



REPORT

The Romanian Agency for Quality Assurance in Higher Education

the type of assessment

**PERIODIC EVALUATION and EUR-ACE® label
awarding**

Bachelor study programme

Automation Hardware and Software
Faculty of Chemical Engineering
National Technical University of Ukraine
„Igor Sikorsky Kyiv Polytechnic Institute“

Bachelor's field – 174 Automation, Computer-
Integrated Technologies and Robotics / G7
Automation, Computer-Integrated Technologies
and Robotics

Form of education – full time

► GENERAL CONSIDERATIONS

Through the application registered with the Romanian Agency for Quality Assurance in Higher Education, with no. 2543, from the date of 13.05.2024, the **National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“** requests the periodic evaluation and granting of the EUR-ACE certification for the bachelor study programme **AUTOMATION HARDWARE AND SOFTWARE** from the Faculty of **Chemical Engineering**.

The file was registered at ARACIS with the number 4889 dated 24.09.2024.

The verification of the fulfillment of the mandatory normative requirements, of the criteria, standards, and performance indicators, and of the specific standards was carried out by the Permanent Commission of Specialty – Engineering Sciences II of the ARACIS Council.

The evaluation report was prepared in accordance with the provisions of the External Evaluation Methodology, the standards, the reference standards, and the list of performance indicators of the Romanian Agency for Quality Assurance in Higher Education approved by Government Decision no. 915 of 14/12/2017 regarding the amendment of the annex to Government Decision no. 1.418/2006 and the Guide to the activities of evaluating the quality of university study programmes and higher education institutions, as well as standards and guidelines for EUR-ACE certification® of study programmes in the fundamental field engineering sciences, respectively of The external evaluation methodology of study programmes in the field of engineering sciences with a view to the periodic evaluation and granting of the EUR-ACE certification®.



► RESULTS OF THE ASSESSMENT CARRIED OUT BY THE PERMANENT COMMISSION OF SPECIALTY

The following criteria, standards, and performance indicators for the periodic evaluation of the undergraduate university study programme are met/partially met/not met

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance ¹
DOMAIN A. INSTITUTIONAL CAPACITY		
CRITERIUM A.1 Institutional, administrative, and managerial structures		
Standard A.1.1 Legal organisational and operating framework		
1.	<p>The study programme is established and operating according to the law (including with regard to the compliance with the schooling capacity).</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The study programme Automation hardware and software (AHS) is established in 2020, within the Faculty of Chemical Engineering of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", in the specialty 151 - Automation and Computer-Integrated Technologies, and it is operating according to the Legislation of Ukraine.</p> <p>The accredited educational and professional program aligns with the requirements of the Higher Education Standard of Ukraine for a bachelor's degree in the specialty 151 "Automation and Computer-Integrated Technologies," as approved by the Ministry of Education and Science of Ukraine No. 1071 dated October 4, 2018. The program is transferred in 2023 to specialty 174 - Automation, Computer-Integrated Technologies and Robotics, when the program was updated in connection with the adoption of Resolution No. 1392 of the Cabinet of Ministers of Ukraine dated December 16, 2022 "On making changes to the list of fields of knowledge and specialties for which higher education applicants are trained".</p> <p>The external periodic review of the educational program Automation hardware and software (AHS) took place in accordance with the Legislation of Ukraine and the provisions of the National Agency for Quality Assurance of Higher Education, in 2023,</p>	Compliance

¹ Degree of compliance with the standard: *compliance/ partial compliance/ noncompliance*

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	<p>and the program was accredited with certificate No. 5400, date of issue of the certificate of accreditation of the educational program 06.07.2023, valid until 01.07.2028.</p> <p>The schooling capacity is provided and shows the number of enrolled students per year of study.</p> <p>Recommendations:</p>	
2.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study programme.²</i></p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Not applicable</p> <p>Recommendations:</p>	Not applicable
A.1.2 Mission and aims of the evaluated study programme		
1.	<p>The mission and aims of the study programme are in accordance with the mission of the higher education institution and the requirements identified on the labour market.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The mission and aims of the study programme Automation hardware and software (AHS) are in accordance with the mission of the university Igor Sikorsky KPI: "To contribute to the formation of the society of the future on the basis of the concept of sustainable development through the internationalization and integration of education, the latest scientific research and innovative developments. To create conditions for the comprehensive professional, intellectual, social and creative development of the individual at the highest levels of excellence in the educational and scientific environment."</p> <p>In particular, the goal of the program is to prepare, in accordance with the university's Strategy, highly qualified and competitive bachelor's degree specialists in automation and computer-integrated technologies. These specialists should be capable of solving complex specialized tasks, creating and improving technical, informational, and software tools that ensure high-quality and quantitative performance indicators of production and organizational systems and complexes. This preparation aims to meet the demands of technological progress and sustainable development of society, the transformation of the labour market, and the comprehensive professional, intellectual, social, and creative development of individuals aligned with the goals of Industry 4.0. It also supports the rapid adaptation of products and services for enterprises and companies.</p> <p>The purpose of the educational program corresponds to the development strategy of Igor Sikorsky KPI for 2020-2025 regarding the formation of future society based on the concept of sustainable development.</p> <p>For identification of requirements on the labour market, there is a working group, and a plan for development of the Educational-Professional Program (EPP). Series of activities are conducted: employers participate in open discussions of the educational program</p>	Compliance

² The degree of compliance with other requirements provided by the specific standards of the ARACIS permanent speciality commission shall be indicated in this item, if applicable

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	<p>at meetings and seminars of the chair, discussions during "Career Fair", during the bachelor's theses defence, during internships, at meetings with members of the project group; involvement of industry experts in classroom classes (in the form of open lectures); periodical monitoring of the requirements for vacancies in the automation labour market; annual survey among graduates and employers regarding satisfaction with acquired competencies conducted by the Educational and Scientific Centre of Applied Sociology "Socioplus".</p> <p>Consultations with employers are held at least once a year. These consultations for updating the curriculum take place either during the revision of the educational program (December - January) or, if no such revision is planned, at the end of the academic year after the bachelor's diploma project defence. The results of the consultations are used to formulate the topics of diploma projects, practice topics, and to adjust the content of courses, etc. In the case of program updates, the working group develops proposals based on the results of the consultations.</p> <p>Thus, the goals and learning outcomes of the program align with labour market trends, enabling graduates to secure relevant positions in the automation industry.</p> <p>Recommendations:</p>	
2.	<p>The declared programme aims and outcomes are rigorously defined and clearly expressed. They are presented to the candidates and other direct and indirect beneficiaries.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The declared programme aims are rigorously defined and clearly expressed. The aim is to prepare highly qualified and competitive bachelor's degree specialists in automation and computer-integrated technologies. These specialists should be capable of solving complex specialized tasks, creating and improving technical, informational, and software tools that ensure high-quality and quantitative performance indicators of production and organizational systems and complexes. This preparation aims to meet the demands of technological progress and sustainable development of society, the transformation of the labour market, and the comprehensive professional, intellectual, social, and creative development of individuals aligned with the goals of Industry 4.0. It also supports the rapid adaptation of products and services for enterprises and companies.</p> <p>Program focuses on the integrated use of hardware and software automation tools that allow creating multi-level control systems for technological processes and production in various industries. This is achieved through practical training at enterprises that develop and operate automation systems, information and computer-integrated technologies, as well as a wide range of elective courses that provide in-depth, multidisciplinary industry-specific knowledge and skills.</p> <p>The programme is presented to the candidates and to other direct and indirect beneficiaries on the website.</p> <p>Recommendations:</p>	Compliance
3.	<p>The name of the study programme is in accordance with its aims, content and outcomes.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>The name of the study programme Automation hardware and software (AHS) is in accordance with its aims, content and outcomes. The correspondence of the educational program to the subject area of the major is ensured by a set of disciplines, primarily focused on professional (ПО1, ПО4, ПО7 – ПО27) and partially on general (3О6, 3О9) education.</p> <p>The educational components develop competencies aligned with the study and activity areas: technical (ПО10 - ПО15), software (ПО4, ПО12, ПО20, ПО21), mathematical (ПО16, ПО17, ПО22, ПО23), informational (ПО18, ПО19, ПО25, ПО26) and organizational support (ПО24, ПО27) for automation systems in various fields using modern microprocessor and computer technology, specialized application software and information technologies. The concepts and principles of automatic control theory, automation systems and computer-integrated technologies are primarily covered by the educational components ПО19-ПО23 and ПО25-ПО26.</p> <p>A series of educational components provides, in accordance with the methods, techniques and technologies: mastering modelling methods and software tools (ПО16 - ПО17), design (ПО18 - ПО19), automated control of complex organizational and technical objects (ПО25 - ПО26), the ability to develop application software for various purposes for automation systems (ПО4, ПО20, ПО21, ПО27).</p> <p>Recommendations:</p>	
4.	<p>There is consistency between: (i) the programme mission and aims, (ii) the professional profile of the graduates and the activities carried out by students during the study programme (iii) expected outcomes obtained by students during the learning process.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The consistency is emphasised in the Educational and professional bachelor's program "Automation Hardware and Software" where the types of economic activity are explained in detail. The professional profile of the graduates.</p> <p>The Supplement to the bachelor's diploma.</p> <p>Recommendations:</p> <p>There have been no graduates yet in the professional educational programme "Automation Hardware and Software" in the specialty 174 Automation, Computer-Integrated Technologies and Robotics in the field of study 17 – Electronics, Automation and Electronic Communications. KPI presented the Diploma supplement of the 2024 graduation year for the PEP " Automation Hardware and Software" in the specialty 151 Automation and Computer-Integrated Technologies in the field of study 15 – Automation and Instrumentation. However, the Supplement for the evaluated programme should exist as a content, even if not issued to any students yet.</p>	Compliance
5.	<p>The higher education institution does regular consultations with the representatives of the academic sector, including students, of the industry sector of the labour market about the programme aims and outcomes. Such consultations take place in an organised arrangement, and they are documented.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>The higher education institution has a plan for development of the Educational-Professional Program (EPP). Series of activities are conducted: employers participate in open discussions of the educational program at meetings and seminars of the chair, discussions during "Career Fair", during the bachelor's theses defence, during internships, at meetings with members of the project group; involvement of industry experts in classroom classes (in the form of open lectures); annual survey among graduates and employers regarding satisfaction with acquired competencies conducted by the Educational and Scientific Centre of Applied Sociology "Socioplus". Consultations with employers are held at least once a year. The results of the consultations are used to formulate the topics of diploma projects, practice topics, and to adjust the content of courses, etc. In the case of program updates, the working group develops proposals based on the results of the consultations.</p> <p>Recommendations:</p>	
6.	<p>The methodology and timeline of the consultations are adequate to identify the educational needs established by the employers (with their predictable transformations as a result of foresight studies, and development strategies at regional, national and European level).</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The methodology is covered in the Educational-Professional Program (EPP) and timeline (minimum annual meetings) of the consultations are adequate to identify the educational needs established by the employers, documented in stakeholders reviews.</p> <p>Recommendations:</p>	Compliance
7.	<p>The educational needs established by the employers have contributed to the definition of the programme mission, aims and outcomes.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>As per methodology there is a working group for the development of the Educational-Professional Program. Representatives of potential employers expressed their proposals in the provided feedback on the EPP (available online), which were accepted for consideration by the working group.</p> <p>Recommendations:</p>	Compliance
8.	<p>The programme outcomes have been established in terms of what students are expected to know (the correspondence between the content of the educational process and the learning outcomes mentioned in the diploma supplement), understand and/or be able to demonstrate after completing the learning process. They are in full agreement with the criteria of EUR-ACE®/ EAFSG, falling into the 8 learning areas: 1- Knowledge and Understanding; 2- Engineering Analysis; 3- Engineering Design; 4- Investigations; 5- Engineering Practice; 6- Making Judgements; 7- Communication and Teamwork; 8- Lifelong Learning.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p><i>Reference will be made to how the curriculum content and learning outcomes cover the 8 learning areas, as described in the document: <u>Standards and guidelines for EUR-ACE® label awarding to study programmes in the fundamental field of engineering sciences.</u></i></p> <p>Recommendations:</p>	
9.	<p>The programme outcomes allow graduates to get a job on the labour market in positions which correspond to the obtained qualification. The graduates of the study programme have a clearly defined perspective of the occupation on the labour market.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The types of economic activity are included in the section: eligibility of graduates for employment and are in line with the obtained qualification.</p> <p>62.01. Computer programming; 62.03. Computer equipment management activities; 62.09. Other activities in the field of information technologies and computer systems. Professional qualification (according to the Classifier of Professions DK 003:2010) 2131.2. Engineer of automated production control systems; 2131.2. Computer software engineer; 2139.2. Computer application engineer; 2145.2. Engineer for mechanization and automation of production processes; 3114. Technician of configured computer systems; 3121. Technician-programmer; 3121. Specialist in information technologies; 3123. Robot controller</p> <p>Recommendations:</p>	Compliance
10.	<p>The study programme is designed in accordance with: National Qualification Framework (CNC), National Register of Higher Education Qualifications (RNCIS) or the European Qualification Framework (https://ec.europa.eu/esco/portal/home), and also with the ARACIS specific standards in the Bachelor's field.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The curriculum is developed in accordance with the National Framework of Qualifications (NFQ), the National Register of Higher Education, the standard of the specialty "151 Automation and Computer-Integrated Technologies" and complies with the principles of Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG 2015).</p> <p>Recommendations:</p>	Compliance

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11.	<p>The particular aspects of the evaluated study programme are rendered evident as compared to other study programmes provided by the institution from the same Bachelor's field.</p> <p>Findings from the Self-Evaluation Report/ Visit: Not applicable</p> <p>Recommendations:</p>	Not applicable
12.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p>Findings from the Self-Evaluation Report/ Visit: Not applicable</p> <p>Recommendations:</p>	Not applicable
A.1.3 Academic integrity		
1.	<p>The higher education institution has a code of university ethics and deontology / academic integrity by which it defends the values of the academic freedom, university autonomy and ethical integrity, possesses practices and applies clear mechanisms to permanently ensure vigilance regarding possible frauds or deviations from its academic (didactic and scientific research) activities, including active measures to prevent and eliminate any form of plagiarism.³</p> <p>Findings from the Self-Evaluation Report/ Visit: Regulations on the system of prevention of academic plagiarism at Igor Sikorsky KPI. Regulations on the commission on ethics and academic integrity of Igor Sikorsky KPI.</p> <p>Recommendations:</p>	Compliance
2.	<p>The higher education institution promotes and applies at the level of the evaluated study programme clear policies and documents regarding the academic integrity, protection of the copyright and against plagiarism, fraud and any form of discrimination, according to the valid legislation and code of university ethics and deontology approved by the University Senate.</p> <p>Findings from the Self-Evaluation Report/ Visit: Observance of academic integrity is facilitated by checking all academic texts for signs of plagiarism using the Unicheck program and placing them in the Electronic Archive of scientific and educational materials of Igor Sikorsky KPI. The university has: The Committee on Ethics and Academic Integrity of the Scientific Council of Igor Sikorsky KPI, working group on academic integrity. Documents are systematized on the official website of the university. Academic integrity policies, standards and procedures. Plagiarism check service "Unicheck".</p>	Compliance

³ To be evaluated and filled-in only in the following cases: a) – if, on the date of evaluating the study programme, higher education institution was not yet subjected to the institutional evaluation; b) – if, as a result of the previous institutional evaluation, the institution was rated other than with “high degree of confidence”.

