effectiveness of active learning and innovative teaching methods.		+		
66	During implementation of the educational program monitoring of a student's independent work should be carried out and mechanisms of an adequate assessment of its results are created.		+		
67	An important factor is the existence of joint educational programs with foreign HEIs and attracting Kazakh scientific research organizations to educational process.			+	
68	The EP's management should provide students with the possibility of performing practical training on a specialty and to monitor the satisfaction of students, enterprise managers – practice places and employers.		+		
69	The EP's management should ensure the implementation of research findings in the educational process.			+	
70	The EP's management must prove the conducting research and the availability of their own developments in the field of teaching methods of academic disciplines of the EP.		+		
<b>Subtotal</b>		<b>4</b>	<b>24</b>	<b>5</b>	<b>0</b>

<b>Standard 3 "Faculty and Teaching Efficiency"</b>					
71	In order to implement educational programs the EP's management should attract practitioners and identify the proportion of disciplines read by them. The EP's management should show the logic of their involvement in the carrying out courses.		+		
72	The EP's management should constantly motivate teaching staff for applying innovation and IT in education process.		+		
73	The EP's management should provide academic staff's compliance with the qualification requirements, the level and specificity of the educational program.		+		
74	The EP's management should demonstrate compliance of human resource capacity of faculty to strategy and specificity of educational programs.		+		
75	The EP's management should demonstrate a personnel selection based on the analysis of the needs of educational programs, the existence of recruitment system.		+		
76	The HEI should demonstrate availability of information to the public on teaching staff, including faculty's directories, placing profiles on the HEI's web-site.	+			
77	The EP's management should demonstrate compliance with the principle of management accessibility and transparency of all personnel procedures.	+			
78	The EP's management should provide monitoring of faculty's activity, a systematic assessment of the professor's competence, a complex assessment of the quality of teaching.		+		
79	The workload of teachers should include educational, methodical, scientific work (including the preparation of projects and applications), the organizational and methodological (including the participation and organization of various events), improvement of a professional competence (qualification enhancing, including personal development and study of literature on the specialty), the activities in a professional environment (for example, participation in professional associations and consulting).		+		
80	The EP's management should demonstrate evidence of performance of all types of planned assignment by the teachers.		+		
81	The EP's management should provide the entirety and adequacy of the academic staff's individual work planning for all kinds of activity, monitoring of productivity and efficiency of individual plans.		+		
82	The EP's management should demonstrate compliance of qualification enhancing, professional and personal development of teaching staff to the goals of EP.		+		

83	The EP's management should provide purposeful actions on the development of young teachers.	+			
84	The EP's management should demonstrate mechanisms of incentives for professional and personal development of faculty and staff.	+			
85	The EP's management must ensure monitoring of faculty's satisfaction.		+		
86	The EP's management must demonstrate the involvement of faculty into practical activities in the field of specialization on permanent basis.		+		
87	The EP's management should confirm the involvement of experienced experts in the relevant branch of economy for implementation of the EP.		+		
88	The EP's management must demonstrate IT competency of faculty members, application of innovative methods and forms of education.		+		
89	An important factor is the development of academic mobility, attracting the best foreign and domestic teachers, conducting joint research during the time of implementation of EP.			+	
90	An important factor is the attraction of the well-known scientists, public and political figures, and honored workers to the education process.		+		
91	An important factor is the participation of teaching staff in the life of society (the role of faculty in the education system, in development of science, region, creating the cultural environment, participation in exhibitions, art competitions, charity programs, etc.).	+			
	<b>Subtotal</b>	<b>5</b>	<b>15</b>	<b>1</b>	<b>0</b>
	<b>Standard 4 "Students"</b>				
92	The EP's management should demonstrate a policy of forming of students' contingent of the EP and the transparency of its procedures.	+			
93	The EP's management should ensure the representation of students in collegial governing body of the EP.		+		
94	The EP's management should demonstrate awareness of the major roles (professional, social) of students on the basis of the learning results.		+		
95	An important factor is to have the possibility of professional certification of students in the field of specialization in the learning process.			+	
96	An important factor is to attract students to scientific research.		+		
97	An important factor is the possibility of external and internal mobility for students.			+	
98	An important factor is existence of support programs for gifted students.	+			

