

«АККРЕДИТТЕУ 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 the external expert commission for assessment of compliance with the requirements of the standards of specialized accreditation of educational programs

7M06103 Information Systems6B06103 Intelligent Robotics6B06104 Software Engineering

on the period of April 3-5,2024



#### INDEPENDET AGENCY FOR ACCREDITATION AND RATING External expert commission

Addressed to Accreditation Council of IAAR



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Almaty, 2024

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### (I) LIST OF SYMBOLS AND ABBREVIATIONS

ECTS - The European Credit Transfer and Accumulation System AMS - administrative and managerial staff BD – basic disciplines EEC – external expert commission SCC - STATE CERTIFICATION COMMISSIONS SCES – State Compulsory Education Standard ICT - Information and communication technologies IC – individual curriculum CC – component of choice (Electives) CQASES - Committee for Quality Assurance in the Sphere of Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan CED – catalog of elective disciplines MEP – modular educational programs IAAR – Independet agency for accreditation and rating **RI** – Research Institute RW – research work NOF – National Qualifications Framework MC – mandatory component GD – general disciplines **EP** – educational programs MD - Major disciplines TS – Teaching staff RK – Republic of Kazakhstan WC – working curriculum QMS – quality management system MIW - master's independent work SIW – students' independent work TSIW – Teacher and student's independent work EMC – educational-methodical complex EMCD – educational-methodical complex of the discipline EMCS – educational-methodological complexes of the specialty EMC - educational-methodological council

#### (II) <u>INTRODUCTION</u>

In accordance with the order № 40-24-OD dated 31.01.2024 of the Independent Agency for Accreditation and Rating from 3 to 5 April 2024, the external expert commission assessed the compliance of educational programs 7M06103 Information Systems, 6B06103 Intelligent Robotics, 6B06104 Software Engineering of the institution 'Turan University' (Almaty) with the standards of specialized accreditation of educational programs of the organization of higher and postgraduate education IAAR (№57-20-OD dated 16 June 2020, sixth edition).

The report of the EEC contains the assessment of the submitted educational programs to the criteria of the IAAR standards, recommendations of the EEC on further improvement of educational programs and parameters of the profile of educational programs.

Members of the EEC:

1) Chairman of the IAAR Commission - Yury Eduardovich Belykh, Candidate of Physico-Mathematical Sciences, Associate Professor, IAAR Category I Expert (Republic of Belarus) Offline participation

2) *IAAR Expert* - Almagul Kanagatova Medikhatovna, Doctor of Philology, CEO Global Nomad Education (Republic of Kazakhstan) *Off-line participation* 

3) *IAAR Expert* - Boyko Svetlana Leonidovna, Candidate of Medical Sciences, Dean of Faculty of Grodno State Medical University (Republic of Belarus) *Off-line participation* 

4) **IAAR Expert** - Timur Saatdinovich Kartbaev, PhD, IIA Academician, Information Systems Officer, Kazakh State Women's Teacher Training University (Republic of Kazakhstan) *Off-line participation* 

5) *IAAR Expert* - Yusupova Adalat Akhmetovna, MBA, Head of EMC, Lecturer of the Department of 'Vocal Art' and 'Music Education and Pedagogical Innovations', Kazakh National Conservatory named after Kurmangazy (Republic of Kazakhstan). *Off-line participation* 

6) *IAAR Expert* - Kairdenov Serik Syrlybaevich, Master of Law, Candidate of Economic Sciences, Associate Professor, Kokshetau University named after Sh.Ualikhanov (Republic of Kazakhstan). *On-line participation* 

7) *IAAR Expert* - Aliya Sagyndykova Aktymbaeva, Candidate of Geographical Sciences, Associate Professor, Department of Recreational Geography and Tourism, Al-Farabi Kazakh National University (Almaty) *Off-line participation* 

8) *IAAR Expert* - Aigul Temirbolatovna Yergalieva, Candidate of Art History, Associate Professor of the Department of Traditional-Musical and Performing Arts, M.Utemisov West Kazakhstan University (Republic of Kazakhstan). *Off-line participation* 

9) *IAAR Expert, employer* - Khamzina Kalamkas Karimtaevna, Specialist, Department of Culture, Akmola region (Republic of Kazakhstan) *On-line participation* 

10) *IAAR Expert, employer* - Niyaz Zhalgasuly, Director of Alatau branch of National Chamber of Entrepreneurs 'Atameken' (Republic of Kazakhstan) *Off-line participation* 

11) *IAAR Expert, student* - Aruzhan Muratkyzy Tynymbayeva, 2nd year Master's student, L.N. Gumilyov Eurasian National University, Member of the Alliance of Students of Kazakhstan (Republic of Kazakhstan) *On-line participation*.

12) *IAAR Expert, student* - Sailau Adilet, 3rd year student of 'Information Systems' at Al-Farabi Kazakh National University, Member of the Alliance of Students of Kazakhstan (Republic of Kazakhstan) *Off-line participation*.

13) *IAAR Expert, student* - Abdurusul Sanzhar Sayatzhanuly, 4th year student of 'Tourism', Kazakh University of International Relations and World Languages named after Abylai Khan, Member of Students' Alliance of Kazakhstan (Almaty, Republic of Kazakhstan) *Off-line participation* 

14) *IAAR Expert, student* - Bolat Maral Berikbolkyzy, 2nd year student of 'Clinical Psychology', Member of the Alliance of Students of Kazakhstan, Aktobe Regional University named after K.Zhubanov (Republic of Kazakhstan) *On-line Participation* 

15) **IAAR Coordinator** - Malika Akhyadovna Saidulaeva, Project Manager, Independent Agency for Accreditation and Rating (Republic of Kazakhstan) *Off-line participation* 



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

The university was established in 1992, is one of the first and largest non-state universities in Kazakhstan, and is part of the "Turan" educational corporation.

Educational Corporation "Turan" is an integral complex that ensures the principle of continuity and multi-stage education. It includes the "Turan Lyceum" school, 2 colleges in the cities of Almaty and Astana, 2 universities - Turan University and Turan-Astana University, as well as the Tau-Turan educational and health complex in the Belbulak gorge of the Almaty region.

The University's activities cover the full educational cycle: bachelor's – master's – PhD – dissertation council. It consists of the following faculties/schools: Economics, Humanities and Law, Faculty of Digital Technologies and Arts, Higher School of Business (HSB) and Foundation Preparatory Faculty, 15 departments, 4 institutes: Research Institute of Tourism, Institute of World Economy and International Relations, Research Institute of Law, Research Institute of Informatization of Education (established in 2020), departments, centers and divisions. There are 3 dissertation councils.

In the 2023-2024 academic year, 29 undergraduate educational programs are being trained, 24 master's programs (including MBA, EMBA), 5 doctoral programs and 1 DBA. The student population is 5143 people: students - 4753, master's students - 329, doctoral students - 61.

The University has 338 full-time teachers, including 34 Doctors of Science, 92 Candidates of Science, 39 PhD. Part-time teachers from other universities, business practitioners, and foreign professors participate in the educational process.

The university has a modern material and technical base that meets the requirements of sanitary standards and regulations, the requirements of the SCES. The university occupies an area of 10.5 hectares; the total area of buildings and structures is 57,364 m2. The material and technical base of the university includes: 4 educational buildings with full infrastructure - 25342.4 m2, including 4 medical care facilities and 5 catering facilities, physical education and sports facilities; 3 dormitories - with a total area of 3299.7 m2; outdoor sports grounds - 6559 m2; educational and health complex "Tau - Turan" - 4,283 m2.

As part of the implementation of the "digital university" concept, the Turan automated control system (ACS) is being developed, which is the central link of its IT infrastructure. ACS "Turan" allows for automation and unification of educational process management and contributes to the effective management of the University's information resources. The library collection is an integral part of the University's information resources; it contains 309,154 titles of all types and types of publications, including 54,157 titles in the electronic library. Of these, textbooks, educational and teaching aids - 81,693 copies.

RW and innovation activities of TS and students are one of the most important areas of the University's activities. Its effectiveness in 2022 is confirmed by the successful completion of reaccreditation of the University as a subject of scientific and (or) scientific and technical activities. The university publishes the scientific journal "Bulletin of the University "Turan"", which is included in the list of CQASES RK (https://vestnik.turan-edu.kz/jour). Since 2023, new journals "Eurasian Journal of Current Research in Psychology and Pedagogy" and "Eurasian Scientific Journal of Law" (https://esjl.turan-edu.kz/jour, https://ejcrpp.turan-edu.kz/jour).

The geography of international cooperation in 2023 covers 39 countries. The total number of agreements between the University and universities near and far abroad has increased over the past 4 years from 120 (2019) to 225. From year to year, partnerships with international organizations are strengthened, including the UN Office in Kazakhstan, the National Office of Erasmus + in Kazakhstan", Foundation "Eurasia Foundation (from Asia)". The university has membership in international organizations UNESCO, GUESSS, UNAI, Triple Helix Association.

According to the results of the General Rating of the TOP-20 universities of the Republic of Kazakhstan, conducted by the IAAR, it is annually included in the top ten best humanitarian universities of the Republic of Kazakhstan. In the Independent Rating of Demand for Universities of the Republic of Kazakhstan - 2023, Turan University took 6th place (p. 68 of the IAAR Report

on the website https://iaar.agency/rating/1/0/2023). Every year, the university's EPs participate in national ratings conducted by the NCE RK "Atameken" (https://turan.edu.kz/ru/ob-universitete/ratings/).

University "Turan" is the winner of the Prize of the President of the Republic of Kazakhstan "Altyn Sapa - 2020" - the most prestigious national award in the field of quality.

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

International specialized accreditation of EP:

- 6B06103 Intelligent Robotics, 6B06104 Software engineering according to IAAR standards is carried out for the first time.

- 7M06103 Information systems:

In accordance with Order No. 6-19-OD dated January 24, 2019 of the Independent Agency for Accreditation and Rating, from February 20 to February 22 (inclusive) 2019, an external expert commission assessed the compliance of Turan University with the standards of specialized accreditation of the IAAR for the programs " 5B070300 Information systems", "7M06103 Information systems" and "5B070400 Computer technology and software", "6M070400 Computer technology and software".

Composition of the previous EEC at Turan University (2019):

Chairman – Pak Yuriy Nikolaevich, Doctor of Technical Sciences, Professor of Karaganda State Technical University.

Foreign expert – Sophio Khundadze, PhD, DBA, associate professor, head of the educational programs development department of the Quality Assurance Department of the European University (Tbilisi, Republic of Georgia)

National expert – Kunakova Klara Umirzakovna, Doctor of Pedagogical Sciences, Professor of the Department of Theoretical and Applied Linguistics of the Kazakh University of International Relations and World Languages. Abylai Khan (Almaty).

Employer – Askar Aytuov, head of the innovation laboratory DAR Lab (Almaty).

Student – Nurmukhan Zarina Bakytzhankyzy, 3rd year student of the specialty "5B011900 - Foreign language: two foreign languages" at the Kazakh University of International Relations and World Languages named after Abylay Khan (Almaty).

National expert – Mirzhakypova Sedep Toktamuratovna, Doctor of Economics, Professor at Narxoz University (Almaty)

National expert - Maya Zhetkergenovna Arzaeva, head of the Department of Finance, Higher School of Economics and Business, Kazakh National University. al-Farabi (Almaty)

Student – Toleubay Daryn Ermekbayuly, studying specialty "5B050900 Finance" at the Kazakhstan University of Engineering and Technology (Almaty)

National expert - Rakisheva Aigul Kuanyshbaevna, Ph.D., Associate Professor, Corresponding Member of the International Academy of Science and Practice of Production Organization, member of the Expert Project Club "Astana ExProClub – 2025", member of the Astana Project Managers Club (Astana)

National expert - Ayapova Zhamal Madakhmetovna, Ph.D., DBA, Director of the School of Business of KazGUU University (Astana)

The student is Suleimenova Aida Erzhankyzy, a 3rd year student in the specialty "6B051100 Marketing" at the Kazakhstan University of Engineering and Technology (Almaty).

Foreign expert – Vladimir Alekseevich Zernov, Doctor of Technical Sciences, Professor, Rector of the Russian New University, Chairman of the Council of the Association of Private Educational Organizations of Higher Education and Professional Educational Organizations of Russia (Moscow)

National expert - Gusmanova Farida Ravilievna, Ph.D., Associate Professor of the Department of Informatics, Kazakh National University. al-Farabi (Almaty)

The student is Kasymkhan Aizada Aidynkyzy, a 3rd year student in the specialty "5B070400 Computer Science and Software" at the Kazakh National University. al-Farabi (Almaty)

IAAR observer – Guliyash Balkenovna Niyazova, project manager for institutional and specialized accreditation of universities (Astana).

Recommendations to the university within the framework of the previous accreditation procedure for the educational program 7M06103 Information Systems (2019):

Standard "Educational Program Management"

Intensify work on cooperation and exchange of experience with universities implementing educational programs similar to those being accredited.

Continue the implementation of consulting and research work in accordance with the priorities of national policy in the field of education, science and innovative development.

Clarify and formalize the mechanism for identifying and managing OP risks.

Information Management and Reporting Standard

Provide the ability to analyze information in order to identify and predict risks.

Improve the system for assessing the effectiveness and efficiency of EP implementation in order to determine opportunities for improving the quality of EP based on information analysis.

Strengthen awareness of students about the latest scientific achievements in the field of IT. Standard "Development and approval of an educational program"

Consider the issue of developing joint educational programs with foreign educational organizations, including the following points:

- inclusion of disciplines with a research direction in the QED of joint educational programs;

- implementation of programs for external academic mobility of students and teaching staff;
- implementation of double-degree education programs.

Inform students about the latest scientific achievements in the field of IT.

Consider preparing students for professional certification.

Standard "Continuous monitoring and periodic evaluation of educational programs"

Develop criteria for assessing all types of student work (practice, laboratory work, all types of independent work, etc.).

Standard "Student-centered learning, teaching and assessment of performance"

To intensify the development of scientific research and dissemination of our own research in the field of teaching methods of educational disciplines of EP.

Continue the development of scientific research and dissemination of our own research in the field of teaching methods of EP academic disciplines.

Standard "Students"

Consider the possibility of creating a special adaptation and support program for.

Continue the participation of students in research activities, including funded scientific projects of the specialty teaching staff.

Continue work to develop external and internal academic mobility of students.

Create opportunities for professional certification of students in the IT field.