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Recommendations:		
A.1.4 Public liability and responsibility³		
1.	<p>The institution possesses practices for internal audit regarding the main fields of the university activity. An academic audit report reviewed by the Senate and a plan of measures to improve activity are prepared on annual basis.</p> <p>Findings from the Self-Evaluation Report/ Visit: Internal audit report of the institution [Supplementary Annex 5] An External Audit in Ukrainian was presented as Supplementary Annex 5.</p> <p>Recommendations: It is recommended to have an internal audit according to EUR-ACE standards</p>	Partial Compliance
A.1.5 Managerial activity of the institution³		
1.	<p>The higher education institution has Internal Rules of Procedure and a Regulation for the Academic Activity of Students. The regulations are in accordance with the legislation in force and they are approved by the university Senate.</p> <p>Findings from the Self-Evaluation Report/ Visit: Regulations on the Organization of the Educational Process at Igor Sikorsky KPI. Regulation on the development, approval, monitoring and revision of educational programs at Igor Sikorsky KPI. The procedure for creating and approving work programs (syllabi) of educational disciplines (educational components) in Igor Sikorsky KPI. Regulations on individual learning plan of an applicant for higher education in Igor Sikorsky KPI. Regulations on the procedure for conducting the practice of higher education Igor Sikorsky KPI. Methodological recommendations on issues of organization of students' practice and preparation of work programs of practice at Igor Sikorsky KPI.</p> <p>Recommendations:</p>	Compliance
2.	<p>The institution of higher education should prove that it has organised the record of the academic activity of the students in accordance with the legislation in force, by forms homologated in this respect (catalogues, summary documents, academic records, transcripts, diplomas etc.).</p> <p>Findings from the Self-Evaluation Report/ Visit: Accounting of students' educational activities at Igor Sikorsky KPI takes place in the automated electronic information and telecommunication system "Electronic Campus", as well as in the "Deanery" system integrated in the information and telecommunication system "Electronic campus". The website of the chair presents catalogues of descriptions of educational general, normative and selective disciplines. All diploma projects are stored in the electronic archive of diploma projects. General information about students and teaching staff of the university is also available in the Unified State Electronic Database on Education, which is an</p>	Compliance

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	<p>automated system for collecting, registering, processing, storing and protecting information and data on education. The owner of the Unified State Electronic Database on Education is the state, the administrator is the Ministry of Education of Ukraine, and the technical administrator is the state enterprise "Inforesurs".</p> <p>Recommendations:</p>	
3.	<p>During the period of operation subsequent to the previous external evaluation, the institution of higher education has complied with the standards based on which the provisional operation/ accreditation/ accreditation maintenance – as the case may be – was granted.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The external periodic review of the educational program Automation hardware and software (AHS) took place in accordance with the Legislation of Ukraine and the provisions of the National Agency for Quality Assurance of Higher Education, in 2023, and the program was accredited with certificate No. 5400, date of issue of the certificate of accreditation of the educational program 06.07.2023, valid until 01.07.2028.</p> <p>The Ukrainian centre for the evaluation of the quality of education carried out external independent evaluation of learning results and conducts monitoring studies of the quality of education and ensures transparency of selection for training and the absence of any discriminatory criteria. Ukrainian Centre for Evaluation of the Quality of Education (External Independent Evaluation).</p> <p>During the period of operation after the previous external evaluation, the institution of higher education has complied with:</p> <p>Rules for admission to higher education at Igor Sikorsky KPI in 2024.</p> <p>Working curriculum of the educational and professional bachelor's program "Automation Hardware and Software"</p> <p>Provisions on the system of evaluation of learning results in Igor Sikorsky KPI</p> <p>Recommendations:</p>	Compliance
A.1.6 Financial activity		
1.	<p>The study fees of the students are calculated in accordance with the average tuition costs per university year in the public education sector financed by the state budget in similar fields, and they are presented to students through various means of communication.³</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>There is an order to establish the cost of tuition for higher education applicants of the first (bachelor's) and second (master's) levels of higher education - citizens of Ukraine who will be enrolled in studies (transferred from other higher education institutions, from other specialties and renewed for studies) at the expense of individuals and legal entities in the 2024/2025 academic year. The same order states to increase the cost of tuition for the 2024/2025 academic year for higher education applicants of the first (bachelor's) and second (master's) levels of higher education - citizens of Ukraine under current contracts for the provision of paid educational services within the officially determined inflation index for 2023, which is 5.1%.</p> <p>Tuition fees for students of higher education for the 2024/2025 academic year.</p>	Compliance

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	Recommendations:	
2.	<p>The students are informed about the possibilities of financial assistance provided by the institution and the modality of using the fees.³</p> <p>Findings from the Self-Evaluation Report/ Visit: The study fees are calculated and communicated.</p> <p>Recommendations:</p>	Compliance
3.	<p>The evaluated study programme disposes of sufficient financial resources for the proper performance of the activity.</p> <p>Findings from the Self-Evaluation Report/ Visit: As per the Financial and budgetary report for 2023, the university disposes of sufficient financial resources for conducting educational activities and the evaluated study programme has the financial resources for the proper performance of the activity.</p> <p>Recommendations:</p>	Compliance
A.2 Facilities		
A.2.1 Availability of educational establishments		
1.	<p>The institution of higher education disposes of own premises – at least 70% - or rented premises which are adequate for carrying out didactic activities (course and applications – seminars, laboratories, projects) during all disciplines included in the programme curriculum.</p> <p>Findings from the Self-Evaluation Report/ Visit: The university has its own premises, which are 100% suitable for conducting educational activities (course and applied - seminars, laboratory works, projects) in all disciplines included in the curriculum of the program. The chair is equipped with the necessary material, technical and laboratory facilities necessary for the implementation of the educational program. The area of the chair premises corresponds to the norms established by the Legislation of Ukraine.</p> <p>Recommendations:</p>	Compliance
2.	<p>The capacity of the educational facilities for the study programme subjected to evaluation should be of: minimum 1 m²/seat, in the class rooms; minimum 1.4 m²/seat in the seminar rooms; minimum 1.5 m²/seat in the lecture rooms from the libraries; minimum 2.5 m²/seat in the computer laboratories and specialty discipline laboratories which use the computer; minimum 4 m²/seat in the laboratories of the technical, experimental, design disciplines etc.</p> <p>Findings from the Self-Evaluation Report/ Visit: The capacity of educational premises for the implementation of the educational program meets the requirements for lecture halls, laboratories and classes, as scheduled in the University class schedule available online. Students of the chair additionally have the</p>	Compliance

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	<p>opportunity to use the scientific and technical library named after G.I. Denisenko, which is equipped with lecture halls in sufficient quantity to carry out the educational process.</p> <p>Recommendations:</p>	
3.	<p>The number of seats in the lecture rooms, seminar rooms, laboratories and project rooms should be correlated with the size of the study formations – series, groups, sub-groups etc., according to the norms in force.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The number of seats in the lecture rooms, seminar rooms, laboratories and project rooms are correlated with the size of the study formations. The number of students in streams, groups and subgroups during lectures, practical and laboratory works is regulated by the Regulations on the organization of the educational process at Igor Sikorsky Kyiv Polytechnic Institute and corresponds to the current Legislation of Ukraine. The schedule of students' classes is formed in the central control room of the university based on the requirements for the organization of the educational process.</p> <p>Recommendations:</p>	Compliance
4.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Not applicable</p> <p>Recommendations:</p>	Not applicable
A.2.2 Endowment of the educational establishments		
1.	<p>The lecture/ seminar rooms dispose of technical equipment that is adequate for teaching and communication; the didactic and research laboratories dispose of specific equipment which ensure the adequate performance of the applied and practical activities.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The lecture/ seminar rooms dispose of technical equipment that is adequate for teaching and communication; the didactic and research laboratories dispose of specific equipment which ensure the adequate performance of the applied and practical activities. There is a video presentation of the material and technical support of Igor Sikorsky KPI.</p> <p>The list of educational spaces with capacities is provided and shows 7 Lecture rooms, 9 Seminar rooms.</p> <p>Recommendations:</p>	Compliance
2.	<p>The technical equipment of the laboratories in which applied activities are carried out in the disciplines included in the programme curriculum is adequate, so that, at the level of a study group, there is one computer at maximum two students. There is licensed software, adequate to the content of the disciplines from the programme curriculum.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>According to the technological requirements for material and technical support of educational activities of the corresponding level of higher education (License conditions), approved by Resolution of the Cabinet of Ministers of Ukraine dated 12.30.2015 No. 1187 in the current version Licensing conditions for carrying out educational activities. The laboratories and equipment for material and technical support of chair of Automation Hardware and Software are presented in detail on the institution website.</p> <p>The laboratory base consists of 6 laboratories:</p> <ol style="list-style-type: none">1. Laboratory of computer technologies,2. Laboratory of pneumatic automation,3. Laboratory of technological measurements and process control,4. Laboratory of measurements and modelling,5. Laboratory of microprocessor technology,6. Centre for the development of strategies for managing technological processes "Honeywell-Ukraine",7. the Ukrainian-Norwegian distance learning centre,8. computer classes. <p>The list of educational spaces with capacities is provided and shows 11 Laboratories.</p> <p>Recommendations:</p>	
3.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Not applicable</p> <p>Recommendations:</p>	Not applicable
A.2.3 Availability and endowment of scientific research premises		
1.	<p>The higher education institution disposes of own or rented research premises/ research laboratories with equipment adequate to the exigencies of the themes approached in the field of the evaluated study programme.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The university has its own scientific premises/scientific laboratories with equipment that meets the requirements for the topics covered in the educational program. In addition, industrial equipment of stakeholders can be used. Conducting scientific research is possible both on the laboratory and technical base of the chair, and in the centres of collective use, which are located in the university, as well as in the scientific and technical library of the university.</p> <p>The list of educational spaces with capacities is provided and shows 11 Laboratories including details of software and laboratory equipment with lab works that can be conducted.</p> <p>Recommendations:</p>	Compliance

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A.2.4 Availability and endowment of the library		
1.	<p>The higher education institution disposes of library equipped with lecture room and own library stock corresponding to the disciplines from the programme curriculum. Students have free access in library.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The university has at disposal its own scientific and technical library, which has its own book fund sufficient to provide the disciplines of the educational program. Students have free access to the book fund and other resources, according to the university's agreements with partner institutions and educational organizations.</p> <p>The list of educational spaces with capacities is provided and shows 15 Library rooms.</p> <p>Recommendations:</p>	Compliance
2.	<p>Own library stock, consisting in Ukrainian and foreign literature, should completely cover the theme of the disciplines from the programme curriculum; at least 50% are book titles or academic courses published within the last ten years by well-known publishing houses.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The university owns a scientific and technical library.</p> <p>Recommendations:</p> <p>Consider adopting an institutional strategy for the transition towards the full digital books and educational materials</p> <p>Consider grouping the educational and documentation resources into a single system.</p> <p>Consider ensuring the appropriate coverage of the subjects in the curriculum and syllabuses with recent bibliographic; material existing in the university libraries in the language of teaching of the study program</p>	Compliance
3.	<p>The library stock should contain enough copies to cover the needs of all the students from the evaluated study programme.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Library has its own book fund of domestic and foreign scientific and technical literature, which fully covers the subjects of the disciplines of the educational program.</p> <p>To identify and address the needs and interests of students, various mechanisms are used, such as surveys, a wide network of student and professional associations and the University's Decisions of the Scientific Council of Igor Sikorsky KPI, which provide strong feedback for the sustainable improvement of the educational environment.</p> <p>Recommendations:</p>	Compliance
4.	<p>There is a sufficient number of subscriptions to Ukrainian and foreign publications and periodicals, which corresponds to the mission and aims undertaken by the study programme.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>The National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" provides comprehensive access to Ukrainian and international publications through its library, including databases like Scopus, Web of Science, and the KPI Electronic Archive. These resources align with the programme's mission, ensuring robust support for research and academic activities.</p> <p>Recommendations:</p>	
5.	<p>For the study programmes taught in foreign languages, there are study resources available in the teaching language that are of adequate quality and in a sufficient number of copies.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Education in the bachelor's program “Hardware and Software Automation” is conducted in Ukrainian. However, in the future, it is planned to gradually teach some subjects in English. The study resources currently available cover the emergent needs for the English language.</p> <p>Recommendations:</p>	Compliance
6.	<p>The higher education institution ensures the multiplication of the courses and other didactic material necessary to the educational process, and it makes them available to students in an adequate number of copies.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The higher education institution ensures the multiplication of the courses and other didactic material through the University Publishing House “Polytechnica”.</p> <p>Recommendations:</p>	Compliance
7.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Not applicable</p> <p>Recommendations:</p>	Not applicable
A.3 Human resource		
A.3.1 Quality of the teachers		
1.	<p>The academic staff from the study programme are hired according to the recruitment criteria established at institutional level, in accordance with the legal provisions.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The competitive selection process at the University is regulated by the Procedure for competitive selection by filling vacant positions of scientific and pedagogical workers and concluding employment contracts with them.</p>	Compliance

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	<p>The purpose of the competition is to ensure a high level of professionalism among academic staff: the candidate's compliance with the components of the EQC, education in the relevant specialty, indicators of professional and scientific activity in accordance with the Regulations on the rating of scientific and pedagogical workers of Igor Sikorsky KPI, possession of a scientific degree, academic title, professional development, and compliance with the points of the Licensing conditions for carrying out educational activities, as defined in the Resolution of the Cabinet of Ministers of Ukraine of December 30, 2015 No. 1187 (as amended by the Resolution of the Cabinet of Ministers of Ukraine of March 24, 2021 No. 365).</p> <p>The proof of salary is provided with encoded/anonymized individual name - Staff list of the university for 2023.</p> <p>Recommendations:</p>	
2.	<p>The higher education institution ensures the adequate number of academic staff with adequate training for the activities provided in the disciplines from the programme curriculum, for the entire cycle of the study programme.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Through competition, the institution ensure a high level of professionalism among academic staff: the candidate's compliance with the components of the EQC, education in the relevant specialty, indicators of professional and scientific activity in accordance with the Regulations on the rating of scientific and pedagogical workers of Igor Sikorsky KPI, possession of a scientific degree, academic title, professional development needed for the activities provided in the disciplines from the programme curriculum, for the entire cycle of the study programme.</p> <p>The situation of the employment rate of the teaching staff from the evaluated study program in the academic year 2024/2025 shows 38 tenure teachers with the specialization and scientific titles.</p> <p>Recommendations:</p>	Compliance
3.	<p>The tenure teachers from the higher education cover, during a university year, maximum three workloads irrespective of the educational institution in which they carry out their activity.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>According to the Labour Code of Ukraine, the Law of Ukraine on Higher Education and the Collective Agreement of the National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”, there is no legal limit on the number of courses that a lecturer can teach. According to the distribution of the workload, each of the teachers is assigned up to 5 courses.</p> <p>Recommendations:</p> <p>It is recommended to reduce the number of teaching hours for teachers and focus their activities on research activities.</p>	Compliance
4.	<p>The number of tenure teachers in the higher education, according to the legal provisions, considered for the evaluated study programme, is the one resulted by considering the full-time jobs from the organisational charts and the part-time jobs which they cover in the respective programme.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>The situation of the employment rate of the teaching staff from the evaluated study program in the academic year 2024/2025 shows 38 tenure teachers work for the study program AHS.</p> <p>Recommendations:</p>	
5.	<p>At least 70% of the total jobs of the study program are assigned to tenure teachers in the higher education institution, according to the legal provisions – with basic workload or reserved position, and at least 25% of them are covered by university professors and associate professors.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The situation of the employment rate of the teaching staff from the evaluated study program in the academic year 2024/2025 shows 38 teaching staff work for the study program AHS, 37 with the basic norm for the higher education KPI and 1 with hourly payment. For 5 Senior lecturers (ML, NS, NY, TC and OK) and 1 assistant (VT), there are not specifications of Specialization and scientific title.</p> <p>Recommendations:</p>	Compliance
6.	<p>The full-time academic staff appointed according to the law, who retired at the age limit or due to other reasons, may work in the capacity of associated academic staff in accordance with the legal provisions, but they may cover at most one workload in the respective educational institution.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The Collective Contract of the National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute” does not provide for additional requirements for the work of part-time and retired employees. The academic load is distributed in proportion to the part-time position for which the part-time employee is registered. In accordance with Article 56 of the Law of Ukraine “On Higher Education”, the working time of academic staff is 36 hours per week. The maximum teaching load for a full-time academic staff member may not exceed 600 hours per academic year.</p> <p>Recommendations:</p>	Compliance
7.	<p>The tenure teachers have the scientific title of PhD and they comply with at least one of the following conditions: they hold a Bachelor’s diploma in the field of the taught disciplines; they are PhD supervisors in the field of the taught disciplines; the theme of their PhD thesis is in the field of the taught disciplines. The other teachers should have the initial training and skills in the field of the taught discipline.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Annex 3 includes lecturers responsible for preparing and teaching an academic discipline according to the educational program in the current academic year (2023 - 2024) in accordance with the individual plans and pedagogical workload - 33 persons. Annex 4 also includes teachers of the Automation Hardware and Software department who participates in laboratory and practical work on the</p>	Compliance