99	The EP's management should make maximum efforts to ensure employment for graduates and maintain communication with alumni and create an alumni community on separate programs of the EP.		+		
100	An important factor is to monitor the employment and professional activities of graduates.		+		
101	The EP's management should actively encourage students for self-education outside of the main program (extracurricular activities).	+			
102	The EP's management should provide students with the possibility of exchanging and expression of opinion – for example, via an Internet forum, student organizations.		+		
103	The EP's management should establish a mechanism for monitoring of students' satisfaction with their HEI activity in general and the individual services in particular.	+			
104	The EP's management should demonstrate the functioning of the feedback system, including operative reporting of assessment results of students' knowledge.			+	
105	An important factor is to have the possibility for continuing education in postgraduate and additional educational programs.		+		
106	An important factor is the mobility of students and faculty members (the ability to study within a certain time in other domestic and foreign HEIs, academic exchanges of teaching staff) and existence of a mechanism for the recognition of the results of academic mobility of students.			+	
	<b>Subtotal</b>	<b>4</b>	<b>7</b>	<b>4</b>	<b>0</b>
	<b>Standard 5 "Resources Available to Education Program"</b>				
107	The EP's management should provide accessibility to the maximum possible number of students a structured, organized information on the disciplines read – presentation materials, lecture notes, mandatory and additional literature, practical assignments, etc.	+			
108	Teaching equipment and software used to master educational programs should be similarly used in the relevant sectors and meet the requirements of operational safety.		+		
109	The HEI should demonstrate the effectiveness of regular analysis of sufficiency and modernity of the resources of available educational programs - classrooms, laboratories, computer hardware and software, financial resources, access to international databases of scientific research results, the system of professional practice and employment, textbooks and materials, etc.		+		

110	The HEI creates a learning environment that contributes to the formation of professional competence and takes into account individual needs and abilities of students.		+		
111	The HEI should create conditions for the development of research teams, research laboratories, academic schools and workshops, involving students in research activities; ensuring the participation of teaching staff and students in academic conferences and competitions, employing leading scholars and practitioners.		+		
112	The HEI should create conditions for the development of scientific potential of young scientists and students.		+		
113	The HEI should demonstrate the compliance of infrastructure used for implementation of the EP with its specifics. Classrooms, offices, laboratories, communication and computer equipments and other facilities must meet high requirements.		+		
114	The HEI should assess the development dynamics of material-technical resources and information support of the EP, efficiency of use of assessment results for adjustment in planning and budget allocation.		+		
	In the HEI should be established learning environment of the EP, which includes:				
115	technological support for students and faculty in accordance with the programs (such as online learning, simulations in the classroom) and the intellectual demands (databases, data analysis programs);		+		
116	academic accessibility – students have access to personalized interactive resources (also available outside the classroom), learning materials and assignments, and as well as the possibility of experimental self-evaluation of students' knowledge through remote access to the HEI portal (website) is provided;		+		
117	academic advising – have personalized interactive resources to help students plan and implement academic programs;		+		
118	professional orientation – students have access to personalized interactive resources that provide assistance in choosing and achieving career paths;		+		
119	required number of classrooms equipped with modern technical means of teaching: educational and research laboratories, modern teaching and training grounds, parks equipped with modern facility that is in correspondence with the educational programs implemented, the sanitary and epidemiological norms and requirements;			+	
120	required number of computer classes, reading rooms, multimedia, language and science classrooms, the number of seats in them;	+			



