



«АККРЕДИТЕУ ЖӘНЕ РЕЙТИНГТІҢ  
ТӘУЕЛСІЗ АГЕНТТІГІ» КЕМ

НУ «НЕЗАВИСИМОЕ АГЕНТСТВО  
АККРЕДИТАЦИИ И РЕЙТИНГА»

INDEPENDENT AGENCY FOR  
ACCREDITATION AND RATING

## **REPORT**

**on the Results of the Work of an External Expert Commission  
for Assessing the Compliance of Educational Programs of “Astana IT  
University” LLP**

**with the Requirements of the Specialized Accreditation Standards:  
6B06101- “Computer Science”, 6B06102- “Software Engineering”,  
6B06103- “Big Data Analysis”, 6B06104- “Industrial Automation”,  
6B06105- “Media Technologies”**

**Site-Visit Dates: May 21-23, 2020**

**INDEPENDENT AGENCY FOR ACCREDITATION AND RATING  
External Expert Commission**

**Addressed to  
the IAAR  
Accreditation Council**

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**May 21-23, 2020**

**Nur-Sultan City, May 23, 2020**

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## (I) LIST OF SYMBOLS AND ABBREVIATIONS

AC	Academic Calendar
AIS	Automatic Information System
DAA	Department of Academic Affairs
DET	Distance Education Technology
DP/DT	Diploma project/diploma thesis
FSC	Final state certification
FC	Final control
ICT	Information and communications technology
IT	Information Technology
ILP	Individual learning plan
CTE	Credit technology of education
CED	Catalogue of elective courses
MES	Ministry of Education and Science
RW	Research work
SRW	Student research work
DAC	Department of International Cooperation
QMD	Quality Management Department
RSTL	Republican Scientific-Technical Library
MT	Midterm
QMS	Quality Management System
SSS	Student Scientific Society
TMCD	Teaching and methodical complex of discipline
AC	Academic Council
ECTS	European Credit Transfer System
SPDES	State Programme for the Development of Education and Science

## **(II) INTRODUCTION**

In accordance with the order dated 21.04.2020 № 31-20-OD of the Independent Accreditation and Rating Agency, 21-23 May 2020, an External expert committee assessed the compliance of Astana IT University LLP activities with the IAAR standards of initial institutional accreditation (approved on December 9, 2019, № 117-19-OD, first edition).

The report of the External expert commission (EEC) contains an assessment of Astana IT University LLP activity compliance within the framework of institutional accreditation with IAAR criteria, recommendations of EEC on further improvement of institutional profile parameters.

### **The members of the EEC:**

1. Chairman of the IAAR Commission - Vladimir Kosov, d. ph-m sc., Professor, Kazakh National Pedagogical University named after Abai (Almaty);

2. IAAR expert - Gulnara Turtkarayeva, Candidate of Pedagogical Sciences, Associate Professor, State University named after S.Ualikhanov (Kokshetau);

3. IAAR expert - Ismailova Aisulu Abzhapparovna, PhD on information systems, Kazakh Agricultural University named after S. Seifullin (Nur-Sultan);

4. IAAR Expert - Baitenova Laura Maratovna, Doctor of Economic Sciences, professor, Narkhoz University (Almaty);

5. IAAR expert - Baklanov Alexander Evgenievich, Candidate of ph-m sc, professor, East Kazakhstan State Technical University named after D. Serikbayev (Ust-Kamenogorsk);

6. IAAR expert - Timur Saatdinovich Kartbayev, PhD, academician of MAIN, Almaty University of Power Engineering and Telecommunications (Almaty);

7. IAAR expert - Beysenkulov Ayazbi Akhbergenovich, can. of phil. sc., IT International University IITU (Almaty);

8. IAAR expert - Mehtiyev Ali Javanshirovich, Candidate of Technical Sciences, professor, Karaganda State Technical University (Karaganda);

9. Employer - Mikhail Rezov, Chief Specialist of Electronic Document Management System Support Department, National Information Technologies JSC (Nur-Sultan);

10. Student - Mauina Gulalem Myrzaliyevna, the 2nd course PhD student of EP "Information Systems", Kazakh Agrotechnical University named after S. Seifullin (Nur-Sultan);

11. Agency observer - Timur Kanapyanov, PhD, Head of IAAR International Projects and Public Relations (Nur-Sultan).

## **(III) REPRESENTATION OF THE EDUCATIONAL ORGANIZATION**

The university was founded in 2019 as part of the "Digital Kazakhstan" state program for the development of human capital in higher and postgraduate education. Educational activities are carried out on the basis of general license No. KZ26LAA00015835 dated April 12, 2019, issued by the Committee for Control in the Field of Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan (<http://stanait.edu.kz>).

The University provides educational services of higher and postgraduate education in accordance with specific areas of training within higher and postgraduate education, classified and approved by the order of the Minister of Education and Science of the Republic of Kazakhstan dated October 13, 2018 No. 569 and State Compulsory Educational Standards higher and postgraduate education of the Republic of Kazakhstan, approved by order Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 No. 604.

The development of the University is determined by the Development Strategy of Astana IT University LLP for 2020-2025 <https://astanait.edu.kz/wp-content/uploads/2020/05/AITU-Strategy.pdf>. Discussion of the first version of the Development Strategy was held at the Scientific Council meeting (SC minutes # 4 dated 28. 11. 2019) and recommended for approval by the General Meeting of the Partnership Members with the decision "to approve" (Minutes # 7 dated 26. 03. 2020).

The supreme governing body - the General Meeting of the Partnership Members. The exclusive competence of General Meeting includes amendment of the Charter of the Partnership, formation of the Partnership Board, election of Board Chairman, election of Rector of the Partnership, etc.

The Supervisory Board provides control over the Partnership activities and has the right to make decisions on any issues of the Partnership activities, except for the issues referred to the Law, constituent documents and the Charter, issues that fall within the exclusive competence of the General Meeting of Participants. The activity of the Supervisory Board is regulated by the Legislation, the Charter and the Supervisory Board Regulation. The Supervisory Board consists of 5 (five) persons: two representatives of the Public Fund "Nursultan Nazarbayev Education Fund", one representative of the Joint Stock Company "National Information communication Holding "Zerde" and two independent members.

Collegial executive body of the Partnership - Management Board carries out its activity in accordance with the Regulations approved by the General Meeting of Participants. The competence of the Board includes: making proposals to form the Partnership general organizational structure; creation of a collective operational and advisory body headed by the Rector - the Rectorate; approval of internal regulatory documents, the which list is determined by the General Meeting of the Participants; approval of price lists for educational and consulting paid services; the cost of short-term training courses, retraining and professional development, part- time wages, apartment rent, accommodation in dormitories and reimbursement of other costs, as well as the approval of the Partnership staffing, etc.

The collegial governing body of the Partnership's educational activities is the Scientific Council. The Regulations on the Scientific Council is approved by the General Meeting of the Members of the Partnership.

The Supervisory body of the Partnership - the Revision Commission of the Partnership is consists of Partnership Members or their representatives to provide control over Partnership financial and economic activities.

The Technological Council shall be formed under the guidance of the Head of the Ministry of Digital Development, Innovation and Aerospace Industry in order to provide practically oriented training, expert and technical assistance in providing dual training and scientific projects. The Technological Council is a consultative and advisory body.

The Technological Council includes the representatives of the Ministry of Digital Development, Innovation and Aerospace Industry of the Republic of Kazakhstan, Ministry of Industry and Infrastructure Development of the Republic of Kazakhstan, Ministry of Education and Science of the Republic of Kazakhstan, employers (Microsoft, CISCO, HP, Kazakhstan Internet Association), Rectors of universities (AITU, UIB, KBTU, AUES, IITU).

The distinction between the functions of corporate and collegial management bodies of the higher education institution is reflected in the corresponding internal regulatory documents: Regulations on the Supervisory Board of "Astana IT University" LLP; Regulations on the Scientific Council of "Astana IT University" LLP; Regulations on the Academic Senate of "Astana IT University" LLP; Regulations on the Scientific and Technical Council of "Astana IT University" LLP; Regulations on student self-government, etc.

<https://drive.google.com/drive/folders/1JnCVM1ktriUrkJ3ZdfoEcc-7YXlaUeFGI>



At present, the organizational structure of the university includes 22 structural subdivisions and the Military department (<http://astanait.edu.kz/about/>). Functions and rights of structural subdivisions of the university are determined by the Regulations of corresponding subdivisions.

At present, the University provides training on 8 educational programs of Bachelor's degree in the context of 4 directions of training, included in the Register of educational programs of higher and postgraduate education. For 2020 - 2021 academic year students will be recruited under the new educational program "Digital journalism".

The total number of students is 605, including 558 on the educational grant, 11 on the IOI grant, and 36 on a paid basis. The number of students of Educational programs: IT Management - 69; Cyber Security - 97; Telecommunication Systems - 41; Media Technology - 37; Industrial Automation - 19; Computer Science - 70; Large Data Analysis - 92; Software Engineering - 180.

The total number of teaching staff for the academic year 2019-2020 is 44 people, including 36 full time staff, 2 doctors of sciences; 8 candidates of sciences; 8 PhD doctors; 18 masters. The percentage of teaching staff scientific degree is 50%.

The University employs graduates from the world's leading international universities: University of Southern California (USA), Boston University (USA), The University of Chicago (USA), University College London (UK), Imperial College London (UK), Robert Gordon University (UK), University of Humboldt (Berlin, Germany), University of Bristol (UK), The University of Sheffield (UK).

The form of organization of the academic period (theoretical study) is a 10 week trimester (there are three trimesters within each academic year, the total duration of the Bachelor's degree is 3 years).

During the whole period of study, students master 240 academic credits. The language of study is English.

Modular educational programs, academic calendar, curricula for training areas, schedule of academic classes for the current academic year have been developed and approved.

In order to organize the educational process, syllabi for all academic disciplines in English have been developed; electronic forms of educational process organization have been expanded, in particular, network communication within the framework of individual and group interaction; methodical materials and tasks are also sent online, Moodle and Platonus platforms are used. ICT is actively used at the lessons, multimedia materials developed by teachers are available in all courses, and there is good practice in using electronic resources in the learning process.

The University has modern Cisco, Huawei, Kaspersky specialized laboratories, 6 lecture rooms, 27 classrooms, 12 computer classes, 17 laboratories, a modern assembly hall with 450 seats, an electronic reading hall with 50 seats, sport hall and gym.

All classrooms are equipped with interactive projectors, computer equipment and audio-video systems.

There is a modern Media Centre with an innovative television and radiobroadcasting studio.

One of the criteria for the effectiveness of staff scientific work is the publication activity, especially in the highly rated journals included in the database (DB) Web of Science and Scopus: the number of publications over the past 5 years in the Web of Science database - 27, in the Scopus database - 41.

Currently, AITU plans to publish 1 scientific journal on IT-technologies, with subsequent inclusion in the international database of Web of Science Core Collection, Scopus, as well as to hold an annual international IEEE conference on trends in IT.

One of the goals is to attract young researchers to science. In 2020 – 2022 the

University plans to have a Council of Young Scientists and Student Scientific Society, the main goal of which is to promote the development of creative scientific activity of young researchers and students.

Scientific and technical laboratories occupy a special place in the indicators of research activity. There are plans to open three research laboratories in 2020-2022: the FabLab research laboratory, a sectoral ICT technology laboratory and a multimedia laboratory with VR/AR elements.

During the reporting period, international and domestic partners from both academic and the business environment have been identified. The University has signed six Memoranda of Understanding and Cooperation with international academic partners: Green River College, Auburn, USA; IGlobal University, Vienna, USA; University of Latvia, Riga; Dortmund University of Applied Sciences and Arts, Germany; Weihai Professional College, China; Eurasian Voyage Beijing International Centre for Economic and Cultural Exchange.

Today the University has signed Memoranda of Understanding and Cooperation with international IT vendors and companies: HP, ASBIS, 1C, Kaspersky Lab, Huawei, Lenovo, KPMG, Enterprise DB Corporation, Cisco, EPAM and Seedstars. Currently, issues are being worked out and negotiation processes are underway to conclude Memoranda and agreements on cooperation with international IT vendors and companies: Microsoft, Hewlett-Packard Enterprise, CyberBit Ltd, Certiport. Cisco, Huawei, and Kaspersky partners have opened modern training laboratories at the University.

Astana IT University has developed an internal quality assurance system approved by the decision of the Scientific Council on December 26, 2019 and approved by the Founder on December 30, 2019. This system includes Internal Quality Assurance Policy and Standards. It reflects the general approaches, key principles and main mechanisms established in AITU for quality assurance and development of a culture of continuous quality improvement. The Policy is implemented through internal quality assurance processes and standards, which involve all parts of the university. The policies and standards have official status and are available to the general public on the university website <https://astanait.edu.kz/wp-content/uploads/2020/05/sistema-vnutrennego-obespecheniya-kachestva.pdf>.

#### **(IV) DESCRIPTION OF THE PREVIOUS ACCREDITATION PROCEDURE**

Astana IT University LLP gets institutional accreditation in IAAR for the first time.