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	<p>discipline under the guidance of a lecturer - an additional 5 persons. The table regarding the Scientific activity in the field of disciplines shows 33 tenure teachers working for the study program AHS, with the list of scientific papers.</p> <p>Recommendations:</p>	
8.	<p>The tenure teachers have prepared courses and other didactic material necessary to the educational process, which fully cover the issues of the respective discipline, in accordance with the subject description (syllabus). The teachers have relevant training for the subjects approached in the developed learning resources.</p> <p>Findings from the Self-Evaluation Report/ Visit: The table regarding the Scientific activity in the field of disciplines shows 33 tenure teachers working for the study program AHS, developed courses and other didactic material in the field of subjects in the teaching position (according to Annex 4.1).</p> <p>Recommendations: It is recommended to increase the number of publications in international journals and conferences, in English for visibility.</p>	Compliance
9.	<p>The teachers who occupy positions of assistant should have certified pedagogical training.</p> <p>Findings from the Self-Evaluation Report/ Visit: There are no legal requirements for teaching assistants to have a pedagogical training certificate. However, for the educational and scientific programs of Masters (https://tpza.kpi.ua/wp-content/uploads/masters/op/2024/174_onpm_akit_2024.pdf) and Doctors of Philosophy (https://tpza.kpi.ua/wp-content/uploads/phd/program/2024/174_onpd_akit_2024.pdf), there are educational components related to the development of pedagogical skills. For the 174 programs of the specialty Automation, Computer-Integrated Technologies and Robotics, these are “High School Pedagogy” and “Pedagogical Practice”, respectively. By studying these disciplines, future teachers acquire the necessary skills of pedagogical mastery. In addition, Igor Sikorsky Kyiv Polytechnic Institute has a practice of conducting open lectures by assistants and their subsequent discussion at department meetings to improve pedagogical skills.</p> <p>Recommendations:</p>	Compliance
10.	<p>The associated teachers are bound to notify in writing the head of the institution where they occupy the primary position and the head of the institution in which they are associates with regard to the number of classes taught by association; in case they hold the primary position in another higher education institution, it is necessary to obtain the consent from the university senate of the respective institution.</p> <p>Findings from the Self-Evaluation Report/ Visit: All external part-time employees shall coordinate their work schedule at KPI with their main place of work through the HR department. A document from the main place of work with the work schedule shall be submitted to the HR department along with the application and other documents.</p> <p>Recommendations:</p>	Compliance

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11.	<p>The institution provides to the academic staff opportunities to improve their teaching skills and the skills of using the new technologies for teaching purpose.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The professional development of instructors is the foundation for ensuring the quality implementation of the Educational Program. At the University, this issue is regulated by the Regulations on improving the qualifications of pedagogical and scientific-pedagogical workers. Instructors can pursue professional development at the Institute of postgraduate education of the university. They have the option to select desired programs, such as distance learning tools (Microsoft and Google services), international project management, academic integrity, and others. Instructors can also take courses on online platforms (Prometheus, Coursera). Professional development can also include participation in conferences, publication of textbooks, and certification of foreign language proficiency.</p> <p>The professional development of instructors is further supported by academic mobility programs (faculty members of the department who have completed internships abroad include Prof. O.A. Zhuchenko, Assoc. Prof. A.Yu. Sazonov, and Assoc. Prof. S.V. Plashikhin), participation in international conferences, international projects, and the preparation of project applications for participation in international competitions, such as Horizon Europe, for example: HORIZON-CL4-2022-TWIN-TRANSITION-01-04: Intelligent work piece handling in a full production line (Made in Europe Partnership), research and development, etc.</p> <p>The University has a library that provides free access to electronic catalogues in the field of study and scientometric databases. The HEI (Higher Education Institution) supports the development of teaching skills through an incentive system.</p> <p>Recommendations:</p>	Compliance
12.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Not applicable</p> <p>Recommendations:</p>	Not applicable
A.3.2 Availability of the auxiliary staff necessary to implement the study programme		
1.	<p>The auxiliary staff who provides the technical support in the didactic and research laboratories is adequate to ensure the performance of the practical activities from the programme curriculum.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The auxiliary staff involved in the organization of education at the University is divided into engineering-technical and educational-methodological personnel.</p> <p>The engineering-technical staff – 10 persons at the Automation Hardware and Software department and additional 16 people of centralized subordination ensures the sanitary condition of the educational premises, provides safe conditions for conducting classes,</p>	Compliance

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	<p>performs repair and adjustment of laboratory equipment, and other tasks. This staff possesses appropriate qualifications, both engineering and technical. While they are not involved in teaching or other activities with students, their qualifications ensure the technical support of the educational process.</p> <p>The educational-methodological staff includes 4 people under the leadership of the Deputy Dean Security service – usually 2 persons in educational building and dormitory. They primarily perform functions directly supporting the educational process and facilitating interaction between instructors and students: scheduling classes, recording teaching loads, maintaining student documentation, etc. Although they do not participate in classes, they have direct contact with students and are sufficiently qualified to work with students, including in crisis situations. The accurate and coordinated work of these employees is key to the successful organization of the educational process.</p> <p>Recommendations:</p>	
B. EDUCATIONAL EFFICACY		
B.1 Content of the study programmes		
B.1.1 Student admission		
1.	<p>The higher education institution applies a transparent policy of student recruitment and admission, which is publicly announced at least six months prior to the application. The university marketing promotes real and correct information, indicating verification and confirmation possibilities.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The educational program does not have special admission conditions compared to other programs at the university. Admission to the educational program takes place according to the university-wide admission rules, which are usually approved more than six months before the start of applications by applicants (SAR, pg. 26).</p> <p>However, in 2022, after the introduction of martial law by the Order of the Ministry of Education and Science of Ukraine No. 392 of April 27, 2022 (https://zakon.rada.gov.ua/laws/show/z0487-22#Text), the admission conditions were cancelled, and the Procedure for admission to higher education in 2022 has been put into effect special Procedure for admission to higher education in 2022. Full information about the admission company is posted on the main website of the university https://pk.kpi.ua/, and is also specified on the website of every faculty. The initial procedure is also stated and include a pre-evaluation procedure and a competitive procedure</p> <p>Recommendations:</p>	Compliance
2.	<p>The students are recruited based on own admission procedures of the institution. At university/ faculty level there is a methodology/ regulation of admission in the university Bachelor's study cycle – distinct document or a document which is part of an entrance methodology/ regulation document for all the study cycles from the university.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>The Rules of admission to Igor Sikorsky KPI (https://pk.kpi.ua/wp-content/uploads/official-documents/rules.pdf), which regulate all aspects of the entrance campaign for the bachelor's educational level, are provided at the university. The rules of admission to KPI this year were approved at the meeting of the Academic Council. According to these rules, admission to the evaluated educational programme is carried out.</p> <p>Recommendations:</p>	
3.	<p>The admission is based exclusively on the academic skills of the candidate and no discriminatory criterion is applied. Signing-up for the entrance examination is based only on the baccalaureate degree or other documents of equivalent studies.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Entrants were accepted according to the results of the National Multi-Subject Test passed or the External Independent Assessment. To be admitted to the competitive selection, all entrants must have a Certificate of complete general secondary education, or an equivalent document certified by the Ministry of Education and Science of Ukraine and a certain score on that. In previous years, when determining the competitive score, along with the scores of the External Independent Assessment, scores from the Certificate of Complete General Secondary Education were taken into account.</p> <p>Recommendations:</p>	Compliance
4.	<p>The results of student evaluations after the first year of study confirm the adequacy of the admission conditions applied for the evaluated study programme.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The evaluation system takes into account all types of educational activities in accordance with the syllabus of the discipline. Knowledge as a result of theoretical training, skills and experience as a result of practical training, competence as a result of individual work and final evaluation have their component points in the rating evaluation system. The absence of an assessment in any component does not allow the applicant to receive a semester certification in the discipline. Every year, 71-90% of the number of students enrolled in the educational programme successfully complete the summer session after the first year of study. The adequacy of admission conditions is also confirmed by the rector's incoming knowledge control of the first-year students, which is annually conducted by the Institute of Monitoring the Quality of Education</p> <p>Recommendations:</p>	Compliance
5.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Not applicable</p> <p>Recommendations:</p>	Not applicable

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B.1.2 Structure and presentation of the study programme

<p>1. The study programme is presented in the form of a package of documents which includes: mission and aims general and specific goals; curriculum with the disciplines weighted in ECTS study credits, and with the disciplines successively arranged in the learning period; the syllabi of the disciplines included in the programme curriculum and the learning outcomes, flexible learning paths, as the case may be; modality of organisation and content of the study completion examination; compatibility with the national framework of qualifications; compatibility with similar study programmes from the European Union and/or from other world countries.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Together with the educational program and the curriculum plan is developed in accordance with it and working curricula. The working curriculum plan is drawn up every year for each course and details the types of educational activities. In accordance with working study plans, syllabi of disciplines are developed. In the personal offices of the "Electronic Campus" system (https://ecampus.kpi.ua/home) individual study plans of students are placed.</p> <p>The study program is presented in the form of the provided documents: educational and professional program, that includes: Profile of the educational program; List of components of the educational component of the educational and scientific program; Structural and logical scheme of the educational program; Form of final examination of applicants for higher education; Matrix of correspondence of program competences to components of the educational program; Matrix for providing program learning outcomes with relevant components of the educational program; Curriculum, that includes the disciplines, their weight in ECTS credits and distribution between lectures, practices, laboratory works, type of the final assessment (exam or final test) and individual student assignments (course projects, course works); the curriculum is placed in the free access university web and also are presented in Annexes to the Self-Assessment Report; Syllabuses of the disciplines; the syllabuses are located in the department web-site .</p> <p>It should be noted that some syllabuses are only in Ukrainian or/and have different names</p> <p>The program corresponds to the sixth level of education of the National Qualifications Framework</p> <p>It should be noted that, in the Self-Assessment Report cannot find information about the compatibility of the evaluated study programme with similar study programmes from the European Union and/or from other world countries</p> <p>University has uploaded syllabuses via WEBSITE of the department (in Ukrainian): https://tpza.kpi.ua/bachelor-metodychne-zabezpechennya/</p> <p>in detail at the bottom of Web-page:</p> <p>https://drive.google.com/drive/folders/1dlxxzs0t-Q2bKpYMNvMsUsLUsSiTeK7j</p> <p>https://drive.google.com/drive/folders/1VnjD5vr-Cpznf6s-fU-E5HbnRTnqdTrG</p> <p>https://drive.google.com/drive/folders/15weQwYvpcBytY5YjOmf76llc3Z8j7JKu</p> <p>in English: https://tpza.kpi.ua/en/bachelors-curriculums/</p> <p>https://drive.google.com/drive/folders/1DO1doms_tUIV10lmnqjOeFUjYbKLIXRR</p> <p>Recommendations:</p>	Compliance
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	<p>Consider providing clear and consistent information about the syllabuses via the WEBSITE of the institution.</p> <p>Consider providing clear and consistent information about the syllabuses of all elective educational components, that can be selected by students of the study programme.</p> <p>Consider realizing analysis of the compatibility with similar study programmes from the European Union and/or from other world countries.</p>	
2.	<p>The personnel involved in the design/ implementation and evaluation of the content of the study programme has adequate academic and pedagogic experience. The teaching methods and learning activities are selected/ conceived so that to ensure the achievement of the programme outcomes.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The project team includes professors and associate professors, doctors and candidates of sciences with extensive pedagogical and scientific experience, including the head of the Scientific and Methodological Commission of Ukraine in specialty 174 Automation, Computer-Integrated Technologies and Robotics.</p> <p>The curriculum plan and syllabi of the disciplines guide educational activities and the application of teaching methods to achieve program results.</p> <p>All teaching and support staff have many years of experience at the university. Their qualifications provide support for the educational process and communication with students, teachers, parents and university management. Among teachers use discussion, heuristic, research, game, simulation methods, as well as the method of modelling, brainstorming as the main methods of teaching; it is indicated in the syllabi (SAR, pg. 27-29).</p> <p>Teachers improve their qualifications at least once every five years. According to the legislation of Ukraine, in 5 years, the NPP must complete advanced training courses totalling 5 credits (180 hours). This possibility is regulated by the "Regulations on improving the qualifications of pedagogical and scientific-pedagogical staff" (Order No. 7/134 of 03.08.2020 on the approval of "Regulations on improving the qualifications of pedagogical and scientific-pedagogical staff"). The professional development plan is approved annually by the Scientific Council of the university.</p> <p>Training is carried out in the form of lectures, seminars, practical classes, laboratory classes, and individual classes. When self-studying, students can have consultations with lecturers</p> <p>Recommendations:</p>	Compliance
3.	<p>The study programme curriculum is approved at institutional level.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The curriculum of the programme is adopted by the Academic Council of Igor Sikorsky Kyiv Polytechnic Institute University has uploaded signed curriculums via WEBSITE of the department (in Ukrainian) : https://tpza.kpi.ua/bachelor-metodychne-zabezpechennya/ and in English: https://tpza.kpi.ua/en/bachelors-curriculums/</p>	Compliance

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	<p>exactly: http://tpza.kpi.ua/wp-content/uploads/bachelors/plans/2024/en/Curriculum_2024.pdf</p> <p>Recommendations: For a better transparency, consider placing the approved (scanned copies with the signatures and stamps) curriculums on the official web-site of the NTU KPI</p>	
4.	<p>The programme curriculum is designed so that the corroborated learning outcomes declared for all the disciplines to ensure the achievement of the programme outcomes.</p> <p>Findings from the Self-Evaluation Report/ Visit: The curriculum and syllabuses of disciplines are drawn up in accordance with the educational program, respectively, time for lectures, practical, laboratory and self-study</p> <p>Recommendations:</p>	Compliance
5.	<p>Based on the content of the fundamental disciplines, the curriculum for the 1st year of study is conceived so that to help and motivate the students for the study of the engineering sciences.</p> <p>Findings from the Self-Evaluation Report/ Visit: The curriculum for the first-year students includes courses of general training as: Physics, Higher mathematics, Informatics, etc., the content of which give the basis and motivation for studying the subsequent courses of vocational training. In addition, teachers of fundamental disciplines emphasize and pay more attention to the study of those sections that are later necessary for the study of special disciplines. The university also offers adaptation courses (https://kpi.ua/adapt), which help first-year students in the study of fundamental disciplines and motivate them to continue their studies.</p> <p>Recommendations:</p>	Compliance
6.	<p>The curriculum is structured so that to allow the graduation, during the period usually assigned for the study cycle of the programme.</p> <p>Findings from the Self-Evaluation Report/ Visit: The legislation of Ukraine establishes a fixed duration of study at the bachelor's level, which is 3 years and 10 months. The total number of weeks for the classes is equal to 18 for all semesters, except the 8th. During this period, students have the opportunity to pass all the normative courses of the educational program, as well as a number of optional courses to take the necessary amount of ECTS credits (240 credits). The educational program and curriculum ensure its compliance</p> <p>Recommendations:</p>	Compliance
7.	<p>The curriculum reflects the student-centred learning, allowing flexible learning paths through optional and facultative disciplines and encouraging the students to have a proactive role in the learning process.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Partially compliance