121	book fund, including fund of educational, methodical and scientific literature on general education, basic and major disciplines in print and electronic form, periodicals in the context of learning language;		+		
122	scientific databases, electronic journals and their availability;		+		
123	availability of electronic versions of published journals;	+			
124	examination of the research results, final papers, dissertations on plagiarism;			+	
125	free access to educational Internet resources, the functioning of free Wi-Fi throughout the HEI.	+			
126	The EP's management should ensure the existence of academic support for students, including giving students the information, reference and teaching materials needed for the learning of educational programs (guide, academic calendar, manual and etc.).	+			
127	Educational materials, software tools, educational literature and additional resources, and equipment should be available to all students.	+			
128	An important factor is the support of the educational program with information and communication technologies.		+		
129	The HEI should demonstrate existence of the laboratory development programs realizing by the EP.	+			
130	The EP's management should determine the degree of implementation of information technology in the learning process of the EP, monitor the use and development of innovative technologies by teaching staff, including ICT-based.		+		
	The EP's management should demonstrate the reflection of information characterizing the EP on a web resource, the efficiency of its use for improvement of the EP, which has the following characteristics:				
131	the presence of personal pages of teaching staff on the portal of the HEI;		+		
132	the presence of adequate and objective information about the teaching staff in the HEI's portal (website);		+		
133	the transparency of information on administration of complaints, including the placement of virtual complaint book for consumers on the HEI's portal (website);		+		
134	the allocation on the HEI's portal (website) complete objective information on the activities and specificity of the EP;		+		
135	the allocation on the HEI's portal (website) external publications (citations, references) on the implementation of the EP;		+		
136	the use of information networks to inform the public and stakeholders;			+	

137	An important factor is to comply with copyright when placing teaching and methodological support in the public domain;		+		
138	An important factor is the creation of conditions for the mastery and use of information and communication technologies by the staff, teaching staff and students in the education process and activities of the HEI.		+		
	<b>Subtotal</b>	<b>8</b>	<b>21</b>	<b>3</b>	<b>0</b>
<b>Standard 6 "In the context of separate specialties"</b>					
<b>Natural and Technical Sciences</b>					
<i>Educational programs in directions "Natural Sciences", "Engineering and Technology", such as "Information System" and "Computer Engineering and Software" must meet the following requirements:</i>					
139	to familiarize students with the professional environment and pressing issues in the field of specialization, also for the acquisition of skills through theoretical training educational program must include disciplines and activities designed to obtain practical experience and skills in the profession in general and majors in particular, including: - excursions to a company in the field of specialization (factories, workshops, research institutes, laboratories, etc.), - conducting individual sessions or the entire discipline in the specialization company, - holding seminars for solving practical tasks relevant to the companies in the area of specialization, etc.		+		
140	The faculty involved in the educational program should include at least one full-time professor who has long experience as the regular employee in enterprises in the area of specialization of the educational program.		+		
141	The contents of all disciplines of the EP should be more or less based and include elements, themes of the fundamental natural sciences, such as mathematics, chemistry, physics.		+		
	<i>Subtotal</i>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>
	<i>Subtotal in general</i>	<b>27</b>	<b>95</b>	<b>19</b>	<b>0</b>

Independent agency for  
accreditation and rating

**(VII) PARAMETERS OF THE SPECIALIZED (5B070200 – “Automation and Control”)**

№ п/п	Evaluation Criteria	Position of the educational organization			
		Strong	Satisfactory	Needs improving	Unsatisfactory
	<b>Standard 1 "Education Program Management"</b>				
1	The HEI demonstrates an elaboration of the EP's development plan based on an analysis of EP's functioning, the real positioning of the HEI and its focus on satisfaction of the needs of government, stakeholders and students.			+	
2	The HEI should demonstrate the individuality and uniqueness of the EP's development plan, their consistency with national development priorities and development strategy of the HEI.		+		
3	The HEI should ensure adequacy of the EP's development plan in relation to available resources (including financial, information, personnel structure, the material and technical base), to the market needs and educational policy of the Republic of Kazakhstan.		+		
4	The HEI should attract the representatives of stakeholder groups, including students, academics and employers to the formation of the EP's development plan.		+		
5	The HEI demonstrates the transparency of the processes of formation of the EP's development plan. The HEI provides the awareness of stakeholders on the content of the EP's development plan and processes of its formation.		+		
6	The HEI should determine mechanisms of formation and regular review of the EP's development plan and monitoring of its implementation.			+	
7	The HEI carries out processes of strategic, tactical and operational planning of the EP and resource allocation in line with the EP's development plan.		+		