#### **(V) DESCRIPTION OF THE EEC VISIT**

The work of the EEC was carried out according the Program of visit of the expert commission on institutional accreditation of "Astana IT University" LLP in the period from 21 to 23 May 2020.

For coordination of the EEC work, at the establishment meeting the responsibilities were distributed among the commission members, the schedule of the visit was specified, and an agreement was reached on the issues of expertise methods selection.

According to the standard requirements, the program of the visit covered meetings with the acting rector, vice-rectors, dean, program coordinators, and heads of structural divisions. Interviews and questionnaires with individual focus groups (teachers, students) were conducted online. 109 people took part in the meetings and interviews in total (Table 1).

Information about employees and trainees who took part in meetings with the NAAR EEC:



Category of participants	Quantity
Acting rector	1
Vice-Rector	3
Heads of structural units,	12
Dean	1
Programme Coordinators	3
Instructors	29
Students	60
Total	109

During the tour, members of the EEC were acquainted with University material and technical base, visited the offices of Apple, 1C, SAR, Oracle; Laboratories of CISCO Networking Academy, Huawei ICT Academy; sport hall, gym, assembly hall, media center, coworking centers and library.

In accordance with the accreditation procedure, 26 teachers and 56 teaching staff were surveyed.

In order to confirm the information provided in the self-assessment report by external experts, working documents of the university were requested and analyzed. In addition, the experts studied the university internet positioning through the official website <https://astanait.edu.kz/>.

For the work of EEC all conditions were created, access to all necessary information resources was provided. The presence of all persons, specified in the visit program and established time was provided.

Within the limits of the planned program the recommendations on improvement of "Astana IT University" LLP activity, developed by EEC in the results of observation, were presented at the meeting with University top - management on 23.05.2020.

## (VI) COMPLIANCE WITH SPECIALIZED ACCREDITATION STANDARDS

### 6.1. "Management of Educational Program» Standard

#### **Evidence part**

An analysis of the presented information and analytical material, the actual positioning of the university, along with the results of familiarization with the technical base and meetings with interested parties allow us to draw the following conclusions.

One of the main tasks of the AITU development is the development of an internal system of the university for ensuring the education quality. The Internal Quality Assurance System of AITU is based on ENQA recommendations, criteria for external evaluation of universities in the National Education Quality Assessment System. The basic principles of building a system include the use of a quality management system based on the principles of ISO standards; implementation of information and analytical systems; use of a consumer monitoring system; ensuring the integrity of the system elements and the regularity of its development; accounting of indicators of external assessment procedures and the transition to the management of educational programs as separate objects.

The university is responsible for the quality of education and its provision. Quality assurance supports the development of a culture of quality. Quality assurance takes into account the needs and expectations of students, other stakeholders and society. Quality assurance and quality improvement will be applied to all the implemented educational programs.

Implementation of 6B06101- "Computer Science", 6B06102- "Software Engineering", 6B06103- "Big Data Analysis", 6B06104- "Industrial Automation", 6B06105- "Media Technologies" EPs is carried out in accordance with the state license issued by ESMC MES RK (<http://new.astanait.edu.kz/about/>).

Management of Accredited Educational Programs is carried out in accordance with the Development Strategy of "Astana IT University" LLP for 2020-2025 (<https://astanait.edu.kz/wp-content/uploads/2020/05/AITU-Strategy.pdf>), approved by the General meeting of the Partnership dated March 26, 2020.

The strategic management model is based on the use of goal-oriented management. The strategic goals of the university are formulated and cascaded to all structural units and communicated to each teacher. The strategic management of the university also provides for an annual assessment of personnel, when the degree of fulfillment of key performance indicators is determined, there is an increase in wages and decisions on promotion and career growth are made. Thus, the effectiveness of the EP development is ensured by the teaching staff responsibility for the final results, delegation and delimitation of powers.

The quality policy is a part of strategic management and is considered along with other documents: Mission, Strategic Plan, Academic Policy, Internal Quality Assurance Standards of the University.

The quality policy is reflected in the complex of the following documents:

- Development strategy, where the values and basic principles of quality assurance are declared.
- Academic policy, which describes academic processes built on the basis of values and where the principle of student-oriented learning is implemented. Special emphasis is given to interaction with employers in the EP design and audit.
- The Code of Honor and the Institutional Code of Ethics, which describe processes to increase the teachers and employees potential of, zero tolerance for plagiarism and corruption.
- Risk management policy, on which based the assessment of risks associated with regulations is carried out.

- Procedures for problem management and incident management.
- Research regulations governing scientific activities.
- Corporate Governance Code.

All these documents are published on the University website.

Astana IT University provides management of educational programs through the process organization and is presented as a network of interconnected processes necessary for the implementation of the EP development strategy. Process management is carried out through: a clear distribution of responsibility for the processes; the existing by-laws containing methods for carrying out activities. All external and internal regulatory documents, including decisions of collegial bodies (Academic Council and Scientific Council) are posted on the university website and are available to all users of the corporate network.

In accordance with the development strategy of Astana IT University until 2025, the key development parameters of the 6B06101- “Computer Science”, 6B06102- “Software Engineering”, 6B06103- “Big Data Analysis”, 6B06104- “Industrial Automation”, 6B06105- “Media Technology” EPs for the period 2020-2025 were defined as:

- creating a system of continuing IT education and certification of digital competencies;
- introduction of a professional certification program.

The academic activity of Astana IT University is regulated by the Academic policy approved by the decision of the Scientific Council of “Astana IT University” LLP (Minutes No. 4 dated as November 28, 2019. Amendments and additions were made by the decision of the Scientific Council of “Astana IT University” LLP, Minutes No. 9 dated as March 26, 2020. The AITU Internal Quality Assurance System is based on ENQA recommendations, criteria for external evaluation of universities in the National Education Quality Assessment System. These principles formed the basis of the internal system for ensuring the quality of education, and the Quality Assurance Department operates to implement the principles.

The University monitors and systematizes data in the following areas: compiling a University profile; data collection, registration of information cards according to the rating of specialties for participation in the competition for receiving state orders; analysis of the results of examination sessions in the context of EP, annual and semi-annual reports for the University, etc.; development of methodological support for credit technology and analysis of the availability of internal university documentation, syllabi; various categories of students and employers questioning on the quality of educational services provided and preparation of proposals; analysis of the level of educational process informatization, the introduction of new educational technologies; assessment and analysis of the results of teaching staff and students’ research work. The ongoing monitoring contributes to the effective planning and allocation of resources by adjusting and evaluating the effectiveness of ongoing processes.

In order to get as close to the market as possible, Astana IT University has adopted the principle that each EP should have business partners who provide timely and relevant feedback from the market regarding the EP and the demanded competencies that graduates in their field should have mastered (“ABY Applied Systems” LLP, “Inventive” LLP, “IT SPACE” LLP, etc.).

Students of accredited EPs are involved in university management and educational programs. They are voting members of all important collegial bodies. In order to manage risks and increase the efficiency of the functioning of the university internal quality assurance system, Astana IT University has developed a Risk Management Policy (Scientific Council, minutes No. 10 dated April 30, 2020), assessed risks, and developed measures to minimize them.

In the process of managing EP, information is systematically analyzed on various areas of activity (according to the contingent of students, available resources, staff, scientific and international activities). Based on the results of the academic semesters of the EP teaching staff, reports on educational, educational, methodological, scientific and educational activities (teachers' individual reports), reports on all types of practices, etc. are compiled.

### ***Analytical part***

The key performance indicators formulated in the University Strategy are the starting point and central recommendation for the tactical and operational EP development. These goals are regulated in the Individual plans for setting and fulfilling the tasks of the dean, the EP coordinators that reflect the strategic guidelines for the EP development. The EEC confirms that the uniqueness and advantage of each EP under accreditation was confirmed during the EP Coordinators' interviewing and in the analysis of the presented documentation.

The Commission notes that the analysis of information on the EP implementation is carried out by considering these issues at collegial body meetings, the University Academic Senate, the EP leadership is developing a EP development plan.

The university provides transparency of the educational program management system. So, the information on the leadership and structural units of the university (rector, vice-rectors, heads of departments of relevant areas, dean, deputy dean) is presented on the university website in the sections "Leadership", "Rectorate", "Dean's Office", "Department". On the rector's page <https://astanait.edu.kz/rector-university/>, questions can be asked directly.

As a result of the interview, it turned out, that taking into account students' opinions regarding the teaching staff, professional activities is practiced. For all matters of interest, including complaints or inquiries, students, employees and other interested parties can contact the EP coordinator, the dean, and the AITU administration in written and verbal form.

The University mission, the main goals, strategic directions of development, the quality assurance policy and the EP objectives are fully developed, written in the documents and implemented in all activity areas.

The submitted documents, which are used as evidence base, comply with IAAR standards.

Documents are presented that the EP management organizes the employers, teaching staff and students' participation as a part of the EP collective management bodies.

The university organizational structure is published (<https://astanait.edu.kz/wp-content/uploads/2020/05/organizational-structure.pdf>.)

Within EP developing and analyzing its functioning, an analysis and implementation of innovative proposals to improve the EP quality is carried out, this is reflected in the modular curricula, the inclusion of new courses in the educational process related to the students' training in the IT industry, and this serves as the basis for creating unique EPs and their consistency with the national development priorities and university development strategy.

The results of the EP external and internal audit are taken into account for operating the current EP by making changes to the educational process: Modular Educational Plan, Working Curricula, EP Passport and Catalogue of Elective Courses, as well as in the development of perspective EPs.

EP management periodically undergo continuing education in the field of education management, as evidenced by S.M. Omirbaev, A.S. Akybaeva, L.N. Salykova, G.A.

Makhmudova's certificates on passing advanced training in management of education abroad in the period 2012-2018. This helps to ensure a modern management style and the introduction of new methods.

**According to the results of the survey of the teaching staff:**

- availability of the administration to students was rated as “Very Good” by 73.1% and “Good” by 26.9% of faculty members;
- availability of the administration to the faculty was rated as “Very Good” by 76.9% and “Good” by 23.1% of faculty members;
- using own innovations in the learning process by the teaching staff was rated as “Very Good” by 96.2% and “Good” by 3.8% of faculty members;
- according to the questionnaire results, the question of the attention paid to the EP content by the administration of the educational institution was evaluated as “Very Good” by 80.8% and “Good” by 19.2% of the teaching staff;
- the faculty staff feedback level with administration was rated as “Very Good” by 57.7%, “Good” by 38.5% and by 3.8% of the faculty members;
- according to the questionnaire results, the question of the university leadership and administration criticism perception addressed to them was rated as “Very Good” by 38.5% and “Good” by 61.5% of the faculty members.

**According to the results of the students' survey:**

- Level of satisfaction with the dean's office relations was rated as “Fully Satisfied” by 96.6% and “Partially Satisfied” by 5.4% of students;
- Level of satisfaction with the dean's office availability was rated as “Completely satisfied” by 98.2% and “Partially satisfied” by 1.8% of students;
- Level of satisfaction with the availability and responsiveness of the university administration was rated as “Completely Satisfied” by 91.1% and “Partially Satisfied” by 8.9% of students.

**Strengths / Best Practice for 6B06101 - “Computer Science”, 6B06102 - “Software Engineering”, 6B06103 - “Big Data Analysis”, 6B06104 - “Industrial Automation”, 6B06105 - “Media Technologies” EPs:**

- *The university has a published quality assurance policy, available to all interested parties on the university website pages.*
- *The EP manual provides transparency in the EP development and contains the deadlines for the start of implementation and is also available to all interested parties on the university website pages.*
- *The development plans for accredited EPs have their own personality and are developed taking into account national priorities and the university development strategy and are also posted on the university website.*
- *EP management is open and accessible to students and faculty, as evidenced by interviews with them.*

**EEC recommendations**

- *not available for this standard*

**The conclusions of the EEC on the criteria for 6B06101 - “Computer Science”, 6B06102 - “Software Engineering”, 6B06103 - “Big Data Analysis”, 6B06104 - “Industrial Automation”, 6B06105 - “Media Technologies” EPs:**

*The EEC notes that according to the standard “Management of Educational Program”, they have a strong position in 4 criteria and satisfactory position in 11 criteria.*



## 6.2. "Information Management and Reporting" Standard

### **Evidence part**

The University has both classic face-to-face information management and information transfer processes, as well as IT based processes. Information is disseminated and feedback is obtained through collegial body meetings and working groups created to solve pressing problems. The University has implemented systems of collecting and analyzing data for decision-making: these are reporting systems of structural units on the work results; issue consideration by collegial bodies; the university external and internal environment analysis; internal audit and control conducting to obtain information about the processes; stakeholder satisfaction systems.

The University provides information management within the following information systems:

- The official website of the university: <https://astanait.edu.kz>.
- Automated information system for educational process management "Platonus" <https://platonus.astanait.edu.kz> and "Moodle" <http://moodle.astanait.edu.kz>.

As part of the University's LMS (Learning Management System), learning management is implemented through the platforms Platonus and Moodle.

"Platonus" includes subsystems of student administration, educational process and distance learning support, combined by an electronic document management system.