Intensify cooperation with educational institutions and national ENIC/NARIC centers to ensure comparable recognition of qualifications.

Standard "Teaching staff"

Develop academic mobility within the framework of OP 6M070400 - "Computer technology and software", 6M070300 - "Information systems", attract the best foreign and domestic teachers, joint scientific research.

Promote the active participation of teaching staff in research work and increasing the level of funded work.

Standard "Educational Resources and Student Support Systems"

Strengthen the filling of the AIS "Platonus" with educational and methodological documentation in the context of EP disciplines, including structured information (presentation

materials, videos, lecture notes, scientific works of teaching staff, relevant educational literature, etc.).

Public Information Standard

Continue work on posting structured information about teaching staff on the website (personal management pages, teaching staff, lists of scientific papers, schedules, contact information, etc.).

Reflect on the university website information about the interaction of the EP cluster with scientific organizations and educational organizations implementing similar educational programs.

Standard "Standards in the context of individual specialties"

Continue the work of the scientific and methodological seminar on the use of IT in the educational process.

On April 5, 2019, by decision of the IAAR Accreditation Council, the educational program 7M06103 Information systems implemented by Turan University was accredited for 5 years.

To implement the recommendations, an action plan was developed at the university, approved on May 2, 2019. The results of the implementation of the planned activities are reflected in the interim reports of Turan University.

Post-monitoring control to assess the implementation of the recommendations of the IAAR EEC, formed based on the results of specialized accreditation of educational 7M06103 Information systems by the IAAR expert group, was carried out at the Turan University on June 7, 2021 (stage 1) and April 24, 2023 (stage 2). Post-accreditation monitoring of the activities of Turan University was carried out within the framework of the action plan for the implementation of the recommendations of the EEC and was carried out in accordance with the requirements of the regulations on post-accreditation monitoring.

Post-accreditation monitoring of the activities of Turan University showed that, in general, the recommendations given by the EEC are being implemented, with the exception of some recommendations.

Based on the results of post-accreditation monitoring, the results of some standards have not been updated since 2021. 17 out of 25 indicators are marked as fully implemented. Most of the recommendations that were not implemented were of an organizational or documentary nature.

The average degree of implementation for 25 recommendations was about 90%.

(V) VISIT DESCRIPTION OF THE EEC

The work of the EEC was carried out on the basis of the approved program of the visit of the expert commission for specialized accreditation of educational programs to the Turan University institution in the period from April 3 to April 5, 2024.

In order to coordinate the work of the EEC, an orientation meeting was held in advance, during which powers were distributed among the members of the commission, the schedule of the visit was clarified, and agreement was reached on the choice of examination methods.

To obtain objective information about the quality of educational programs and the entire infrastructure of the university, and to clarify the content of self-assessment reports, meetings were held with the rector, vice-rectors for areas of activity, heads of structural divisions, deans and heads of departments, teaching staff, students, and meetings with stakeholders. A total of 83 representatives took part in the meetings (Table 1).

Table 1 - Information about employees and students who took part in meetings with the IAAR EEC:

Category of participants	Quantity
Rector	1
Members of the Board - Vice-Rector	4
Heads of structural divisions	19
Deans	4
Heads of departments and heads of educational programs	9
Teaching staff	16
Students	21
Employers	4
Graduates	5
Total	83

During the excursion, members of the EEC got acquainted with the state of the material and technical base of the university, visited classrooms for conducting lectures, practical and laboratory work on the profile of accredited educational programs, the university library, and the places of operation of support services for the educational, scientific, social and educational process.

At the meeting of the EEC of the IAAR with the target groups of the university, the mechanisms for implementing the university's policy were clarified and certain data presented in the university's self-assessment report were specified.

EEC experts reviewed the practice databases and also asked questions to the heads of organizations regarding the practice databases.

In accordance with the accreditation procedure, an online survey of teachers and students was conducted.

In order to confirm the information presented in the Self-Assessment Report, external experts requested and analyzed the working documentation of the university. Along with this, experts studied the online positioning of the university through the official website of the university(https://turan.edu.kz/).

As part of the planned program, recommendations for improving the accredited educational programs of the Turan University institution, developed by the EEC based on the results of the examination, were presented at a meeting with the management on April 5, 2024.

#### (VI) COMPLIANCE WITH SPECIALIZED ACCREDITATION STANDARDS

6.1. Standard "Educational Program Management"

✓ *The university must have a published quality assurance policy.* 

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

 $\checkmark$  The university must demonstrate the development of a quality assurance culture, including in the context of *EP*.

✓ A commitment to quality assurance must apply to all activities carried out by contractors and partners (outsourcing), including joint/double degree education and academic mobility.

 $\checkmark$  The management of the EP ensures transparency in the development of the EP development plan based on an analysis of its functioning, the real positioning of the university and the focus of its activities on meeting the needs of the state, employers, stakeholders and students.

 $\checkmark$  The management of the EP demonstrates the functioning of the mechanisms for the formation and regular review of the EP development plan and monitoring its implementation, assessing the achievement of learning goals, compliance with the needs of students, employers and society, and making decisions aimed at continuous improvement of the EP.

 $\checkmark$  The management of the EP should involve representatives of stakeholder groups, including employers, students and teaching staff in the formation of a development plan for the EP.

 $\checkmark$  The leadership of the EP must demonstrate the individuality and uniqueness of the development plan of the EP, its consistency with national development priorities and the development strategy of the educational organization.

The university must demonstrate a clear definition of those responsible for business processes within the EP, an unambiguous distribution of job responsibilities of staff, and delimitation of the functions of collegial bodies.
 The management of the educational program must provide evidence of the transparency of the educational program management system.

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

✓ The management of the EP must implement risk management.

 $\checkmark$  The management of the educational program must ensure the participation of representatives of interested parties (employers, teaching staff, students) in the collegial bodies governing the educational program, as well as their representativeness when making decisions on issues of managing the educational program.

 $\checkmark$  The university must demonstrate innovation management within the EP, including the analysis and implementation of innovative proposals.

✓ The management of the EP must demonstrate evidence of openness and accessibility for students, teaching staff, employers and other interested parties.

*The management of the educational program must undergo training in educational management programs.* 

 $\checkmark$  The management of the EP should ensure that the progress made since the last external quality assurance procedure is taken into account in preparation for the next procedure.

#### Evidence

At the institution "Turan" University (hereinafter referred to as the University), personnel training in EP 6B06103 - Intelligent Robotics, 6B06104 - Software Engineering, 7M06103 "Information Systems" is carried out in accordance with the State License of the Ministry of Education and Science of the Republic of Kazakhstan No. 14001575/No. KZ42LAA00001579 dated 05.02.2014, issued by the Committee for Control in the Sphere of Education and Science of the Republic of Kazakhstan.

The management of accredited EPs provides evidence of the involvement of representatives of business structures in their design and examination (copies of expert opinions are presented in the self-assessment report).

When planning, the management and structural divisions of the university rely on existing regulatory documents, state standards and state programs for the development of higher education. The strategic development plan defines the main directions of the university's work and contains benchmarks. The implementation of plans, the dynamics of the university's activities, the level of development according to various indicators is determined through a system for monitoring the activities of departments, faculties by type of activity, monitoring the knowledge of students,

ratings of teachers based on performance results, and checking reporting documentation. Based on the results of the reporting documentation, planned activities are also adjusted. This approach involves work, including risk management, which is divided into external and internal. This issue is considered at meetings of the relevant collegial bodies, where the degree of threat from existing risks to the implementation of the EP at the current moment is clarified.

At the EP level, the university departments carry out risk management measures according to the developed mechanism for identifying and managing EP risks in accordance with the paragraph "Measures for managing EP risks" of the procedure "Managing a modular educational program"; a risk register for the relevant EP is compiled and approved.

Risk assessment is carried out on the basis of a SWOT analysis of EP 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information systems in the educational services market, taking into account the areas of training of specialists by competing universities.

In order to manage EP risks, the following is carried out: analysis of the external and internal environment (determining the likelihood of their occurrence, their impact on core activities, possible consequences, determining the level of criticality); drawing up a risk map; risk identification; selection of risk reduction methods/techniques. Possible risk management methods: risk acceptance; risk aversion; risk localization; risk diversification; risk compensation; timely resolution of conflicts of interest that arise during the implementation of the EP; creation of reserves to ensure continuity of implementation of the EP; distribution of powers and functions between departments and other divisions, eliminating their duplication; ensuring timely preparation of complete and reliable reporting regarding the disclosure of information on risks.

In accordance with the selected methods, the necessary risk management actions are planned and implemented, they are monitored and adjusted, which is regulated by the Procedure "Management of Modular Educational Programs", which contains the section "Risk Management".

Issues of identifying and managing risks of EP 6B06103 - Intelligent Robotics, 6B06104 - Software Engineering, 7M06103 - Information Systems were discussed at meetings of the IT and KPI departments. Based on the results of the meetings, measures to eliminate and reduce risks were developed. Among them, the publication of educational and methodological aids developed by teaching staff of departments, at the expense of the university in accordance with the Thematic Plan for the publication of educational and methodological literature, which is annually compiled by the educational and methodological department at the request of the departments, taking into account the map of educational and methodological provision of the EP (formed in the automated control system " Turan").

The AC undergraduate and graduate programs EP 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information Systems include employers: Rashev Sabit Dosmaganbetovich, Ph.D., Associate Professor, expert of SEZ "PIT "Alatau", Kalimoldaev Maksat Nuradilovich, academician NAS RK "Institute of Information and Computing Technologies" of the Science Committee of the Ministry of Education and Science of the Republic of Kazakhstan; Dzhaparov Boris Alikenovich – Doctor of Technical Sciences, Professor, Director of the Association of Users of the Scientific and Educational Computer Network of Kazakhstan "KazRENA"; Naumenko V.V. – General Director of IE "Cluster WEB", Konysbaev A.T., Ph.D., President of the Association for Assistance to the Development of the Alatau Sity Information Technology Park.

Students, employees and interested parties can count on help and additional explanations by contacting department heads, deans, vice-rectors personally at any time, and the rector through the rector's blog or at specially designated times. Suggestions and recommendations can also be made during meetings of collegial bodies, which include students and teachers.

The university demonstrates its work on innovation management https://turan.edu.kz/ru/nauka-i-innovaczii/. The educational process for EP 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information Systems includes new modern courses taking into account the analysis of the latest trends in education: "Model Checking for information systems", "Agile approach in project management", "Systems" statistical data analysis (in Python)", "Data Mining and Visualization", "Machine Learning", "Arduino Programming", "Internet Entrepreneurship", "E-Commerce", "UX/UI Design", "Data Analytics", "Introduction to Entrepreneurship", "Business Organization".

The rector's blog has been opened on the university website www.turan-edu.kz/rector. Meetings between the rector and students are periodically organized. Deans of faculties regularly meet with students on current student issues. Together with political parties and movements, public hearings, actions and events are held on anti-corruption topics, on the prevention of crime and religious extremism among students.

The implementation of accredited EPs is consistent with the strategy, mission, vision and values of the University. Quality assurance of the EP implementation is carried out in accordance with the Quality Assurance Policy approved by Order No. 72 of May 4, 2021 based on the decision of the Academic Council (Minutes No. 12 of April 29, 2021, Appendix 1.1) https://turan.edu.kz/ru/politika-universiteta/, requirements of ESG standards, ISO 9001:2015 "Quality management system. Requirements", procedures PRO UT 805-23 "Management of a modular educational program", PRO UT 810-23 "Quality control of the educational process", etc. The quality assurance policy reflects the connection between scientific research, teaching and learning.

According to the professional development plan, the university organizes advanced training courses for EP managers and top management. Thus, the heads of accredited EP Kiseleva O.V., Baytenova L.M., including the dean of the faculty and the vice-rector, have completed advanced training courses and have advanced training certificates in the field of management in education.

In accordance with the mission, the strategic development goals are to improve the quality of education and training of graduates, ensuring a stable position of the University in a competitive market for educational services and the labor market, harmonization of Kazakhstani education and compliance of higher education as a system with the goals, needs, norms and requirements of the main consumers: individuals, society, state. The content of the EP is aimed at developing students' personal qualities and developing competencies in accordance with the SCES and the needs of the labor market, which corresponds to the mission and Development Strategy of the university for 2021-2024.

Responsibility for business processes within the EP is distributed according to their functional characteristics. During the implementation of the EP at the department at the beginning of the academic year, those responsible for research work, research work, practice and strategic partnership, educational training, international cooperation and employment of graduates are appointed.

Requirements for the types of activities carried out under outsourcing conditions are recorded in regulatory legal acts, including Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 30, 2018 No. 595 "On approval of standard rules for the activities of organizations of higher and (or) postgraduate education" ( with amendments and additions dated January 20, 2023, Order of the Minister of Education and Science of the Republic of Kazakhstan No. 391 dated June 17, 2015 "On approval of qualification requirements for the educational activities of organizations providing higher and (or) postgraduate education, and the list of documents , confirming compliance with them" (with amendments and additions dated January 29, 2023), as well as Decree of the Government of the Republic of Kazakhstan dated December 20, 2016 No. 832, as amended on June 10, 2022 "On approval of uniform requirements in the field of information and communication technologies and software information security", Order of the Minister of Education and Science of the Republic of Kazakhstan dated March 2, 2020 No. 79 "On determining the minimum requirements for software, hardware and application software used in educational organizations", which the university adheres to.

At Turan University, an electronic survey "Teacher through the eyes of students" and "Evaluation of satisfaction with the educational program" is systematically conducted. The results of internal sociological surveys are discussed at the Academic Council of the university and are

widely used in drawing up programs for further development and assessing the quality of the university.

According to the survey results, the question about the accessibility of the manual to students and teachers was generally assessed as good and the following result was obtained from the point of view of teaching staff: 66.7% answered very well, 30.6% answered well, 2.7% responded relatively poorly. Among the teaching staff, the following survey results were obtained: 64.9% responded very well, 34.2% responded well, and 0.9 responded relatively poorly. Analyzing the results of the survey, we can conclude that there are a few unsatisfactory answers on this issue. From the point of view of students, the level of accessibility and responsiveness of the university management is generally assessed very well and the following result was obtained: very good - 71.1%, good - 26.5%, relatively bad - 1.2%, bad - 1.2%, it can also be noted that there are isolated unsatisfactory answers to this question.

To the question about stimulating innovative activities of teaching staff, respondents answered as follows: very well - 50.5%, good - 45.9%, relatively bad - 2.7%, bad - 0.9%. We also observe isolated unsatisfactory responses from the teaching staff.