8	The HEI should regularly collect, store and analyze information about implementation of the EP and conduct self-evaluation in all directions, based on the elaboration and implementation the processes of measurement and the analysis for assessing the success of realization of development strategy of the EP through such indicators as “productivity” and “efficiency”, develop and reconsider the EP’s development plan.				+
9	The EP’s development plan undergoes public discussion with representatives of all interested parties, on the basis of proposals and amendments to the project made by authorized collegial body of the HEI.				+
10	An important factor is to ensure the representativeness of stakeholder group delegates.				+
11	The HEI should demonstrate compliance of the priorities of the research work completed by the faculty of the EP to national policies in the sphere of education, science and innovation development.				+
12	The HEI demonstrates the implementation degree of the principles of sustainability, efficiency, productivity, priority, transparency, accountability, authority delegation, separation and independence of the HEI funding system.				+
	<i>EP Management is expected to include:</i>				
13	the activity management through processes;				+
14	the mechanisms of planning, development and continuous improvement;				+
15	the risk assessment and identification the ways to reduce these risks;				+
16	monitoring, including creation of reporting processes, which allows to determine the dynamics in the activities and the implementation of plans;				+
17	the analysis of the revealed discrepancies, the implementation of the corrective and preventive actions;				+
18	the analysis of the effectiveness of change;				+
19	the assessment of productivity and efficiency of activity of divisions and their interaction;				+
20	In HEI all major business processes, which regulates the implementation of the EP should be documented.				+
21	The HEI should define its own requirements for the various forms (full-time, evening, correspondence), levels (BA – MA – PhD) and technology (including remote).				+
22	The HEI should demonstrate an accurate designation of those responsible for business processes, a clear allocation of staff duties, and delimitation of responsibilities of collegial bodies participating in implementation of the EP.				+

23	The HEI should demonstrate the order for approval, periodic review (revision), and monitoring of educational programs and documents that regulate this process.		+		
24	The HEI should ensure the existence and effective operation of the system of informing and feedback focused on students, employees and stakeholders.		+		
25	The HEI should demonstrate the existence of mechanism of communication with students, staff and other interested in the HEI's activity parties, including the presence of deadlines for processing complaints, appeals and inquiries.		+		
26	The HEI should establish the frequency, forms and methods of evaluation of the education program.		+		
27	An important factor is the cooperation with other HEIs implementing the same education program and an exchange of experience.		+		
28	The EP's management must make decisions that are justified and based on the facts.		+		
29	The EP's management should demonstrate the successful operation of the EP quality assurance system, which includes designing, management and monitoring, their improvement, making decisions based on facts.			+	
30	An important factor is the existence of information systems and databases, using the Internet for informing, the presence of portal and/or Internet site containing information reflecting the planning processes and the evaluation results of its effectiveness for students, staff and the public.		+		
31	The EP's management should provide evidence of transparency in the educational program management system.		+		
32	An important factor is the participation of representatives of interested parties (employers, faculty, and students) in the collegial governing bodies of the educational program.		+		
33	The HEI should demonstrate the presence and evidence of an intensive use in the processes of the EP management the system for collection and analysis of statistics on the contingent of students and alumni, on resources, personnel, research and international activities and other areas.		+		
34	An important factor is the EP management based on research results of changes in internal and external environment.		+		
35	The EP's management should provide a measurement of the degree of satisfaction with the needs of faculty, staff and students and to demonstrate evidence of removing shortcomings found in the measurement process.		+		