Along with the listed information systems, the following databases function in the university, which accumulate and store all information about the university, students, staff, etc.:

- "NEBD" - the National Educational Database (as part of the implementation of the "E-learning" project);
- "ESUVO" - a unified system of higher education management;

These systems help remotely maintain the awareness of all employees and students at the same level.

For the 2019-2020 academic year, the NEBD database contains information about students of Astana IT University accredited EP, IIN, full name, date of birth, gender, citizenship, nationality, form of study, information about academic mobility, etc. The general contingent report can be exported in Excel format.

The university's electronic library contains methodological guidance of university teachers, and literature of high demand. Remote access to the resources of the Electronic Library is provided around the clock and can be carried out through local and global networks, in particular through the local university network.

The electronic library includes:

- library electronic catalog;
- electronic library resources (the site of the scientific library, the resource of abstracts of master's theses, access to the republican inter-university electronic library, Scopus, Science Direct, Web of Science Core Collection);
- Library electronic resources;
- electronic resources of information retrieval systems;
- EP electronic resources on the Internet.

So, for example, to provide access to scientific sources, the university website has links to scientific databases <http://new.astanait.edu.kz/science-and-innovation/>. In the "Announcements" section on the university website, announcements of international and national scientific events are constantly posted. All information on the results of scientific activities is available in the section "Science and Innovation" on the main page of the site <http://new.astanait.edu.kz/science-and-innovation/>.



Astana IT University has adopted an open door policy. The university regularly conducts surveys to test students' opinions; There is a rector's page for sending your opinion and questions directly (<https://astanait.edu.kz/rector-university/>). The faculties regularly conduct meetings of students with the rector and vice-rectors. The degree of students' satisfaction with programs, services and university activities is monitored on a regular basis.

The university collects, analyzes and processes information on the students' contingent, and also has information on the level of student achievement. Assessment of the students' contingent dynamics and their performance are an ongoing process and is carried out at Academic Council, faculty and department meetings, drawn up in the form of minutes.

Feedback system has been established with students, allowing us to identify their satisfaction with the quality of the implemented educational programs. In the course of the conversation with the students, it was noted that there was an opportunity to turn to the leadership with certain problems.

### ***Analytical part***

Analyzing the EP on filling the "Information Management and Reporting" standard in accredited areas, the commission notes that the university has a system of information and reporting management. Data is stored in electronic and paper format in accordance with the nomenclature.

The Commission notes that the university is analyzing information to improve the quality assurance system of accredited EPs.

In the course of the conversation with the students, it was noted that there was an opportunity to turn to the administration with certain problems. In collecting and analyzing information, the university takes into account key performance indicators, the dynamics of the students' contingent in the context of forms and types, the level of academic performance, student achievement and expulsion.

The university must draw up agreements with students, employees and teaching staff for their personal data processing in accordance with the Law of the Republic of Kazakhstan "On Personal Data and Their Protection" (dated as May 21, 2013 No. 94-V). In the course of interviewing the teaching staff, the heads of departments and the dean it was revealed that the agreement with the teaching staff is not drawn up personally, but negotiated with students while conclusion of the contract. EEC IAAR recommends that the management of the public organization develop a procedure to ensure confirmation of documentary consent to the faculty staff and employees' personal data processing.

During the visit, the EP management demonstrated EP development plans for each accredited EP, which allowed to evaluate the effectiveness and efficiency of the activity. EP management is encouraged to update and improve the development plan for each EP, as well as to involve all interested parties in the development.

In order to further develop and improve activities for the implementation of accredited educational programs, EEC IAAR recommends improving the university website in terms of expanding its functionality.

Interviews with teachers and students showed that suggestions and recommendations from interested parties resonate with the administration decisions.

### **According to the results of the survey of teaching staff:**

- The level of faculty involvement in the process of making managerial and strategic decisions is rated as "Very Good" by 34.6%, as "Good" by 57.7% and as "Relatively poor" by 7.7% of faculty members.

***Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software***

**Engineering”, 6B06103 - “Big Data Analysis”, 6B06104 - “Industrial Automation”, 6B06105 - “Media Technologies” EPs:**

- The university uses various methods for collecting and analyzing information within the EP framework, and also uses modern ICT and software tools, such as Vjudge, Moodle, Contester, Github, Turnitin Microsoft Teams, etc.

- As part of the EP, the information collected and analyzed takes into account the availability of educational resources and support systems for students.

**EEC recommendations for 6B06101 - “Computer Science”, 6B06102 - “Software Engineering”, 6B06103 - “Big Data Analysis”, 6B06104 - “Industrial Automation”, 6B06105 - “Media Technologies” EPs:**

- to develop a decision-making mechanism based on the analysis of information obtained in the course of communication with students, employees and other interested parties in the context of EP;

- to develop a procedure to ensure confirmation of documentary consent to the processing of personal data of employees and faculty staff.

**EEC conclusions on the criteria for 6B06101 - “Computer Science”, 6B06102 - “Software Engineering”, 6B06103 - “Big Data Analysis”, 6B06104 - “Industrial Automation”, 6B06105 - “Media Technologies” EPs:**

EEC notes that according to the “Information Management and Reporting” standard, they have a strong position in 2 criteria, satisfactory positions in 13 criteria and suggest improvement in 1 criterion.

**6.3. “Development and Approval of the Educational Program” Standard**

**Evidence part**

The university provides educational services for the 6B061 EP group Bachelor's in Information and Communication Technologies - “Computer Science”, “Software Engineering”, “Big Data Analysis”, “Industrial Automation”, “Media Technologies”. These educational programs are widely demanded. The planning of the content of educational programs is designed by the university independently in accordance with the national and industry qualification frameworks, and the requirements of professional standards are taken into account. Educational programs at all levels are focused on learning outcomes. For EP drawing up, a working group headed by the Provost, the dean and the EP coordinator of the corresponding educational program is organized. Along with the dean and the EP coordinator, the working group, includes the most experienced faculty staff of the university, the ones with great practical experience or extensive experience in scientific project conducting. Moreover, as a part of implementing the principles of student-centered learning, for EP drawing up, the working group may include students who collect all the information from their fellow students according to one or another preference.

The complexity of academic disciplines is determined in Kazakhstani credits and ECTS on the basis of the “Rules for the Organization of the Academic Process according to the Credit Technology of Education”, approved by order of the Ministry of Education and Science of the Republic of Kazakhstan No. 152 dated as April 20, 2011, confirmed in the Regulations of the university, Academic policy; Policies and Standards for internal quality assurance; as well as university Internal Regulations.

A unique feature of 6B06101 - “Computer Science”, 6B06102 - “Software Engineering”, 6B06103 - “Big Data Analysis”, 6B06104 - “Industrial Automation”, 6B06105 - “Media Technologies” EPs at the university is that all programs are designed for 3 years of study. The volume of the entire undergraduate educational program is 240 academic

credits, equivalent to 240 ECTS, where 80 credits are covered per academic year on average. The number of credits is distributed among three cycles: general education disciplines (GED), basic disciplines (BD) and core disciplines (CD), according to the state compulsory education standard (SCES) dated as October 31, 2018, which ensures the effective development of all required skills and competencies in students, including not only professional, but also the soft skills.

Thus, the cycle of general education disciplines includes 56 academic credits, the cycle of basic disciplines includes 112 academic credits, and the cycle of core disciplines includes 60 academic credits. A sufficient selection of elective disciplines (optional component) allows students to formulate electives for those courses that they consider correct for their formation as highly qualified specialists in the field of information and communication technologies.

For each EP, a Curriculum Specification has been formed, which includes a competency map, minimum requirements for the EP development, a list of compulsory and elective courses, and a recommended model for the development of EP courses to achieve maximum results.

Having interviewed administration, teaching staff, and studied the documentation, as well as visual inspection of the university, it was found that the students and teaching staff are prepared for professional certification in the context of academic staff, as well as the use of vendor courses in the educational process (CISCO, Microsoft, Apple, Oracle) and undergoing certification courses. For example, according to 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06105 - "Media Technologies" EPs "Introduction to Web Development" (Yandex certificate (Front-end development), "Project Manager "(KPMA certificate)," Android 1 // iOS 1 // PL / SQL 1 // Python 1 "(Oracle Pl / Sql certificate)," Information and Communication Technologies "(Cisco certificate).

The complexity of the programs is defined in Kazakhstani credits and ECTS credits. The disciplines included in the CED reflect the current direction of development of the studied area. For example, to create professional competencies for students in educational program 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 06103 - Big Data Analysis, programming disciplines using the Python language - "Programming for the Data Science in Python 1", "Programming for Data Science in Python 2," "Capstone Project" were included. In order to improve the content of EP 6B06105 - Media Technologies, the following disciplines were introduced: "Mobile Development 1, 2 (Android)", "Mobile Development 1, 2 (iOS)", "Digital Journalism 1, 2", "Improving Design Thinking" "UX / UI Design", "Digital Art".

Also disciplines such as "Software Factory" (project), "Project Management" included in 6B06101 - "Computer Science", 6B06102 - "Software Engineering" EPs form competencies for the implementation of IT solutions and help to get closer to the real conditions of the labor market.

In accordance with the needs of the labor market, employers' requests, based on the national qualifications framework, industry qualifications frameworks, professional standards, the state compulsory standard of higher education and the state compulsory standard of postgraduate education, the set of required professional competencies is determined and a model of the graduate of the educational program is formed. The developers of the "EP graduate Model" are the EP coordinators, the dean and the Provost. In addition, all interested parties were involved, including potential employers, students and faculty of the educational program, the results of the work are displayed in the minutes of the meetings.

External EP examination is carried out by an expert group, which includes employers and students' representatives.

The educational program is considered and recommended for approval at Academic Council meeting and approved by the Scientific Council. After passing through all stages of approval, the educational program is implemented into the educational process. The EP methodological content includes a catalog of elective courses, course syllabi, educational and methodical developments in practice, as well as reference and information resources. (SC Minutes No.1 date as 08/29/2019 and No.7 dated as 01/30/2020)

Employers are required to participate in the EP development and evaluation. Meetings are held where the discussed issues are recorded in the minutes. Based on the analysis of the educational program, employers compile a list of recommendations and proposals for the educational program and issue EP review (Meeting of the Expert Council for the EP Management Minutes No. 1 dated as October 14, 2019 and Minutes No. 2 dated as October 21, 2019).

For forming the MOS and the development plan of accredited EPs, internal and external peer-reviewing is carried out from the companies "iBec Systems" LLP, "Davay Sxodim" LLP, "ABY Applied Systems" LLP, "Inventive" LLP, "IT SPACE" LLP, etc.

In accordance with the Work Plan of the Scientific Council for the 2019-2020 academic year, questions on the EP development were considered. The reports presented the working groups work results in EP creating led by the EP coordinator and the dean for the academic year, as well as the working group main achievements.

### ***Analytical part***

Analysis of accredited EPs for compliance with the criteria of the "Development and approval of an educational program" standard shows that the EP content, the sequence of their implementation, the depth of development in all specialties of training correspond not only to regulatory requirements, but also to the demands of the labor market.

In the study of teaching materials, curricula and EP 6B06104 - "Industrial Automation" it was found that the basic and elective disciplines do not contain material on the theory of automatic control. This circumstance allows us to give recommendations on incorporating the basics of automatic control into existing disciplines or additionally introduce elective disciplines that provide basic knowledge of automation.

According to educational programs, the graduate profile and model are determined. The Commission notes the possibility of expanding the range of joint educational programs with foreign educational organizations.

At an online meeting, students confirmed their participation in the EP development. It is recommended that the management of accredited EPs improve the work of involving stakeholders in the development and quality assurance of EPs.

### **According to the results of the survey of teaching staff:**

- support of the university and its administration in developing new educational programs was rated as "Very Good", by 69.2% and as "Good" by 30.8% of faculty members;
- according to the questionnaire, the question of how the attention of the administration of the educational institution is paid to the content of the educational program was evaluated as "Very Good" by 80.8% and as "Good" by 19.2% of the teaching staff;
- according to the results of the questionnaire, the level of satisfaction with the content of the educational program of their needs was rated as "Very Good" by 88.5% and "Good" by 11.5% of teaching staff;
- according to the results of the questionnaire, the question of how the curricula of educational institutions form the students' ability to analyze situations and make forecasts was evaluated as "Very Good" by 57.7% and as "Good" by 42.3% of the teaching staff.



**According to the results of a student survey:**

- The satisfaction with the overall quality of the curriculum as rated as “Fully Satisfied” by 94.6%, as “Partially Satisfied” by 1.8 % and as “Partially Dissatisfied” by 3.6% of students.

**Strengths / Best Practice for 6B06101 - “Computer Science”, 6B06102 - “Software Engineering”, 6B06103 - “Big Data Analysis”, 6B06104 - “Industrial Automation”, 6B06105 - “Media Technologies” EPs:**

- the qualifications obtained upon completion of the accredited EP are defined and explained, and the readiness of students for professional certification of vendors is demonstrated;

- the complexity of accredited EPs is clearly defined in Kazakhstan credits and ECTS.

