



# REPORT

## The Romanian Agency for Quality Assurance in Higher Education

the type of assessment  
**PERIODIC EVALUATION and EUR-ACE® label  
awarding**

Bachelor study programme

### **Energy Management and Energy Efficient Technologies**

Educational and Research Institute of  
Energy Saving and Energy Management  
**National Technical University of Ukraine  
„Igor Sikorsky Kyiv Polytechnic Institute“**

Bachelor's field – 141 Electrical Energetics,  
Electrical Engineering and Electromechanics / G3  
Electrical Engineering  
Form of education – full time

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management  
National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

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### ► 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 **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES** from the Faculty of **Educational and Research Institute of Energy Saving and Energy Management**.

The file was registered at ARACIS with the number 4891 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 <sup>1</sup>
<b>DOMAIN A. INSTITUTIONAL CAPACITY</b>		
<b>CRITERIUM A.1 Institutional, administrative, and managerial structures</b>		
<b>Standard A.1.1 Legal organisational and operating framework</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The study programme is established in 1997 as a specialty "Energy Management" and was updated as study programme Energy Management and Energy Efficient Technologies (EMEET) in 2018 on the basis of the National Framework of Qualifications, within the Educational and Research Institute of Energy Saving and Energy Management of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", in the specialty 141 Electrical Energetics, Electrical Engineering and Electromechanics. At that time the standard of higher education in specialty 141 "Electrical Energetics, Electrical Engineering and Electromechanics " was absent so in 2020, taking into account the standard of higher education for the bachelor's level (order of the Ministry of Education and Culture of June 20, 2019 No. 867), this study programme was updated and is operating according to the Legislation of Ukraine and the requirements of the National Agency for Quality Assurance of Higher Education.</p> <p>The external periodic review of the educational program Energy Management and Energy Efficient Technologies (EMEET) took place in accordance with the Legislation of Ukraine and the provisions of the National Agency for Quality Assurance of Higher Education, in 2021, 2022, 2024, and the program was accredited with certificate No. 5471, date of issue of the certificate of accreditation of the educational program 07.07.2023, valid until 01.07.2028.</p> <p>The schooling capacity is provided and shows the number of enrolled students per year of study.</p>	Compliance
2.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study programme.</i><sup>2</sup></p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>Not applicable</p>	Not the case

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

<sup>2</sup> *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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Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
<b>A.1.2 Mission and aims of the evaluated study programme</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The mission and aims of the study programme Energy Management and Energy Efficient Technologies (EMEET) are the training of highly qualified specialists in speciality 141 "Electrical Energetics, Electrical Engineering and Electromechanics" in conditions of sustainable innovative scientific and technical development of society.</p> <p>For identification of requirements on the labour market, there is a working group. Each year, the Educational and Scientific Center of Applied Sociology "Socioplus" surveys graduates and employers to assess their satisfaction with acquired competencies. Additionally, students are surveyed about the quality of education through the university's "Electronic Campus" at the end of each semester.</p> <p>Consultations with representatives of the scientific and industrial sectors are conducted annually, during the employment period of graduates, at the "Fair of Professions", and during student internships. The results of these consultations are documented through meeting protocols and letters from institutions.</p> <p>The project of the updated study programme underwent external expertise by the employers. Stakeholders were actively involved in the discussion of the study programme, shaping its goals and learning outcomes. This included a meeting at the Training Centre for Energy Managers of the Educational and Research Institute of Energy Saving and Energy Management, Igor Sikorsky Kyiv Polytechnic Institute, with representatives from UNIDO, the Technical Committee for Standardization No. 48 "Energy Saving", Association of Energy Engineers of Ukraine. Additionally, during a visit to the Warsaw University of Technology as part of the NAWA "Good Practice Days" program, a working meeting was held between Halyna Bielokha, associate professor of the Power Supply Department, Yulia Chernetska, senior lecturer, and Konrad Świrski, Professor of the Warsaw University of Technology. These discussions contributed to incorporating progressive and modern topics into the study programme's educational components.</p> <p>Representatives of employers are involved in the educational process of this study programme: Opryshko V.P., head of the Ukrainian Energy Initiative of the UN Global Compact in Ukraine; Zamulko A.I., Deputy Head of the State Energy Supervision Inspection of Ukraine. Elements of dual education are implemented; part of the training sessions are held based on the "DTEK Kyiv Regional Electric Networks" with the direct participation of representatives of production units; students undergo production practices at operating enterprises within the framework of the contract with Igor Sikorsky Kyiv Polytechnic Institute No. D/0002/112ts.01/241/2021 dated 06/24/2021 (No. 2613-KOE). Since January 2023, the bases of dual education have expanded, and a corresponding agreement was concluded between OJSC "Ternopiloblenergo" and Igor Sikorsky Kyiv Polytechnic Institute, according to which one student of the OH-91 group was trained in the dual form.</p> <p>On November 19, 2019, an open seminar of the department was held with representatives of employers regarding the organization of the educational process under the study programme, professional requirements for employment of students, the material base of the Power Supply Department (protocol No. 5). The stakeholders were present: A.I. Zamulko, B.I. Basok, O.V. Ovdienko. Also, to improve the quality of the educational process, the stakeholders provided equipment to the Power Supply Department free of charge, namely monitors for the computer class from "Skywind Tech UA" LLC; modern relays for the relay protection laboratory from LLC "NVP RELSIS"; devices for conducting energy audits from GIZ and State Agency on Energy Efficiency and Energy Saving of Ukraine.</p>	Compliance