36	The EP's management should demonstrate an evidence of openness and accessibility for students, teaching staff, and parents (the official reception hours on personal matters, e-mail communications, etc.).	+			
37	The HEI should demonstrate the existence of communication channel by which any interested person can give innovative proposals on the improvement of the EP's activity to the HEI's management and the governing bodies. The HEI should demonstrate examples of the analysis of these proposals and the implementation of such proposals in the life of the HEI.	+			
	<b>Subtotal</b>	<b>6</b>	<b>27</b>	<b>4</b>	<b>0</b>
	<b>Standard 2 "Specificity of Education Program"</b>				
	<b>Evaluation Criteria: the content of the EP</b>				
38	The HEI should demonstrate the existence of developed models of the graduate education program, including knowledge, skills, competencies and personal qualities.	+			
39	The HEI should provide evidence of the participation of teaching staff and employers in the development and management of educational programs, ensuring their quality.	+			
40	The HEI should prove that employers involved in design and implementation of the EP are typical representatives of employers (representativeness) and express the interests and views, which is common for most employers.	+			
41	The HEI should determine the content, scope, logic of constructing individual educational trajectory of students, the influence of disciplines and professional practices on formation of professional competence of graduates.		+		
42	The HEI should demonstrate a continuity of content of educational programs at different levels (bachelor's, master's, doctorate degrees, additional education), including the logic of academic interdependence of disciplines, sequence and continuity.		+		
43	The EP's management should demonstrate the influence of discipline on the formation of students' professional competence, skills and knowledge blocks.		+		
44	The EP's management should demonstrate a clear definition of the logical sequence of discipline courses and reflection in the work study program of basic requirements for learning outcomes.	+			
45	The EP's management should demonstrate the existence of professional context in the content of academic disciplines.	+			
46	The EP's management should demonstrate the existence of an effective balance between the theoretical and practice-oriented disciplines.		+		

47	The EP's management should demonstrate the logic and reasons for drafting of curriculum and teaching programs, in particular the reasons for including a particular discipline to the curriculum list, the reasons for assigning the status of post-or prerequisite, matching the names and content of the courses to the topical areas of study of science/society and etc.		+		
48	The EP's management should ensure that the content of academic disciplines is congruent with study level (bachelor's, master's, doctorate degrees) and offered learning outcomes.		+		
49	The list and content of disciplines should be available for students. Disciplines should contain the most relevant results of research and other information of the teaching field. Disciplines should comprehensively cover all the issues, problems existing on the agenda of teaching field.		+		
50	An important factor is a harmonization of content of educational programs with educational program soft he leading foreign and Kazakh HEIs.			+	
51	In structure of the educational program should be envisaged different activities, the content of which should contribute to the development of students' professional competences taking into account their personal features.		+		
52	An important factor is updateability of educational programs, taking into account the interests of employers during the elaboration of educational programs designed to develop professional skills.		+		
53	The EP's management must provide an annual revision of the content of curriculum and teaching programs, taking into account changes of the market, the wishes of students and teachers and with the involvement in decision-making representatives of employers, students, teachers and stakeholders.		+		
<b>Evaluation Criteria: Individualization of EP</b>					
54	The EP's management must provide equal opportunities for students, regardless of the language of instruction on the formation of an individual educational program aimed at developing professional competence.			+	
55	The EP's management should ensure the existence and effective functioning of the individual support system and consulting of students on the educational process.		+		
56	The EP's management creates conditions for the effective promotion of student on individual learning path, including consultations of advisors.		+		
57	The EP's management should demonstrate the use of advantages, individual characteristics, needs and cultural experience of students in the implementation of the EP.		+		
58	The EP's management should demonstrate an individual academic support for students in the implementation of EP.		+		