#### Analytical part

The Commission notes that:

The Education Quality Policy of the University of Turan is posted on the university website https://turan.edu.kz/ru/politika-universiteta and reflects the general approaches, key principles and basic mechanisms established at the university to ensure quality and develop a culture of continuous quality improvement and reflects link between research, teaching and learning. In addition, the university demonstrated the development of a quality assurance culture based on the quality assurance policy and the current QMS.

Commitment to quality assurance applies to any activity performed by contractors and partners, including the purchase of materials and goods, the hiring of part-time workers on the basis of agreements and memorandums concluded between the university and partners, executors.

EP managers are developing an EP development plan, but there are no requirements and algorithms for ensuring transparency, individuality and uniqueness in the development of an EP implementation plan.

To reveal issues related to the availability of mechanisms for the formation and regular review of the EP development plan and monitoring its implementation, assessing the achievement of learning goals, compliance with the needs of students, employers and society, making decisions aimed at continuous improvement of the EP, an illustration of the influence of targets (indicators) is also required ) for accredited educational institutions.

The management of the EP involves representatives of stakeholder groups, including employers, students and teaching staff in the formation of a development plan for the EP.

The university demonstrated the organizational structure, the distribution of staff duties in accordance with job descriptions, and the delimitation of the functions of collegial bodies in accordance with the regulations.

The university positions itself as an innovative and entrepreneurial one, but the mechanism for managing innovation in the university's activities, planning and reporting, as well as within the educational program has not been demonstrated.

The EP development plan presented possible risks within the EP and measures to reduce their impact, however, the EEC notes that the risk register is formal and consists of only 2 points.

The heads of accredited educational institutions ensure the participation of employers and teaching staff studying as part of the Academic Committee.

The teaching staff is engaged in scientific and innovative projects, and also defends dissertations for a doctoral degree, however, during the study of the content of the disciplines, it was not possible to discover the results of introducing the departments' research into the educational process. In this regard, the university needs to clarify the mechanisms for managing innovation in the entire university and in the context of EP.

To ensure openness and accessibility of the management of the EP to students, teaching staff, employers and other stakeholders, their contact information is posted on the official website of the university, in addition there is a blog of the rector.

The university has a plan for advanced training and the management of the educational program systematically undergoes advanced training in the field of educational management. These courses are paid for at the expense of the university.

According to the previous accreditation by the management of the EP, 17 out of 25 indicators were fully implemented. Most of the recommendations that were not implemented were of an organizational or documentary nature. The average degree of implementation for 25 recommendations was about 90%.

### Strengths/best practices according to accreditation EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

1. The university pays special attention to the completion of training by the management of the EP in management programs and all managers have certificates of completion of courses within these programs.

2. Within the framework accredited by the EP, the management of the EP ensures the development of culturequality assurance, including in the context of EP, participation of representatives of employers, teaching staff, students and other interested parties in the collegial bodies governing the educational program, as well as their representativeness in decision-making on issues of managing the educational program.

# EEC recommendations for EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

1. The management of the university should develop and implement into practice the implementation of the EP:

- requirements and algorithms for ensuring transparency in the development of an EP implementation plan;

- mechanisms for the formation and regular review of the EP development plan and monitoring its implementation, assessing the achievement of learning goals, compliance with the needs of stakeholders;

- requirements for ensuring the individuality and uniqueness of the EP development plan, its consistency with national development priorities and the university development strategy, and for their explicit presentation in the content of the EP development plan. Until June 30, 2024.

2. The management of the EP on an ongoing basis ensures the transparency of the EP management system, the implementation of the developed requirements and mechanisms, the reflection of the analysis and results of this activity in reporting documents at the faculty and department level.

3. The management of the university should determine and document the procedure for risk management at the level of structural divisions and within the EP. Until June 30, 2024.

4. The management of the university should provide for innovation management in planning, reporting and activity procedures based on the implementation of all basic management functions, including planning, organization, stimulation, analysis. Until October 30, 2024.

# Conclusions EEC OP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

According to the "Educational Program Management" standard, 17 criteria are disclosed, of which: 2 strong positions, 14 satisfactory positions, 1 position suggests improvement.

### 6.2. Information Management and Reporting Standard

 $\checkmark$  The university must ensure the functioning of a system for collecting, analyzing and managing information based on the use of modern information and communication technologies and software.

 $\checkmark$  EP management must demonstrate the systematic use of processed, adequate information to improve the internal quality assurance system.

 $\checkmark$  Within the EP there must be a system of regular reporting, reflecting all levels of the structure, including assessment of the effectiveness and efficiency of the activities of departments and departments, and scientific research.

 $\checkmark$  The university must establish the frequency, forms and methods of assessing the management of educational programs, the activities of collegial bodies and structural divisions, senior management, and the implementation of scientific projects.

 $\checkmark$  The university must demonstrate the determination of the procedure and ensuring the protection of information, including the identification of responsible persons for the accuracy and timeliness of the analysis of information and the provision of data.

 $\checkmark$  An important factor is the involvement of students, employees and teaching staff in the processes of collecting and analyzing information, as well as making decisions based on it.

 $\checkmark$  The management of the EP must demonstrate the presence of a communication mechanism with students, employees and other interested parties, including the presence of conflict resolution mechanisms.

✓ The university must ensure that the degree of satisfaction of the needs of teaching staff, staff and students within the EP is measured and demonstrate evidence of eliminating the identified deficiencies.

✓ The university must evaluate the effectiveness and efficiency of activities, including in the context of EP.

✓ Information collected and analyzed by the university within the framework of the EP must take into account:

✓ *key performance indicators;* 

✓ *dynamics of the student population in terms of forms and types;* 

✓ academic levels, student achievement and attrition;

✓ student satisfaction with the implementation of the EP and the quality of education at the university;

- ✓ availability of educational resources and support systems for students;
- ✓ employment and career growth of graduates.
- ✓ Students, employees and teaching staff must document their consent to the processing of personal data.

✓ The management of the EP should help provide all the necessary information in the relevant fields of science.

### Evidence

The University of Turan has systems for collecting, analyzing and managing information using modern information and communication technologies and software.

Modern ICT and software tools are used as a tool for collecting and analyzing information, which provide the ability to automate the processes of managing and transmitting information:

- IP telephony operates based on the Cisco CallManager architecture;

- corporate mail is built on the basis of Google services, which provides a unified network for distributing information, implementing mass mailings, and using various Google forms;

- the University website is used to disseminate experience and popularize the University's achievements in educational, scientific and educational processes and innovation activities, while conducting marketing research.

- OBS Studio software, which makes it possible to teach, learn and collaborate at any distance, at any time thanks to built-in technology that simplifies access to lessons: a television studio has been created to record high-quality video lectures;

- free access to Wi-Fi is provided for teachers and students throughout the university. All departments, structural divisions, electronic resource halls, and the dormitory are connected to the Internet, the total bandwidth speed is 600 Mb/s;

- a digital security video surveillance system is operating, consisting of many CCTV cameras.

Monitoring of the implementation of the EP is carried out through the regular collection of reports at all levels of the structure, including minutes of meetings of the academic council, minutes of meetings of the scientific and methodological council, the annual report of the department, the department's report on scientific work, the department's report on educational

work, examinations of the quality of EMCD, educational and methodological and material and technical support of the EP, readiness of the educational and laboratory base of the EP, etc., as well as through a survey of students, employers and graduates on the degree of satisfaction with the educational services received.

The assessment is carried out in all areas of educational, educational and methodological, information, scientific, educational activities and material and technical support of the educational process. Evaluation of activities is a continuous process and is carried out at meetings of the Academic Council, Rector's Office, Institutes and EP, academic committees and is documented in the form of minutes. The activities of the educational program are also assessed by students, as the main consumers of educational services. The frequency, forms and methods of assessing the management of educational programs, the activities of collegial bodies and structural divisions, and the implementation of scientific projects are established by the university within the framework of academic policy (protocol No. 19 of the US dated August 31, 2023 (https://turan.edu.kz/ru/normativnye -dokumenty/).

In order to prevent and resolve conflict situations, the University has developed and operates a Code of Corporate Ethics (Minutes US No. 16 dated 08/31/2021 with amendments dated 02/20/2023), a Code of Ethics for Science and Innovation at Turan University (Approved by the Rector dated 02/25/2021. Approved by the Academic Council dated 02/25/2021, Minutes No. 10), Student Code of the University "Turan" (Minutes US No. 11 dated 08/28/2018). In addition, the Conciliation Commission (Appendix 2.4 of the self-report), the Disciplinary Council, and the Anti-Corruption Commission operate. All the work of the graduating department is reflected in semi-annual and annual reports on academic development and research, which analyze the individual work of each teacher in teaching, methodological, research, educational work, international cooperation, and academic mobility.

Based on the results of the received assessments, suggestions and comments, corrective actions are taken to eliminate the identified omissions and shortcomings. Information obtained from these sources of information is used when revising EP development plans. EP development plans are available to teaching staff, students and employers.

Students and faculty use the electronic library University at https://e-lib.turan-edu.kz/.

The current list of periodicals is published on the university website in the "Library" – "Resources" section – "Periodicals" tab (https://turan.edu.kz/ru/turan-library/turan-library-resources/). Current information on electronic resources, including scientific databases, is posted on the university website in the section "Library" - "Resources" - tab "Electronic Resources" (https://turan.edu.kz/ru/turan-library/turan-library/turan-library-

The university has licenses and subscriptions for various software products: CorelDRAW Graphics Suite X8 for editing graphics, Sanaco Study 500 for managing classroom computers and monitoring programs, Internet pages, etc. For educational and research purposes, Microsoft Imagine Standard and Kaspersky Endpoint Security Antivirus are used to protect data on personal computers.

Product categories available under the program: server and client operating systems: Windows 7/10, Windows Server 2008 R2, development and design tools Microsoft Visual Studio Community (for students and teachers), Microsoft Visual Studio Professional (for laboratories) and Embedded, Microsoft SQL servers. Currently, the work is carried out through the functioning of the Turan automated control system and LMS Canvas, which allow not only the formation of a single database, but also additional information services, such as an information portal, electronic library, student's personal account, teacher's office, etc.

ACS "Turan" is a digital platform of the university, which provides tools for planning and monitoring the educational process, accounting for staff and student populations, allows for work with requests between structural divisions (for example, for the purchase of educational or scientific literature/periodicals, posting content on the website, for copying and duplicating work, photography, video filming, etc., and for students applying to the SSC - student service center).

According to the principles of electronic document management, all documents in the

system have their own route with the possibility of approval, approval, sending for revision, etc. Electronic document management is carried out through the Turan automated control system.

ACS "Turan" contains such subsystems as "Educational process", which contains "Statements", "Protocol of the SEC/MAC", etc.; also, the "Science" subsystem, where teaching staff enter information on publications and documents of protection. Students in this system can view academic and financial debt.

ACS "Turan" provides the processes: "Formation of a contingent", "Planning and organization of the educational process", "Educational process", "Staff management". The process of generating information in the Turan ACS consists of individual operations performed by process participants, each of which represents automated processing of data related to one or another type of university activity. Currently, the Turan ACS includes information on the contingent of students at all levels of training and forms of education, AMS, teaching staff and other workers, united in user groups with individual rights, with delimited access to information resources.

Login to the system is carried out using a login and password. Each user of the system has his own (according to roles and access rights) interfaces for accessing information. User individually: sees and can work only with his own accounting section and only with the information to which he has access. The Information Security Policy, Regulations on Ensuring Information Security at Turan University) and Procedure PRO UT 705-19 "Management of the University's IT Infrastructure" adopted by the university provide for a set of measures to protect information resources, as well as software and hardware from accidental or intentional change or disclosure or destruction.

From 2021-2022 academic year. year, the Canvas learning management system was introduced for all EPs of the university. This service allowed teaching staff to post their electronic courses, organize registration, doing everything through a single platform. This system is a training course with mass interactive participation using e-learning technologies and open access via the Internet (https://canvas.turan-edu.kz/). The system contains the necessary content for studying the discipline - lecture materials, video lectures, assignments, tests, bibliography, etc.

Operational management of information exchange between departments is carried out through the corporate mail system turan-edu.kz. Also, each student has a corporate email, through which the process of interaction with the university is carried out.

The Career and Leadership Center of Turan University https://turan.edu.kz/ru/career-and-leadership-center/ and the Turan-Zerde Alumni Association hold a number of events. Such events include: career fair, Skill up, organizing meetings with heads of enterprises and organizations and conducting master classes as part of the Skill up project; organizing round tables with representatives of the business community, case championship Case4Success.

Students and employees are actively involved in the process of collecting and analyzing information using the university's information systems.

The university annually collects and analyzes information in the context of the EP on the dynamics of the student population, the level of academic performance, the achievements of students, the safety of the contingent, student satisfaction with the implementation of the EP and the quality of education, employment and career growth of graduates. This information is provided as part of the regular reporting of the department and is analyzed during consideration at meetings of the collegial governing bodies of the university (annual report of the department).

During the survey, students rated the quality of the EP as a whole very highly, i.e. answered very well - 74.7% (62 people), good - 20.5% (17 people), relatively poorly - 4.8 (4 people).

To the question "How much attention is paid by the management of the educational institution to the content of the educational program?" The teaching staff of the university rated it as good and the following result was obtained: 66.7% (74 people) responded very well, 31.5% (35 people) responded well, 1.8% (2 people) responded relatively poorly.

#### Analytical part

The university has demonstrated the presence and evidence of the use in the management processes of the EP of a system for collecting and analyzing statistics on the student population, available resources, personnel, consulting, research and international activities, with the help of which it manages both the EP itself and other areas of activity, using There are a variety of methods for this.

The EEC notes that EPs are provided with all the necessary information in the relevant fields of science, which is confirmed by the presence of a library fund such as: Republican Interuniversity Electronic Library (RIEL) -<u>www.rmeb.kz</u>; electronic library of the publishing house "Zheti Zhargy" - www.zhetizhargy.kz; electronic library of the University "Turan"; electronic library of the publishing house "Lan" - www.e.lanbook.com; Thomson Reuters: http://it-science.thomsonreuters; Database "Law" - www.zakon.kz; Databases "All encyclopedias of Rubricon" -<u>www.rubricon.com</u>; National Library of the Republic of Kazakhstan - www.nlrk.kz; Electronic library of the publishing house "Urayt" - www.biblio-online.ru; Unified Electronic Library - www.elibrary.kz; Scopus - www.scopus.com; Science Direct - www.sciencedirect.com; SpringerLink – www.link.springer.com; Web of Science – http://apps.webofknowledge.com; ELSEVIER - www.elsevier.com; etc. In order to replenish the fund in the field of information and communication technologies, the University library regularly acquires electronic resources.