**Strengths / Best Practice for OP 6B06101 - “Computer Science”, 6B06102 - “Software Engineering”, 6B06103 - “Big Data Analysis”, 6B06105 - “Media Technologies” EPs:**

- accredited 6B06101 - “Computer Science”, 6B06102 - “Software Engineering”, 6B06103 - “Big Data Analysis”, 6B06105 - “Media Technologies” EPs correspond to educational goals and learning outcomes;

**Recommendations of EEC 6B06104 - “Industrial Automation”:**

According to EP 6B06104 - “Industrial Automation” consider the introduction of elective course, considering the theoretical fundamentals of industrial automation.

**EEC conclusions on the criteria for 6B06101 - “Computer Science”, 6B06102 - “Software Engineering”, 6B06103 - “Big Data Analysis”, 6B06104 - “Industrial Automation”, 6B06105 - “Media Technologies” EPs:**

EEC notes that according to the “Development and approval of EP”, they have strong positions in 3 criteria and satisfactory positions in 9 criteria.

**6.4. “Constant monitoring and periodic assessment of educational programs” Standard**

**Evidence part**

The monitoring process and the periodic assessment of ongoing programs are carried out both at the academic and administrative levels.

The purpose of the EP audit is to update existing programs or to create new programs so that the components of the educational program and their content contribute to the training of high-level specialists who possess the set of competencies necessary for the employer. Despite the fact that the university began training in the current academic year, the university is reviewing educational programs. As a result, the expected learning outcomes based on the Dublin descriptors are reviewed - a description of the knowledge and skills needed to achieve a certain level in the learning process.

Developed syllabi are updated in connection with the achievements of science and practice. So for the ICT group of educational programs, the developed course syllabi are updated annually according to the latest achievements and discoveries in the field of information and communication technologies. For example, in B06101 - “Computer Science”, 6B06102 - “Software Engineering”, 6B06103 - “Big Data Analysis” EPs there is a discipline “Algorithms and Data Structures”, which includes both the study of traditional classical algorithms and data structures, as well as the study of the most recent discoveries in the IT field. Moreover, at each course lecture, the application of the studied algorithms

and data structures in the real world is studied. One of the topics of this discipline is the study of associative arrays (often found as a dictionary term) and the hash of a function, and accordingly, in classes, the use of this logical data structure and function in cryptography as a whole, and in particular in the application of Blockchain technology is considered. In other words, the data structure itself in this case is not new, but it was used as the main data structure when working with Blockchain technology, which is currently one of the most relevant and promising areas in information and communication technologies. It should be noted that within curricula developing, the experience of implementing similar programs by other top universities and online course providers from such training platforms as Coursera, Udacity, Udemy and others is analyzed. A high level of assessment by students of top universities and online courses indicates the good quality of the course; accordingly, it was necessary to consider the possibility of introducing this course into the EP curriculum after the course adapting procedures according to the university requirements. Another example of the need for constant updating is the course of "Object-Oriented Java", which is based on the classical principles of object-oriented programming, such as class, object, encapsulation, inheritance and polymorphism, but using these principles for solving problems, the most relevant problems of the current time is considered.

The control of educational programs provides for the evaluation of curricula, as well as work programs and methodological developments in the course context. The quality control system successfully operates in accordance with the developed university internal regulatory documents such as: Academic policy of "Astana IT University" LLP, Rules of academic honesty of "Astana IT University" LLP, Rules of organization of the academic process according to credit technology of education of "Astana IT University" LLP, Rules on the organization of educational and methodological activities of "Astana IT University" LLP, Regulations on the verification of written work for plagiarism of "Astana IT University" LLP, Rules on the organization and conduct of intermediate certification of students of "Astana IT University" LLP, Rules on the students' assessment system of "Astana IT University" LLP (<http://new.astanait.edu.kz/about/management/>).

The educational program is updated in connection with the change in state generally binding standards of higher education and the introduction of new directions and elective courses.

In order to obtain information about meeting the needs of students, a survey "Teacher through the eyes of students" is conducted.

The University uses the following methods for monitoring and periodically evaluating its educational programs as internal university control: current monitoring of student performance, midterm examination, final examination, evaluating all types of practices, checking the status of the methodological support of the educational process, collecting and analyzing data on stakeholder satisfaction and internal audits.

A very important part of the quality assurance system of education is student feedback, the commission for the examination of published textbooks, teaching aids and the acquisition of printed and electronic resources for the fund of the Scientific Library.

### ***Analytical part***

The EEC confirms that the university constantly monitors, periodically evaluates and reviews educational programs to implement the educational process and works to create a favorable learning environment for students.

The university administration has demonstrated its openness and accessibility for students, faculty, and employers: reception hours for personal issues are determined and meetings with the university administration are held on a systematic basis. Based on the results of monitoring and questionnaires, a change to the existing EPs is planned, and new



ones are developed. All documents on EP are available on the university website.

To enhance the monitoring of the quality of educational programs, the Turnitin anti-plagiarism system is used, which the American online plagiarism detection service used worldwide by top universities and educational institutions. The Turnitin system is integrated with the Moodle learning management system (moodle.astanait.edu.kz) and produces a result within 2-3 minutes immediately after sending the work. The advantage of this integration is that students do not need to use 2 different systems, but they can carry out all the work in one system.

According to the results of monitoring and evaluation of educational programs, "Astana IT University" provides a review of the content and structure of the educational program, taking into account changes in the labor market, requirements of employers and the social request of society. So this year, taking into account the wishes of employers, there was an update of 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103- "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs (minutes of the meeting of the Scientific Council No. 7 dated as 30.01.2020). Expert assessments and reviews from "ABY Applied Systems" LLP, "Inventive" LLP, "IT SPACE" LLP are presented, where it is recommended to ensure the participation of employers and representatives, large ICT companies, students and other stakeholders to adjust the EP.

Experts of the EEC IAAR note the existence of a systematic approach to monitoring and periodically evaluating educational programs.

At the same time, in the process of questioning students, 89.3% of respondents indicated "full" satisfaction with the quality of teaching, 10.7% indicated "partially satisfied" and 87.5% are fully satisfied with the timely assessment of students. 89.3% are completely satisfied with the level of implementation of the rules and strategies of the educational program and only 8.9% are partially satisfied.

85.7% are fully satisfied and only 1.8% are partially satisfied with the academic load / student requirements.

***Strengths / Best Practice for OP 6B06101- "Computer Science", 6B06102- "Software Engineering", 6B06103- "Big Data Analysis", 6B06104- "Industrial Automation", 6B06105- "Media Technologies":***

*- not available for this standard*

***EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technology" EPs:***

*- ensure the participation of employers and representatives, large ICT companies, students and other stakeholders to adjust the EP;*

*- constantly improve the content and structure of the EP taking into account the requirements of employers and representatives of large ICT companies and taking into account changes in the labor market.*

***The conclusions of the EEC on the criteria for the EEC 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:***

*The EEC notes that according to the standard "Constant monitoring and periodic assessment of educational programs" it is satisfactory in 9 criteria.*

## **6.5. "Student-centered Learning, Teaching, and Performance Evaluation" Standard**

### **Evidence part**

The administration of Astana IT University provides equal opportunities for students in the formation of an individual educational program aimed at the formation of professional competencies. The University has a Department of Student Affairs, which coordinates all processes related to the organization of student life.

Language of instruction at Astana IT University is English. There is an increase in the acceptance of the number of students in English, in this regard, the university is conducting focused work to improve the quality of teaching and educational support for educational programs in English. An individual educational trajectory is reflected in modular educational programs and individual curricula, where, along with general educational, basic disciplines of the compulsory component, there are elective courses and practices that are aimed at ensuring professional competencies. The catalog of elective courses is freely available for review to all students.

The formation of educational trajectories of students is organized in accordance with the procedure "Planning of the educational process." For the convenience of choosing an individual trajectory, for students in the Moodle learning management system (<http://moodle.astanait.edu.kz/>) an option is created to select courses from a component of choice, after which each student automatically generates an individual curriculum in the Platonus system (<http://platonus.astanait.edu.kz/>), which is further signed by the student, his academic adviser, office registrar and approved by the dean of the faculty and the director of the Academic department.

Based on the results of the selection of disciplines in the system <http://moodle.astanait.edu.kz/>, an individual curriculum is formed, signed by the student, adviser, program coordinator and approved by the dean.

EP management seeks to provide attention to various groups of students and their needs, providing them flexible learning paths and using various forms and methods of teaching and learning. If the course is recognized as not cost-effective, students have the right to choose another alternative one. While an individual curriculum is being formed, the logical sequence of studying disciplines is observed and the presence of prerequisites is taken into account.

The approaches used by teachers of a foreign (English) language involve the formation of competencies, academic and professional English, which are laid down in the curricula of three trimesters are formed on the basis of key and special competencies.

Information on the educational process is presented to students in the form of an academic calendar, class schedules, office-hours schedules (independent work of students under the guidance of a teacher (IWST)). This allows students to get an idea of the duration and structure of the school year, their daily workload, types of training and additional consultations.

The principle of student-centered learning determines the differentiation of various types of classes, which are held in the form of lectures, seminars, practical and laboratory classes and IWST. In the framework of these types of classes, students receive training information, form practical skills, and help reduce difficulties in mastering the course. Considerable attention in the academic policy of the university is paid to the additional students' assistance who have the opportunity to receive regular consultations on the discipline as part of the IWST and summer term classes.

Such active teaching methods, solving programming problems on leetcode, hackerrank platforms in the course of «Algorithms and data structures" are effectively used in the classroom, allowing students to prepare for production practice, for interviews

during employment in companies.

In addition, when conducting classes, active and interactive teaching methods are used, such as: brainstorming, express interviews, Fishbone Diagram (student's independent work with text): filling out a diagram, compiling a cluster of terms, associative practical lessons, a project method, an experiment; solving situational problems, puzzle method, Bloom's Diagram. These methods are aimed both at mastering professional knowledge, and at developing non-standard approaches and creative thinking.

To monitor the effectiveness and efficiency of the application of innovations and the use of various teaching methods, students are invited to evaluate the teaching quality, the degree of preparation of presentations and handouts, as well as the level of organization of classes at the course. Based on the results of the questionnaire on the students' satisfaction degree, the work is being done to eliminate the discovered shortcomings. So the results of the student survey showed that satisfaction with the relationship between the student and the teacher was 94.6%, with teaching methods in general - 78.6% and with teachers' objectivity and fairness - 91.1%.

Assessment of knowledge, skills and professional competencies is carried out on a 100-point scale with the conversion of the final result into a letter and number equivalent. Achieving the desired learning outcomes is determined through a variety of forms for assessing students' knowledge: tests, substantiation and decision-making defending for the situation, essays, cases, solving cross-cutting problems, building models for solving situations, defending projects. 94.6% of students express full satisfaction with the overall quality of the curriculum; 92.9% of students are fully satisfied with the fairness of exams and certification, 92.9% are satisfied with the tests and exams.

### ***Analytical part***

Students are given the opportunity to familiarize themselves with the results of the weekly intermediate control, midterm and end term examination grades (admission to the examination session), and exam results. Also, students have access to all kinds of information developed by the teaching staff: MEP, CED, syllabi, guidelines, manuals, lecture notes, etc.

The university is conducting systematic work to improve the teaching staff qualifications. The EEC Commission, during an interview with faculty members, determined that faculty members of the faculty issue various teaching and learning materials in their courses. The educational process of the university is actively introducing innovative teaching methods that are practice-oriented in nature, such as the implementation of practical projects, problem-oriented, science-oriented, team-oriented training, business and role-playing games, brainstorming methods, group methods discussions, combined surveys, teaching methods in small groups and others. However, the EEC revealed that the teaching staff does not have its own research in the field of teaching professional courses in the context of accredited EPs.

The process of assessing the level of achievement of learning outcomes and the student competency assessment system are presented in the Rules on the student assessment system of "Astana IT University" LLP. However, students were unable to confirm the availability of this document, which cast doubt on its publication, and also analyzing the course syllabi, the EEC revealed that they do not reflect the criteria and methods for assessing students' knowledge. The Commission recommended the need to publish the changes made according to the criteria and assessment methods, as well as the criteria and methods for assessing the knowledge of students to reflect in syllabi.

After interviewing students and faculty, EEC made sure that the university has all the conditions for free access of students to the university administration. All applications are accepted in writing to the dean / rector of the university. Under Distance learning

conditions, all applications are accepted by students' corporate mail. In addition, the university has channels in Telegram, Instagram where students can contact at any time

In addition to this, the commission notes the involvement of students and employers in the EP audit procedures. The EEC has ascertained the formation of educational paths by students through the Platonus system (<http://platonus.astanait.edu.kz/>).

The Commission notes that the University is committed to developing objective tools for assessing students' knowledge, using the recommendations of the latest version of ECTS and pursuing a clear anti-corruption policy.

**According to the results of a student survey:**

- Satisfaction with the fairness of exams and certifications was rated as "Completely satisfied" by 92.9% and "Partially satisfied" by 7.1% of students.

- Satisfaction with the timely assessment of students was rated as "Fully Satisfied" by 87.5% and "Partially Satisfied" by 12.5% of students;

- Satisfaction with tests and exams was rated as "Fully Satisfied" and "Partially Satisfied" by 92.9% of students.