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	<p>According to point 1.3 of the Regulation on the organization of the educational process at Igor Sikorsky Kyiv Polytechnic Institute educational activity is based on the principles of student-centred learning. The realism and balance of the OPP and the training curriculum create conditions for the all-round harmonious development of the applicants. Applicants are trained according to individual study plans which are based on the results of the applicant's personal choice of disciplines from the elective course-catalogues of optional disciplines.</p> <p>Curriculum has 25% (60 ECTS) of the elective components that divided into 2 elective disciplines (4 ECTS in total) in the field of general training cycle and 14 elective disciplines (56 ECTS credits in total) of vocational training cycle, that corresponds to the requirements of Ukrainian legalisation in the field of higher Education (SAR p8) in the personal office of the "Electronic Campus" system.</p> <p>In addition to the specified mandatory number of optional subjects, the student can study additional subjects at his own request. All selected disciplines, together with regulatory ones, are recorded in the student's individual study plan.</p> <p>It should be noted that:</p> <ul style="list-style-type: none">- some of the elective disciplines from elective catalogue are missing, so it is not clear what other disciplines students can select; in general.- the analysis of the titles and the content of provided syllabuses shown that content of many elective courses are the same; or with quite similar topics. <p>Recommendations:</p> <p>For the existing selective catalogue, the list of all elective courses should be added. Consider removing duplicated disciplines.</p> <p>We recommend analysing a different approach regarding the elective components, as follow: transform the common part of elective discipline into a compulsory discipline and proposing of the elective disciplines with unique content; form the groups of elective disciplines with 3, 4 options, where the student can free select only one discipline.</p>	
8.	<p>The programme curriculum consists of fundamental, domain, specialty and complementary disciplines grouped in mandatory, elective and optional disciplines in accordance with the regulatory requirements established at national level and with the standards specific to the Bachelor's field/ study programme.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The requirements for the structure, content and design of curricula are determined every year together with the organization and planning of the educational process</p> <p>The content of the discipline allows their classification into ARACIS categories: fundamental disciplines (those in year I); domain disciplines (those in years II and III); specialty disciplines (those in year IV), roughly respecting the specific engineering requirements.</p> <p>Recommendations:</p>	Compliance

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9.	<p>The programme curriculum is designed so that to meet the educational needs of the employers, including the acquirement of practical skills.</p> <p>Findings from the Self-Evaluation Report/ Visit: The practical training of students is ordered by the Regulations on the procedure for conducting the practice of higher education Igor Sikorsky KPI and is provided through practical, seminar and laboratory classes. The curriculum includes 180 hours of pre-diploma practice, which takes place at partner enterprises, which are also the main employers, as well as 50% hours of laboratory and practical classes. During the development and updating of the educational programme, the opinion expressed by employers during its evaluation is considered (SAR p24-26).</p> <p>Recommendations: Consider extension of practice training by adding the practice (internship) on the 2nd and/or 3rd year of study that should improve the acquire of practical skills.</p>	Compliance
10.	<p>The disciplines included in the programme curriculum are provided in a logical sequence and they are weighted by ECTS study credits.</p> <p>Findings from the Self-Evaluation Report/ Visit: The number of ECTS credits of each discipline is indicated in a dedicated column in the curriculum, designed to align with the educational program's structural and logical scheme and ensuring that the learning outcomes for disciplines are met. The share of students' independent work hours in relation to the total number of hours is on average 55%, which amounts to 4014 hours. The number of classroom hours gradually decreases from 26 hours (1st year of training) to 23 hours (4th year of training). Elective courses make up at least 25% of the total number of ECTS credits, which creates conditions for the realization of students' personal creative potential.</p> <p>Recommendations:</p>	Compliance
11.	<p>The higher education institution disposes of internal mechanisms for the harmonization of the discipline contents and avoidance of their overlapping.</p> <p>Findings from the Self-Evaluation Report/ Visit: The study programme “Automation hardware and software (AHS)” is conducted in the field of 174 Automation, Computer-Integrated Technologies and Robotics and has fundamental and professional-oriented core disciplines. In order to avoid overlapping and duplication of the content of the disciplines, regular methodical seminars are held at the department, where both the structural and logical scheme of teaching, and the methodology and content of teaching individual disciplines are considered.</p> <p>Recommendations: Implementation of a mechanism used to avoid the overlapping.</p>	Compliance

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<p>12. The disciplines from the programme curriculum have syllabi with the objectives, basic thematic content, distribution of the number of courses, seminars, and applicative activities etc. by themes, minimal bibliography, adequate examination methods for the planned learning outcomes; the syllabi are signed by the course, seminar/ other applicative activity holder and by the head of department.</p> <p>Findings from the Self-Evaluation Report/ Visit: The syllabuses of the study programme AHP are located on the drive of the Department (https://drive.google.com/drive/folders/1DO1doms_tUIV10ImnqjOeFUjYbKLIXRR). Each syllabus contains of the next parts: Description of the educational discipline, its purpose, subject of study and learning outcomes; Purpose and tasks of the academic discipline; Pre-requisites and post-requisites of the discipline (place in the structural and logical scheme of training according to the relevant educational program); Content of the academic discipline; Educational materials and resources; Methods of mastering an educational discipline (educational component); Independent work of a student/graduate student; Policy of academic discipline (educational component); Types of control and rating system for evaluating learning outcomes; Additional information on the discipline (educational component).</p> <p>It should be noted that:</p> <ul style="list-style-type: none">- in general, in the elective catalogue, there are elective components, but some courses have no alternative, or it is not clear what other disciplines students can select.- there are some syllabuses in which, the number of hours allocated for each topic is missing.- at the end of the syllabuses placed on the WEBSITE is mentioned that these were adopted by the Department of Electronic Devices and Systems and agreed by Scientific council of the Faculty of Electronics; however, there are not signed by the course, seminar / other applicative activity holder and by the head of department. <p>Recommendations: For the existing electing-catalogue, the list of all elective courses should be added. Consider the optimization of syllabus structure for the orientation of their content on students (e.g., requirements for students). Formal validation of each course / discipline</p>	Partially compliance
<p>13. The syllabi provide correlations between the declared learning outcomes which the discipline contributes to, its content and the modality of evaluating the learning outcomes acquired by the student.</p> <p>Findings from the Self-Evaluation Report/ Visit: Syllabi indicate the topics of classroom sessions, types of individual tasks, recommended literature for mastering the discipline, describe the rating system for evaluating students' task completion, and teaching and learning policies for the discipline (SAR, pg. 8). The rating system for evaluating each discipline, is compiled in its syllabus in such a way that it is possible to receive gained points for all learning outcomes of the discipline. Tasks submitted for semester control contain a practical and theoretical part and cover the content of the entire discipline.</p> <p>Recommendations:</p>	Compliance

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14.	<p>The syllabi reflect the student-centred learning, including by providing activities specific to the individual study (homework, individual or team projects etc.) and their inclusion in the evaluation process.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>According to point 1.3 of the Regulation on the organization of the educational process at Igor Sikorsky Kyiv Polytechnic Institute (https://osvita.kpi.ua/node/39) educational activity is based on the principles of student-centred learning. Applicants are trained according to individual study plans (https://osvita.kpi.ua/node/117).</p> <p>Individual tasks may include: writing a separate essay on topics assigned for independent study (usually in the early years of study); other tasks include performing calculations to gain practical experience in determining the characteristics of various electrical circuits (transistor amplifiers, circuits on operational amplifiers, etc.); works on graphic design, as well as homework from different disciplines. The curriculum includes course projects and works, in total, provides 4014 hours (more than 50%) for independent work of students.</p> <p>Recommendations:</p> <p>Before the beginning of the semester, consider updating the course works syllabuses and add information about topics of the course works; so, students can select the topics that are in the area of their interest.</p>	Compliance
15.	<p>The nomenclature of the disciplines contained in the programme curriculum and the content of such disciplines indicated in syllabi correspond to the Bachelor's field and study programme.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>List of curriculum disciplines and their content correspond to the Bachelor's field and study programme.</p> <p>Recommendations:</p>	Compliance
16.	<p>The academic year is structured on two semesters of 14 weeks on average, with 22-28 classes/week, depending on the university education fields, except the study programmes regulated under the directives of the European Union.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>According to the educational process schedule of Igor Sikorsky Kyiv Polytechnic Institute, the Bachelor's degree program takes 4 academic years to complete. An academic year consists of two semesters, each lasting for 18 weeks (except 8th) for the contact hours (lectures, practices, laboratory works) and independent students work, and 2 exam session. During the session, at least 3 days are planned for each exam, including 1 day for taking the exam and at least 2 days for preparation. In addition, 8th semester has 5 weeks of Pre-diploma practice. There are at least 2 weeks of holidays scheduled between the autumn and spring semesters. The student's weekly workload for all types of educational activities does not exceed 50 hours per week (10 hours per day during working days). According to the curriculum, depending on the course, students of the educational program have between 23 to 27 hours of classroom instruction per week.</p> <p>Recommendations:</p>	Compliance

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17.	<p>Each semester shall have 30 ECTS study credits for the mandatory disciplines (including those selected by the student from the category of optional disciplines), irrespective of the form of education.</p> <p>Findings from the Self-Evaluation Report/ Visit: According to the curriculum the educational program provides general volume of 240 ECTS credits of academic disciplines, 30 ECTS in each semester (including electives). According to discussion during the visit they confirm this situation.</p> <p>Recommendations:</p>	Compliance
18.	<p>The optional disciplines, irrespective of the study semester in which they are provided in the programme curriculum, complete with an examination, and the credit points which are granted are in addition to the 30 credit points of the respective semester.</p> <p>Findings from the Self-Evaluation Report/ Visit: Ukraine legalisation in the field of higher education requires 25% of ECTS credits of each educational programme devote to the elective disciplines. Their credit points should be included in 30 ECTS credits of each semester. All disciplines of the students' choice are accompanied by a final (semester) control on which the student receives a final grade for the discipline on a 100-point scale. The form of semester control – credit or exam – is determined by the curriculum. The final (semester) control is carried out in the terms established by the schedule of the educational process of the university. Credits of optional disciplines supplement credits of normative disciplines of the corresponding semester up to 30 credits.</p> <p>Recommendations: Consider adding to the curricula of free elective disciplines (with extra credits to the 30 compulsory of the semester).</p>	Compliance
19.	<p>The ratio between the course hours and the hours of applicative didactic activities – seminars, laboratories, projects, practice etc. should be in accordance with the standards specific to the Bachelor's field/ study programme.</p> <p>Findings from the Self-Evaluation Report/ Visit: The ratio between theoretical and practical training meets the requirements of the Ukrainian legalisation in the field of higher education and the specialty standard 174 Automation, Computer-Integrated Technologies and Robotics. According to the curriculum more than 50% hours are allocated to practical classes. In addition, students complete two course projects (90 hours) and two term papers (60 hours).</p> <p>Recommendations:</p>	Compliance
20.	<p>At least 50% of the forms of verification of the disciplines provided in the programme curriculum are examinations.</p> <p>Findings from the Self-Evaluation Report/ Visit: All disciplines of the program are accompanied by a final semester control, on which the student receives a final grade for the discipline on a hundred-point scale. During the entire period of study, the student studies 61 disciplines and takes 19 exams and 42 credits. The difference between an exam and a credit is that the exam is given in a two-week period of the session, which is not</p>	Partially compliance

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	<p>included in the 18 weeks of the semester. The assessment is given at the last lesson of the semester. No more than 3 exams per semester are allowed SAR, pg. 16).</p> <p>As such the exams to credits ratio is: $19/61 \cdot 100 = 31\%$.</p> <p>Recommendations: Consider increasing the number of exams in the educational programme, in order to reach at least 50%</p>	
21.	<p>The programme curriculum provides 2-3 weeks of practice per year as of the second year of study, and for the preparation of the graduation thesis in the last year of study.</p> <p>Findings from the Self-Evaluation Report/ Visit: The practice is organized in accordance with "Regulations on the practice of students of higher educational institutions of Ukraine". According to the curriculum has one practice (pre-diploma) in 8th semester, with duration of 5 weeks and 6 ECTS study credits. In addition, practical and laboratory classes of some disciplines of junior courses are also held at partner enterprises on the partners' modern equipment. It should be noted that, it is partially compliant the requirements of ARACIS and EurAce label, which impose minimum 240 hours of practice for the Bachelor studies (divided into domain, specialty and diploma practice).</p> <p>Recommendations: Consider the introduction in the curriculum of practice / internship in enterprise, for a total of at least 6 weeks (with 30 hours/week workload).</p>	Partially compliance
22.	<p>For the practice periods, the higher education institution has concluded collaboration agreements, contracts, or other documents with the practice units, which provide: the location and period of practice, modality of organisation and guidance, persons in charge from the education institution and practice unit etc.</p> <p>Findings from the Self-Evaluation Report/ Visit: Internship contracts are concluded with partner enterprises. These enterprises have a large production and research base, every year providing the necessary number of places for the practice of students of the educational program. In general, the specified enterprises have all the necessary resources and use them to achieve the goals of the practice. Each student is assigned with a manager at the enterprise where the practice takes place, as well as a manager from among the teachers of the department. During the practice, each student fills out a practice diary, which displays the tasks completed by him and the assessment of the representative of the company where the practice takes place regarding its results and the degree of the student's mastery of the relevant competencies.</p> <p>Recommendations:</p>	Compliance
23.	<p>The practice syllabi are adequately prepared, being focused on the students acquiring the practical skills which to allow them, after graduation, to get a job on the labour market.</p>	Compliance

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	<p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The practice is organized in accordance with "Regulations on the practice of students of higher educational institutions of Ukraine" According to the curriculum, has one practice (pre-diploma) in 8th semester, with duration of 5 weeks and 6 ECTS study credits. Practice syllabi are oriented for students to acquire practical skills that will allow them to get a job on the labor market after graduation. According to the results of the defence, 100% of students received positive marks. It should be noted that, on the web site where the syllabuses are uploaded, for the Pre-diploma practice and Diploma work there are no English versions of the contents.</p> <p>Recommendations:</p> <p>Consider the introduction in the curriculum of practice / internship in enterprise, for a total of at least 6 weeks (with 30 hours/week workload).</p> <p>Publish the English version of the syllabuses for all the components of practice.</p>	
24.	<p>The graduation examination is a summary examination which certifies the assimilation of the learning outcomes corresponding to the university qualification (study programme).</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The graduation examination is carried out in the form of a public defines of the qualification work (diploma thesis or diploma project). The qualification work should involve the solution of a complex specialized task or a practical problem, which requires the application of theories and methods of engineering sciences and is characterized by the complexity and uncertainty of conditions.</p> <p>Recommendations:</p>	Compliance
25.	<p>The themes for the preparation of the final paper (graduation theses) contain subjects proposed by/ developed in collaboration with the industry.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>According to the Regulation on the examination board and certification of higher education applicants at Igor Sikorsky Kyiv Polytechnic Institute / Regulations on the examination commission and certification of applicants for higher education in Igor Sikorsky KPI topics of qualification papers can be proposed by practice managers from practice bases, stakeholders with the necessary justification of the expediency of its development and the possibility of implementation.</p> <p>The list of topics for diploma projects (diploma theses) consists of topics proposed by the graduation department, supervisors, practice supervisors from practice bases, stakeholders and is approved at the beginning of the academic year at a department meeting and is posted on the department's website. Students can choose the topic of their diploma project (theses) from the proposed list, which also includes topics proposed by partner enterprises.</p> <p>According to SAR, employers take part in the development of curricula and educational programs, provide their production and laboratory facilities for conducting scientific research of graduate students. The practice of completing diploma theses and projects on assignments from enterprises is established.</p>	Compliance

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	<p>Recommendations: Meeting with representatives of employers and industry stakeholders proved the facts that there are some topics that were proposed by the industry.</p>	
26.	<p>The structure of the study programme remains unchanged for one study cycle; it may be modified only as of the 1st year of the following academic year.</p> <p>Findings from the Self-Evaluation Report/ Visit: Specified procedures for development, approval, monitoring and periodic review of educational programs are considered in sections 2 and 9 of the Regulation on the organization of the educational process and in the Regulation on the development, approval, monitoring and revision of educational programs at Igor Sikorsky Kyiv Polytechnic Institute. Over the past five years, the program has been updated four times. However, those changes are implemented only for the next study cycle, so it means, study program remains unchanged for one study cycle in general. In the process of program revising consultations are held with all stakeholders - employers, teachers and students.</p> <p>Recommendations:</p>	Compliance
27.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p>Findings from the Self-Evaluation Report/ Visit: Not applicable</p> <p>Recommendations:</p>	Not applicable
B.1.3 Relevance of the study programme		
1.	<p>The study programme is designed by involving the representatives of the academic sector, including students, industry and economic sector, and labour market.</p> <p>Findings from the Self-Evaluation Report/ Visit: The project group that developed the program includes representatives of the academic sector, a representative of industry and a graduate of the program.</p> <p>Recommendations:</p>	Compliance
2.	<p>The study programme is revised on regular basis by considering the peer-reviews together with students, graduates, and representatives of the employers, in this way benefiting from external expertise and reference points.</p> <p>Findings from the Self-Evaluation Report/ Visit: The interests and proposals of the academic community in the formation of the goals and program results of training are taken into account by including the following PRN in the EP: adapt to changes in the technologies of professional activity, predict their impact on</p>	Compliance