In addition, during the inspection of the material and technical base and dormitories, it was revealed that there is free access to WiFi throughout the entire territory, which was also confirmed during interviews with students and teaching staff.

For the convenience of all users, the university has developed its own Turan automated control system, which provides the following processes: "Formation of a contingent", "Planning and organization of the educational process", "Educational process", "Personnel management", etc.

Information management processes and reporting are assessed by analyzing methods and forms for collecting and analyzing information, decisions of collegial bodies and management, examining university information resources, systems and software, and interviewing stakeholders.

The university widely uses the results of processing university information on student admission, academic performance, movement of the student population, graduation of students, financial resources, personnel, publications, etc., which are presented through the university information system for reports, collegial bodies for consideration and at the request of the university management.

At the same time, during the interview, the EEC revealed the absence of a procedure for analyzing and using the results obtained, informing interested parties and the public about them, indicating the timing of the relevant actions and the persons responsible for them.

The introduction of a feedback mechanism can strengthen the university's capabilities in the operational control and management of EP, as well as in making decisions aimed at developing EP.

The university has determined the frequency, forms and methods of assessing the management of educational programs, the activities of collegial bodies and structural divisions, and senior management. There are provisions on structural divisions and collegial bodies. In addition, the university ensures the protection of information, responsible persons are identified and they are given appropriate roles in information systems in accordance with job descriptions.

Students and employees document their consent to the processing of personal data.

### Strengths / best practice in accredited EP 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information Systems:

- Turan University has its own development of the ACS Turan, on the basis of which the collection, analysis and management of information is ensured, and the automated control system is integrated with all other information systems, such as the anti-plagiarism checking system, LMS,

etc.

# EEC recommendations for EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

- The management of the university, taking into account the features and specifics of the EP, determine key indicators of efficiency and effectiveness, establish and document the procedure for their collection, analysis and application. Until October 30, 2024.

### Conclusions EEC EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

According to the "Information Management and Reporting" standard, 17 criteria are disclosed, of which 1 is strong, 16 have satisfactory positions.

6.3 Standard "Development and approval of educational program"

✓ The university must define and document procedures for developing EP and their approval at the institutional level.

 $\checkmark$  The management of the EP must ensure that the developed EP meets the established goals, including the intended learning outcomes.

✓ The management of the EP must ensure the availability of developed models of the EP graduate that describe learning outcomes and personal qualities.

✓ The management of the EP must demonstrate the conduct of external examinations of the EP.

 $\checkmark$  The qualifications obtained upon completion of the EP must be clearly defined, explained and correspond to a certain level of the NQS.

 $\checkmark$  The management of the educational program must determine the influence of disciplines and professional practices on the formation of learning outcomes.

✓ An important factor is the ability to prepare students for professional certification.

✓ The management of the EP must provide evidence of the participation of students, teaching staff and other stakeholders in the development of the EP and ensuring their quality.

 $\checkmark$  The labor intensity of the EP must be clearly defined in Kazakhstan loans and ECTS.

✓ The management of the EP must ensure the content of academic disciplines and learning outcomes for the level of study (bachelor's, master's, doctoral studies).

✓ The structure of the EP should provide for various types of activities corresponding to the learning outcomes.

✓ An important factor is the presence of joint EPs with foreign educational organizations.

#### Evidence

Information about the educational programs of the University of Turan is posted on the official website of the university and in the Unified Higher Education Management System (UHMS), where the goals and objectives of the EP, priorities and features are indicated.

The University of Turan develops EP taking into account the Dublin descriptors and the European Qualifications Framework, in accordance with the Classifier of areas of training for personnel with higher and postgraduate education, the requirements of the SCES, regulations in the field of higher and postgraduate education, as well as the Academic Policy of the University.

The university ensures the involvement of all stakeholders (administration, teachers, students and employers) in determining the goals and strategies for the development and improvement of the educational program through a system of questionnaires and surveys. The quality of the educational program is ensured by the general QMS of the university, operating on the basis of: the requirements of state bodies for licensing, certification and state accreditation of educational institutions, standards, requirements of ISO 9001:2015.

The developed EP goes through several stages of discussion: 1) at the department level - EMCS with the participation of employers, students, teaching staff of the department; 2) at the level of the Faculty Council with the participation of employers and students; 3) at the university EMC level (Procedure PRO UT 805-19-MOP Management). Methodological recommendations for the design of MEP (edition 3), approved in 2023 and posted in the EL.

To implement the EP, teachers develop EMCD, which are approved annually by the university's EMC. The learning results are written in the catalog

The implementation of the principles of efficiency, transparency, responsibility and effectiveness of the EP is achieved by focusing on the SCES, its coordination with employers and the teaching staff, the current QMS, developing accompanying documents, discussion with management of controversial issues and problems, and decision-making at the University's Educational, Methodological and Academic Councils.

Within the framework of the QMS, a form of planning and reporting of all types of activities of the department has been developed, which makes it possible to monitor dynamics and identify inconsistencies, as well as evaluate the effectiveness and efficiency of the department's activities. For this purpose, procedures PRO UT 901-23 "Internal checks" and PRO UT 1001-23 "Non-conforming products" have been developed, which allow for high-quality monitoring of the OP and its further improvement. All of the listed procedures represent documentation of all the main processes regulating the implementation of the OP.

Development of MEP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems is carried out by teaching staff of graduating departments, taking into account national and international educational experience, with the participation of employers and representatives of scientific and professional organizations, such as NAT Kazakhstan JSC, Association of Innovative Companies SEZ "PIT Alatau", Institute of Information and Computing Technologies SC MSHE RK, ACITE - Association of Computer and Information Technology Enterprises, Russian Federation, "Dar Ecosystem" Laboratories, "Home Credit Bank" JSC, "CopyLand Company" LLP, "PIRSUM-A Company" LLP, "Avenir Promotion" LLP, "Internet Company PS" LLP, "Project Management Technologies" LLP, etc.

In order to harmonize the content of the EP, the educational programs of such leading universities of the Republic of Kazakhstan as Al-Farabi Kazakh National University, K.I. Satpayev Kazakh National Research Technical University, Astana IT University, ENU named after. L.N. Gumilyov, International University of Information Technologies, Almaty University of Energy and Communications, Kazakh-British Technical University, EKTU named after. D. Serikbaeva, etc. Thus, in EP 6B06103 - Intelligent Robotics, 6B06104 - Software Engineering, 7M06103 - Information Systems, the commonality of concepts in the field of ICT is maintained, covering the interests of employers and in accordance with modern challenges of the IT industry.

When developing the EP, the experience of universities near and far abroad is also taken into account: University of Aveiro (Aveiro, Portugal), National Research Institute of Technology and Communications (Moscow, Russia), Harbin Commercial University (China), Penza State Technological University (Aveiro, Portugal), Penza), Asia-Pacific University of Technology and Innovation (Malaysia), University of Tehran (Iran), University of Bielsko-Biala (Poland), St. Petersburg State University of Telecommunications named after prof. M.A. Bonch-Bruevich (RF), European University (Ukraine), Kyrgyz-Russian Slavic University (Kyrgyzstan), Zittau/Gerlitz University of Applied Sciences (Germany), University of Kuala Lumpur (Malaysia), Northern Arctic Federal University (Arkhangelsk, RF), and a number of others with whom scientific and academic connections are maintained. Participation over the past few years of professors of the KPI department Kubekov B.S. in scientific and practical conferences dedicated to the implementation of information technologies in education and, in particular, by the EMC2 corporation (RF), provides the opportunity to form and clarify concepts for the development of information technologies and pedagogical methods. Achieving the required level of quality of the EP involves a scientific understanding of the relationships between academic disciplines and the individual characteristics of students and their professional and personal development, which implies: differentiation of the influence of the EP on the personality of the future professional and the fundamental nature of his preparation; systematic analysis of students' assessments of the importance of the EP for their professional development; the expression of students' personal qualities in their perception of the EP system as a decisive factor in professional development.

To organize educational, industrial and pre-graduation practice, agreements and

memorandums of cooperation have been concluded with practice bases: KazRENA Association, Technodom Operator JSC, BUSINESSFEM LLP, Lanzhou Company LLP, School of Art and Design named after. A. Kasteev", "HALYK Academy" LLP, "DHL Kazakhstan" LLP, "LOTTE Rakhat" JSC, "Eurasian Bank" JSC, "KUSTO GROUP PTE.LTD" LLP, etc.

The qualifications obtained upon completion of the EP are determined by the results of the state exam in the specialty, GPA assessment, assessment of the diploma project and supporting documents at the place of pre-diploma internship, reviews and implementation certificates from the employer.

The formation of individual educational trajectories of university students is an important aspect of ensuring flexibility and personalization of the educational process. It is carried out for each academic year, on the basis of the State Educational Standards of the Republic of Kazakhstan, IEPs, through familiarization and independent choice by each student of an individual learning path, using the educational platform ACS Turan.

The university's educational programs provide for preparing students for professional certification. Students of OP 6B06104 – Software Engineering received certificates after listening to lectures by Smolarz Andrzej Jerzy, Doctor of Technical Sciences, Lublin University of Technology (Poland) in September-October 2021 on the topic "Architecture and main components of Artificial Intelligence systems" (72 hours). Students of OP 6B06104 – Software Engineering successfully completed professional training courses, having listened to lectures by Professor (full) PhD, Muslum Arici (Kocaeli University, Izmit, Turkey) on the topic: "Application of digital innovative technologies in energy consumption systems based on microservice architecture" in for 72 hours from October 23 to October 28, 2023.

The curriculum of EP 6B06103 – Intelligent Robotics, 6B06104 - Software Engineering, 7M06103 - Information Systems includes the discipline "Professional English", which involves preparing students to pass the certified IELTS exam. The University is also the official authorized center for conducting the international TOEFL exam.

EP 6B06103 – Intelligent Robotics includes the courses "Routing, scaling and switching of networks (CISCO)", "Design and development of client-server software architecture (CISCO)". The courses "Routing, scaling and switching networks (CISCO)" deepen and develop the training of engineers who master modern technology for building telecommunication networks with packet switching, introduces the concept of building next-generation networks, and the principles of building multiservice networks.

The results of the survey of teaching staff showed that they were satisfied with:

- To what extent does the content of the educational program meet your scientific and professional interests and needs? – noted as satisfactory by 98.2% (109 people);

- compliance of students' knowledge acquired at this university with the realities of the requirements of the modern labor market - 99.1% (110 people);

- formation of educational programs for the organization of education in students with the ability and skills to analyze situations and make forecasts - 98.2% (109 people).

Students rated how much they agree that the taught material is relevant: 65.1% (54 people) - completely agree, 22.9% (19 people) - agree, 10.8% (9 people) - partially agree, 1.2% (1 person) – disagree.

#### Analytical part

The university has demonstrated an approved documented procedure for developing EP and the developed EP corresponds to the established goals and planned results.

The university demonstrated graduate models approved by the Academic Council on February 23, 2023, which include a listing of the main components of a graduate of a certain level - i.e. indicate what types of competencies the graduate model for an educational program should consist of.

The modular structures of the programs are based on the European Credit Transfer and Accumulation System (ECTS) and ensure compliance of the EP and its modules (in content and

structure) with the goals set, with a focus on achieving the planned learning outcomes.

The management of the EP provided a catalog of elective disciplines and syllabuses of educational programs that indicate the prerequisites of these disciplines.

The implementation of the principles of efficiency, transparency, responsibility and effectiveness of the EP is achieved by focusing on the State Educational Standards, its coordination with employers and the teaching staff, the current QMS, developing accompanying documents, discussion with management of controversial issues and problems, and decision-making at the University's Educational, Methodological and Academic Councils.

An important factor is the ability to prepare students for professional certification and the management of the EP provides the opportunity for students to undergo professional certification of educational programs on Google, IBM, Intel, ELTC, Cisco, as well as within the Coursera MOOC.

The university and the department cooperate with various domestic and foreign universities, and also carried out work to harmonize EP by these universities, however, EEC experts note that the management of the EP did not present double-degree and/or joint EP programs with foreign universities.

# Strengths/best practices of the accredited EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

- The content of the EP ensures a high level of readiness of students and graduates for professional certification in Cisco, IBM, Intel, ELTC.

EEC recommendations for EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

1. The Department of International Cooperation, together with the management of the EP, will develop a plan for cooperation with foreign universities on the design and implementation of double-degree EP and/or joint EP by the end of 2024;

2. The management of the EP should develop a double-diploma and/or joint EP with a domestic and/or foreign university before the start of the 2025-2026 academic year.

**Conclusions EEC OP 6B06103** – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

According to the "Development and approval of an educational program" standard, 12 criteria are disclosed, of which 1 position has a strong side, 10-have satisfactory positions, 1 position suggests improvement.

6.4. Standard "Continuous monitoring and periodic evaluation of educational programs"

 $\checkmark$  All interested parties must be informed of any planned or undertaken actions regarding the OP. All changes made to the OP must be published.

 $<sup>\</sup>checkmark$  The university must monitor 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 are aimed at continuous improvement of the EP.

<sup>✓</sup> Monitoring and periodic evaluation of the EP should consider:

 $<sup>\</sup>checkmark$  The content of the programs in the light of the latest scientific achievements in a particular discipline to ensure the relevance of the taught discipline;

<sup>✓</sup> Changes in the needs of society and the professional environment;

<sup>✓</sup> Workload, performance and graduation of students;

<sup>✓</sup> The effectiveness of student assessment procedures;

<sup>✓</sup> Expectations, needs and satisfaction of students;

<sup>✓</sup> The educational environment and support services and their compliance with the objectives of the EP.

 $<sup>\</sup>checkmark$  The university and the management of the EP must provide evidence of the participation of students, employers and other stakeholders in the revision of the EP.

✓ The management of the EP must ensure a revision 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 society.

#### Evidence

The university, in the "Management of a modular educational program" procedure, defines and consistently applies procedures for monitoring, periodic evaluation and revision of educational programs in order to ensure that they achieve their goals and meet the needs of students and society.