**Strengths / Best Practice for OP 6B06101- "Computer Science", 6B06102- "Software Engineering", 6B06103- "Big Data Analysis", 6B06104- "Industrial Automation", 6B06105- "Media Technologies":**

- not available for this standard

**EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:**

- to conduct their own research in the field of teaching methods of professional courses in the context of EP;

- it is necessary to inform about any actions in relation to the EP and publish all the changes made according to the criteria and assessment methods, as well as the criteria and methods for assessing the students' knowledge to reflect in syllabi.

**The conclusions of the EEC on the criteria for the 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:**

The EEC notes that according to the "Student-centered Learning, Teaching and Performance Evaluation" standard, they have satisfactory positions in 8 criteria and suggest improvements in 2 criteria.

## **6.6. Standard "Students"**

### **Evidence part**

The university has a model for the formation of the contingent of students, based on the principle of electivity by applicants and students of the specialty and educational program.

Admission to training takes place in accordance with the Model Rules for admission to study at educational organizations that implement educational programs of higher and postgraduate education, approved by the order of the Minister of Education and Science of the Republic of Kazakhstan No. 600 dated as October 31, 2018.

Applicants to university undergraduate educational programs must have knowledge in the volume of a secondary school (gymnasium, lyceum, college), confirmed by a united national testing (UNT) or complex testing (CT). Applicants also pass a special English language exam at the university.



The main contingent of 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" are students of bachelor's programs. Admission of applicants for the 2019-2020 academic year is presented in table 1.

Table 1. Admission of full-time applicants for the 2019-2020 academic year

<b>Student admission</b>	<b>2019-2020 academic year, September 1</b>
Educaional grant	560
Grants of Local Executive Bodies	11
Self-paid	43
<b>Total</b>	<b>614</b>

Currently, the total contingent is 605 students, including 558 on state grants, 11 for LEB grants, and 36 for self-paid.

Table 2 shows the student contingent in the context of 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" Eps as of May 21, 2020.

Table 2 - The contingent of students in the context of Astana IT University EP for the 2019-2020 academic year (on the state of 21.05.20)

No.	EP title	Total number of students	Including		
			State order	Grant LEB	Self-paid
1	6B06101- Computer Science	70	68	1	1
2	6B06102- Software Engineering	180	166	5	9
3	6B06103 - Big Data Analysis	92	81	5	6
4	6B06104 - Industrial Automation	19	19	-	-
5	6B06105 - Media technologies	37	35	-	2
6	6B06301-Cyber Security	97	87	-	10
7	6B06201-Telecommunication Systems	41	41	-	-
8	6B04101- IT Management	69	61	-	8
<b>Total:</b>		<b>605</b>	<b>558</b>	<b>11</b>	<b>36</b>

The movement of the contingent is reflected in the monthly reports within the university and in the 3-NK statistical form approved by the Agency for Statistics of the Republic of Kazakhstan, as well as in the daily report of the ESME (Unified Management System for Higher Education) of the Ministry of Education and Science of the Republic of Kazakhstan.

An adaptation program has been prepared for foreign students, which includes a set of measures for socio-psychological and academic support, a psychological counseling office is working

On the adaptation of the university freshmen, trainings were held, the rules of behavior at the university, outside the university, acquaintance with the student atmosphere were explained. More than 5 intensive meetings were held with freshmen during the first trimester on the following topics: prevention of offenses and diseases;

search for talented students to visit sports, student sections, theaters, associations; presentation of youth associations for the development of leadership skills; Conducting conversations on moral topics: inculcating respect for elders and peers. Individual conversations, trainings, seminars, cultural, educational, sporting events are held, the work of creative associations and interest groups is organized. According to the work plan, much attention is also paid to adapting to the conditions of training, living in dormitories, on topics of personal hygiene, on healthy eating and a healthy lifestyle, visiting the rooms is organized, checking the sanitary condition, availability and execution of the duty schedule.

Ensuring academic mobility of students and teachers, internationalizing education, improving educational and research programs is carried out by integrating Astana IT University into the international educational space. VHI regularly holds individual and group consultations on academic mobility issues. In accordance with paragraph 32 of the Direction for study abroad, including in the framework of academic mobility, approved by order of the Ministry of Education and Science of the Republic of Kazakhstan dated November 19, 2008 No. 613, external outgoing academic mobility for 2020-2021 makes up 5 students at universities in Europe and 5 students at universities in China. The Department of International Cooperation posted information on the competition for studying abroad in the framework of academic mobility (undergraduate) in the media (telegram channel, Instagram and on the website of the university). In order to ensure 100% informing all students of the Department of International Cooperation, information sessions were organized for students of 1 year of study. As a result, 52 applications were submitted that meet the requirements of academic mobility (high GPA, IELTS level not lower than 6.0, or not lower than a B2 level certificate - English), currently all documents of applicants have been submitted to the Bologna Center process for participating in the competition.

In order to internationalize the educational process and create conditions for double-degree education, a number of measures were taken to strengthen international relations. On September 24, 2019, Astana IT University was paid a special visit by representatives of the Italian Embassy in the Republic of Kazakhstan. During the event, the foreign delegation met with the university top management and discussed a number of pressing issues. The parties discussed issues of future partnership, areas of interaction and expanding opportunities in the field of education, scientific research and international relations between Astana IT University and Italian universities, as well as the development of digital technologies in the educational process.

On November 21, 2019, the President of the Center for International Programs JSC, Ainur Karbozova, met with the Vice-Rector of the University of Information Technologies Astana IT University Karsten Wolf.

The AITU DIC is conducting systematic work in cooperation with the centers of the "European Network of National Information Centers for Academic Recognition and Mobility / National Academic Recognition Recognition Information Centers" ERIC / NARIC in order to ensure comparable recognition of qualifications as a result of the program completion.

In order to guarantee objective recognition of higher education qualifications, periods of study and prior education, including recognition of non-formal education, the university ensures compliance with the Lisbon Recognition Convention and cooperates with the Bologna Process and Academic Mobility Center of the Ministry of Education and Science of the Republic of Kazakhstan, which is the executive body for the recognition and nostrification procedure in the Republic of Kazakhstan.

The recognition of qualifications acquired in other Kazakhstani or foreign educational institutions is carried out in accordance with the Documented Procedures of the Department of International Cooperation and the developed Regulation on Academic



Mobility.

In the 2019-2020 academic year, mutual cooperation agreements were concluded with Green River College, Auburn (USA), University of Latvia, Riga, IGlobal University, Vienna (USA), Dortmund University of Applied Sciences and Arts (Germany), Weihai Professional College (China), Eurasian Voyage Beijing International Center for Economic and Culture Exchange, the University of Applied Sciences Schmalkalden

The practice is carried out in close collaboration with employers. The main bases of practice include: QazTech Ventures JSC, HPC Global Trading B.V., LLP Kolesa, Huawei Technology Kazakhstan, Redprice LLP, Senim Group of Companies LLP, Astel LLP, Zerde Holding JSC, Astana Hub, Business & Technology Services LLP, Research & Development Center Kazakhstan Engineering LLP.

Memoranda were concluded with Huawei, EDB Postgres, and Cisco, within the framework of which the opening of specialized laboratories is considered. Memoranda with Lenovo Kazakhstan, Chocofamily, KPMG, Senim, which include joint hackathons, support for student startup projects, the possibility of sponsorship of major events, and the possibility of students visiting Lenovo's laboratory in Astana HUB, passing paid internships and further employment of university students, and conducting joint hackathons, guest lectures, master classes.

The examination session was held on time, established by the academic calendar of the university. Session preparation was carried out in accordance with a set of measures for organizing and conducting the session by structural units responsible for the organization of the educational process. According to the analysis of examination sessions, academic performance of students is positive.

#### **Analytical part**

At the same time, the commission notes that the university has developed an academic policy containing the main issues of educational and organizational activities of students, and description of adaptation and support programs for students, including international ones. However, there is no comprehensive program to attract, adapt international students and support gifted students. In the meantime, EEC NAAR encourages to develop this program.

The Commission notes the impact of the coronavirus pandemic on student preparedness for academic mobility, which was noted during meetings with students. The university has all the prerequisites for the organization of internal and external mobility of students.

#### **According to the results of the survey of teaching staff:**

- The level of development of conditions for students with different physical abilities was rated as "Very Good" by 34.6% and as "Good" by 65.4% of faculty members;
- The knowledge of students acquired in this university and correspondence to the realities of the requirements of the modern labor market was rated as "Very Good" by 26.9% and as "Good" by 73.1% of faculty members.

#### **According to the results of a student survey:**

- Satisfaction with the availability of academic counseling was rated as "Fully Satisfied" by 14.3% and as "Partially Satisfied" by 85.7% of students.

**Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies EPs:**

- The university has a clear policy for the formation of the contingent of students from admission to graduation and ensures the transparency of its procedures, including forecasting the number of state grants;

- the availability of modern material and technical base;
- the availability of specialized training laboratories and software for use in the educational process;
- created favorable social conditions for students, including the provision of students with places in the Student Houses.
- the possibility is provided for EP graduates with additional certificates from vendor companies confirming the qualifications obtained, the results of training, as well as the status of education.

**EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:**

- to develop and implement a comprehensive program to attract, adapt foreign students and support gifted students;
- to provide for the possibility of assistance in obtaining external grants for training.

**The conclusions of the EEC on the criteria for the 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:**

The EEC notes that according to the "Students" standard, they have strong positions in 4 criteria, satisfactory positions in 9 criteria and suggest improvements in 1 criterion.

## **6.7. Standard "Faculty staff"**

### **Evidence part**

The personnel policy of "Astana IT University" is published on the university website <https://astanait.edu.kz/wp-content/uploads/2020/05/kadrovaya-politika.pdf> and is aimed at effective personnel support for the implementation of the university's strategy with a strong corporate culture, providing for unified approaches in working with personnel within the framework of best corporate practice throughout the university.

The main goal of the University's Personnel Policy is to increase the effectiveness of personnel management by creating a human resources management system aimed at ensuring leadership in a competitive environment based on qualitative and quantitative personnel indicators.

The following positions of the teaching staff are established at the university (hereinafter - the teaching staff / faculty): Coordinator of the EP, Professor, Associate Professor, Senior Lecturer, Teacher (assistant).

The teaching staff performs labor functions in accordance with the job descriptions approved by the rector of the university and the teacher's individual work plan.

In accordance with the Professional "Faculty" Standard (order No. 133 of the Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" dated as June 8, 2017) and the Sectoral Qualifications Framework for the field of "Education" (Minutes of the meeting of the industry commission of the Ministry of Education and Science of the Republic of Kazakhstan No. 3 dated as November 27, 2019). The faculty of the University ensures the implementation of curricula and educational programs of undergraduate studies.

The compliance of teaching staff with qualification requirements is confirmed by the availability of diplomas of basic education, scientific or academic degree, academic rank, copies of certificates confirming advanced training, a list of scientific works and inventions, diplomas of basic education, scientific or academic degree.

The total number of the faculty for the 2019-2020 academic year is 44 people, including 36 people actually working. The scientific degree of teaching staff is 50%.

Employment of teaching staff is carried out in accordance with the Rules for competitive filling of positions of the faculty of "Astana IT University", approved by the Public Foundation "Nursultan Nazarbayev Educational Foundation" (dated as December 30 2019).

On the official website of the university in the section "Vacancy" vacant positions are published <http://new.astanait.edu.kz/university-life/>.

Teachers participating in the competition prepare presentations about their activities at the university in educational and scientific areas, as well as personal achievements. The terms of employment are consistent with the Labor Code of the Republic of Kazakhstan.

Qualification requirements for teaching staff are regulated by the Rules of competitive replacement of faculty positions of "Astana IT University" LLP.

It is important to note that the administration of the university focuses teaching staff on the implementation of the principles of both student-centered learning and the principles of student-centered teaching. The academic policy developed in this regard includes various elements related to the provision of educational programs with highly qualified personnel and resources. In this regard, a mechanism for competitive selection, certification, and advanced training of teachers has been developed. The university creates the conditions for students to effectively master theoretical knowledge and practical skills. For this purpose, classroom and extracurricular types of classes are practiced, which are divided into lecture, practical and laboratory classes, and consulting. The knowledge and skills gained during training are reinforced by students in practice in real production conditions. For this, the university organizes educational, pedagogical, professional and research practice. Partner organizations, employers, experienced specialists from various fields are involved in the practice. The formation of the necessary competencies among students is facilitated by various teaching methods that the teacher determines independently, taking into account the objectives of the training course. Active teaching methods are widely used at the university, including group work, business games, colloquiums, discussions, round tables, trainings and others. Quality control of learning material is checked through such forms of control as testing, oral and written surveys, course and creative work.