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	<p>the final result; to understand the state and prospects of development of the subject area; to critically understand the main theories, principles, methods and concepts in professional activity.</p> <p>Recommendations:</p>	
3.	<p>The higher education institution disposes of mechanisms for annual peer-review of the way in which knowledge is transmitted to and assimilated by students.</p> <p>Findings from the Self-Evaluation Report/ Visit: Igor Sikorsky Kyiv Polytechnic Institute annually conducts complex monitoring of the quality of specialist training (https://kpi.ua/monitoring-about). According to the results of each round of comprehensive monitoring for each specialty of the university, an index of the quality of specialist training is determined, the components of which are the following:</p> <ul style="list-style-type: none">a) the result of the rector's control of students' residual knowledge.b) index of diploma theses quality.c) index of the quality of specialist training based on the results of sociological surveys of the labour market.d) accumulative index of the quality of specialist training based on the results of previous rounds. <p>Monitoring indicators are determined based on the methodology.</p> <p>Recommendations:</p>	Compliance
B.1.4 Organisation and coordination of the study programme		
1.	<p>The didactic process is organised and coordinated so that to ensure the fulfilment of the mission and aims and achievement of the programme outcomes.</p> <p>Findings from the Self-Evaluation Report/ Visit: The focus of the didactic process on fulfilling the missions, goals and achieving the results of the program is clearly traced in its structural and logical scheme. Based on it, a curriculum is drawn up, which provides an appropriate sequence of teaching to implement connections between disciplines. In the syllabus of each discipline its goals and learning outcomes are given, and the disciplines on which it is based and for which it itself is the basis are indicated. The study of all regulatory disciplines ensures the achievement of the missions, goals and results of the programme.</p> <p>Recommendations:</p>	Compliance
2.	<p>There are prerequisites set to ensure the development of the skills by natural and correlated accumulation of knowledge and skills mentioned in the syllabi (for example, conditioned discipline groups).</p>	Compliance

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	<p>Findings from the Self-Evaluation Report/ Visit: The sequence of disciplines reflected in the structural and logical scheme of the educational program and in the syllabuses of the disciplines ensures accumulation and development of knowledge and skills.</p> <p>Recommendations:</p>	
3.	<p>The results of the analyses regarding the quality of the student evaluation with regard to the developed skills confirm the adequacy of the evaluation methods used and the proper deployment of the process.</p> <p>Findings from the Self-Evaluation Report/ Visit: Evaluation of students takes place in accordance with the provision on the system of evaluation of learning outcomes at Igor Sikorskyi Polytechnic Institute. According to it, a rating evaluation system is compiled, which is a component of each syllabus in the discipline. The rating system of evaluation is brought to the students' attention at the first lesson. In educational disciplines of EP according to clause 5.2 of the Regulation on the organization of the educational process in Igor Sikorsky Kyiv Polytechnic Institute the following main types of control measures are carrying out: current, calendar, rector's and final (semester control and certification) control. The content and forms of conducting each of the specified types of control are determined by the Regulation on current, calendar and semester control of study results at Igor Sikorsky Kyiv Polytechnic Institute. The current monitoring of educational components involves obtaining points for doing individual tasks and tests according to the working curriculum, for performances at practical or seminar classes and, reports of computer workshops and laboratory works, etc. Based on the results of current control, the teacher can determine the current level of knowledge and skills mastered by the learner (including independently), defined in the syllabus of the discipline, and make certain corrections in the teaching process. Calendar control is carried out for each academic discipline (educational component), as a rule, on the 7-8th weeks and 14-15th weeks of each semester of study of the students and is implemented by determining the level of compliance of the applicant's current achievements (rating) with the criteria established and defined in the RSA. According to the results of the calendar controls, the presence of general or individual problems of the applicants regarding the study of the discipline is determined. The results of calendar controls are discussed at department meetings and relevant decisions are made. The final (semester) control is the assessment of the degree of achievement by the student of the planned program learning results from a certain educational component. The results of semester's inspections are discussed at department meetings, based on the results of which proposals are made regarding the need to make changes to the teaching of educational components. Such three-level control of success allows the authorities to adjust the process during training to improve the results from both the teachers and the students.</p> <p>Recommendations:</p>	Compliance

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4.	<p>The achievement of the learning outcomes by students is adequately assessed, covering the 8 learning areas defined by the EAFSG: 1- Knowledge and Understanding; 2- Engineering Analysis; 3- Engineering Design; 4- Investigations; 5- Engineering Practice; 6- Making Judgements; 7- Communication and Teamwork; 8- Lifelong Learning.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Teachers strictly follow the provisions of Igor Sikorskyi Kyiv Polytechnic Institute about the system for evaluating learning results (https://osvita.kpi.ua/index.php/node/37) and about the current calendar and semester control of learning results (https://osvita.kpi.ua/index.php/node/32).</p> <p>In these regulations are claimed: the purpose, main tasks, principles and mechanisms of implementation of the comprehensive assessment of the training of higher education applicants are determined; the monitoring process and basic control measures are regulated to determine the level of competences, knowledge, skills acquired by higher education graduates, their compliance with the requirements of educational programs at a certain level of higher education; the procedure for liquidation of academic debts is determined.</p> <p>In the Regulation on the system of evaluation of learning results in Igor Sikorskyi KPI is mentioned that the algorithms for forming the evaluation of the academic discipline for credit and exam cases are uniform for the entire university and provide for the use of a 100-point scale. Point assessment of all types of work is provided, in accordance with the curriculum.</p> <p>The adequacy of the assessment is confirmed by the results of the rector's control conducted at the university in the first (entrance control), second and fourth years of studying in the main disciplines. Rector's control is independent and impartial, teachers of the department have no opportunity to influence the evaluations (https://kpi.ua/monitoring-about).</p> <p>The student/graduate of the study program is able to describe, identify and summarize fundamental mathematical, physical and computer science/programming concepts and methods (this would be with reference to the disc. in appendix 8, High Mathematics, Programming, Physics). The student/graduate identifies electrical/electronic, linear and digital devices and circuits and uses methods for measuring quantities in various schemes/circuits (this with reference to Electronics and Electromechanics, Technological Measurements and Devices, Fundamentals of Digital Circuitry in appendix 8). The student/graduate describes and identifies fundamental concepts in computer science and information technology and their application in concrete problems/projects in automation, energy and electromechanical engineering (Information Systems Design, Design of Automation Systems etc.). The student/graduate describes and identifies fundamental concepts of automation, methods of modelling, identification, simulation and analysis of processes and computer-aided design techniques and their application in concrete problems in engineering sciences (Computer modelling, Automatic control theory, etc.).</p> <p>Recommendations:</p>	Compliance
5.	<p>The students are supported in the didactic activities or by other specific actions to understand the necessity of continuing their education through lifelong learning to maintain, after graduation, an updated level of their knowledge in the studied field.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>During the teaching of disciplines, attention is paid to the place of application of relevant knowledge both in industry and in the disciplines of master's training. In this way, the development of knowledge and skills in the master's degree is announced, and admission to the master's degree is promoted.</p> <p>Students receive consultations both according to the schedule and individually at any convenient time using all available means of communication. Teachers give students advice and consultations, also regarding their further education and career. The Club on control systems of unmanned aerial vehicles, is organised by the department which encourages students to solve more complex practical tasks and continuing education. 1st-year students are offered adaptation courses in fundamental disciplines and remedial courses of the Educational and Scientific Center of the Institute for Monitoring the Quality of Education. Teachers conduct additional consultations in their disciplines.</p> <p>Recommendations:</p>	
6.	<p>The ratio between the number of teachers and the number of students enrolled in the evaluated study programme complies with the provisions of the standards specific to the Bachelor's field of the programme. To assess the quality, it is considered that a teacher has the primary working hours in a single university.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The number of full-time students for one full-time position of a teacher in state-owned higher educational institutions for the educational qualification level of a bachelor is regulated by Resolution of the Cabinet of Ministers of Ukraine No. 1134 of August 17, 2002 (https://zakon.rada.gov.ua/laws/show/1134-2002-%D0%BF#Text).</p> <p>The number of full-time employees is 39: 5 professors, 17 associate professors, 11 senior teachers, 2 assistants work at the department.</p> <p>According to the Annex 5, the number of teaching staff with activities to the evaluated study programme is 39 and the number of the students enrolled in the current academic year is 280 with a maximum of 75 per year of study.</p> <p>Recommendations:</p>	Compliance
7.	<p>The study batches – series, groups, sub-groups – are sized so that to ensure the efficient deployment of the educational process.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The number of students in lecture streams and during group training sessions is determined by the Regulations on the Organization of the Educational Process at Igor Sikorsky Kyiv Polytechnic Institute / Regulations on the Organization of the Educational Process at Igor Sikorsky KPI (https://osvita.kpi.ua/index.php/node/39):</p> <ul style="list-style-type: none">- lectures - 50-100 people;- group classes - 20-30 people.- practical classes - 15-25 people;- laboratory classes - 10-15 people.	Compliance

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	<p>The schedule is made according to the capabilities of the auditorium fund (https://schedule.kpi.ua/).</p> <p>Recommendations:</p>	
8.	<p>From the timetable of the evaluated study programme results the possibility of normal deployment of the educational process, in accordance with the law.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The schedule of classes is developed by the methodologist of the educational and scientific institute and is controlled centrally in the university control room in accordance with the rules that contribute to the normal educational process (https://schedule.kpi.ua/). For example, no more than eight hours of classes per day are allowed. Gaps between classes are not allowed. Practical and laboratory classes are held after lectures. According to the work plan, no more than 28 hours of classes are allowed per week (no more than 30 hours in the first year). The recommended division between classroom classes and students' independent work is 50% by 50%. It is allowed to increase the classroom load up to 60% for fundamental disciplines. In the conditions of the need for remote learning in a mixed form, lectures are scheduled for separate days. In this way, laboratory and practical exercises can be conducted in laboratories, and lectures can be conducted remotely.</p> <p>Recommendations:</p>	Compliance
9.	<p>The results obtained by the student during years of study are registered in the Academic Record, and they are attested based on the Diploma Supplement.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Grades are posted in information on the electronic campus (https://ecampus.kpi.ua/), where they are stored and available to the student in his personal office throughout the study period, as well as in paper information. After graduation, the final grades for all disciplines of the program studied by the student for all years are included in the appendix to the European-style diploma in Ukrainian and English.</p> <p>In the case of premature completion of studies, the student is issued an academic certificate with all received grades and results, which is regulated by the "Procedure for Accompanying Documents on Higher Education".</p> <p>Recommendations:</p>	Compliance
10.	<p>The higher education institution has regulated the procedure for the promotion of the student from one year of study into another, depending on the accumulated ECTS study credits, and the procedure of covering two years of study in a single year, in accordance with the legal regulations in force.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The University has a Regulation on the expulsion, interruption of studies, renewal and transfer of students of higher education in Igor Sikorsky KPI (https://osvita.kpi.ua/index.php/node/178), formed on the basis of the Law of Ukraine "On Higher Education".</p>	Compliance

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	<p>This regulation prescribes the criteria for the implementation of the individual study plan and the grounds for expelling students from the university. Individual study plans provide, as a rule, 30 credits per semester, which must be credited to the student according to the results of his studies.</p> <p>For students who have difficulties in completing the educational program, state regulations (Law of Ukraine "On Higher Education", Article 46) and "Regulations on Expulsion, Interruption of Education of Students of Higher Education at Igor Sikorsky KPI (https://osvita.kpi.ua/index.php/node/178) it is provided to receive an academic leave - a break in studies, during which the student does not expell from the university, but also does not participate the educational process. The duration of the academic leave is usually one year. Students with learning difficulties have the opportunity to study at adaptation and remedial courses of the Educational and Scientific Center of the Institute for Monitoring the Quality of Education (https://kpi.ua/adapt).</p> <p>Recommendations:</p>	
11.	<p>For accreditation, the series of graduates of the higher education institutions authorized to operate on temporary basis have taken the Bachelor's exam in accredited institutions with the same Bachelor's field or study programme, established by ARACIS. The teachers who have carried out activities in the faculties or study programmes which the candidates taking the respective Bachelor's degree examination come from shall not be part of the examination commissions.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>This is an evaluation for maintaining the accreditation. The educational program is accredited by the Ministry of Education and Science of Ukraine.</p> <p>The training of students is conducted on an ongoing basis (Certificate of accreditation No. 5400 issued by the Ministry of Education and Science of Ukraine on July 6, 2023, valid until July 1, 2028).</p> <p>Recommendations:</p>	Compliance
B.1.5 Partnerships		
1.	<p>The partnerships concluded with public and private organisations for the practice of the students are sufficient and with an adequate content (regarding the practice period, number of practice locations, tutorship guaranteed in the company etc.) in order to obtain the expected results of the study programme.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The internship is organized in accordance with "Regulations on the internship of students of higher educational institutions of Ukraine" No. 93 of April 8, 1993 (https://kpi.ua/document_practice). The practice of the applicants is carried out at the leading enterprises in the field of automation.</p> <p>These enterprises have a large production and research base, providing each year the necessary number of places for the practice of students of the educational program. Enterprises provide practice management by highly qualified specialists In general, the specified enterprises have all the necessary resources and use them to achieve the goals of the practice.</p>	Compliance

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	Recommendations:	
2.	<p>There are partnerships concluded with organisations with which prior consultations were held in order to identify the educational needs of the study programme (see criterion A.1.2.5)</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The Department actively involves employers in the organization and implementation of the educational process, using their practical experience and scientific potential for participation in the educational process, joint implementation of scientific and research works, implementation of enterprise developments in the educational process, organization of internships for scientific and pedagogical workers, performing internship of students of higher education.</p> <p>With the participation of these enterprises, educational and scientific laboratories are organized and operate, in which students of higher education conduct their scientific research.</p> <p>For example, the Ukrainian representative office of Honeywell donated software and hardware for the centre for developing management strategies to the AH&S department. The company SIEMENS provided a grant to purchase software for system design and modelling (NX, SolidEdge, Tecnomatix).</p> <p>Recommendations:</p>	Compliance
3.	<p>The partnerships concluded with other higher education institutions from abroad correspond for the purpose of achieving international mobility and achievement of programme outcomes.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Issues of partnership and conclusion of agreements with other higher educational institutions from abroad and academic mobility of applicants belong to the field of activity of the educational and methodological department of the University (https://okop.naiou.kiev.ua/!%D1%96ve-menyu/akadem%D1%96chna-mob%D1%96ln%D1%96st.html).</p> <p>The department of academic mobility of Igor Sikorsky KPI (https://mobilnist.kpi.ua/, https://osvita.kpi.ua/node/124) is responsible for information support and documentation in matters of academic exchange of students and teachers, namely: informing and consulting; program coordination; development of cooperation with Ukrainian and foreign universities; organization of information events aimed at popularizing programs.</p> <p>Partnerships with foreign educational institutions contributed to the participation of teachers and students in European projects: programs TEMPUS-NETCENG, ERASMUS, etc. Academic mobility of the Academic Staff is realized through internships and teaching</p> <p>Recommendations:</p>	Compliance