59	The EP's management must prove the existence of monitoring system for the effective promotion of student on individual learning path and students' achievements.		+		
<b>Evaluation Criteria: Student Assessment Results</b>					
60	The EP's management should ensure the existence and effective operation of the mechanism of objective, accurate and comprehensive assessment of the knowledge, skills and qualities acquired by students in the process of studying the course, as well as collective mechanism of the appeal and professional assessment appeal.		+		
61	The EP's management must provide an objective assessment of knowledge and degree of development of students' professional competence, transparency and adequacy of tools and evaluation mechanisms.		+		
62	The EP's management should provide compliance of procedures of assessment of students' knowledge level to the planned learning outcomes and program's goals.		+		
63	The EP's management should carry out diagnostics of students' knowledge at the beginning of training of the course and the study of academic disciplines.		+		
64	The processes and criteria for assessment of knowledge must be transparent.		+		
<b>Evaluation Criteria: teaching methodology</b>					
65	The EP's management must provide a systematic development, implementation and effectiveness of active learning and innovative teaching methods.		+		
66	During implementation of the educational program monitoring of a student's independent work should be carried out and mechanisms of an adequate assessment of its results are created.		+		
67	An important factor is the existence of joint educational programs with foreign HEIs and attracting Kazakh scientific research organizations to educational process.			+	
68	The EP's management should provide students with the possibility of performing practical training on a specialty and to monitor the satisfaction of students, enterprise managers – practice places and employers.	+			
69	The EP's management should ensure the implementation of research findings in the educational process.			+	
70	The EP's management must prove the conducting research and the availability of their own developments in the field of teaching methods of academic disciplines of the EP.		+		
<b>Subtotal</b>		<b>12</b>	<b>18</b>	<b>3</b>	<b>0</b>
<b>Standard 3 "Faculty and Teaching Efficiency"</b>					



71	In order to implement educational programs the EP's management should attract practitioners and identify the proportion of disciplines read by them. The EP's management should show the logic of their involvement in the carrying out courses.	+			
72	The EP's management should constantly motivate teaching staff for applying innovation and IT in education process.		+		
73	The EP's management should provide academic staff's compliance with the qualification requirements, the level and specificity of the educational program.		+		
74	The EP's management should demonstrate compliance of human resource capacity of faculty to strategy and specificity of educational programs.		+		
75	The EP's management should demonstrate a personnel selection based on the analysis of the needs of educational programs, the existence of recruitment system.		+		
76	The HEI should demonstrate availability of information to the public on teaching staff, including faculty's directories, placing profiles on the HEI's web-site.	+			
77	The EP's management should demonstrate compliance with the principle of management accessibility and transparency of all personnel procedures.	+			
78	The EP's management should provide monitoring of faculty's activity, a systematic assessment of the professor's competence, a complex assessment of the quality of teaching.		+		
79	The workload of teachers should include educational, methodical, scientific work (including the preparation of projects and applications), the organizational and methodological (including the participation and organization of various events), improvement of a professional competence (qualification enhancing, including personal development and study of literature on the specialty), the activities in a professional environment (for example, participation in professional associations and consulting).		+		
80	The EP's management should demonstrate evidence of performance of all types of planned assignment by the teachers.		+		
81	The EP's management should provide the entirety and adequacy of the academic staff's individual work planning for all kinds of activity, monitoring of productivity and efficiency of individual plans.		+		
82	The EP's management should demonstrate compliance of qualification enhancing, professional and personal development of teaching staff to the goals of EP.	+			
83	The EP's management should provide purposeful actions on the development of young teachers.	+			