Internal quality assessment and examination of EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems is carried out by monitoring the processes occurring at the university, in order to create conditions for the formation of a holistic picture of the level of educational services provided, their qualitative and quantitative changes, conducting analysis and development of proposals for improvement.

Constant monitoring and periodic evaluation of EP 6B06104 - Software Engineering, 6B06103 - Intelligent Robotics and 7M06103 - Information Systems is carried out taking into account the proposals of students participating in the process of selecting and forming a list of elective disciplines, developing topics for final works, as well as the opinions and suggestions of students and employers on the results of professional internships, proposals from the chairmen of academic committees. The demand for graduates in the labor market and the recognition by employers of the quality of specialist training are also taken into account. The EP is being updated in connection with changes in the state general education standard, the introduction of new directions and elective courses.

To identify the satisfaction of students in the educational program, an analysis is carried out to study the satisfaction of students through a survey for the previous semester at the end of each semester through the ACS Turan system. The results of the survey are analyzed at meetings of the EMC and decisions are made.

To ensure the quality of the educational program, the university undergoes a specialized accreditation procedure and undergoes post-accreditation monitoring during the accreditation period.

The university has established a procedure for monitoring, analysis and revision of EP (procedure "Management of a modular educational program"), which includes an analysis of the content of the program in the light of the latest scientific achievements in specific disciplines of the EP being assessed, changes in the needs of society and the professional environment, workload, academic performance and graduation students, the effectiveness of student assessment procedures, expectations, needs and satisfaction of students with EP training in this cluster, as well as the educational environment and support services. The EMC has approved methodological recommendations for the development of MEP. The implementation of the MEP is carried out in accordance with internal procedures: Educational and methodological work, Quality control of the educational process, Evaluation of learning outcomes, Formation of a contingent, etc.

Educational programs are developed in accordance with the Dublin descriptors by qualified teaching staff of departments, taking into account changes in the external environment, labor market requirements and in order to create the opportunity for independent and comprehensive determination of the students' learning trajectory and are approved by the Academic Council of the university. The developed elective courses of accredited EP are aimed at developing the key competencies of a bachelor, which are also determined by the Dublin descriptors, consistent with the European Qualifications Framework, and contribute to the personal development of the student and develop the creative abilities of students. The MEP of accredited EPs is regularly updated, while the requirements of the labor market and employers are taken into account when developing elective courses and developing the content of the professional practice program.

#### Analytical part

The university has a documented procedure for monitoring and periodic EP assessments to

achieve the EP goal. Evaluation of the effectiveness of the educational program is carried out in accordance with the procedure PRO UT 805-23 "Management of a modular educational program".

Monitoring and periodic evaluation of the OP considers content of programs in the context of the latest achievements of science and technology in a specific discipline, workload, performance and graduation of students, needs and degree of satisfaction of students, compliance of the educational environment and the activities of support services with the goals of the EP.

The workload, academic performance and graduation of students comply with regulatory requirements and SCES. Monitoring of student assessment procedures is carried out within the framework of the academic policy of the university and the syllabuses of disciplines of educational programs.

Despite the fact that the website contains information about the faculty, departments, educational programs, holistic and systemic information (information about teaching staff, graduate models, laboratories, scientific work, cooperation, practice bases, etc.) in the context of EP is difficult to find. In addition, there is no information about planned or taken actions regarding the EP on the EP page of the official website.

Strengths / best practice in accredited EP 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information Systems:

- Not identified.

EEC recommendations for EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

- From September 1, 2024, the management of the EP should publish and keep up to date information about changes in each EP on the university website in the section dedicated to the EP.

Conclusions EEC OP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

According to the standard "Continuous monitoring and periodic evaluation of educational programs," 10 criteria are disclosed, of which: 9 - have a satisfactory position, 1 - suggests improvement.

6.5. Standard "Student-Centered Learning, Teaching and Assessment of performance".

- ✓ The management of the educational program must ensure respect and attention to different groups of students and their needs, providing them with flexible learning paths.
- $\checkmark$  The management of the educational program must ensure the use of various forms and methods of teaching and learning.
- ✓ An important factor is the presence of own research in the field of teaching methods of EP academic disciplines.
- $\checkmark$  The management of the educational program must demonstrate the presence of a feedback system on the use of various teaching methods and evaluation of learning outcomes.
- ✓ *EP* management must demonstrate support for student autonomy while providing guidance and assistance from the teacher.
- $\checkmark$  The management of the educational program must demonstrate the existence of a procedure for responding to student complaints.
- ✓ The university must ensure consistency, transparency and objectivity of the mechanism for assessing learning outcomes for each EP, including appeal.
- $\checkmark$  The university must ensure that the procedures for assessing the learning outcomes of EP students comply with the planned learning outcomes and program goals. The evaluation criteria and methods within the EP must be published in advance.

 $\checkmark$  The university must define mechanisms to ensure that each EP graduate masters the learning outcomes and ensure the completeness of their formation.

 $\checkmark$  Evaluators must be proficient in modern methods of assessing learning outcomes and regularly improve their skills in this area.

#### Evidence

Turan University implements a system of student-centered learning, which is based on the fact that the student is an active subject of the educational process. When implementing student-centered learning and teaching, the University ensures the active participation of students in the educational process, students take more responsibility for their learning by participating in discussions, project work, research and critical thinking, Individualization of learning: the individual characteristics and needs of each student are taken into account, including including learning styles and learning rates, using a variety of teaching methods: Combining different methods and approaches (e.g., lectures, workshops, online learning) to make learning more effective and interesting for students, respecting and being sensitive to diverse groups students and their needs, providing flexible learning paths.

The choice of language of instruction within the EP is made by the student. IET is reflected in the modular educational program and individual curricula, where, along with general education, basic disciplines of the compulsory component, there are elective courses and practices that are aimed at ensuring professional competencies. Elective courses are chosen by students independently and are recorded in the student's individual curriculum.

The catalog of educational modules, regardless of the language of instruction, is identical and is created taking into account the interests and needs of students, employers and other interested parties. To select a discipline and teacher, during the presentation week, students are familiarized with the discipline syllabus, which defines the goals, objectives of the course, methods, interactive learning technologies and forms of control. When choosing and implementing individual educational trajectories, students are helped by the information presented in the university guidebook and interaction with the department advisor.

The management of the EP regularly conducts various training seminars, guest lectures, Workshops, master classes for practitioners and business trainers. For example, on October 26, 2023 and November 10, 2023, guest lectures on the topic "How and where to find an idea for a startup" from the director of the mobile game development company "Magneri games" Tungatarov were held for students of the EP "Information Systems" and "Intelligent Robotics". Rustam https://turan.edu.kz/ru/news/43301/guest-lecture-how-and-where-to-find-an-idea-for-a-startup-for-students-of-the-op -information-systems/ and "MVP. From idea to implementation" from CEO, Co-Founder of IMPRO Mede Aruzhan, https://turan.edu.kz/ru/news/43320/guest-lecture-by-aruzhan-mede-myp-from-idea-to- implementation/.

Manual EP 6B06104 – Software Engineering, 6B06103 – Intelligent Robotics and 7M06103 – Information Systems fully ensures the implementation and application of active and innovative teaching methods. Active and innovative teaching methods at the department are conducted at a high professional level; the departments have developed a plan for advanced training of teaching staff to study innovative teaching methods, according to which teachers study the latest technologies on the basis of other universities in Kazakhstan, near and far abroad.

Turan University has provided an opportunity for students to gain access to the international educational platform Coursera. These courses help students become effective leaders, receiving Coursera certificates, students gain access to resources that allow them to get a job in their specialty, as well as be competitive at a professional level, as well as constantly develop and increase their potential.

Google accounts and corporate email are created for each student and teacher. These services help optimize communication with students and make it possible to provide access to internal University services, such as LMS CANVAS and ACS Turan. Thanks to cloud access, it is possible to distribute additional material on current topics to students. The advantages of such

technology are that all these processes can be performed anywhere, from anywhere (both from a computer and from mobile devices). Moreover, all materials and links remain with students throughout the entire period of study, even after the end of the semester. With centralized access, students can access assignments from home and will still be kept up to date with the curriculum if they have an excused absence.

The staff of the departments pays great attention to the involvement of students in research work as part of the development of EP and in order to develop deep professional competencies in students, scientific student circles function in accredited departments. Thus, at the IT department, since 2020, the "RE: BOOT" circle has been functioning, the creation of which was initiated by students of OP 6B06103 - Intelligent Robotics S. Shevchenko, A. Remizov and Yu. Bushemal, and since September 2023, the SNK "Goggle developers students" has been functioning club". Students of 2-4 years take part in the meetings of the circle. The circle participants come up with scientific projects, report on the results of their research, and test projects intended for participation in various scientific events. Thus, in 2022, at the meeting of the Council of People's Commissars "RE:BOOT", a project of the student of the EP "Intellectual Robotics" S. Shevchenko on the topic "LED-BRIEFCASE" was heard, which became the Best Social Startup at the International Exhibition of Scientific and Technical Creativity of Youth MILSET EXPO-Sciences Vostok 2022 (Appendix 5.5), and in 2023 at the circle meeting the master's thesis of V.S. Lyutikova was heard. on the topic "Modern technologies for visualizing the global seismicity of undergraduates.

#### Analytical part

Within the framework of accredited educational programs, the management of the EP provides students with flexible trajectories, and also ensures respect and attention to different groups of students. There is a student code and a code of corporate ethics. The university carries out systematic work to monitor the academic performance of students.

EEC experts note that various teaching methods are used within the EP, and the teaching staff also conducts its own research in the field of methods of teaching disciplines in the context of the EP and the teaching staff have publications in this area.

According to the Modular educational programs, educational trajectories are provided for in the context of educational programs.

Methods and forms of conducting current and milestone control, intermediate certification, a system for analyzing and monitoring the results of examination sessions are determined and carried out in accordance with the requirements of the credit education system and in accordance with the internal procedure PRO UT 810-23 "Quality Control of the Educational Process". In order to constantly improve the quality and methodological support of the educational process, the plans reflect special events and forms of work: mutual visits, open classes using innovative teaching methods, analysis and discussion of the classes of leading teachers, visits by members of the Coordinating Council on the quality of teachers' classes, etc. Attendance of classes by members The Quality Coordination Council is carried out in accordance with the schedule approved by the EMC for the current academic year. Mutual visits to classes by teachers are carried out in accordance with the approved schedule.

SIW is assessed in accordance with a point-rating system under the credit education system, the use of which in the educational process of the University is based on an individual approach to students and ranking of tasks. Ranking of tasks allows the student to correctly calculate their strengths, more fully reveal individual qualities and objectively assess their own level of knowledge in the discipline. In addition, the point-rating system allows you to receive additional points to those scored during the semester.

During the course of training, any student, regardless of the form, direction and level of study, has the right to express his disagreement and seek support from University staff on academic issues and on issues that are not directly related to them.

The student has the right to appeal. The mechanism for assessing knowledge, including issues of appeal, is reflected in the Academic Policy of the University of Turan and the procedure PRO UT 811-23 "Assessment of learning outcomes." For this purpose, during the examination session, an appeal commission is created from among experienced teachers whose qualifications correspond to the profile of the disciplines submitted for the examination session.

The student handbook contains a link to the grievance and appeals policy and procedure.

In addition, the university, in accordance with the developed "Policy against Discrimination and Harassment," aims to maintain and develop an academic environment free from any type of discrimination and harassment.

The criteria and methods for assessing learning outcomes are published on the university's educational portal. However, not all evaluators have supporting documents of advanced training in modern methods of assessing learning outcomes.

A survey of students showed that 100% (83 people) of students who took part in the survey fully or partially agreed that the facilities and equipment for students are safe, comfortable and modern and that the library is well equipped and has a fairly good collection of books. The EEC also notes that 96.4% (80 people) of students are fully or partially satisfied with the speed of response to feedback from teachers regarding the educational process, and only 2.4% (2 people) are partially dissatisfied and 1.2% (1 person) find it difficult to answer this question. 97.6% (81 people) of students were satisfied with the level of accessibility and responsiveness of the university management and the availability of academic counseling.

# Strengths / best practice in accredited EP 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information Systems:

- The management of the EP ensures a high level of respect and attention to different groups of students and their needs within the framework of the student code, and also provides ample opportunities for the formation of flexible learning paths within the EP.

# EEC recommendations for EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

- Until May 1, 2025, the management of the EP will organize training and advanced training for teaching staff of the EP in modern methods of assessing learning outcomes.

### **Conclusions EEC EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering,** 7M06103 – Information systems:

According to standard "Student-centered learning, teaching and performance assessment", 10 criteria are disclosed, of which 1 position is the best practice, 8 criteria have a satisfactory position, 1 implies improvement.

6.6. Standard "Students"

 $\checkmark$  The university must demonstrate a policy for forming a student population in the context of EP from admission to graduation and ensure the transparency of its procedures. Procedures governing the life cycle of students (from admission to completion) must be defined, approved, and published.

✓ The management of the EP must demonstrate the implementation of special adaptation and support programs for newly admitted and foreign students.

✓ The university must demonstrate compliance of its actions with the Lisbon Recognition Convention.

✓ The university must 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 in order to ensure comparable recognition of qualifications.

✓ The management of the EP must demonstrate the existence and application of a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and informal learning.

 $\checkmark$  The university must provide opportunities for external and internal mobility of EP students, as well as assist them in obtaining external grants for training.

 $\checkmark$  The management of the educational program must make maximum efforts to provide students with places of practice, promote the employment of graduates, and maintain contact with them.

 $\checkmark$  The university must provide EP graduates with documents confirming the qualifications obtained, including the learning outcomes achieved, as well as the context, content and status of the education received and evidence of its completion.

✓ An important factor is monitoring the employment and professional activities of EP graduates.

 $\checkmark$  The leadership of the EP should actively encourage students to self-education and development outside the main program (extracurricular activities).

✓ An important factor is the presence of an active alumni association/union.

✓ An important factor is the presence of a mechanism to support gifted students.

#### Evidence

Turan University has a policy of forming a contingent, and the entire life cycle of students from admission to completion is regulated in the "Rules for admission to study at Turan University" (https://turan.edu.kz/ru/postuplenie/). A favorable factor for admission to a university is a system of discounts on tuition depending on educational achievements, student activity, and provision of financial assistance to low-income categories. Work is being successfully carried out to provide information to applicants with information about the university, faculties, and specialties. For this purpose, advertising and image materials, booklets about professions, structural divisions, admission rules, posters, special editions of the newspaper, and advertising and information stands are produced. Participation in education and career exhibitions, etc. In particular, participants (11th grade students, final year college students, graduates of schools and colleges of Kazakhstan) of the republican competition GRANT PROJECT have the opportunity to study for free at the University.