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B.2 Learning results

B.2.1 Pass rate of students and graduates

<p>1. For the accreditation of the study programme, the higher education institution should prove as follows:</p> <ul style="list-style-type: none">- minimum 51% of the total graduates of each series have passed the Bachelor's degree examination;- minimum 40% of the graduates of the first series are hired with legal labour contract on positions corresponding to the specialization obtained when graduating. <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>This is confirmed by the successful defence of more than 95% of diploma projects within the planned period. More than 70% of graduates annually enter the Master Degree program in the year of graduation. The University employment activities are regulated by Order No. 7/153 of August 26, 2020 "On the Approval of the Regulation on Assistance to the Employment of Graduates of Higher Education and Graduates of Igor Sikorskyi Kyiv Polytechnic Institute". To help with career guidance and graduates employment, the University has a Career Development Center of Igor Sikorskyi Kyiv Polytechnic Institute, which is an interactive space for cooperation between higher education applicants/graduates and employers (https://robota.kpi.ua/).</p> <p>Recommendations:</p>	Compliance
<p>2. The institution disposes of internal mechanisms to monitor the student progression with regard to:</p> <ul style="list-style-type: none">- academic results during the years of study,- drop-out rate,- credits accumulated by the students which pass from one year into another (as credited students),- time to graduation. <p>The results of the monitoring confirm the efficiency of the educational process.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The University has its internal mechanisms for monitoring the success of students regarding: studying results for the years of study; dropout level; credits are accumulated by students when transferring from one course to another; time to graduation. All grades are given in the "Electronic Campus" system (https://ecampus.kpi.ua/) which automatically calculates the success rates. In addition, the educational and scientific institute of aerospace technologies reports on the semester controls results. The monitoring results show a proper distribution of the number of students according to the received grades, as well as a decrease in the number of the expelled students. This indicates the effectiveness of the educational work. The time until the graduation of bachelor degree program is fixed, with rare exceptions, if the student takes an academic leave.</p> <p>Recommendations:</p>	Compliance

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B.2.2 Valorisation of the university qualification by hiring on the labour market or by continuing the university studies		
1.	<p>The educational institution monitors on ongoing basis the career of its graduates based on a system developed for this purpose, and it annually provides a detailed report regarding the evaluated study programme.</p> <p>Findings from the Self-Evaluation Report/ Visit: The research center of applied sociology "Socioplus" (https://kpi.ua/socioplus) conducts annual surveys of employers and graduates regarding the employment of graduates of Igor Sikorskyi Kyiv Polytechnic Institute. Based on the survey results, a detailed report is made up.</p> <p>However, according to Ukrainian law, graduates are not required to provide detailed information about their employment. The Career Development Center of Igor Sikorskyi Kyiv Polytechnic Institute, which is an interactive space for cooperation between higher education applicants/graduates and employers (https://robota.kpi.ua/) helps with the employment.</p> <p>The active association of university graduates (https://alumni.kpi.ua/) is one of the effective tools of communication with graduates.</p> <p>Recommendations:</p>	Compliance
2.	<p>At least 50% of the graduates are hired within two years as of graduation at the level of their university qualification.</p> <p>Findings from the Self-Evaluation Report/ Visit: The leaders of the department and its staff are in contact with the main employers and the graduates. These contacts indicate that within two years more than 90% of graduates who do not continue their studying are employed at the level of their professional qualification.</p> <p>Recommendations:</p>	Compliance
3.	<p>At least 20% of the graduates from the last two series of the study programme enrol in Master's degree programmes irrespective of the field.</p> <p>Findings from the Self-Evaluation Report/ Visit: More than 70% of graduates annually enter the Master Degree program in the year of graduation.</p> <p>Recommendations:</p>	Compliance
4.	<p>The results of the process of monitoring the graduate's employability, the opinion of the hired graduates and employers with regard to the training during the university studies confirm the value of the obtained qualification, the adequacy of the programme aims and outcomes in relation to the needs of the labour market.</p> <p>Findings from the Self-Evaluation Report/ Visit: The university has a career development center (https://robota.kpi.ua/), which takes care of graduate employment issues. Results are monitored according to the surveys held by the Socioplus Research Center of Applied Sociology (https://kpi.ua/socioplus).</p>	Compliance

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	<p>In addition, the leaders of the department and its staff are in constant contact with the main employers and graduates. The programme is annually discussed with stakeholders regarding the quality of student training.</p> <p>Recommendations: Consider developing more effective procedures for monitoring the employment.</p>	
5.	<p>The involvement of the companies in partnership with the evaluated study programme in the graduates' employability confirms the value of the obtained qualification, adequacy of the programme aims and outcomes in relation to the needs of the labour market.</p> <p>Findings from the Self-Evaluation Report/ Visit: Most of the graduates of the programme are employed at the leading partner enterprises. These enterprises are leaders in the field of automation. The demand and successful employment of graduates at these enterprises indicate the value of the obtained qualification, the relevance of the goals and the results of the program to the needs of the labor market.</p> <p>Recommendations:</p>	Compliance
B.2.3 Level of satisfaction of the students in relation to the professional and personal development provided by the university		
1.	<p>The higher education institution owns and applies regulations for mechanisms of regular sounding of the students' opinion with regard to their satisfaction relative to the educational process, student services and infrastructure provided by the university.</p> <p>Findings from the Self-Evaluation Report/ Visit: Each semester, the "Electronic Campus" university system (https://ecampus.kpi.ua/) conducts a survey of students regarding their satisfaction with teachers. Students actively express their level of satisfaction with the educational process, student services and infrastructure in the Telegram channels "Good KPI/Bad KPI"). With their help, the university leading staff constantly monitors the opinion of students and responds to complaints. The program also has its own telegram channel. If a student is dissatisfied with the educational process, he can express his opinion in the specified telegram channels</p> <p>Recommendations:</p>	Compliance
2.	<p>The process of monitoring the opinion of the students is adequate with regard to the relevance of the collected information, rate of reply and improvement measures (identified and implemented).</p> <p>Findings from the Self-Evaluation Report/ Visit: The mentioned Telegram channels "Good KPI/ Bad KPI" are available for all students around the clock. It gives the opportunity to cover the opinion of the wide range of students. In addition, group curators and a person responsible for educational work are appointed by the department. They monitor the specified resources and also personally communicate with students regarding problem issues. The issues that do not require official decisions are resolved immediately.</p>	Compliance

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	<p>Monitoring of students' opinions is regularly conducted by the Socioplus Research Center of Applied Sociology (https://kpi.ua/socioplus). Acute issues of student life as well as the monitoring results of the specified electronic resources are considered at the meetings of the Academic Council.</p> <p>Recommendations:</p>	
3.	<p>Monitoring the opinion of the students about the didactic process confirms the efficiency of the respective process and provided support services. More than 50% of the students positively assess the learning/ development environment provided by the university and their own learning path.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Students are regularly involved in surveys in order to find out the degree of satisfaction with the conditions of study, participation in the updating of the educational program, monitoring of employment, etc. In general, up to 40-50% of students studying in the educational program participate the surveys; some surveys can involve all the students. Surveys are anonymous, which ensures impartiality and anonymity.</p> <p>In addition, the level of student satisfaction with the didactic process more than 50% is evidenced by the study of the opinions of the department's telegram channel.</p> <p>In order to create a positive learning/development environment at the university and at the department, educational and support staff of the department is appointed. Its task is to help students in solving their problems, using special premises and opportunities of the Scientific and Technical Library named after G.I. Denisenko of Igor Sikorsky Kyiv Polytechnic Institute (https://www.library.kpi.ua/), as well as the possibilities of the Electronic Archive of scientific and educational materials of Igor Sikorsky Kyiv Polytechnic Institute ELAKPI (https://ela.kpi.ua/).</p> <p>Recommendations:</p>	Compliance
B.2.4 Student-centred learning		
1.	<p>The teaching methods are adequate in order for the students to obtain the learning outcomes, including transversal skills.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The "Regulations on the Organization of Inclusive Education at Igor Sikorsky Kyiv Polytechnic Institute" is implemented at the university (http://osvita.kpi.ua/node/172).</p> <p>The formation of learning outcomes including cross-cutting skills is checked during the semester control, as well as during the final certification in accordance with the provision on the evaluation system of learning outcomes of Igor Sikorsky Kyiv Polytechnic Institute (https://osvita.kpi.ua/index.php/node/37), as well as the current calendar and semester control of studying results (https://osvita.kpi.ua/index.php/node/32).</p> <p>Students who have problems can undergo additional training at the adaptation and remedial courses of the Educational and Scientific Center of the Institute for Monitoring the Quality of Education (https://kpi.ua/adapt), teachers conduct consultations remotely 24/7.</p>	Compliance

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	<p>Selected teaching methods and tools are reflected in the syllabi of the educational components.</p> <p>Recommendations:</p>	
2.	<p>The teacher – student relationship is of partnership, each of them being responsible for obtaining the learning outcomes. The learning outcomes are explained and discussed with the students from the perspective of their relevance for their development.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The curriculum is designed to align with the educational program's structural and logical scheme, ensuring that the learning outcomes for disciplines are met (Regulation on the assessment system of learning outcomes at Igor Sikorsky Kyiv Polytechnic Institute, https://osvita.kpi.ua/node/37).</p> <p>As a result of mutual interest in learning outcomes, the teacher and student are partners during their formation. The teachers explain the importance of the results, and also go to the meeting to solve the difficulties in the students' studies, conducting additional consultations in all possible ways. Curators provide assistance to students in relations with teachers and in other matters. Each student group has 2 curators: a teacher of the department and a senior student.</p> <p>In the "Electronic campus" system, in the "Teacher through the eyes of students" module, according to the specified criteria, students are surveyed about the evaluation of the work of teachers</p> <p>A student can appeal the results of his attestation in accordance with the "Regulations on appeals at Igor Sikorsky Kyiv Polytechnic Institute", (https://osvita.kpi.ua/node/182) and "Regulations on resolving conflict situations in Igor Sikorsky Kyiv Polytechnic Institute».</p> <p>In addition, the University has started the practice of discussing issues of improving the educational process using individual student pages on the Sikorsky Distance Learning Platform (https://www.sikorsky-distance.org/).</p> <p>Recommendations:</p>	Compliance
3.	<p>The teaching-learning process considers both face-to-face didactic activities and individual study.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The recommended distribution between classroom classes and students' independent work is 50% by 50%. It is allowed to increase the classroom load up to 60% for fundamental disciplines. In didactic activities, part of the evaluation points can be obtained for individual training of student within the framework of non-formal/informal education, which is provided by the "Regulations on recognition of learning results acquired in non-formal/informal education at Igor Sikorskyi Kyiv Polytechnic Institute (https://osvita.kpi.ua/node/179).</p> <p>According to the full-time study curriculum, classroom sessions make up 48%, and independent work constitutes 52% of the total study time. The weekly classroom load for students averages 26 hours, while the volume of ISR is 28 hours.</p> <p>Recommendations:</p>	Compliance

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4.	<p>Teachers use the resources of the new technologies (e.g. email, personal webpage/e-learning platform for themes, bibliography, resources in electronic format and dialogue with the students) and auxiliary materials, from the blackboard to flipchart and video projector etc.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>In the conditions of distance learning, teachers use various means of organizing communication and video conferences: Zoom, Skype, Webex, Discord, e-mail, messengers, etc. The courses are hosted on the distance learning platform Sikorsky distance and in the Moodle environment. Video projectors are used in classes. Teachers also use the results of their own scientific research, materials and presentations at scientific and technical conferences and video films.</p> <p>All methodical materials are placed in the Electronic Campus, as well as in distance courses, and are sent to students' electronic addresses, placed in the telegram channels of the disciplines, upon request. Students have free access to information, knowledge, ideas and technologies and to the formation of information literacy skills by means of modern and innovative services in comfortable conditions (https://www.library.kpi.ua/). There is available electronic access to the KPI library (https://discovery.kpi.ua/), as well as available open access to the libraries of world universities.</p> <p>Recommendations:</p>	Compliance
5.	<p>Teachers flexibly use a variety of pedagogical methods by which they encourage the debates, exchange of opinions and teamwork..</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Teachers use discussion, heuristic, research, game, simulation methods, as well as the modelling method, brainstorming as the main teaching methods indicated in the syllabi.</p> <p>In the distance learning environment, teachers conduct virtual laboratory work</p> <p>Recommendations:</p>	Compliance
6.	<p>The higher education institution has recognition and completion procedures fit for purpose in cases of students' study mobility/ practice.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>It is assumed that the results of study during academic mobility are recognized by the university (SAR, pg. 26). Recognition is carried out in accordance with the regulations on recognition of the results of preliminary training at Igor Sikorskyi Kyiv Polytechnic Institute (https://document.kpi.ua/files/2020_7-157.pdf). Completion of study, which is carried out in accordance with the "Regulations on expulsion, interruption of study of higher education applicants at Igor Sikorskyi Kyiv Polytechnic Institute" (https://osvita.kpi.ua/node/178). Also, according to the "Regulations on recognition of the results of study acquired in non-formal/informal education at Igor Sikorskyi Kyiv Polytechnic Institute (approved by the order dated 01.10.2020 No. 7/177) (https://osvita.kpi.ua/node/179), the studying results obtained by the student within the framework of non-formal /informal education</p>	Compliance

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	<p>are recognized. The results can be recognized as part of academic mobility in accordance with the "Regulations on academic mobility of Igor Sikorskyi Kyiv Polytechnic Institute" (https://osvita.kpi.ua/node/124).</p> <p>Recommendations:</p>	
7.	<p>Teachers have standby classes available for the students, and they customize the guidance upon the request of the student. There are tutors or other forms of association between a teacher and a group of students.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Teachers conduct consultations both on the schedule and at time approved by mutual agreement using all available means of communication, and text messages, e-mail and instant messengers help to keep in touch 24 hours a day. Officially appointed group curators are in constant contact with students and provide assistance on any issues of students' lives. Their activities are regulated by the "Regulations on the Curator of the Academic Group of Igor Sikorsky Kyiv Polytechnic Institute" (http://osvita.kpi.ua/node/173).</p> <p>Teachers have additional contacts with students within the framework of guiding students' scientific activities.</p> <p>Recommendations:</p>	Compliance
B.3 Scientific research activity		
B.3.1 Research planning		
1.	<p>The Bachelor's field and the study programme subjected to evaluation dispose of own scientific plan included in the strategic plan of the faculty and of the institution which it belongs to, being certified with documents kept in the department, faculty etc.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>Educational programme has a scientific plan, proved by the numbers of publications of the teaching staff (Annex 4)</p> <p>Recommendations:</p> <p>Consider providing information on research activities (on web site), both in Ukrainian and English languages and also a scientific plan approved by the Scientific Committee.</p>	Partial Compliance
2.	<p>The research themes included in the plan are within the scientific area of the field which the study programme subjected to evaluation is part of.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The topics of scientific research are correlated from the directions of scientific research of the department's teachers. Bachelors choose topics for diploma projects from the list of topics of interest.</p> <p>Recommendations:</p> <p>Consider providing information on research activities (on web site), both in Ukrainian and English languages and also a list of scientific projects for students.</p>	Partial Compliance
B.3.2 Research resources		
1.	<p>The research disposes of sufficient financial resources in order to meet the proposed goals.</p>	Compliance

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	<p>Findings from the Self-Evaluation Report/ Visit: The university is a state educational institution; therefore, the main funding of scientific activity comes from the state. In addition, there are grants and self-financing projects financed by separate contracts with research customers (https://kpi.ua/2023-def).</p> <p>Recommendations:</p>	
2.	<p>The research disposes of sufficient logistic resources in order to meet the proposed goals.</p> <p>Findings from the Self-Evaluation Report/ Visit: To carry out scientific research, the students have at their disposal the Center for collective use of scientific equipment of Igor Sikorsky Kyiv Polytechnic Institute (https://iff.kpi.ua/stuktura/tsentr-kolektyvnoho-korystuvannia-naukovym-obladnanniam),</p> <p>Recommendations: It is difficult in the current context, but we could recommend building a 5-year modernization plan to bring the laboratories in line with new technologies.</p>	Compliance
3.	<p>The research disposes of sufficient human resources in order to meet the proposed goals.</p> <p>Findings from the Self-Evaluation Report/ Visit: Research topics are carried out under the guidance and with the direct participation of qualified scientific and pedagogical workers and students of the educational programme. The staff of the department has 38 full-time employees all PhD or doctors in their domains.</p> <p>Recommendations:</p>	Compliance
B.3.3 Performance and valorisation of research		
1.	<p>Teachers carry out scientific research activities in the field of the disciplines include in their workload, which are valorised in: publications in scientific journals or publishing houses from the country or abroad, scientific papers presented in sessions, symposiums, seminars etc. from the country and/or abroad, contracts, expertise, consultancy etc. based on contracts or agreements concluded with partners from the country and/or abroad, with evaluation certified by specialty commissions, patents and technological transfer through consultancy centres, science parks or other forms of valorisation, development of new products etc.</p> <p>Findings from the Self-Evaluation Report/ Visit: The teachers of the program regularly publish the results of their research (Annex 4). Their topics correspond to the field of disciplines delivered by the teachers. The university conducts an annual self-analysis of the departments which reflects all the achievements of each teacher over 5 years.</p> <p>Recommendations: Consider increasing the visibility of the published research (higher ranked journals and conferences) and to report also at department level not just individually.</p>	Compliance
2.	<p>Every teacher has at least one annual publication or didactic or scientific achievement.</p>	Compliance