84	The EP's management should demonstrate mechanisms of incentives for professional and personal development of faculty and staff.	+			
85	The EP's management must ensure monitoring of faculty's satisfaction.		+		
86	The EP's management must demonstrate the involvement of faculty into practical activities in the field of specialization on permanent basis.		+		
87	The EP's management should confirm the involvement of experienced experts in the relevant branch of economy for implementation of the EP.		+		
88	The EP's management must demonstrate IT competency of faculty members, application of innovative methods and forms of education.		+		
89	An important factor is the development of academic mobility, attracting the best foreign and domestic teachers, conducting joint research during the time of implementation of EP.			+	
90	An important factor is the attraction of the well-known scientists, public and political figures, and honored workers to the education process.		+		
91	An important factor is the participation of teaching staff in the life of society (the role of faculty in the education system, in development of science, region, creating the cultural environment, participation in exhibitions, art competitions, charity programs, etc.).	+			
	<b>Subtotal</b>	<b>7</b>	<b>13</b>	<b>1</b>	<b>0</b>
	<b>Standard 4 "Students"</b>				
92	The EP's management should demonstrate a policy of forming of students' contingent of the EP and the transparency of its procedures.	+			
93	The EP's management should ensure the representation of students in collegial governing body of the EP.		+		
94	The EP's management should demonstrate awareness of the major roles (professional, social) of students on the basis of the learning results.		+		
95	An important factor is to have the possibility of professional certification of students in the field of specialization in the learning process.			+	
96	An important factor is to attract students to scientific research.		+		
97	An important factor is the possibility of external and internal mobility for students.			+	
98	An important factor is existence of support programs for gifted students.	+			

99	The EP's management should make maximum efforts to ensure employment for graduates and maintain communication with alumni and create an alumni community on separate programs of the EP.		+			
100	An important factor is to monitor the employment and professional activities of graduates.		+			
101	The EP's management should actively encourage students for self-education outside of the main program (extracurricular activities).	+				
102	The EP's management should provide students with the possibility of exchanging and expression of opinion – for example, via an Internet forum, student organizations.		+			
103	The EP's management should establish a mechanism for monitoring of students' satisfaction with their HEI activity in general and the individual services in particular.	+				
104	The EP's management should demonstrate the functioning of the feedback system, including operative reporting of assessment results of students' knowledge.				+	
105	An important factor is to have the possibility for continuing education in postgraduate and additional educational programs.		+			
106	An important factor is the mobility of students and faculty members (the ability to study within a certain time in other domestic and foreign HEIs, academic exchanges of teaching staff) and existence of a mechanism for the recognition of the results of academic mobility of students.				+	
	<b>Subtotal</b>	<b>4</b>	<b>7</b>	<b>4</b>	<b>0</b>	
	<b>Standard 5 "Resources Available to Education Program"</b>					
107	The EP's management should provide accessibility to the maximum possible number of students a structured, organized information on the disciplines read – presentation materials, lecture notes, mandatory and additional literature, practical assignments, etc.	+				
108	Teaching equipment and software used to master educational programs should be similarly used in the relevant sectors and meet the requirements of operational safety.	+				
109	The HEI should demonstrate the effectiveness of regular analysis of sufficiency and modernity of the resources of available educational programs - classrooms, laboratories, computer hardware and software, financial resources, access to international databases of scientific research results, the system of professional practice and employment, textbooks and materials, etc.		+			
110	The HEI creates a learning environment that contributes to the formation of professional competence and takes into account individual needs and abilities of students.		+			