In the scientific areas of the "CSE" department, 9 diploma projects were defended. The following students are involved in the implementation of research and development work: students of group SE-21-1(u) Ruslan Tumanov, Andrey Shabalin, Alexey Shostak, took 1st place in the All-Russian Olympiad for students "Fundamentals of Algorithmization and Programming".

In 2019-2023, students of EP 6B06104 - Software Engineering and master's students of EP 7M06103 - Information systems participated in the following conferences: All-Ukrainian Scientific and Technical Conference of Young Scientists, Postgraduates and Students "Computer Games and Multimedia, as An innovative approach to communication - 2022" (September 29-30, 2022, Ukraine, Odessa, Odessa National Technological University); XV International scientific and practical conference "information technologies and automation – 2022" (October 20-21, 2022, Ukraine, Odessa, Odessa National Technological University); International scientific and practical forum "Global changes: challenges of science and education in honor of the 30th anniversary of Turan University" (October 6-7, 2022, Kazakhstan, Almaty, Turan University); All-Ukrainian scientific and technical conference of young scientists, graduate students and students "Stand, achievements and prospects of information systems and technologies" (Ukraine, 2022 Odessa, Odessa National Technological University); International scientific and technical conference "Informatics. Mathematics. Automatics - 2023" IMA-2023 (April 24-28, 2023, Ukraine, Sumy, Sumy State University, Kazakhstan, Astana, Astana International University; 4th International Scientific Conference "Reviews of Modern Science" (October 19- 20, 2023, Zürich, Switzerland) (Appendix 6.6).

In 2023, master's students EP 7M06103 – Information systems Lyutikova V.S. was awarded a 1st degree diploma "Best Researcher 2023", and Lyuterovich O.V. – 1st degree diploma "Best Young Scientist 2023".

The university has a club called EnjoyClub, a new format where students not only practice English, but also have an interesting time meeting native speakers, and hold fun games and competitions in English. The departments of "IT" and "CSE" have student scientific circles "World of Information Technologies", "RE: BOOT" and "Google developers students club".

Excellent students are given a 20% discount (with a GPA of 4.0) and a 10% discount (with a GPA of 3.7 and above) from the cost of the previous academic year upon the recommendation of the dean at the DAV (student affairs department). The University provides 5, 10, 15 and 20% discounts on tuition fees for the current year based on the results of the previous year for students who participate in research projects and work free of charge in various departments and structural divisions.

#### Analytical part

Turan University has a policy for the formation of a student population and ensures transparency of procedures using information systems. The university's procedures regulate the entire spectrum of the student life cycle and are posted on the university website, including adaptation and support programs for newly admitted students. On the university website in the section "Applicants - How to enter Turan" (https://turan.edu.kz/ru/postuplenie/) there is complete information about the methods of admission to the university. Besides, Various events are held for newly admitted students, such as the "Welcome to Turan" Freshmen Meeting, "Turan University Traditions Day", the "Respond, Freshman" Decade - identifying talented 1st year students, etc.

According to the University's Academic Policy, there are mechanisms for recognizing the results of academic mobility of students, as well as the results of additional, formal and informal learning. However, within the framework of accredited educational programs, the academic mobility of students has not been demonstrated.

The University of Turan actively encourages students to self-education and development outside the main program through various clubs and MOOCs.

Students of educational programs have the opportunity to participate in various events, conferences, guest lectures, clubs, sports sections, and students are also provided with internships in accordance with concluded agreements with enterprises.

In order to promote the employment of graduates, the university organizes job fairs and meetings with potential employers. Despite the fact that the website has a section for the Turan-Zerde Alumni Association, during interviews with graduates it was noted that not all graduates know the existence of this association. In addition, the university management is recommended to develop a section on the employment website for posting resumes of graduates and current vacancies of partners in areas to increase the level of employment.

In addition, the university has a mechanism for supporting gifted students, in particular, there are programs to support the winners of Olympiads, research projects and certain discounts are provided for students, as well as support for the best ideas based on competitions.

The university and the department cooperate with various domestic and foreign universities, but the participation of students in academic mobility programs within the framework of accredited EP has not been demonstrated.

### Strengths / best practice in accredited EP 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information Systems:

- The University provides a high level of support for gifted students, providing them with various benefits and incentives, including discounts on tuition and grants for the winners of various competitions.

### *EEC recommendations for EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:*

1. The management of the EP from the 2024-2025 academic year should include in the development plans of educational programs, in the work plans of departments, measures and activities in the following areas: "outgoing academic mobility of students (external, internal)", "attracting students under the academic mobility program (external, internal)" and indicative indicators of their implementation.

2. The management of the university and the Turan-Zerde association, before the beginning of 2025, develop an action plan for the association and post it on the university website.

3. The management of the university should develop a section on the employment website to post resumes of graduates and current vacancies of partners in the areas before the 2025-2026 academic year.

# Conclusions of EEC EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

According to the "Students" standard, 12 criteria are disclosed, of which:

1 position is a strength, 10 criteria have satisfactory positions, 1 suggests improvement.

6.7. Standard "Teaching staff"

 $\checkmark$  The university must have an objective and transparent personnel policy, including in the context of EP, including recruitment, professional growth and development of personnel, ensuring the professional competence of all staff.

 $\checkmark$  The university must demonstrate compliance of the staff potential of the teaching staff with the university development strategy and the specifics of the educational program.

 $\checkmark$  The management of the EP must demonstrate awareness of responsibility for its employees and providing them with favorable working conditions.

✓ *The management of the educational program must demonstrate a change in the role of the teacher in connection with the transition to student-centered learning.* 

 $\checkmark$  The university must determine the contribution of the EP teaching staff to the implementation of the university development strategy and other strategic documents.

✓ The university must provide opportunities for career growth and professional development of EP teaching staff.

 $\checkmark$  The management of the educational program should involve practitioners from relevant industries in teaching.

The management of the EP must ensure targeted actions for the development of young teachers.

 $\checkmark$  The university must demonstrate motivation for the professional and personal development of EP teachers, including encouraging both the integration of scientific activities and education, and the use of innovative teaching methods.

 $\checkmark$  An important factor is the active use of information and communication technologies by teaching staff of *EP* in the educational process (For example, on-line learning, e-portfolio, MOOC, etc.).

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

 $\checkmark$  An important factor is the involvement of EP teaching staff in the life of society (the role of teaching staff in the education system, in the development of science, the region, the creation of a cultural environment, participation in exhibitions, creative competitions, charity programs, etc.).

#### Evidence

The university's personnel policy is carried out in accordance with the main priorities of the university development program and corresponds to modern trends in the field of working with human resources.

Recruitment at the University is carried out on the basis of an analysis of the needs of the educational program in accordance with the normative indicators established by the Law "On Education" of the Republic of Kazakhstan No. 319 dated July 27, 2007, SCES RK, approved by order of the Ministry of Education and Science of the Republic of Kazakhstan dated July 20, 2022 No. 2, Model rules for the activities of organizations higher and (or) postgraduate education, approved by the Minister of Education and Science of the Republic of Kazakhstan dated October 30, 2018 No. 595 (as amended), Rules for organizing the educational process in credit technology of education ", approved by order of the Ministry of Education and Science of the Republic of Kazakhstan dated April 20, 2011 No. 152, Regulations on competitive filling of teaching staff positions at the university, approved by order of the rector dated September 20, 2021 No. 156. The

assessment of the competence and business qualities of personnel is carried out upon hiring in accordance with the procedure QMS PRO UT 701-23 "Personnel Management".

When determining the requirements for the qualifications of teaching staff, the University is guided by the Regulations on teaching staff and qualification characteristics for teaching staff positions at the Turan University, approved by the rector's order No. 156 dated September 20, 2021. There is a system for hiring teachers on a competitive basis and on the basis of hiring. When selecting personnel, the administration relies on the staffing table; a system of signing employment contracts is used with pre-defined rights and responsibilities, working conditions, social package and material compensation. The procedures for admission and dismissal of teaching staff comply with the requirements of current labor legislation.

Also, once every 3 years, teaching staff participate in a competition in accordance with the Regulations on competitive filling of university teaching staff positions, developed on the basis of the requirements of the legislation of the Republic of Kazakhstan. As part of the competition, the competence of teachers is assessed to determine compliance with the position held, including based on the results of the above-mentioned annual performance rating assessment. The results of the rating assessment of the teaching staff's activities are one of the criteria in determining the winners in the "Scientist of Turan" competition.

For the purpose of targeted development of young teachers, the Council of Young Scientists was created at the university, which is a permanent collegial advisory body on a voluntary basis. The Council is a youth meeting of authorized representatives (up to 35 years old inclusive) of the university, forming and pursuing youth policy, protecting the interests of young scientists in the professional sphere and social and everyday problems. The purpose of creating the Council is: to assist young scientists in improving their professional level; development of scientific potential and realization of their creative potential; representation, protection and implementation of professional, intellectual, legal and social interests and rights of scientific youth; promotion of scientific knowledge and the latest achievements of science.

The annual School of Pedagogical Excellence is also aimed at developing the potential of young teachers, participation in which is confirmed by certificates.

To maintain the level of licensing requirements of the Ministry of Education and Science of the Republic of Kazakhstan in terms of graduation, the department prepares applicants from among those who have completed the master's degree program for admission to the target doctoral program and for a state grant. Thus, during the period from 2019 to 2023, five teachers received a master's degree and remained working at the university. In February 2023, defended doctoral dissertation and received a PhD degree, senior teacher Ainakul N.A. Senior teachers Mukanova Zh.A., Naumenko V.V., Alenova R.A. completed their doctoral studies. In 2024 they plan to enroll in doctoral studies. teachers Shilibaeva A.S., Maintser D.A., Noke A.G., Stukalova A.V.

According to the academic mobility plan, leading professors from foreign universities, leading organizations and leading industrial enterprises are invited to the University every year to give lectures. Thus, from 2019 to 2024, the following professors from near and far abroad conducted lectures and practical classes: Professor of the Lublin University of Technology, Lublin, Poland Smolarz Andrzej Jerzy, gave guest lectures for the teaching staff of the departments "CSE" and "IT" within "Academic mobility" program on the topic "Intelligent methods of controlling robotic systems"; Professor Muslum Arici, Kocaeli University, Izmit, Turkey in September 2023 gave a guest lecture to the teaching staff of the KPI department as part of the Academic Mobility program on the topic "Application of digital innovative technologies in energy consumption systems based on microservice architecture"; An invited foreign expert, associate professor, PhD Dababrata Narayan Chowdhury from Ravensbourne University London, United Kingdom of Great Britain and Northern Ireland held a seminar on September 6, 2023 on the topic "Digital Technology and Creativity".

The university teaching staff participates in television programs and is published in local and national media. Alshanov R.A., Dzhaparov B.A. are actively featured. and others.

The university is the author and publisher of the Kazakh book of records KINES). the

origins of the formation of various social phenomena and events, records, are immortalized.

At the university, for EP 6B06104 - Software Engineering, 6B06103 – Intelligent Robotics and 7M06103 - Information Systems, famous scientists, public, political, honored figures are involved in the educational process: Doctor of Technical Sciences, Professor B.A. Japarov. – Director of the Archive of the President of the Republic of Kazakhstan; Academician of NAS RK Kalimoldaev M.N – IIVT MES RK; Ph.D. Associate Professor Konysbaev A.T. The participation of famous scientists, public, political, and honored figures in the educational process influences the image of the university and the implemented educational programs.

The following practitioners were involved in the educational process, who conducted specialized disciplines and practical trainings: Usatova O.A., chief scientific secretary of the Institute of Information and Computing Technologies of the National Science Ministry of Education and Science of the Republic of Kazakhstan, PhD; Nurymov T.K., Director of Capitaltelecom LLP; Amirkhanov B.S., Director of "Document.KZ" LLP; Maimakov E.R., head of the department of JSC Center for Supporting the Activities of the National Bank of the Republic of Kazakhstan; Vladimir Verkholantsev, director of business development in the healthcare sector, "InformConsulting".

#### Analytical part

The EEC Commission notes that the university has personnel policy. Transparency of all personnel procedures is due to the acceptance of documents for positions through competitions for vacant positions. It is also important that there is career growth of specialists, university teachers to heads of university structural divisions. The university provides the opportunity for professional development of teaching staff. Various competitions are organized to support personnel.

In addition, specialists from relevant industries who have professional competencies that meet the requirements of accredited educational programs are involved in teaching.

The teaching staff of accredited educational programs use various licensed software, open massive open online courses in the educational process.

In order to develop the economy, education and science of the region, the teaching staff, together with students, develop software as part of theses and master's theses and participate in research in priority areas of scientific development in the Republic of Kazakhstan.

The management of the educational program for the development of young teachers is sent to doctoral studies under targeted state grants.

Despite the fact that the university cooperates with various universities and organizations, EEC experts notethat teachers implementing accredited EPs do not fully realize the opportunity to exchange experience within the framework of the academic mobility program <u>in foreign, Kazakh</u> <u>universities and research institutes.</u>

The EEC, having examined the serving teaching staff of core and non-core disciplines of accredited undergraduate EPs, notes that the compliance of the EP staff with the qualification requirements has been ensured.

Strengths / best practice for accredited EP 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information Systems:

-Not identified.

### *EEC recommendations for EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:*

1. Starting from 2025, the management of the EP should determine in the development plans indicative indicators for the participation of teaching staff in the programs "external and internal, outgoing and incoming academic mobility."

### Conclusions EEC OP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

According to the "Faculty and Teaching Staff" standard, 10 criteria are disclosed, of which 9 positions are satisfactory, 1 position suggests improvement.

6.8. Standard "Educational Resources and Student Support Systems"

 $\checkmark$  The management of the EP must demonstrate the sufficiency of material and technical resources and infrastructure.

✓ The management of the educational program must demonstrate the existence of procedures for supporting various groups of students, including information and consultation.

✓ The management of the EP must demonstrate the compliance of information resources with the specifics of the EP, including compliance with:

✓ technological support for students and teaching staff in accordance with educational programs (for example, online learning, modeling, databases, data analysis programs);

library resources, including a collection of educational, methodological and scientific literature on general education, basic and major disciplines on paper and electronic media, periodicals, access to scientific databases;
 examination of RW results, graduation works, dissertations for plagiarism;

✓ access to educational Internet resources;

✓ *functioning of WI-FI on the territory of the educational organization.* 

 $\checkmark$  The university should strive to ensure that the educational equipment and software used to master educational programs are similar to those used in the relevant industries.