AITU faculty and university students take part in scientific domestic and international conferences, meetings and forums. For example, associate professor of the educational program "Telecommunications" B.E. Amirgaliev took part in the IV international scientific-practical conference "Informatics and Applied Mathematics" dedicated to the 70th anniversary of professors T. N. Biyarov, Valdemar Vuytsik and the 60th anniversary of professor E.N. Amirgaliev, which was held on September 25-29, 2019 in Almaty, Kazakhstan with a report on the theme "On the Development of a Database of Handwritten Symbols of Kazakh Language." Also, associate professor of the educational program "Mathematics" Ismailov N.A. participated in the Plenary talk at the II International workshop on Non-associative Algebras, held on April 30 to May 3, 2019 in Porto, Portugal with a report on the topic "Embeddable Algebras into Zinbiel Algebras via Commutators".

As part of the "Academic Mobility» program, university teachers plan to travel to universities abroad and also participate in various international conferences. Thus, Professor L.N. Salykova, Dr. Karsten Wolff, R.A. Syzdykov and K.T. Kozhakhmet, made a presentation at the international conference "Research and Education in Project management 2020", in Bilbao, Spain, "Digitalized and Projectized Education at Astana IT University". The EEC Commission recommended continuing work in this direction.

In addition, the university successfully implements the program of the Ministry of Education and Science of the Republic of Kazakhstan "Attracting foreign specialists to universities in Kazakhstan". The university plans to host foreign scientists from the USA, Germany, Austria, Portugal, Ukraine, Russia, China, Hungary, the UK to teach on the accredited EP.

The quantitative and qualitative composition of faculty will satisfy all the requirements for licensing. Every year, teaching staff take part in various cultural and recreational activities in the region.

### **Analytical part**

The EEC notes the existence of a holistic training program for faculty and targeted allocation of financial resources for continuing education. The Commission notes the possibility of enhancing the participation of faculty in academic mobility programs.

The members of the EEC note the sufficient work of the university in attracting and professional development of young teachers.

The Commission has established the average level of teaching staff's IT competence, the application of innovative methods and forms of training. The active use of information and communication technologies in the educational process (for example, on-line training, MEP, etc.) was also noted. During the study of lectures, the record noted the high professional training of teaching staff. An important factor is the attraction of the best international and domestic teachers from different countries.

You can note the established system of advanced training of faculty staff. The teaching staff of the EP went through various advanced training courses and retraining of personnel in the profile of the taught courses and have certificates.

According to the results of the questionnaire, university teachers noted the positive work of the administration in creating conditions for advanced training, 57.7% rated it as "very good", 38.5% rated as "good", 3.8% rated as "relatively bad" and 1.4 % rated as "bad".

Additionally, regarding innovation promotion, 38.6% rated it as "very good", 50% rated it as "good", 7.1% rated it as "relatively bad", as for the activities of academic mobility programs, 34.6% rated it as "Very good", 46.2% rated it as "good" and 19.2% rated it as "relatively bad".

**Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:**

*- not available for this standard*

**EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:**

*- to increase the level of academic mobility of teaching staff and the degree of involvement of foreign and domestic teachers in conducting joint research in the implementation of educational programs;*

*-to continue work on the creation of electronic materials, as well as Massive open online courses (MOOCs).*

**EEC conclusions on the criteria for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105- "Media Technologies" EPs:**



*The EEC notes that according to the "Faculty staff" standard they have a satisfactory position in 9 criteria.*

### **6.8. Standard "Education Resources and Student Support Systems"**

#### ***Evidence part***

The University has a material and technical base that provides all types of practical training and research work for students envisaged by educational programs.

The infrastructure of Astana IT University is a single educational and scientific complex. The university infrastructure includes 1 academic building, 2 student houses and 2 houses for faculty staff. The total area of the educational building is 37.6 thousand square meters, including 21.2 thousand square meters of useful area, 18 thousand square meters of which is the educational area. Student houses are designed for 350 places: 150 places in student house No.1, and 200 beds in student house No.2.

The university has modern educational laboratories Cisco, Huawei, Kaspersky, 6 lecture halls, 27 classrooms, 12 computer labs, 17 laboratories, a modern assembly hall with 450 seats, an electronic reading room with 50 seats, a sports and fitness room. All classrooms are equipped with interactive projectors, computer equipment and audio-video systems. A modern Media Center with an innovative television and broadcasting studio has been opened.

The university has a health center equipped with modern equipment and staffed by leading medical specialists, there is a student canteen for 250 seats.

The university has a corporate computer network. The university has 250 Wi-Fi points with free internet access. The total number of computers at the university is 529 units. The number of students per computer is 1:1. As part of the development of digitalization, the University has installed IP telephony with a virtual telephone exchange. Currently, 120 IP telephones are on the balance sheet of the university.

Currently, the following have been implemented at Astana IT University: a reading room with 250 seats and 68 computers; media studio center for editing, processing and recording video, development of electronic materials; gym; coworking playground for students; 70 units of small office space equipped with computers for the faculty and administrative staff.

In general, the material and technical materials used to organize the learning process and support students are sufficient and meet the requirements of the ongoing educational program.

Students have the opportunity to search for literature in the electronic catalog in the automated library program "Parakozm LTD", have access to the RIEL (Republican Interuniversity Electronic Library of Kazakhstan), as well as "NALRK" (National Academic Library of the Republic of Kazakhstan).

The fund of the scientific library of Astana IT University comprises 7856 units of publications in the state, Russian and foreign languages and on CD-carriers.

The EEC notes a lack of library resources in English. The users of the scientific library also have access to full-text resources located on remote servers and available at the university IP addresses: DB ThomsonReuters, SpringerLinkc, EBSCO, Euromonitor International, Znanium.com collection.

#### ***Analytical part***

EEC confirms the availability of responsible and student support systems, including support through the university website.

The Commission emphasizes that the introduction of an anti-plagiarism system will minimize plagiarism at Astana IT University. All the work of teachers and students go



through verification. Also, a holistic system of measures ensured zero tolerance for corruption.

During the visual inspection and analysis of documents, the EEC was convinced that the library stock is equipped with new editions of educational literature according to the university profile based on curricula and programs of all specialties, but there is a lack of library resources in English. Since English is selected as the language of instruction at the university, it is recommended to fill in the lack of library resources in the language of instruction for students.

There is evidence of access to library and information resources and services. During these interviews, there has been a significant increase in the use of electronic resources such as e-books and online magazines. Interviews and open conversations with teachers and students showed that they are satisfied with the resources and services offered through the Library. Thus, we can conclude that at the University as a whole and within the framework of the cluster, systematic measures are being taken to develop resources aimed at ensuring the quality of the educational process and the student support processes themselves.

According to the results of the survey of teaching staff:

- according to the results of the questionnaire, the question of how the relevant medical centers and offices operate at the university, 43.3% of faculty members rated it as "Very Good", and 57, 7% rate it as "Good";

- according to the results of the questionnaire, the question on how do you assess the availability of the necessary scientific and educational literature in the library for teachers, 11.5% of teaching staff evaluated it as "Very Good", 61.5% evaluated it as "Good" and 26,9% rated as "relatively poor".

**Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105- "Media Technologies" EPs:**

- the presence of a developed infrastructure that ensures the basic processes of the university;
- the availability of modern material and technical base;
- the availability of specialized training laboratories and software for use in the educational process;
- sufficient Wi-Fi coverage area (WiFi free zone);
- the presence of a modern computer base connected to the Internet;
- a high level of informatization of the educational process.

**EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:**

- complete the insufficiency of library resources, including the fund of educational, methodological and scientific literature on general education, basic and major disciplines in the languages of instruction.

**The conclusions of the EEC on the criteria for the 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies":**

The EEC notes that according to the standard "Education resources and student support systems", they have strong positions in 3 criteria, satisfactory positions in 4 criteria and suggest improvements in 1 criterion.

## 6.9. Public Awareness Standard

### **Evidence part**

Official information of AITU is distributed on the university website <https://astanait.edu.kz/>. The site information is aimed at a wide audience: students, employees, teachers, applicants and their parents, employers, university partners, scientific and public organizations.

The university's information policy is aimed at: ensuring a stable information flow of news about significant events and achievements in the media; attracting the interest of potential consumers in new programs and innovative developments of university scientists; support and clarification of national development programs of the country and the system of higher and postgraduate education, as well as the possibility of feedback (including anonymous).

The implementation of the information policy is provided by the University's Marketing and Public Relations Department, whose functions include determining the priority areas of the information policy, drawing up plans for its implementation using all available information sources, ensuring the completeness and efficiency of information, developing existing and searching for new media, as well as media monitoring in order to adjust information activities.

The University provides public information about its activities through the official website <https://astanait.edu.kz/>, official pages on social networks Facebook and Instagram, national and regional media and information resources of partner organizations. The main partners of the university in implementing information policy are PF "Nursultan Nazarbayev Education Foundation", QAZEXPOCONGRESS, "Zerde National Infocommunication Holding" JSC, as well as social networks of partners a memorandum of cooperation has been concluded with.

Thoroughly planned website in three languages (English, Russian, Kazakh), located on a separate server. The university's site includes three main components - a content management system (CMS), content and information systems operating within the site. It should be noted that the management system allows you to design and develop a site taking into account the characteristics of the structure and activities of the university. The university actively uses various social networks as part of a marketing company focused on attracting students and building the image of the university. Uniform brand positioning through online media and offline media.

To increase information and image work, the Department of Marketing and Public Relations approves a media plan annually at the beginning of the year for covering the University's activities for the academic year.

The main principle of structuring information on a site is orientation to certain groups of users. The site created clusters for students, staff, parents, and partners. A list of important documents with a link to a pdf file and useful links from various main sections of the site is presented. For example, links to educational software Platonus and Moodle, contact hotlines for complaints or emergency communications, various application forms, information brochures (on employment, campus, courses, etc.).

AITU successfully supports the following information systems of EP:

- The official website of the university <https://astanait.edu.kz> as a result of the integration of information systems of the university;
- Automated educational process management information system "Platonus";
- Additional platforms for educational activities (Edmodo, Moodle);
- The University's electronic library, the content of which contains teaching materials for all disciplines and educational programs <https://astanait.edu.kz/library/>;
- Information systems and resources of the library complex (the site of the scientific

library, the resource of abstracts of master's theses, access to the republican inter-university electronic library).

As part of career guidance work, the planned work and results are publicized on the university website and social networks. At the level of republican or regional media (in addition to posting information on the university's website and social networks), material is published with the participation of employees and / or teaching staff and / or students in the following areas (expert opinion): Rukhani Zhangyru, Digital Kazakhstan, higher and postgraduate education.

### **Analytical part**

As part of the analysis of information transparency, the official website of the university (<https://astanait.edu.kz>) was developed. The website is the main point of obtaining information about the university, visiting the site is the first thing that applicants and their parents do become interested in a university. It helps to influence the target audience in order to inform them and encourage the acquisition of services.

According to accredited 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs all information about the EP is published on the university's website, the expected results and qualifications obtained, as well as the graduate model are indicated separately.

The university should regularly update information on the site, keep a news feed, etc. to create a positive image, however, experts revealed some comments on the completeness and information updating.

Moreover, the commission notes that the information on the faculty on the university website is not complete. In this regard, it is possible to supplement the resume of teachers of the EP cluster with information about courses taught, continuing education programs, publications, scientific interests, etc.

The university has a sufficient number of sources to inform the public about its activities. At the same time, experts note that the information posted on the site is not updated regularly. This was revealed in the course of interviewing faculty staff and heads of structural units.

And also the audited financial report is not published on the university website. The EEC Commission recommended the interested parties to have access to this document and publish on the university's website.

Feedback on the site is implemented in the form of the rector's blog functioning on the rector's page (<https://astanait.edu.kz/rector-university/>).

### **According to the results of a student survey:**

- The usefulness of the website of educational institutions in general and faculties in particular was rated as "Fully Satisfied" by 91.1% and "Partially Satisfied" by 7.1% of students;
- Informing students about courses, educational programs, and academic degrees was rated as "Fully Satisfied" by 94.6% and "Partially Satisfied" by 5.4% of students.

### **Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:**

- *The expected results and qualifications obtained in the EP are clearly spelled out on the university's website;*
- *Within the framework of accredited EPs, the graduate model is clearly reflected on the university's website.*

**EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105- "Media Technologies" EPs:**

- to ensure the availability of audited financial reports on the university's web resource;  
- on an ongoing basis ,to update information on cooperation with scientific organizations, business partners and educational organizations of Kazakhstan, as well as far and near abroad in the context of EP and information about the faculty of EP: education, scientific interests, achievements, publications, etc. on the university website;

**The conclusions of the EEC on the criteria for the 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies":**

The EEC notes that according to the standard "Public awareness", they have strong positions in 2 criteria and satisfactory positions in 8 criteria.

### **6.10. Standard "Standards in the context of individual specialties"**

#### **Evidence part**

In order to obtain relevant, up-to-date knowledge in the field of IT and taking into account the tasks of developing the national education system, the industrial development of the region, the competitiveness of the university and the existing distinctive features of AITU, a special role is given to educational programs 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" as part of the implementation of "Digital Kazakhstan" state program.

The goals and results of accredited EPs are aimed at students obtaining specific skills that are in demand on the labor market. The main goal of the educational program is the ability to select and critically use scientific information, master universal general scientific methods of cognition, mastery of research methods and techniques, knowledge of the fundamentals of theory, planning and setting up an experiment, analysis and discussion of results, knowledge of the methodology of planning and charting, etc.