111	The HEI should create conditions for the development of research teams, research laboratories, academic schools and workshops, involving students in research activities; ensuring the participation of teaching staff and students in academic conferences and competitions, employing leading scholars and practitioners.		+		
112	The HEI should create conditions for the development of scientific potential of young scientists and students.		+		
113	The HEI should demonstrate the compliance of infrastructure used for implementation of the EP with its specifics. Classrooms, offices, laboratories, communication and computer equipments and other facilities must meet high requirements.		+		
114	The HEI should assess the development dynamics of material-technical resources and information support of the EP, efficiency of use of assessment results for adjustment in planning and budget allocation.		+		
	In the HEI should be established learning environment of the EP, which includes:				
115	technological support for students and faculty in accordance with the programs (such as online learning, simulations in the classroom) and the intellectual demands (databases, data analysis programs);		+		
116	academic accessibility – students have access to personalized interactive resources (also available outside the classroom), learning materials and assignments, and as well as the possibility of experimental self-evaluation of students' knowledge through remote access to the HEI portal (website) is provided;		+		
117	academic advising – have personalized interactive resources to help students plan and implement academic programs;		+		
118	professional orientation – students have access to personalized interactive resources that provide assistance in choosing and achieving career paths;		+		
119	required number of classrooms equipped with modern technical means of teaching: educational and research laboratories, modern teaching and training grounds, parks equipped with modern facility that is in correspondence with the educational programs implemented, the sanitary and epidemiological norms and requirements;		+		
120	required number of computer classes, reading rooms, multimedia, language and science classrooms, the number of seats in them;	+			
121	book fund, including fund of educational, methodical and scientific literature on general education, basic and major disciplines in print and electronic form, periodicals in the context of learning language;		+		
122	scientific databases, electronic journals and their availability;		+		
123	availability of electronic versions of published journals;	+			
124	examination of the research results, final papers, dissertations on plagiarism;			+	

125	free access to educational Internet resources, the functioning of free Wi-Fi throughout the HEI.	+			
126	The EP's management should ensure the existence of academic support for students, including giving students the information, reference and teaching materials needed for the learning of educational programs (guide, academic calendar, manual and etc.).	+			
127	Educational materials, software tools, educational literature and additional resources, and equipment should be available to all students.	+			
128	An important factor is the support of the educational program with information and communication technologies.		+		
129	The HEI should demonstrate existence of the laboratory development programs realizing by the EP.	+			
130	The EP's management should determine the degree of implementation of information technology in the learning process of the EP, monitor the use and development of innovative technologies by teaching staff, including ICT-based.		+		
	The EP's management should demonstrate the reflection of information characterizing the EP on a web resource, the efficiency of its use for improvement of the EP, which has the following characteristics:				
131	the presence of personal pages of teaching staff on the portal of the HEI;		+		
132	the presence of adequate and objective information about the teaching staff in the HEI's portal (website);		+		
133	the transparency of information on administration of complaints, including the placement of virtual complaint book for consumers on the HEI's portal (website);		+		
134	the allocation on the HEI's portal (website) complete objective information on the activities and specificity of the EP;		+		
135	the allocation on the HEI's portal (website) external publications (citations, references) on the implementation of the EP;		+		
136	the use of information networks to inform the public and stakeholders;			+	
137	An important factor is to comply with copyright when placing teaching and methodological support in the public domain;		+		
138	An important factor is the creation of conditions for the mastery and use of information and communication technologies by the staff, teaching staff and students in the education process and activities of the HEI.	+			
	<b>Subtotal</b>	<b>9</b>	<b>21</b>	<b>2</b>	<b>0</b>
	<b>Standard 6 "In the context of separate specialties"</b>				
	<b>Natural and Technical Sciences</b>				

	<i>Educational programs in directions “Natural Sciences”, “Engineering and Technology”, such as “Automation and Control” must meet the following requirements:</i>				
139	to familiarize students with the professional environment and pressing issues in the field of specialization, also for the acquisition of skills through theoretical training educational program must include disciplines and activities designed to obtain practical experience and skills in the profession in general and majors in particular, including: - excursions to a company in the field of specialization (factories, workshops, research institutes, laboratories, etc.), - conducting individual sessions or the entire discipline in the specialization company, - holding seminars for solving practical tasks relevant to the companies in the area of specialization, etc.	+			
140	The faculty involved in the educational program should include at least one full-time professor who has long experience as the regular employee in enterprises in the area of specialization of the educational program.	+			
141	The contents of all disciplines of the EP should be more or less based and include elements, themes of the fundamental natural sciences, such as mathematics, chemistry, physics.		+		
	<i>Subtotal</i>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>
	<i>Subtotal in general</i>	<b>40</b>	<b>87</b>	<b>14</b>	<b>0</b>

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