✓ The university must ensure compliance with safety requirements during the learning process.

 $\checkmark$  The university should strive to take into account the needs of various groups of students in the context of EP (adults, working people, foreign students, as well as students with disabilities).

#### **Evidence**

Material and technical assets and working environment conditions comply with the requirements of ST RK 1158-2002 "Higher professional education. Material and technical base of educational organizations", SCES RK.

The University's need for various types of resources is determined by the demand of students, an increase in the student population, and the development of new IT technologies.

To ensure a sufficient number of educational resources, modern equipment and software are purchased annually, new classrooms are equipped, classrooms are illuminated with daylight and artificial lighting, old computers and projectors are replaced, existing equipment is modernized and software is updated. All computer equipment undergoes regular maintenance. Maintenance of computer classes, updating and purchasing of computer park, technical, multimedia equipment, software is carried out by the IT and DC department, in accordance with the work plan of this department and the requests of the department.

Currently, the University is making efforts to modernize its positions in the field of use of information technology; operating systems such as MS Windows, MS Office editing software, Project Standard 2016, Visio Standard 2016, Visual Studio Comminity 2022, AnyLogic and etc.

Students can work in computer labs outside of class hours, search for information on the Internet, and connect to Wi-Fi from their devices. Interactive communication is carried out through virtual representations that provide access to educational services and automated information systems, such as an electronic catalog of educational resources, a library website, Canvas Turan, and email.

In order to ensure the educational process of EP 6B06103 - Intelligent Robotics, 6B06104 - Software Engineering", 7M06103 - Information Systems, there are computer classes and specialized laboratories. Such technical means create favorable conditions for the study and practical application of theoretical knowledge in these areas. The EP "Software Engineering" has 4 specialized classrooms (laboratories) (rooms 202, 209, 718, 720), the EP "Information Systems", "Intelligent Robotics" has 1 computer class (room 310) and 2 specialized laboratories (room 310).

319, 317).

According to the survey results, 92.8% of students were satisfied with the level of accessibility of library resources, and 92.8% of students were satisfied with the quality of services provided in libraries and reading rooms.

A survey of students showed the following indicators on the provision of educational materials during the learning process (95.2%), existing educational resources of the university (96.5%), and available computer classes (96.4%), accessibility and quality of Internet resources (94%).

Teaching staff face the following problems:

- lack of classrooms (often - 4.5%, sometimes - 19.8%, never - 75.7%);

- Inappropriate conditions for classes in classrooms (often -10.8%, sometimes -89.2%, never -0%);

- Lack of access to the Internet/weak Internet (sometimes – 38.1%, never –61.9%);

- Lack of technical teaching aids in classrooms (sometimes - 33.3%, never - 66.7%);

#### Analytical part

The University ensures that educational resources and student support services are sufficient, accessible and fit for purpose. When distributing, planning and providing educational resources, the university takes into account the needs of various groups of students.

EEC experts got acquainted with the equipment of the material and technical base for the implementation of accredited educational programs. The visual inspection included familiarization with the university infrastructure, including specialized rooms of accredited educational programs. The infrastructure and material and technical resources of the university meet modern requirements.

Based on the results of questioning and interviewing students, the EEC noted that The university provides various means of communication and communications for teaching staff and students, namely: telephone line, service request registration system, online conference platforms, Microsoft products.

The university demonstrated the compliance of information resources with the needs of the university and the implemented educational programs in the areas of technological support for students and teaching staff, since the educational process uses Turan University's own development, DBMS, antiplagiarism system, LMS Canvas system, etc. In addition, the university provided access to educational Internet resources, not only SCOPUS, Web of Science and our own developments, but also in the MOOC systems Coursera and others, and access to WI-FI zones.

The University of Turan has created conditions for conducting scientific research and the teaching staff actively participate in funded and initiative research, thus, at the graduating departments of accredited EP there are grant projects financed by the IHHE.

Assessment of the competence of teaching staff is carried out in the form of separate procedures. Assessment of the quality of teaching and the level of satisfaction of the teaching staff is carried out by surveying the teaching staff and students. The results are taken into account when certifying teaching staff and passing the competition and contract commission.

<u>Based on the results of a survey of teaching staff</u>, EEC experts recommend that the university management and the management of the educational program bring up for discussion the issues noted in the survey results problems of teaching staff, such as lack of classrooms; inappropriate conditions for classes in classrooms, lack of access to the Internet/weak Internet, lack of technical meanstraining in the classrooms, lack of a relaxation area for teachers.

Strengths / best practice in accredited EP 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information Systems:

- The management of the university ensures the systematic renewal and development of the material base and infrastructure of educational, scientific activities, creative development and leisure of students, maintaining them in accordance with the quality requirements for the implementation of basic and supporting processes.

#### EEC recommendations for EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

1. The management of the university should consider the possibility of expanding recreation areas for students and teaching staff by the end of 2025.

#### Conclusions of EEC EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

According to the standard "Educational Resources and Student Support Systems" 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information Systems have 1 strong, 12 satisfactory positions.

6.9. Standard "Public awareness"

The information published by the university within the framework of the EP must be accurate, objective, relevant and must include:

- ✓ *implemented programs, indicating expected learning outcomes;*
- implemented programs, matching expected tearning outcomes,
   information about the possibility of assigning qualifications upon completion of the EP;
   information about teaching, learning, assessment procedures;
   information about passing scores and educational opportunities provided to students;

*information about employment opportunities for graduates. The management of the EP should use a variety of methods to disseminate information, including the media,* information networks to inform the general public and interested parties.

Public information should include support and explanation of the country's national development programs and the system of higher and postgraduate education.

The university must publish audited financial statements on its own website, including by EP.

✓ *The university must demonstrate the reflection on the web resource of information characterizing the university* as a whole and in the context of educational programs.

✓ An important factor is the availability of adequate and objective information about the teaching staff of the EP, in the context of personalities.

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

✓ The university must post information and links to external resources based on the results of external assessment procedures.

✓ An important factor is the participation of the university and the implemented educational programs in various external assessment procedures.

#### **Evidence**

The University management uses various methods of disseminating information management briefings; open days; job fairs at the university; round tables with heads of enterprises and organizations, exhibitions of achievements; career guidance activities.

The University's web resources are a means of supporting the educational process and a channel for exchanging information. Published materials about the activities of the university are regulated in the procedure PRO UT 705-23 "Management of the University's IT Infrastructure" and the Regulations on the management of the website of the Turan University.

The university has an automated learning management system based on the CANVAS

software (https://canvas.turan-edu.kz/). This software has great functionality. LMS CANVAS operates and provides distance learning, which provides all the necessary educational materials, test tasks, and develops video and audio lectures. The departments have installed equipment to ensure "on-line" communication between teachers and students and undergraduates.

The university pays special attention to the development of communications; corporate email is an important link. Work continues on converting document flow into electronic format. Google provides unlimited space in the drive.google cloud for teaching staff and university employees.

A survey of students conducted during the visit of the IAAR EEC showed:

- satisfaction with the usefulness of the website of educational organizations in general and faculties in particular was confirmed by 97.6% of students;

- 95.2% are satisfied with information about courses, educational programs, and academic degrees.

#### Analytical part

The university publishes information about various areas of activity, such as: information for applicants, students, various grants, ratings, etc.

The site contains information about the university, mission, strategy in accordance with which the university operates. The university has a page on social networks on Facebook, Instagram, Youtube. The website and educational portal of the university are a unified information support system for students and teaching staff.

The university informs the public on support and explanation of the country's national development programs and the system of higher and postgraduate education on the developed official website of the university.

In addition, the university posts information on the results of external assessment procedures <u>https://turan.edu.kz/ru/ob-universitete/ratings/</u> and corresponding links to these resources are posted on the university website.

*<u>However</u>*, the university management needs to take targeted actions to improve the availability of up-to-date and complete information:

- about the organizational structure responsible for business processes;

- in the regulatory documents section <u>https://turan.edu.kz/ru/normativnye-dokumenty/</u> The posted documents are not systematized;

- about upcoming events within the framework of the OP;

- about current teachers;

- cooperation and interaction with partners within the framework of the EP.

## Strengths / best practice in EP 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information Systems:

- Not identified.

EEC recommendations for EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

1. The management of the university should determine the requirements for publishing reliable, objective, up-to-date information on the university website and post on the official website of the university information about the organizational structure, faculty, heads of the EP, documents of the EP, as well as on cooperation and interaction with partners within the EP by the beginning of 2025.

Conclusions of EEC EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

According to the standard "Informing the public" 12 criteria are disclosed, of which: 12 have satisfactory positions.

# (VII) OVERVIEW OF STRENGTHS/BEST PRACTICES FOR EACH STANDARD

Strengths / best practice in accredited EP 6B06103 – Intelligent Robotics, 6B06104 – Software Engineering, 7M06103 – Information Systems:

#### Standard "Educational program management"

- The university pays special attention to the completion of training by the management of the EP in management programs and all managers have certificates of completion of courses within these programs.

- Within the framework accredited by the EP, the management of the EP ensures the development of a culture of quality assurance, including in the context of the EP, the participation of representatives of employers, teaching staff, students and other interested parties in the collegial governing bodies of the educational program, as well as their representativeness in decision-making on issues educational program management.

#### Standard "Information Management and Reporting"

- The University of Turan has its own development of the Turan automated control system, on the basis of which the collection, analysis and management of information is ensured, and the automated control system is integrated with all other information systems, such as the anti-plagiarism checking system, LMS, etc.

#### Standard "Development and approval of educational program"

- The content of the EP ensures a high level of readiness of students and graduates for professional certification in Cisco, IBM, Intel, ELTC.

Standard "Continuous monitoring and periodic evaluation of educational programs" - Not identified.

#### Standard "Student-centered learning, teaching and assessment of performance"

- The management of the EP ensures a high level of respect and attention to different groups of students and their needs within the framework of the student code, and also provides ample opportunities for the formation of flexible learning paths within the EP.

#### Standard "Students"

-The university provides a high level of support for gifted students, providing them with various benefits and incentives, including discounts on tuition and grants to the winners of various competitions.

## *Standard "Teaching staff"* - Not identified.

Standard "Educational Resources and Student Support Systems"

-The management of the university ensures the systematic renewal and development of the material base and infrastructure of educational, scientific activities, creative development and leisure of students, maintaining them in accordance with the quality requirements for the implementation of basic and supporting processes.

Standard "Public awareness"

- Not identified.

#### (VIII) OVERVIEW OF RECOMMENDATIONS FOR IMPROVING QUALITY FOR EACH STANDARD

EEC recommendations for EP 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

#### Standard "Educational Program Management"

1. The management of the university should develop and implement into practice the implementation of the EP:

- requirements and algorithms for ensuring transparency in the development of an EP implementation plan;

- mechanisms for the formation and regular review of the EP development plan and monitoring its implementation, assessing the achievement of learning goals, compliance with the needs of stakeholders;

- requirements for ensuring the individuality and uniqueness of the EP development plan, its consistency with national development priorities and the university development strategy, and for their explicit presentation in the content of the EP development plan. Until June 30, 2024.

2. The management of the EP on an ongoing basis ensures the transparency of the EP management system, the implementation of the developed requirements and mechanisms, the reflection of the analysis and results of this activity in reporting documents at the faculty and department level.

3. The management of the university should determine and document the procedure for risk management at the level of structural divisions and within the EP. Until June 30, 2024.

4. The management of the university should provide for innovation management in planning, reporting and activity procedures based on the implementation of all basic management functions, including planning, organization, stimulation, analysis. Until October 30, 2024.

#### Standard "Information Management and Reporting"

- The management of the university, taking into account the features and specifics of the EP, determine key indicators of efficiency and effectiveness, establish and document the procedure for their collection, analysis and application. Until October 30, 2024.

#### Standard "Development and approval of an educational program"

1. Department of international cooperation jointly with the leadership of the EP, develop a plan for cooperation with foreign universities on the design and implementation of double-degree EP and/or joint EP by the end of 2024;

2. The management of the EP should develop a double-diploma and/or joint EP with a domestic and/or foreign university before the start of the 2025-2026 academic year.

Standard "Continuous monitoring and periodic evaluation of educational programs"

- From September 1, 2024, the management of the EP should publish and keep up to date information about changes in each EP on the university website in the section dedicated to the EP.

#### Standard "Student-centered learning, teaching and assessment of performance"

- ToOn 05/01/2025, the management of the EP will organize training and advanced training of teaching staff of the EP on modern methods of assessing learning outcomes.

Standard "Students"

1. From 2025, the management of the EP should include in the plans for the development

of educational programs, in the work plans of departments, measures and activities in the following areas: "outgoing academic mobility of students (external, internal)", "attracting students under the academic mobility program (external, internal)" and indicative indicators of their implementation.

2. The management of the university and the Turan-Zerde association should develop an action plan for the association and post it on the university website by the beginning of 2025.

3. The management of the university should develop a section on the employment website to post resumes of graduates and current vacancies of partners in the areas before the 2025-2026 academic year.

#### Standard "Teaching staff"

1. To the managementFrom 2025, the EP will determine in its development plans indicators for the participation of teaching staff in the programs "external and internal, outgoing and incoming academic mobility."

#### Standard "Educational Resources and Student Support Systems"

1. The management of the university should consider the possibility of expanding recreation areas for students and teaching staff with the installation of computer equipment by the end of 2025.

#### Standard "Public awareness".

1. The management of the university should determine the requirements for publishing reliable, objective, up-to-date information on the university website and post on the official website of the university information about the organizational structure, faculty, heads of the EP, documents of the EP, as well as on cooperation and interaction with partners within the EP by the beginning of 2025.