Rapid changes in technology and the rapid emergence of new approaches, algorithms and methods for software development, working with data, industrial automation, working with media technologies require the rapid training of basic fundamental and specialized skills in these sectors of information and communication technologies and practice-oriented programs, which determines the choice of 3 years of study in educational programs 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies".

Teaching in the framework of the EP is conducted on the basis of the most relevant and comprehensive achievements of world science and practice in the field of specialization, as well as using the most modern and advanced teaching technologies.

The university provides students with the maximum possible amount of structured, organized information on readable disciplines - presentation materials, lecture notes, compulsory and additional literature and practical tasks.

Much attention is paid to improving the level of professional competence by consolidating practical skills in order to form additional competencies. This allows you to provide high quality training for a future specialist.



**Analytical part**

Based on the results of the analysis, the members of the EEC came to the following conclusion: teaching in educational programs is based on the achievements of science and practice in the field of specialization, as well as using modern pedagogical technologies. Information on the presence in the EP of a significant number of disciplines aimed at obtaining practical experience in applying theoretical knowledge by students (professional practice) is presented and confirmed, however, experts note the insufficiency of organized events in this direction in the form of excursions, seminars, master classes, etc. The EEC recommends the development of a program of measures for interconnection and organization with leading IT enterprises of the Republic of Kazakhstan.

During the online meeting with the teaching staff of the accredited EP, it turned out that the number of teachers with long experience in the enterprise is not available. This may be due to the fact that the university operates only 1 year. However, the EEC recommends involving practitioners, foreign and domestic specialists in the field of EP specialization in teaching.

During the meeting with the heads of departments and vice-rectors, the experts learned about the university's intention to introduce elements of dual education at the end of the second and third years of student education through the introduction of special practical disciplines, for example, "Software Factory (Project)" for educational program 6B06102 - "Software Engineering".

**Strengths / Best Practice for OP 6B06101- "Computer Science", 6B06102- "Software Engineering", 6B06103- "Big Data Analysis", 6B06104- "Industrial Automation", 6B06105- "Media Technologies":**

- not available for this standard

**EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:**

- develop a program of interconnection and organization measures to strengthen the practical training of teaching staff and students in the professional field: internships and excursions to leading enterprises of Kazakhstan and distance / in-person special courses, master classes, seminars of leading ICT industry experts;

- to attract practitioners, foreign and domestic specialists to teaching activities within the framework of the EP.

**The conclusions of the EEC on the criteria for the 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies":**

The EEC notes that according to the standard "Standards in the context of individual specialties" they have a satisfactory position in 3 criteria and suggest improvements in 2 criteria.



## **(VII) OVERVIEW OF STRENGTHS / BEST PRACTICE BY EACH STANDARD**

### **6.1 "MANAGEMENT OF EDUCATIONAL PROGRAM" STANDARD**

***Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:***

-The university has a published quality assurance policy, available to all interested parties on the pages of the university website.

-The EP manual provides transparency in the development of the EP and contains the deadlines for the start of implementation and is also available to all interested parties on the pages of the university website.

-The development plans for accredited EPs have their own personality and are developed taking into account national priorities and the development strategy of the university and are also posted on the university website.

-EP management is open and accessible to students and faculty, as evidenced by interviews with them.

### **6.2 "INFORMATION MANAGEMENT AND REPORTING" STANDARD**

***Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:***

- The university uses various methods for collecting and analyzing information within the framework of the EP, and also uses modern ICT and software tools, such as Vjudge, Moodle, Contester, Github, Turnitin Microsoft Teams, etc.

- As part of the EP, the information collected and analyzed takes into account the availability of educational resources and support systems for students.

### **6.3 "DEVELOPMENT AND APPROVAL OF THE EDUCATIONAL PROGRAM" STANDARD**

***Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:***

- the qualifications obtained upon completion of the accredited EP are defined and explained, and the readiness of students for professional certification of vendors is demonstrated;

- the complexity of accredited EPs is clearly defined in Kazakhstan credits and ECTS.

***Strengths / Best Practice for OP 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06105 - "Media Technologies" EPs:***

- accredited 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06105 - "Media Technologies" EPs correspond to educational goals and learning outcomes;

### **6.4 STANDARD "CONSTANT MONITORING AND PERIODIC ASSESSMENT OF EDUCATIONAL PROGRAMS"**

***Strengths / Best Practice for OP 6B06101- "Computer Science", 6B06102- "Software Engineering", 6B06103- "Big Data Analysis", 6B06104- "Industrial Automation", 6B06105- "Media Technologies:***

- not available for this standard

#### **6.5 STANDARD "STUDENT-CENTERED LEARNING, TEACHING, AND PERFORMANCE EVALUATION"**

**Strengths / Best Practice for OP 6B06101- "Computer Science", 6B06102- "Software Engineering", 6B06103- "Big Data Analysis", 6B06104- "Industrial Automation", 6B06105- "Media Technologies:**

- not available for this standard

#### **6.6 STANDARD "STUDENTS"**

**Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies EPs:**

- The university has a clear policy for the formation of the contingent of students from admission to graduation and ensures the transparency of its procedures, including forecasting the number of state grants;
- the availability of modern material and technical base;
- the availability of specialized training laboratories and software for use in the educational process;
- created favorable social conditions for students, including the provision of students with places in the Student Houses.
- the possibility is provided for EP graduates with additional certificates from vendor companies confirming the qualifications obtained, the results of training, as well as the status of education.

#### **6.7 STANDARD "FACULTY"**

**Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies EPs:**

- not available for this standard

#### **6.8 "EDUCATION RESOURCES AND STUDENT SUPPORT SYSTEMS" STANDARD**

**Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105- "Media Technologies EPs:**

- the presence of a developed infrastructure that ensures the basic processes of the university;
- the availability of modern material and technical base;
- the availability of specialized training laboratories and software for use in the educational process;
- sufficient Wi-Fi coverage area (WiFi free zone);
- the presence of a modern computer base connected to the Internet;
- a high level of informatization of the educational process.

#### **6.9 "PUBLIC AWARENESS" STANDARD**

**Strengths / Best Practice for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:**

- The expected results and qualifications obtained in the EP are clearly spelled out on the university's website;

- Within the framework of accredited EPs, the graduate model is clearly reflected on the university's website.

**6.10. "STANDARDS IN THE CONTEXT OF INDIVIDUAL SPECIALTIES" STANDARD  
Strengths / Best Practice for OP 6B06101- "Computer Science", 6B06102-  
"Software Engineering", 6B06103- "Big Data Analysis", 6B06104- "Industrial  
Automation", 6B06105- "Media Technologies:**

- not available for this standard



## **(VIII) REVIEW OF QUALITY IMPROVEMENT RECOMMENDATIONS BY EACH STANDARD**

### **6.1 "MANAGEMENT OF EDUCATIONAL PROGRAM» STANDARD**

- not available for this standard

### **6.2 "INFORMATION MANAGEMENT AND REPORTING" STANDARD**

*EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:*

- to develop a decision-making mechanism based on the analysis of information obtained in the course of communication with students, employees and other interested parties in the context of EP;
- to develop a procedure to ensure confirmation of documentary consent to the processing of personal data of employees and faculty.

### **6.3 "DEVELOPMENT AND APPROVAL OF THE EDUCATIONAL PROGRAM" STANDARD**

*Recommendations of EEC 6B06104 - "Industrial Automation":*

- to consider the introduction of elective course, considering the theoretical fundamentals of industrial automation.

### **6.4 STANDARD "CONSTANT MONITORING AND PERIODIC ASSESSMENT OF EDUCATIONAL PROGRAMS"**

*EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technology" EPs:*

- to ensure the participation of employers and representatives of large ICT companies, students and other stakeholders to adjust the EP;
- to constantly improve the content and structure of the EP taking into account the requirements of employers and representatives of large ICT companies and taking into account changes in the labor market.

### **6.5 STANDARD "STUDENT-CENTERED LEARNING, TEACHING, AND PERFORMANCE EVALUATION"**

*EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:*

- to conduct their own research in the field of teaching methods of professional disciplines in the context of EP;
- it is necessary to inform about any actions in relation to the EP and publish all the changes made according to the criteria and assessment methods, as well as the criteria and methods for assessing the knowledge of students to reflect in syllabi.

### **6.6 STANDARD "STUDENTS"**

*EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:*

- to develop and implement a comprehensive program to attract, adapt foreign students and support gifted students;
- to provide for the possibility of assistance in obtaining external grants for training.

#### **6.7 STANDARD "FACULTY"**

***EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:***

- to increase the level of academic mobility of teaching staff and the degree of involvement of international and domestic teachers in conducting joint research in the implementation of educational programs;
- to continue work on the creation of electronic materials, as well as Mass open online courses (MOOCs).

#### **6.8 "EDUCATION RESOURCES AND STUDENT SUPPORT SYSTEMS" STANDARD**

***EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:***

- to complete the insufficiency of library resources, including the fund of educational, methodological and scientific literature on general education, basic and major disciplines in the languages of instruction.

#### **6.9 "PUBLIC AWARENESS" STANDARD**

***EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:***

- to ensure the availability of audited financial statements on the university's web resource;
- on an ongoing basis, to update information on cooperation with scientific organizations, business partners and educational organizations of Kazakhstan, as well as far and near abroad in the context of EP and information about the faculty of EP: education, scientific interests, achievements, publications, etc. on the university website;

#### **6.10. "STANDARDS IN THE CONTEXT OF INDIVIDUAL SPECIALTIES" STANDARD**

***EEC recommendations for 6B06101 - "Computer Science", 6B06102 - "Software Engineering", 6B06103 - "Big Data Analysis", 6B06104 - "Industrial Automation", 6B06105 - "Media Technologies" EPs:***

- to develop a program of interconnection and organization measures to strengthen the practical training of teaching staff and students in the professional field: internships and excursions to leading enterprises of Kazakhstan and distance / in-person special courses, master classes, seminars of leading ICT industry experts;
- to attract practitioners, international and domestic specialists to teaching activities within the framework of the EP.



**Appendix 1. Evaluation table “SPECIALIZED PROFILE PARAMETERS” (6B06101 - “Computer Science”, 6B06102 - “Software Engineering”, 6B06103 - “Big Data Analysis”, 6B06104 - “Industrial Automation”, 6B06105 - “Media Technologies”) Eps**

№	№	Criteria for evaluation	The position of the organization of education			
			Strong	Satisfactory	Need improvement	Unsatisfactory
<b>Standard " Management of Education Program "</b>						
1.	1.	The higher and (or) post graduate education organization should have a published quality assurance policy. The quality assurance policy should reflect the relationship between research, teaching and learning.	+			
2.	2.	The higher and (or) post graduate education organization should demonstrate the development of a culture of quality assurance, including in the context of the EP.		+		
3.	3.	Commitment to quality assurance should apply to any activities performed by contractors and partners (outsourcing), including in the implementation of joint / dual degree education and academic mobility.		+		
4.	4.	The management of the EP demonstrates commitment to ensuring transparency in creating of an EP’s development plan based on an analysis of its functioning, the actual positioning of EO and the focus of its activities on meeting the needs of the state, employers, students and other stakeholders. The plan should contain the start dates for the implementation of the educational program.	+			
5.	5.	The management of the EP demonstrates the existence of a mechanisms for the formation and regular revision of the development plan of the EP and monitoring of its implementation, assessing		+		

		the achievement of the training objectives, meeting the needs of students, employers and society, making decisions aimed at the continuous improvement of the EP.				
6.	6.	The management of the EP should involve representatives of stakeholder groups, including employers, students and teaching staff, in the development of an EP's development plan.		+		
7.	7.	The management of the EP should demonstrate the individuality and uniqueness of the development plan for the EP, its coherence with national development priorities and the development strategy of the higher and (or) post graduate education organization.	+			
8.	8.	The higher and (or) post graduate education organization should demonstrate a clear definition of those responsible for business processes within the framework of the EP, unambiguous distribution of the duties of the staff, delineation of the functions of collegial bodies.		+		
9.	9.	The management of the EP should provide evidence of the transparency of the educational program's management system.		+		
10.	10.	The management of the EP should demonstrate the existence of the internal quality assurance system of the EP, including its design, management and monitoring, their improvement, decision-making based on facts.		+		
11.	11.	The management of the EP should implement risk management, including in the framework of the EP passing ex-ante accreditation and demonstrate system of measures aimed at risk reduction.		+		
12.	12.	The management of the EP should ensure the participation of representatives of employers, teaching staff, students and other stakeholders in the collegial bodies of management of the educational program, as well as their representativeness in making managerial decisions related to the educational program.		+		
13.	13.	EO should demonstrate the management of innovation within the framework of the EP, including the analysis and implementation of innovative proposals.		+		