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	<p>Findings from the Self-Evaluation Report/ Visit: Annual publication is obligatory for the teachers which is taken into account when hiring and renewing contracts (https://osvita.kpi.ua/competition). The list of publications can be found in Annex 4. On average, each teacher has more than two publications per year.</p> <p>Recommendations:</p>	
3.	<p>The students are supported and stimulated to carry out research activities, they are involved in research projects, and they are financially supported to participate in national and international scientific conferences / symposiums.</p> <p>Findings from the Self-Evaluation Report/ Visit: The University provides preferential lending for higher education in accordance with Order No. 7-155 dated August 27, 2020 "On preferential lending for higher education at Igor Sikorsky Kyiv polytechnic Institute" (https://document.kpi.ua/files/2020_7-155.pdf). There is also a Conference of young scientists at Igor Sikorsky KPI (https://kpi.ua/young-conference)</p> <p>Recommendations:</p>	Compliance
4.	<p>The faculty organises with the teachers, researchers, students and graduates, on regular basis, scientific sessions, symposiums, conferences, round tables, and the papers are published in scientific volumes with ISBN and ISSN or in proceedings dedicated to the organised activity.</p> <p>Findings from the Self-Evaluation Report/ Visit: The department organize Automation and Computer-Integrated Technologies - International scientific and practical conference of young scientists, PhD students and students ACIT – 2024.</p> <p>Recommendations:</p>	Compliance
5.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p>Findings from the Self-Evaluation Report/ Visit: Not applicable</p> <p>Recommendations:</p>	Not applicable
C. QUALITY MANAGEMENT		
C.1 Quality assurance strategies and procedures		
1.	<p>In the higher education institution, there is a central quality assurance commission and commissions for study programmes, who work on integrated basis. There is a commission for quality assessment and assurance at the level of the faculty/department coordinating the study programme, which coordinates the application of the quality assessment and assurance procedures and activities.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Partial Compliance

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	<p>According to the self-evaluation report (page 31) and the document Regulations on the internal quality assurance system in higher education at the National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute» (https://osvita.kpi.ua/sites/default/files/downloads/REGULATIONS%20_Eng.pdf), there is a central quality assurance commission. The quality assurance system has 5 levels: the first level includes university students and their initiative groups, the second level focuses on the direct implementation of educational programs and current monitoring, at the third level the focus is on the administration of educational programs and annual monitoring in relation to the needs of the labor market, the fourth level involves vice-rectors responsible for various fields of activity and the fifth level consists of system-making decisions made by the Supervisory Board, the Academic Council and the Rector. There is a university subdivision called Department of quality of the educational process (https://kpi.ua/about-diaop) that implements the policy and achieves the goals of prospective development.</p> <p>Recommendations: Procedures are needed to underpin a functional quality system.</p>	
2.	<p>The quality assurance policies and strategies are active in the faculty coordinating the study programme, and they stimulate the participation of each member of the didactic and research team and also of the students.</p> <p>Findings from the Self-Evaluation Report/ Visit: The quality assurance policies and strategies are active in the faculty through the Department of quality of the educational process ((https://kpi.ua/about-diaop)) and they stimulate the participation of each member of the didactic and research team and also of the students.</p> <p>Each applicant for this department is required to participate in an interview with the heads of the relevant departments. The qualifications and suitability for the specific job responsibilities are evaluated in alignment with the requirements outlined in the job description.</p> <p>Recommendations: Consider the formalization of the selection process and the requirements that must be fulfilled by personnel who want to be in this department.</p>	Compliance
3.	<p>The educational institution prepares and presents an annual report regarding the modality of complying with the provisions of the programme of quality policies and to the positive and negative aspects of the internal quality assurance, which it makes public.</p> <p>Findings from the Self-Evaluation Report/ Visit: An annual report regarding the modality of complying with the provisions of the programme of quality policies is prepared and presented.</p> <p>Recommendations: Publish the report on the faculty website in order to ensure transparency.</p>	Compliance
4.	<p>The study programme is part of the institutional system of internal quality assurance, and it implements the identified measures to improve the quality of the educational process.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>According to the Self-Evaluation Report, the higher education institution has an effective management system and decision-making processes (it applies the adopted quality assurance policy and proves the functioning of quality assurance structures/mechanisms). The current edition of the EP, containing relevant updates, was approved by the Academic Council of Igor Sikorsky KPI, protocol No. 5 dated 13.05.2024. The revision of the educational program takes place in accordance with the Regulations on the development, approval, monitoring, and revision of educational programs at Igor Sikorsky KP.</p> <p>Recommendations:</p>	
C.2 Procedures regarding the initiation, monitoring and periodic review of study programmes		
1.	<p>A regulation regarding the initiation, approval, monitoring and periodic review of the study programmes exists, and it is applied.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>According to the Self-Evaluation Report, the development of an educational program is carried out by a project team consisting of teachers with the necessary level of qualification, academic experience and high performance in scientific and professional activities. A regulation regarding the initiation, approval, monitoring and periodic review of the study programme exists. The revision of the educational program takes place in accordance with the Regulations on the development, approval, monitoring, and revision of educational programs at Igor Sikorsky KPI. Every year, the EP is monitored to ensure that the defined goals and learning outcomes are being achieved. The monitoring is conducted by the department implementing the EP, the Educational and Scientific Centre of Applied Sociology "Socioplus," and the Educational and Scientific Centre for Innovative Monitoring of Education Quality.</p> <p>Recommendations:</p>	Compliance
2.	<p>The study programme is periodically reviewed in terms of objectives and labour market need, teaching and learning process, resources, outcomes and management system, to guarantee their continuing relevance and effectiveness.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>According to the Self-Evaluation Report, the requirements for vacancies in the automation labour market are periodically monitored to ensure that the goals and learning outcomes of the educational program meet modern requirements. Moreover, the study programme is periodically reviewed in terms of objectives, teaching and learning process, resources and outcomes based on the feedback received from each stakeholder.</p> <p>Recommendations:</p>	Compliance
3.	<p>The process of periodic review of the study programme considers: (i) the interest of the representatives of the labour market for the study programme and the satisfaction regarding the training of students/graduates; (ii) the interest of the practice partners for the study programme and satisfaction regarding the training of students; (iii) results of monitoring the opinion of the students with regard to the didactic process.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>According to the self-assessment report, the Educational Program is reviewed through periodic surveys. The department has a plan for conducting meetings and consultations with stakeholders. Consultations with employers are held at least once a year. These consultations take place either during the revision of the educational program (December - January) or, if no such revision is planned, at the end of the academic year after the bachelor's diploma project defence</p> <p>A semesterly survey of applicants is conducted on the quality of teaching academic disciplines and the ethics of teachers, called "Teachers Through the Eyes of Students". It is conducted anonymously. When asked, students confirmed that their voice is heard through this survey and they actively participate in this review.</p> <p>Recommendations:</p>	
4.	<p>An annual study programme internal evaluation report is prepared, and it includes proposals to improve the quality of the education.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>From the Self-Evaluation Report and Regulations on the internal quality assurance system in higher education at the National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute» document, an annual study programme internal evaluation report is prepared to ensure the quality of higher education. The results of the self-analysis of the departments are analyzed by the accreditation commissions of the faculties and transferred to the Accreditation and Licensing Department of the Department of Educational Quality.</p> <p>Recommendations:</p>	Compliance
C.3 Objective and transparent procedures for the evaluation of the learning outcomes		
1.	<p>The higher education institution has a regulation regarding the examination and grading students, which is rigorously and consistently applied.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>According to the Self-Evaluation Report, the syllabi of the academic disciplines include a section on the "Student Rating System," which provides a detailed description of the procedure for forming a student's rating throughout the semester and during the final assessment. Calendar assessment for each EC is conducted twice per semester. The obtained results are entered into the electronic system for supporting the learning process. The semester assessment of an academic discipline, the format of which is defined by the syllabus, is conducted in the form of a written, oral, or combined exam or test, as specified in the curriculum and the student's individual study plan.</p> <p>Recommendations:</p>	Compliance
2.	<p>Besides the course holder, at least another specialty teacher participates in the examination. The evaluation methods are diverse, and they encourage critical thinking, creativity, teamwork, case studies.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>According to the Self-Evaluation Report, verification of the achievement of learning results is carried out with the help of assessment forms and methods: work in laboratory and practical classes, testing, performance of individual tasks, modular control works, home control works, calculation and calculation-graphical works, course projects, final control - test/examination.</p> <p>The document REGULATIONS about the examination commission and attestation of higher education applicants in Igor Sikorsky Kyiv Polytechnic Institute (https://osvita.kpi.ua/sites/default/files/downloads/Regulations_EC_certification.pdf) governs the manner in which the examination is carried out.</p> <p>Recommendations:</p>	
3.	<p>The evaluation of students includes the objective examination and grading based on criteria and methods clearly established in the beginning of the semester and on standards presented to the students, together with other criteria for the assessment of the carried-out activity.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>At the start of the semester, students are provided with detailed information regarding assessment criteria and methods, including the objective examination.</p> <p>Recommendations:</p>	Compliance
4.	<p>The methods and criteria used to evaluate the students with regard to the developed skills and competences are adequate and allow the verification of actual acquirement by them of the knowledge and skills provided in the discipline syllabi.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>According to the Self-Evaluation report, the evaluation methods and criteria are closely aligned with the learning outcomes specified in the discipline syllabi. A variety of assessment techniques are employed, such as written exams, practical assignments, group projects, and presentations, which allow the verification of actual acquirement by them of the knowledge and skills</p> <p>Recommendations:</p>	Compliance
5.	<p>For the disciplines provided with laboratory and/or project activities, the evaluation methods and criteria included in the discipline syllabi contain detailed information on the evaluation of the students in the different types of activity: course/ laboratory/ project (for example, percentage of the final grade, minimum performance standard).</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>According to the document Syllabuses of the disciplines of the educational and professional bachelor's program "Automation Hardware and Software", the evaluation methods and criteria included contain detailed information on the evaluation of the students in different types of activity.</p> <p>Recommendations:</p>	Compliance

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6.	<p>During the practical activity evaluation process, the assessments of the practice tutor from the company where the respective activity was carried out shall be considered.</p> <p>Findings from the Self-Evaluation Report/ Visit: According to the Self-Evaluation Report, the assessments of the practice tutor from the company where the respective activity was carried out is important in determining the final grade for the internship at the University.</p> <p>Recommendations:</p>	Compliance
7.	<p>The number and distribution of the forms of examination in a semester are organised so that to ensure the time necessary to the training of the students and deployment of the evaluation process.</p> <p>Findings from the Self-Evaluation Report/ Visit: The document Syllabuses of the disciplines of the educational and professional bachelor's program "Automation Hardware and Software" contains information about the distribution of the forms of examination in a semester. It is organised in a proper manner so that to ensure the time necessary to the training of the students and deployment of the evaluation process.</p> <p>Recommendations:</p>	Compliance
8.	<p>There is an official procedure for the students to contest the evaluation and to solve the appeals, which is presented to the students.</p> <p>Findings from the Self-Evaluation Report/ Visit: There is an official procedure for the students to contest the evaluation and to solve the appeals. The procedure is regulated by the document <i>Regulation on appeals in Igor Sikorsky Kyiv Polytechnic Institute</i>. When the students were asked if they knew the procedure, few of them knew the concrete way in which the appeal is made.</p> <p>Recommendations: Promoting among students how they can appeal when they are not satisfied with the grade received.</p>	Compliance
9.	<p>There are regulations with regard to re-examinations, taking the medically postponed examinations and credited examinations, sanctioning the frauds discovered during examinations, other circumstantial situations.</p> <p>Findings from the Self-Evaluation Report/ Visit: There are regulations to re-examinations, taking the medically postponed examinations and others. The applicant's repeated passing of control measures is regulated in Section 8 "Regulations on current, calendar and semester control of study results at Igor Sikorsky Kyiv Polytechnic Institute" (https://kpi.ua/document_control). In the case of academic debt, the applicant is given the opportunity to eliminate it after the completion of the examination session within the established period. Students who, due to medical reasons or other objective circumstances, have missed a significant part of the semester or are unable to take tests are granted academic leave. Such students are reinstated for the next academic year under the same conditions.</p> <p>Recommendations:</p>	Compliance

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10.	<p>The completion of studies implies the preparation of a graduation thesis, which demonstrates the capacity of the student to fulfil an independently assigned task at the level of the imposed standards. The higher education institution disposes of plagiarism prevention mechanisms.</p> <p>Findings from the Self-Evaluation Report/ Visit: All student diploma theses were checked for plagiarism by the Unicheck programme, until 2024: https://unicheck.com/uk-ua. Starting with next year, plagiarism checks will be carried out in the StrikePlagiarism system: https://panel.strikeplagiarism.com. The final version of the diploma thesis is submitted to the examination committee in printed and electronic form. The responsible person then uploads the electronic version of the thesis to the Unicheck system for verification, which generates a similarity report.</p> <p>Recommendations:</p>	Compliance
11.	<p>In the process of evaluating the graduation theses with themes proposed by/ prepared in collaboration with the industry, the assessments of the company representative in collaboration with whom the respective activity was carried out shall be considered. Representatives of the industry are invited to participate in the presentation of the graduation theses.</p> <p>Findings from the Self-Evaluation Report/ Visit: According to the Self-Evaluation Report, in the process of evaluating the graduation theses with themes proposed by/ prepared in collaboration with the industry, the assessments of the company representative in collaboration with whom the respective activity was carried out is considered. Representatives of the industry can attend the presentation of the graduation theses remotely, during the martial law.</p> <p>Recommendations:</p>	Compliance
C.4 Procedures of regular quality assessment of the academic staff ESG 1.5		
1.	<p>The peer-review is organised on regular basis, being based on general criteria and clear and public procedures.</p> <p>Findings from the Self-Evaluation Report/ Visit: The peer-review is being based on general criteria and clear and public procedures that can be consulted in the document entitled Regulations on the internal quality assurance system in higher education at the National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute» (https://osvita.kpi.ua/sites/default/files/downloads/REGULATIONS%20_Eng.pdf).</p> <p>Recommendations:</p>	Compliance
2.	<p>The evaluation by students is mandatory. There is an evaluation form provided to students to evaluate all their teachers, being approved by the Senate, and applying after each semester training cycle. It is filled-in exclusively in the absence of any external factor and by guaranteeing the confidentiality of the appraiser.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>From the Self-Evaluation Report, students are surveyed every semester on the quality of teaching in academic disciplines and the ethics of teachers through the "Teacher through the eyes of students" questionnaire. Students also have the opportunity to directly submit suggestions to the educational program guarantor in writing or through a specialized form.</p> <p>Recommendations: Preparation of a report after each evaluation cycle in which to present a synthesis of the results. Develop an improvement plan based on the feedback received from the students.</p>	
3.	<p>The academic staff carries out self-evaluation and he/she is also evaluated by the head of the department.</p> <p>Findings from the Self-Evaluation Report/ Visit: The responsible departments of the University check all teachers for their compliance with the licensing personnel requirements for work in higher education institutions, at the beginning of each academic year. The academic staff is evaluated by determining ratings, at the end of each academic year. According to the document Regulations on the Rating of Scientific and Pedagogical Employees of the Igor Sikorsky Kyiv Polytechnic Institute, the result of each teacher is evaluated according to three criteria - educational and methodological work (45%), scientific work (45%) and organizational and educational work (10%).</p> <p>Recommendations:</p>	Compliance
C.5 Accessibility of the adequate learning resources		
1.	<p>The faculty disposes of incentive programmes for the students with outstanding results and recovery programmes for the students with learning difficulties.</p> <p>Findings from the Self-Evaluation Report/ Visit: Students with outstanding results are rewarded with the following scholarships: academic scholarship of the President of Ukraine, the Cabinet of Ministers of Ukraine, the Cabinet of Ministers of Ukraine for gifted students from among the disabled, Igor Kurchatov scholarship, the Verkhovna Rada of Ukraine scholarship, and the social scholarship of the Verkhovna Rada of Ukraine. There are also paying scholarships from partner companies of the university. In terms of recovery programmes for the students with learning difficulties, the university only offers the right to take a break from studies.</p> <p>Recommendations: Create recovery programmes for the students with learning difficulties where the teachers resume the subject step by step, highlight the important things and make sure that no one is left behind regarding knowledge and abilities.</p>	Partial Compliance
2.	<p>The higher education institution has structures and procedures to facilitate the mobility of the students in the same system or between different systems of higher education, like the International Relation Office, commissions for the recognition of formally or non-formally acquired qualifications/ skills and competences, etc.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p>	Compliance