### (IX) RECOMMENDATIONS TO THE ACCREDITATION BOARD

The members of the EEC came to the unanimous opinion that 7M06103 Information Systems, 6B06103 Intelligent Robotics, 6B06104 Software Engineering are recommended for accreditation for a period of 5 years

Appendix 1. THE SCORECARD «SPECIALIZED PROFILE PARAMETERS» for educational programs 6B06103 – Intelligent robotics, 6B06104 – Software engineering, 7M06103 – Information systems:

No.	No.	Evaluation criteria	Position of the educational organization					
			Strong	Satisfactory	Suggests improvement	Unsatisfactory		
Standa	ard "E	ducational Program Management''						
1	1.	The university must demonstrate the development of a goal and strategy for the development of the EP based on an analysis of external and internal factors with the wide involvement of a variety of stakeholders		+				
2	2.	Quality assurance policies should reflect the relationship between research, teaching and learning		+				
3	3.	The university demonstrates the development of a quality assurance culture	+					
4	4.	A commitment to quality assurance must apply to any activity carried out by contractors and partners (outsourcing), including joint/double degree education and academic mobility.		)				
5	5.	The management of the EP ensures transparency in the development of the EP development plan based on an analysis of its functioning, the real positioning of the university and the focus of its activities on meeting the needs of the state, employers, stakeholders and students		5				
6	6.	The leadership of the EP demonstrates the functioning of the mechanisms for the formation and regular review of the EP development plan and monitoring its implementation, assessing the achievement of training goals, compliance with the needs of students, employers and society, making decisions aimed at the continuous improvement of the EP		+				
7	7.	The management of the EP should involve representatives of stakeholder groups, including employers, students and teaching staff in the formation of a development plan for the EP		+				
8	8.	The management of the EP must demonstrate the individuality and uniqueness of the development plan of the EP, its consistency with national development priorities and the development strategy of the educational organization		+				
9	9.	The university must demonstrate a clear definition of those responsible for business processes within the EP, the distribution of job responsibilities of staff, and the delimitation of the functions of collegial bodies		+				
10	10.	The management of the EP ensures coordination of the activities of all persons involved in the development and management of the EP, and its continuous implementation, and also involves all interested parties in this process		+				

11	11.	The management of the EP must ensure the transparency of the management system, the functioning of the internal quality assurance system, including its design, management and monitoring, and the adoption of appropriate decisions		+		
12	12.	The management of the EP must exercise risk management		+		
13	13.	The management of the EP must ensure the participation of representatives of interested parties (employers, teaching staff, students) in the collegial bodies governing the educational program, as well as their representativeness when making decisions on issues of managing the educational program		+		
14	14.	The university must demonstrate innovation management within the EP, including the analysis and implementation of innovative proposals			+	
15	15.	The management of the EP must demonstrate its openness and accessibility to teaching staff students, employers and other interested parties		+		
16	16.	The management of the EP confirms completion of training in educational management programs	+			
17	17.	The management of the EP should ensure that the progress made since the last external quality assurance procedure is taken into account in preparation for the next procedure		+		
<b>G</b> . <b>1</b>	3 (/7	Total according to standard	2	14	1	0
		formation Management and Reporting"				
18	1.	The university must ensure the functioning of a system for collecting, analyzing and managing information based on modern information and communication technologies and software	+	く		
19	2.	The management of the EP demonstrates the systematic use of processed, adequate information to improve the internal quality assurance system		+		
20	3.	The management of the EP demonstrates the presence of a reporting system reflecting the activities of all structural divisions and departments within the EP, including an assessment of their effectiveness		7		
21	4.	The university must determine the frequency, forms and methods of assessing the management of the educational program, the activities of collegial bodies and structural divisions, and senior management		+		
22	5.	The university must demonstrate a mechanism for ensuring the protection of information, including identifying responsible persons for the accuracy and timeliness of information analysis and data provision		+		
23	6.	The university demonstrates the involvement of students, employees and teaching staff in the processes of collecting and analyzing information, as well as making decisions based on it		+		
24	7.	The management of the EP must demonstrate the availability of communication mechanisms with students, employees and other interested parties, including conflict resolution		+		
25	8.	The university must ensure that the degree of satisfaction of the needs		+		

		-				
26	9.	The university must evaluate the effectiveness and efficiency of activities, including in the context of EP		+		
		Information collected and analyzed by the university within the framework of the EP must take into account:				
27	10.	key performance indicators		+		
28	11.	dynamics of the student population in terms of forms and types		+		
29	12.	grade level, student achievement and dropout		+		
30	13.	student satisfaction with the implementation of the EP and the quality of education at the university		+		
31	14.	Availability of educational resources and support systems for students		+		
32	15.	employment and career growth of graduates		+		
33	16.	Students, employees and teaching staff must document their consent to the processing of personal data		+		
34	17.	The management of the EP should help provide all the necessary information in the relevant fields of science		+		
		Total according to standard	1	16	0	0
Stand	lard "D	evelopment and approval of an educational program"				
35		The university must demonstrate the existence of a documented procedure for developing EP and its approval at the institutional level		Ð		
36		The university must demonstrate compliance of the developed EP with the established goals and planned learning outcomes		5		
37		The management of the educational program must determine the influence of disciplines and professional practices on the formation of learning outcomes		+		
38		The university can demonstrate the presence of a model of an EP graduate that describes learning outcomes and personal qualities		+		
39		The qualification awarded upon completion of the EP must be clearly defined, explained and correspond to a certain level of the NQF, QF-	/	+		
		EHEA				
40	6.	EHEA The management of the EP must demonstrate the modular structure of the program, based on the European Credit Transfer and Accumulation System (ECTS), ensure that the EP and its modules (in content and structure) comply with the set goals with a focus on achieving the planned learning outcomes		+		
40 41	6. 7.	The management of the EP must demonstrate the modular structure of the program, based on the European Credit Transfer and Accumulation System (ECTS), ensure that the EP and its modules (in content and structure) comply with the set goals with a focus on achieving the		+ +		
	6. 7. 8.	The management of the EP must demonstrate the modular structure of the program, based on the European Credit Transfer and Accumulation System (ECTS), ensure that the EP and its modules (in content and structure) comply with the set goals with a focus on achieving the planned learning outcomes The management of the EP must ensure that the content of academic disciplines and learning outcomes correspond to each other and the level				

				Jui u		
44	10.	The management of the EP must demonstrate the positioning of the EP in the educational market (regional/national/international), its uniqueness		+		
45	11.	An important factor is the ability to prepare students for professional certification	+			
46	12.	An important factor is the presence of a double-degree EP and/or joint EP with foreign universities			+	
		Total according to standard	1	10	1	0
	dard "( rams"	Continuous monitoring and periodic evaluation of educational				
47	1.	The university must ensure a revision of the content and structure of the EP, taking into account changes in the labor market, the requirements of employers and the social demands of society		+		
48	2.	The university must demonstrate the existence of a documented procedure for monitoring and periodically evaluating the EP to achieve the goal of the EP. The results of these procedures are aimed at continuous improvement of the EP		+		
1	3.	Monitoring and periodic evaluation of the EP should consider:				
49	4.	content of programs in the context of the latest achievements of science and technology in a specific discipline		+		
50	5.	changes in the needs of society and the professional environment		+		
51	6.	workload, performance and graduation of students		+		
52	7.	effectiveness of student assessment procedures		+		
53	8.	needs and degree of satisfaction of students		+6		
54	9.	compliance of the educational environment and the activities of support services with the goals of the EP		†		
55	10.	All interested parties must be informed of any planned or undertaken actions regarding the OP. All changes made to the OP must be published	7		+	
56	11.	Support services should identify the needs of various groups of students and the degree of their satisfaction with the organization of training, teaching, assessment, and development of EP in general		+		
		Total according to standard	0	9	1	0
	dard "' ramme	Student-centered learning, teaching and assessment of educational s"				
57	1.	The management of the educational program must ensure respect and attention to different groups of students and their needs, providing them with flexible learning paths	+			
58	2.	The management of the EP must ensure teaching based on modern achievements of world science and practice in the field of training, the use of various modern teaching methods and assessment of learning outcomes that ensure the achievement of the goals of the EP, including competencies and skills in performing scientific work at the required level		+		

		-				
59	3.	The management of the EP must determine mechanisms for distributing the educational load of students between theory and practice within the EP, ensuring the mastery of the content and achievement of the goals of the EP by each graduate		+		
60	4.	An important factor is the presence of your own research in the field of teaching methods of EP disciplines		+		
61	5.	The university must ensure that the procedures for assessing learning outcomes comply with the planned results and goals of the EP		+		
62	6.	The university must ensure consistency, transparency and objectivity in the mechanism for assessing the educational results of the EP. Criteria and methods for assessing learning outcomes should be published in advance		+		
63	7.	Evaluators must be proficient in modern methods of assessing learning outcomes and regularly improve their skills in this area			+	
64	8.	The management of the educational program must demonstrate the existence of a feedback system on the use of various teaching methods and evaluation of learning outcomes		+		
65	9.	The leadership of the educational program must demonstrate support for student autonomy while simultaneously providing guidance and assistance from the teacher.		+		
66	10.	The management of the educational program must demonstrate the existence of a procedure for responding to student complaints		+		
		Total according to standard	1	8	1	0
Stan	dard ''S	Students''				
67	11.	The university must demonstrate a student enrollment policy and ensure the transparency of its procedures. Procedures regulating the life cycle of students (from admission to completion) must be defined, approved, published		5		
68	12.	The management of the EP should provide for special adaptation and support programs for newly admitted and foreign students		+		
69	13.	The university must demonstrate compliance of its actions with the Lisbon Recognition Convention, including the presence and application of a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and informal learning		+		
70	14.	The university must provide opportunities for external and internal academic mobility of students, as well as assist them in obtaining external grants for studying			+	
71	15.	The university must actively encourage students to self-education and development outside the main program (extracurricular activities)		+		
72	16.	An important factor is the presence of a mechanism to support gifted students	+			
73	17.	The university must demonstrate cooperation 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 in order to ensure comparable recognition of qualifications		+		
74	18.	The university must provide students with places of practice, demonstrate a procedure for promoting the employment of graduates, and maintaining contact with them		+		

75	19.	The university must demonstrate the procedure for issuing documents to graduates confirming the qualifications obtained, including the achieved learning outcomes		+		
76	20.	The management of the educational program must demonstrate that graduates of the program have skills that are in demand in the labor market and that these skills are actually in demand in the labor market		+		
77	21.	The management of the educational program must demonstrate the existence of a mechanism for monitoring the employment and professional activities of graduates		+		
78	22.	An important factor is the presence of an active alumni association/union		+		
		Total according to standard	1	10	1	0
	Standa	rd "Teaching staff"				
79	1.	The university must have an objective and transparent personnel policy in the context of the EP, including recruitment (including invited teaching staff), professional growth and development of personnel, ensuring the professional competence of the entire staff		+		
80	2.	The university must demonstrate compliance of the qualitative composition of the teaching staff with the established qualification requirements, the strategy of the university, and the goals of the EP		+		
81	3.	The leadership of the EP must demonstrate a change in the role of the teacher in connection with the transition to student-centered learning and teaching		+		
82	4.	The university must provide opportunities for career growth and professional development of teaching staff, including young teachers		+		
83	5.	The university must involve in teaching specialists from relevant industries who have professional competencies that meet the requirements of the EP				
84	-6.	The university must demonstrate the presence of a mechanism for motivating the professional and personal development of teaching staff		+6		
85	7.	The university must demonstrate the widespread use of information and communication technologies and software in the educational process (for example, on-line learning, e-portfolios, MOOCs, etc.)	6	ť		
86	8.	The university must demonstrate a focus on developing academic mobility and attracting the best foreign and domestic teachers		+		
87	9.	The university must demonstrate the involvement of each teacher in promoting a culture of quality and academic integrity at the university, determine the contribution of teaching staff, including invited ones, to achieving the goals of the EP		+		
88	10.	An important factor is the involvement of teaching staff in the development of the economy, education, science and culture of the region and country		+		
		Total according to standard	0	9	1	0
Stan	dard "	Educational Resources and Student Support Systems"				
89	1.	The university must guarantee the compliance of educational resources, including material and technical, and infrastructure with the goals of the educational program	+			

90	2.	The management of the EP must demonstrate the availability of classrooms, laboratories and other facilities equipped with modern equipment and ensuring the achievement of the goals of the EP		+		
		The university must demonstrate the compliance of information resources with the needs of the university and the educational programs being implemented, including in the following areas:				
91	3.	technological support for students and teaching staff in accordance with educational programs (for example, online learning, modeling, databases, data analysis programs)		+		
92	4.	library resources, including a fund of educational, methodological and scientific literature on general education, basic and major disciplines on paper and electronic media, periodicals, access to scientific databases		+		
93	5.	examination of research results, graduation works, dissertations for plagiarism		+		
94	6.	access to educational Internet resources		+		
95	7.	functioning of WI-FI on your territory		+		1
96	8.	The university must demonstrate that it creates conditions for conducting scientific research, integrating science and education, publishing the results of research work of teaching staff, staff and students		+		
97	9.	The university should strive to ensure that the educational equipment and software used to master educational programs are similar to those used in the relevant sectors of the economy		t		
98	10.	The management of the educational program must demonstrate the availability of procedures for supporting various groups of students, including information and consultation		K		
99	11.	The management of the educational program must show the existence of conditions for the student's advancement along an individual educational path		+		
100	12.	The university must take into account the needs of different groups of students (adults, working people, foreign students, as well as students with special educational needs)		1		
101	13	The university must ensure that the infrastructure meets security requirements		+		
		Total according to standard	1	12	0	0
Stan	dard "	Public awareness"				
102	1.	The information published by the university must be accurate, objective, relevant and reflect all areas of the university's activities within the educational program		+		
103	2.	Public information should include support and explanation of the country's national development programs and the system of higher and postgraduate education		+		
104	3.	University management must use a variety of methods of information dissemination (including the media, web resources, information networks, etc.) to inform the general public and interested parties		+		
		Information published by the university about the educational program				
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		must be objective and relevant and include:				
105	4.	purpose and planned results of the EP, assigned qualifications		+		
106	5.	information and system for assessing educational achievements of students		+		
107	6.	information about academic mobility programs and other forms of cooperation with partner universities and employers		+		
108	7.	information about opportunities for developing personal and professional competencies of students and employment		+		
109	8.	data reflecting the positioning of EP in the educational services market (at the regional, national, international levels)		+		
110	9.	An important factor is the publication on open resources of reliable information about teaching staff, in the context of personalities		+		
111	10.	The university must publish audited financial statements for the EP on its own website		+		
112	11.	The university must post information and links to external resources based on the results of external assessment procedures		+		
113	12.	An important factor is the placement of information about cooperation and interaction with partners, including scientific/consulting organizations, business partners, social partners and educational organizations		+		
		Total according to standard	0	12	0	0
		TOTAL	7	100	6	0
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