14.	14.	The management of the EP should demonstrate evidence of readiness for openness and accessibility for students, teaching staff, employers and other stakeholders.	+			
15.	15.	The management of the EP should be trained in management of education programs.		+		
<b>Total by standard</b>			<b>4</b>	<b>11</b>	<b>0</b>	<b>0</b>
<b>Standard «Information Management and Reporting»</b>						
16.	1.	EO should demonstrate the existence of the system for collection, analysis and management of information using modern information and communication technologies and software. EO uses a variety of methods to collect and analyze information in the context of EP.	+			
17.	2.	The management of the EP should demonstrate the existence of a mechanism for the systematic use of processed, adequate information to improve the internal quality assurance system.		+		
18.	3.	The management of the EP should demonstrate fact-based decision making.			+	
19.	4.	Under the EP there should be provided a system of regular reporting, reflecting all levels of structure, including an assessment of the effectiveness and efficiency of activities of structural units, departments and research.		+		
20.	5.	EO should establish the periodicity, forms and methods of the EP's evaluation management, the activities of collegial bodies and structural units, top management, the implementation of scientific projects.		+		
21.	6.	EO should demonstrate the definition of order and ensure protection of information, including the identification of responsible persons for the reliable and timely analysis of information and data provision.		+		
22.	7.	An important factor is the existence of a mechanism of the involvement of students, employees and teaching staff in the processes of collection and analysis of information, being the basis for making decisions.		+		
23.	8.	The management of the EP should demonstrate the existence of a mechanism of communication with students, employees and other stakeholders, including the existence of conflict resolution mechanisms.		+		
24.	9.	EO should demonstrate the existence of mechanisms for providing a measure of the degree of satisfaction of the needs of the teaching staff, personnel and students under the EP.		+		

25.	10.	EO should provide evaluation of the effectiveness and resulting quality of its activities, including in the context of the EP.		+		
		The information estimated to be collected and analyzed by the EO should take into account:				
26.	11.	key performance indicators;		+		
27.	12.	dynamics of students population in the context of forms and types;		+		
28.	13.	level of academic achievement, student achievement and failing students rate;		+		
29.	14.	students' satisfaction with the implementation of the EP and the quality of education at the EO;		+		
30.	15.	availability of educational resources and support systems for students.	+			
31.	16.	EO should confirm the implementation of the processing of personal data of students, employees and teaching staff based on their consent in writing form.		+		
<b>Total by standard</b>			<b>2</b>	<b>13</b>	<b>1</b>	<b>0</b>
<b>Standard «Development and Approval of Educational Programs»</b>						
32.	1.	EO should define and document the procedures for the development of the EP and their approval at the institutional level.		+		
33.	2.	The management of the EP should demonstrate the compliance of the developed EP with the established objectives, including the expected learning outcomes.	+			
34.	3.	The management of the EP should ensure the existence of the developed models of the EP's graduates, describing the results of training and personal qualities.		+		
35.	4.	The management of the EP should demonstrate the conduct of external reviews of the EP's content and planned results of its implementation.		+		
36.	5.	The qualification obtained on completion of EP should be clearly defined and consistent with a certain level of the NQF.		+		
37.	6.	The management of the EP should determine the impact of disciplines and professional practices on the formation of learning outcomes.		+		



38.	7.	An important factor is the possibility of students' training for professional certification.	+			
39.	8.	The management of the EP should provide evidence of the participation of students, the staff and other stakeholders in the development of the EP, ensuring its quality.		+		
40.	9.	The complexity of the EP should be clearly defined in Kazakhstan credits and ECTS.	+			
41.	10.	The management of the EP should ensure that the content of the academic disciplines and planned learning outcomes corresponds to the level of study (bachelor's, master's, doctoral).		+		
42.	11.	The structure of EP should provide for various activities ensuring achievement by students the planned learning outcomes.		+		
43.	12.	An important factor is the correspondence between the content of the EP and the results of EP's learning outcomes implemented by an organization of higher and (or) postgraduate education in the EHEA.		+		
<b>Total by standard</b>			<b>3</b>	<b>9</b>	<b>0</b>	<b>0</b>
<b>Standard «Ongoing Monitoring and Cyclic Evaluation»</b>						
44.	1.	EO should identify mechanisms of monitoring and periodically evaluate the EP in order to ensure that the goal is achieved and meet the needs of students and society. The results of these processes should be aim at the continuous improvement of the EP.		+		
		Monitoring and periodic evaluation of EP should provide:				
45.	2.	the content of the programs in the light of the latest scientific achievements in a specific discipline to ensure the relevance of the discipline being taught;		+		
46.	3.	changes in the needs of society and the professional environment;		+		
47.	4.	workload, academic performance and graduation;		+		
48.	5.	effectiveness of evaluation procedures for students;		+		
49.	6.	expectations, needs and satisfaction of students of teaching methods under the EP;		+		
50.	7.	the educational environment and support services and their compliance with the objectives of the EP.		+		
51.	8.	EO, management of the EP should identify a mechanism for informing all stakeholders of any planned or undertaken actions in relation to the		+		

		EP.				
52.	9.	All changes made to the EP shall be published. The management of the EP should develop a mechanism for review of the content and structure of the EP, taking into account changes in the labor market, the requirements of employers and the social demand of the society.		+		
<b>Total by standard</b>			<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>
<b>Standard «Student-Centered Learning, Teaching and Evaluation of learning»</b>						
53.	1.	The management of the EP should ensure respect and attention to different groups of learners and their needs, providing them with flexible learning paths.		+		
54.	2.	The management of the EP should ensure the use of various forms and methods of teaching and learning.		+		
55.	3.	An important factor is the availability of own research in the field of methods of teaching the academic disciplines.			+	
56.	4.	The management of the EP should demonstrate the availability of a mechanism for feedback system on the use of different teaching methods and the evaluation of learning outcomes.		+		
57.	5.	The management of the EP should demonstrate the existence of a mechanism of support for the autonomy of students with simultaneous guidance and assistance from the teacher.		+		
58.	6.	The management of the EP should demonstrate the existence of a procedure for responding to student complaints.		+		
59.	7.	EO should ensure the consistency, transparency and objectivity of the learning outcomes evaluation mechanism for each EP, including the appeal.		+		
60.	8.	EO should ensure that the procedures for evaluating the learning outcomes of students of EP are consistent with the planned learning outcomes and program objectives. Criteria and methods of evaluation should be published in advance.			+	

61.	9.	Mechanisms for ensuring that each graduate of EP has mastered the learning outcomes must be defined in EO, and the completeness of their formation is ensured.		+		
62.	10.	Reviewers should know modern methods for evaluation of learning outcomes and regularly improve their qualifications in this field.		+		
<b>Total by standard</b>			<b>0</b>	<b>8</b>	<b>2</b>	<b>0</b>
<b>Standard «Students»</b>						
63.	1.	EO should demonstrate the existence of a policy of forming students' population from admission until graduation and ensure the transparency of its procedures. Procedures regulating the life cycle of students (from admission to graduation) must be defined, approved, published.		+		
		The management of the EP should determine the order of formation of students' population on the basis of:				
64.	2.	minimum requirements for entrants;		+		
65.	3.	the maximum size of the group for conducting seminars, practical, laboratory and studio sessions;		+		
66.	4.	forecasting the number of government grants;	+			
67.	5.	analysis of available material, technical, information resources, personnel potential;	+			
68.	6.	analysis of potential social conditions provided to students, incl. providing places in dormitories.	+			
69.	7.	The management of the EP should demonstrate willingness to provide for special adaptation and support programs for newly enrolled and foreign students		+		
70.	8.	EO must demonstrate its compliance with the Lisbon Recognition Convention.		+		
71.	9.	EO should cooperate with other educational organizations and national centers of the "European Network of National Information Centers for Academic Recognition and Mobility / National Academic Recognition Information Centers" ENIC / NARIC to ensure comparable recognition of qualifications.		+		
72.	10.	The management of the EP should demonstrate the existence of a mechanism to recognize the results of academic mobility of students, as well as the results of additional, formal and informal training.		+		
73.	11.	EO should provide an opportunity for external and internal mobility of students of EP, as well as provide willingness to assist them in obtaining			+	

		external education grants.				
74.	12.	The management of the EP should demonstrate the willingness to provide practice-enrolled students, facilitate the employment of graduates, and maintain communication with them.		+		
75.	13.	EO should provide an opportunity for providing graduates of EP with documents confirming the received qualification, including the results achieved, as well as the context, content and status of the education received and evidence of graduation.		+		
76.	14.	An important factor is the existence of mechanism for monitoring of the employment and professional activities of EP's graduates.		+		
<b>Total by standard</b>			<b>4</b>	<b>9</b>	<b>1</b>	<b>0</b>
<b>Standard «Teaching Staff»</b>						
77.	1.	EO should have an objective and transparent personnel policy, earmarked for the specific EP, which includes hiring, professional growth and development of staff, ensuring the professional competence of the whole manning power.		+		
78.	2.	EO should demonstrate the conformity of the personnel potential of the faculty with the development strategy of the EO and the specifics of the EP.		+		
79.	3.	The management of the EP should demonstrate the awareness of responsibility for its employees providing them with favorable working conditions.		+		
80.	4.	The management of the EP should demonstrate a change in the role of the teacher in connection with the transition to student-centered learning.		+		
81.	5.	EO should determine the contribution of the faculty to the implementation of the development strategy of the EO and other strategic documents.		+		
82.	6.	EO should provide opportunities for career growth and professional development of the EP's teaching staff.		+		
83.	7.	The management of the EP should demonstrate the willingness to involve practitioners in the relevant sectors.		+		
84.	8.	EO should demonstrate the motivation for the professional and personal development of teachers, including encouraging both the		+		

		integration of research and education, and the use of innovative teaching methods.				
85.	9.	An important factor is willingness to develop of academic mobility under the EP, attracting the best foreign and domestic teachers.		+		
<b>Total by standard</b>			<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>
<b>Standard «Educational Resources and Student Support Systems»</b>						
86.	1.	EO should guarantee a sufficient number of accessible and correspondent with the learning objectives training resources and support services for students.		+		
87.	2.	EO should demonstrate the sufficiency of material and technical resources and infrastructure taking into account the needs of different groups of students under specific EP (adults, working, foreign students, as well as disabled students).	+			
		The management of the EP should demonstrate the existence of support procedures for various groups of students, including information and counseling. The management of the EP should demonstrate the compliance of information resources with the specifics of the EP, including:				
88.	3.	technological support for students and teaching staff in accordance with educational programs (for instance, online training, modeling, databases, data analysis programs);		+		
89.	4.	library resources, including a fund for educational, methodological and scientific literature on general education, basic and major disciplines in hard or soft copies, periodicals, access to scientific databases;			+	
90.	5.	examination of the results of research, final papers, dissertation papers on plagiarism;		+		
91.	6.	access to educational Internet resources;		+		
92.	7.	the functioning of WI-FI in the area of the educational organization.	+			
93.	8.	EO should strive to ensure that the training equipment and software used to develop the EP are similar to those used in the relevant industries.	+			
<b>Total by standard</b>			<b>3</b>	<b>4</b>	<b>1</b>	<b>0</b>
<b>Standard «Public Awareness»</b>						
		EO should publish reliable, objective, relevant information about the educational program and its specifics, which should include:				



94.	1.	expected learning outcomes of the implemented educational program;	+			
95.	2.	qualification and (or) qualifications, which will be awarded upon completion of the educational program;	+			
96.	3.	approaches to teaching, training, and systems (procedures, methods and forms) of evaluation подходы;		+		
97.	4.	information on "pass" scores and educational opportunities provided to students;		+		
98.	5.	information on employment opportunities for graduates		+		
99.	6.	The management of the EP should use a variety of ways to disseminate information (including media, web resources, information networks etc.) to inform the general public and stakeholders.		+		
100.	7.	Public awareness should support and explain national development programs of the country and the system of higher and postgraduate education.		+		
101.	8.	EO should publish audited financial statements on its own web resource including in reference to specific EP.		+		
102.	9.	An important factor is the availability of adequate and objective information about the faculty of EP.		+		
103.	10.	An important factor is public awareness about cooperation and interaction with partners under the EP.		+		
<b>Total by standard</b>			<b>2</b>	<b>8</b>	<b>0</b>	<b>0</b>
<b>Standards by Specific Specialties</b>						
<b>«TECHNICAL SCIENCES AND TECHNOLOGIES»</b>						
		Educational program in the areas of "Natural Sciences", "Technical sciences and technologies" should comply with the following requirements:				
104.	1.	EP should include disciplines and activities aimed at gaining practical experience and skills in the specialty as a whole and majoring disciplines in particular, including:  - site visits to enterprises in the field of specialization (factories, workshops, research institutes, laboratories, scientific and experimental households, etc.); - individual lessons or complete courses on			+	

		specialization of enterprises; - workshops for solving practical problems of relevance at companies in the field of EP's specialization, etc.				
105.	2.	The teaching staff involved in the EP shall include in-house practitioners who have long-term experience working at enterprises in the field of EP's specialization.			+	
106.	3.	The content of all disciplines of EP should be based and have a clear relationship with the content of the fundamental natural sciences.		+		
107.	4.	The management of the EP should provide measures for strengthen practical training in the field of specialization.		+		
108.	5.	The management of the EP should provide the training of students in the field of application of modern information technologies.			+	
<b>Total by standard</b>			<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>
<b>Total</b>			<b>18</b>	<b>83</b>	<b>7</b>	<b>0</b>