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	<p>The document Regulation on academic mobility at National technical university of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute” (https://osvita.kpi.ua/sites/default/files/downloads/Regulation_acad_mobility.pdf) contains structures and procedures to facilitate the mobility of students in the same or different system. The university has a central structure for registration of student mobility -department of academic mobility, and has those responsible for organizing academic mobility at the faculty and chair. Currently, under this educational program, 6 students have taken advantage of the academic mobility program. According to the Regulation, participants in international academic mobility prepare an individual study plan (Individual Study Plan for Academic Mobility Participants), which outlines the educational components studied at Igor Sikorsky KPI and equivalent components at the host university that can be credited in accordance with the procedure for recognizing learning outcomes.</p> <p>Recommendations:</p>	
3.	<p>The faculty, through the university, disposes of social, cultural and sports services for students, like: accommodation premises for at least 10% of the students, sports centre, various advisory services, which have an efficient management. The students are informed on the existence of such services.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>According to the Self-Evaluation Report, the faculty disposes of social, cultural and sports services for students like accommodation, sports centre and various advisory services. There are 20 dormitories on the territory of the University which are home to over 13.000 students (https://kpi.ua/en/web-studmisto).</p> <p>Recommendations:</p>	Compliance
4.	<p>The study programme provides relevant support to students for the learning process (career advice, tutorship, and assistance), in this way facilitating the acquirement of knowledge and skills and passing in a superior year of study.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>The study programme provides relevant support to student for the learning process. The Department of Professional Growth – Centre for Career Development (https://kpi.ua/en/students/sec) offers a wide range of activities from professional webinars, factory tours, meetings with representatives of partner companies to student activities and current vacancies.</p> <p>Recommendations:</p>	Compliance
5.	<p>There are sufficient personnel with adequate training to provide support services to students.</p> <p>Findings from the Self-Evaluation Report/ Visit:</p> <p>According to the Self-Evaluation Report, the auxiliary staff involved in the organization of education is divided into engineering-technical and educational-methodological personnel. The second type of auxiliary staff performs functions such as scheduling classes, recording teaching loads and maintaining student documentation. There are a couple of bodies meant to support students as the Department of Professional Growth – Centre for career development, Associations of university graduates, clubs and interest groups to support mental</p>	Compliance

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	<p>health and consultative support offered at the department level. There is a staff list of the university for 2023, but it is only in the Ukrainian language. The Student Social Service provides support through four main activities: psychological support, social assistance, preventive work and educational activities and volunteering and social initiatives. There are three psychologists that are currently working in this body.</p> <p>Recommendations: Consider hiring more people in the student social service in order to provide support to each student in need.</p>	
C.6 Information management		
1.	<p>At faculty level, the institution has a computer system which facilitates the collection, processing and analysis of data and information relevant for the efficient organisation and operation of the study programmes and of the other activities.</p> <p>Findings from the Self-Evaluation Report/ Visit: The institution has a computer system which facilitates the collection, processing and analysis of data and information relevant. This system is called Electronic Campus: https://campus.kpi.ua/. It is available to teachers and students. The students can find here current control assessments, calendar control results or methodological materials to download. In the discussions with them, they confirmed that this system is used by them periodically.</p> <p>Recommendations: Review once a year the Electronic Campus in terms of new features that will enable students to find more valuable information.</p>	Compliance
C.7 Transparency of the information of public interest with regard to the study programmes		
1.	<p>The study programme provides complete, updated and easily accessible, both quantitative and qualitative, public information on the aims, teaching-learning process, resources, results and management system.</p> <p>Findings from the Self-Evaluation Report/ Visit: According to the Self-Evaluation Report, the official website of chair of Automation Hardware and Software is https://tpza.kpi.ua/en/main/ which provides complete, updated and easily accessible public information on the aims, teaching-learning process, resources, results and management system. This information is made available to all stakeholders.</p> <p>Recommendations:</p>	Compliance
2.	<p>The graduates receive, free of charge, the Diploma Supplement, which contains all the information provided by the regulations in force.</p> <p>Findings from the Self-Evaluation Report/ Visit: According to the Self-Evaluation Report, students have free access to all provided materials, laboratory resources, topics and archives of diploma projects and others. Graduates receive a diploma supplement free of charge. The students confirmed this information.</p> <p>Recommendations:</p>	Compliance

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C.8 Quality assurance by periodic external review

1.	<p>The higher education institution complies with the legal provisions regarding the external cyclical review of the evaluated study programme.</p> <p>Findings from the Self-Evaluation Report/ Visit: According to the Self-Evaluation Report, the higher education institution complies with the legal provisions regarding the external cyclical review of the evaluated study programme. The programme Automation Hardware and Software was accredited by the National Agency for Quality Assurance of Higher Education in 2023, the certificate is valid until 01.07.2028</p> <p>Recommendations:</p>	Compliance
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Other observations/findings:

There were some small problems with the electricity supply and switching to local generators and the interruption of the Internet connection for short moments.

Recommendations of the external evaluation committee:

- There have been no graduates yet in the professional educational programme "Automation Hardware and Software" in the speciality 174 Automation, Computer-Integrated Technologies and Robotics in the field of study 17 – Electronics, Automation and Electronic Communications. KPI presented the Diploma supplement of the 2024 graduation year for the PEP " Automation Hardware and Software" in the speciality 151 Automation and Computer-Integrated Technologies in the field of study 15 – Automation and Instrumentation. However, the Supplement for the evaluated programme should exist as a content, even if not issued to any students yet.
- It is recommended to have an internal audit according to EUR-ACE standards
- Consider adopting an institutional strategy for the transition towards full digital books and educational materials
- Consider grouping the educational and documentation resources into a single system;

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- Consider ensuring the appropriate coverage of the subjects in the curriculum and syllabuses with recent bibliographic; material existing in the university libraries in the language of teaching of the study program
- It is recommended to reduce the number of teaching hours for teachers and focus their activities on research activities.
- It is recommended to increase the number of publications in international journals and conferences, in English for visibility.
- Consider providing clear and consistent information about the syllabuses of all elective educational components, that can be selected by students of the study programme.
- Consider realizing analysis of the compatibility with similar study programmes from the European Union and/or from other world countries.
- For a better transparency, consider placing the approved (scanned copies with the signatures and stamps) curriculums on the official website of the NTU KPI
- For the existing selective catalogue, the list of all elective courses should be added.
- Consider removing duplicated disciplines.
- We recommend analysing a different approach regarding the elective components, as follow: transform the common part of elective discipline into a compulsory discipline and proposing of the elective disciplines with unique content; form the groups of elective disciplines with 3, 4 options, where the student can free select only one discipline.
- Consider extension of practice training by adding the practice (internship) on the 2nd and/or 3rd year of study that should improve the acquire of practical skills.
- Implementation of a mechanism used to avoid the overlapping.
- Consider the optimization of syllabus structure for the orientation of their content on students (e.g., requirements for students).
- Formal validation of each course / discipline
- Before the beginning of the semester, consider updating the course works syllabuses and add information about topics of the course works; so, students can select the topics that are in the area of their interest.

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- Consider adding to the curricula of free elective disciplines (with extra credits to the 30 compulsory of the semester).
- Consider increasing the number of exams in the educational programme, in order to reach at least 50%
- Consider the introduction in the curriculum of practice / internship in enterprise, for a total of at least 6 weeks (with 30 hours/week workload).
- Publish the English version of the syllabuses for all the components of practice.
- Meeting with representatives of employers and industry stakeholders proved the facts that there are some topics that were proposed by the industry.
- Consider developing more effective procedures for monitoring the employment.
- Consider providing information on research activities (on web site), both in Ukrainian and English languages and also a scientific plan approved by the Scientific Committee.
- Consider providing information on research activities (on web site), both in Ukrainian and English languages and also a list of scientific projects for students.
- It is difficult in the current context, but we could recommend building a 5-year modernization plan to bring the laboratories in line with new technologies.
- Consider increasing the visibility of the published research (higher ranked journals and conferences) and to report also at department level not just individually.
- Procedures are needed to underpin a functional quality system.
- Consider the formalization of the selection process and the requirements that must be fulfilled by personnel who want to be in this department.
- Publish the report on the faculty website in order to ensure transparency.
- Preparation of a report after each evaluation cycle in which to present a synthesis of the results.
- Develop an improvement plan based on the feedback received from the students.

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- Create recovery programmes for the students with learning difficulties where the teachers resume the subject step by step, highlight the important things and make sure that no one is left behind regarding knowledge and abilities.
- Consider hiring more people in the student social service in order to provide support to each student in need.
- Review once a year the Electronic Campus in terms of new features that will enable students to find more valuable information.

► PROPOSAL OF THE EVALUATION COMMISSION

The proposal of the Permanent Commission of Specialty - Engineering Sciences II, adopted in online meeting from the date of 31.01.2025 was *maintaining accreditation, monitoring after 2 years* and *awarding* EUR-ACE certification of the bachelor's study programme **AUTOMATION HARDWARE AND SOFTWARE**, for the form of education full-time, with **240** of credits and tuition capacity in the first year of studies of **120** students, according to the Extract from the minutes, the Evaluation Report of the Commission and the Evaluation Sheets, registered at ARACIS with no. 476 from 31.01.2025.

► THE EVALUATION OF THE COUNCIL AND THE OPINION OF THE ARACIS COUNCIL

The ARACIS Council appreciated that the evaluation process was carried out in accordance with the provisions of Government Decision no. 915/2017 regarding the amendment of the annex to Government Decision no. 1.418/2006 for the approval of the External Evaluation Methodology, the standards, the reference standards and the list of performance indicators of the Romanian Agency for Quality Assurance in Higher Education.

From the analysis of the self-evaluation report, based on the reports submitted by the commission of permanent specialized experts and the opinion of the Director of the Accreditation Department regarding compliance with the procedures, the Romanian Agency for Quality Assurance in Higher Education found that:

Bachelor's study programme **AUTOMATION HARDWARE AND SOFTWARE** **satisfies** mandatory normative requirements, standards and performance indicators, specific standards and standards for EUR-ACE label.

► OPINION OF THE ARACIS COUNCIL

In the Report of the Romanian Agency for Quality Assurance in Higher Education, developed and approved in accordance with the provisions of Law no. 87/2006, it's being suggested:

- ⇒ **MAINTAINING ACCREDITATION** – monitoring after 2 years and *awarding* EUR-ACE label undergraduate study programme **AUTOMATION HARDWARE AND SOFTWARE**;
- ⇒ Bachelor field – **174 Automation, Computer-Integrated Technologies and Robotics / G7 Automation, Computer-Integrated Technologies and Robotics**;
- ⇒ from the Faculty of **Chemical Engineering**;
- ⇒ **National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“**;
- ⇒ form of education – full-time;

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⇒ number of credits – **240**;

⇒ tuition capacity in the first year of study of **120** students.

The report of the Romanian Agency for Quality Assurance in Higher Education and the proposed solution were discussed and approved by the ARACIS Council on 06.02.2025.

Executive Office of the ARACIS Council

President Univ. Prof. Dr. Eng. Valentin
NĂVRĂPESCU

Vice-president Univ. Prof. Dr. Eng. Teodor-Ioan
TRAȘCĂ

General Secretary Univ. Prof. Dr. Eng. Marius Gabriel
PETRESCU

Coordinator of the Univ. Prof. Dr. Eng. Neculai-Eugen
Department for SEGHEDIN
Institutional Evaluation
and Audit

Coordinator of the Univ. Prof. Dr. Nicoleta-Claudia
Department for MOLDOVAN
University Studies
Evaluation

This notice is valid five years from the date of communication of this report. The request for periodic evaluation will be submitted three months before the expiration of the validity period under the penalty of liquidation of the bachelor's study programme.

This opinion is submitted for the attention of the National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“.

Bucharest, February, 2025
UA01/ 476 MA

NCM/CM

REPORT OF THE ARACIS COUNCILregarding the periodic evaluation of the bachelor's study programme **AUTOMATION****HARDWARE AND SOFTWARE**

Faculty of Chemical Engineering

National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

The synthetic presentation of the results of the ARACIS evaluation for the undergraduate university study programme analyzed:

No. crt.	Naming of the indicators	Remarks
1.	Higher education institution (name in Romanian, Ukrainian and English)	<p>Universitatea Națională Tehnică a Ucrainei "Institutul Politehnic Igor Sikorsky Kyiv"</p> <p>Національний технічний університет України "Київський політехнічний інститут імені Ігоря Сікорського"</p> <p>National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"</p>
2.	The field of undergraduate university studies of the evaluated programme (name in Romanian, Ukrainian and in English)	<p>Ramura de știință: 17 - Electronică, automatizare și comunicații electronice</p> <p>Domeniul: 174 Automatizare, Tehnologii Integrate de Calculatoare și Robotică</p> <p>Галузь знань: 17 - Електроніка, автоматизація та електронні комунікації</p> <p>Спеціальність: 174 Автоматизація, комп'ютерно-інтегровані технології та робототехніка</p> <p>Knowledge branch: 17 - Electronics, automation and electronic communications</p> <p>Specialty: 174 Automation, Computer-Integrated Technologies and Robotics / G7 Automation, Computer-Integrated Technologies and Robotics</p>
3.	Bachelor's degree programme (title in Romanian, Ukrainian and English)	<p>Hardware și software pentru automatizări</p> <p>Технічні та програмні засоби автоматизації</p> <p>Automation Hardware and Software</p>

REPORT OF THE ARACIS COUNCILregarding the periodic evaluation of the bachelor's study programme **AUTOMATION****HARDWARE AND SOFTWARE**

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4.	The number of enrolled students per year of study	I: 74 students II: 73 students III: 58 students IV: 75 students
5.	The number of teaching staff teaching at the programme, of which holders	Total number – 38 persons Doctors of science, full professors – 6 persons PhD (candidate of science), associate professor, senior lecturer – 19 persons PhD (candidate of science), senior lecturer – 5 persons Senior lecturer – 6 persons Assistant – 2 persons
6.	Diploma issued	Engineer
7.	Qualification level according to CNC	6
8.	Duration of schooling (expressed in number of semesters)	8 semesters
9.	Total number of ECTS credits	240 credits
10.	Targeted qualifications/occupations	Engineer in Automation, Computer-Integrated Technologies and Robotics
11.	The approval given to the evaluated study programme	MAINTAINING ACCREDITATION – monitoring after 2 years and awarding EUR ACE label
12.	Date of last ARACIS assessment	first attempt
13.	ARACIS commission of expert evaluators:	prof. dr. eng. MILICI Laurentiu Dan Prof. PhD PIDTYCHENKO Oleksandr Prof. dr. eng. ROSENBERG Dan Eng. ACOMI Cristian Ovidiu LEANCA Petrica
14.	Evaluation visit period	04 – 05 December 2024