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Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p>Within the framework of the memorandum on cooperation between Igor Sikorsky Kyiv Polytechnic Institute and Solomianskyi district administration in Kyiv, numerous energy audits were conducted, during the preparation of bachelor's theses. Scientific and pedagogical staff of the department serve as trainers and evaluators for the assignment and/or confirmation of the professional qualification "Energy auditor of buildings, 7th level of the National Qualifications Framework" at the Training Centre for Energy Managers of the Educational and Research Institute of Energy Saving and Energy Management.</p> <p>Thus, the goals and learning outcomes of the program align with labour market trends, enabling graduates to secure relevant positions in the energy sector.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></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 speciality 141 "Electrical Energetics, Electrical Engineering and Electromechanics" in conditions of sustainable innovative scientific and technical development of society for:</p> <ol style="list-style-type: none"> <li>1. qualified conducting of energy audits of buildings and industrial enterprises;</li> <li>2. analysis of the efficiency of energy use (development, implementation, monitoring and control of energy efficiency indicators);</li> <li>3. formation and introduction of the demand side management programs; programs for management of energy flows, including distributed generation sources;</li> <li>4. development and implementation of energy management systems (according to the requirements of international standards, including ISO 50001) and audit of these systems;</li> <li>5. work on liberalized energy markets; effective interaction with suppliers and consumers; work in the field of ESCO contracts.</li> </ol> <p>The main feature of this study programme is the focus on the development of measures to increase energy efficiency, taking into account modern technologies and materials, as well as the economic feasibility of their implementation. Since the preparation for this study programme is conducted at the Power Supply Department, it is not only about the selection of individual sources of distributed generation but also about the design of complex energy-efficient systems with sources of distributed generation and renewable energy sources.</p> <p>The objectives of this study programme fully correspond to the concept of educational activity of the University, fixed in the Statute of Igor Sikorsky Kyiv Polytechnic Institute. Elements of the "Strategy for the development of the Igor Sikorsky Kyiv Polytechnic Institute for 2020-2025", namely the training of highly qualified specialists in the field of technical education in conditions of sustainable innovative scientific and technical development of society, which fully corresponds to the mission and vision of the strategy development of the university. The programme is presented to the candidates and to other direct and indirect beneficiaries on the website.</p>	Compliance
3.	<p>The name of the study programme is in accordance with its aims, content and outcomes.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The name of the study programme Energy Management and Energy Efficient Technologies (EMEET) is in accordance with its aims, content and outcomes.</p>	Compliance

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	<p>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– ПО11) and partially on general (3О17 – 3О22) education.</p> <p>The program results of the study programme were developed in alignment with the Energy Strategy of Ukraine until 2035, aimed at reducing the energy intensity of the economy and diversifying energy sources and supply methods, including integration of distributed generation and non-traditional renewable energy sources. In this context, during the 2022 revision of the educational components "Energy Management" and "Energy Audit" (PO8, PO10, PO11), the program result "PR27" and "PR34" were added concerning the study of PO1 and PO2. Moreover, upon achieving the set goals, students attain the following program learning outcomes: "PR23" and "PR24" (from studying PO 4); "PR30" (from studying PO 5, PO 8, PO 10, PO 11); "PR37" (from studying PO 3); and "PR42" (from studying PO 6 and PO 7).</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The consistency is emphasised in the Educational and professional bachelor's program “Energy Management and Energy Efficient Technologies” where the types of economic activity are explained in detail.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The higher education institution has a plan for development of the Educational-Professional Program (EPP). Consultations with representatives of the scientific and industrial sectors are conducted annually, during the employment period of graduates, at the "Fair of Professions", and during student internships. The results of these consultations are documented through meeting protocols and letters from institutions.</p> <p>Each year, the Educational and Scientific Center of Applied Sociology "Socioplus" surveys graduates and employers to assess their satisfaction with acquired competencies. Additionally, students are surveyed about the quality of education through the university's "Electronic Campus" at the end of each semester.</p> <p>Since 2021, the working group responsible for updating the study programme has included O.V. Ovdiienko, a specialist in energy audit and energy management, certified at the international level, and head of the Association of Energy Engineers of Ukraine.</p> <p>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><b>Recommendations:</b></p> <p>Consider to set-up an official board (teachers, stakeholders, partners) to participate to the improvement of the educational programme, meeting minimum once a year, with an official report.</p> <p>Consider establishing more systematic and procedural approach to the consultation of the stakeholders and the analysis and use of their feedback, including the documentation of the proceedings/consultations.</p>	Partial Compliance

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	Enhance interaction between students/graduates and leadership/teaching staff in this area by conducting this interaction in a more official way. For example, by creating a round table/discussion panel for these categories with results of this discussion and actions taken being listed on-line for public review (not just publishing the offer, but also a reaction and implementation of given offer)	
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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>	Compliance
7.	<p>The educational needs established by the employers have contributed to the definition of the programme mission, aims and outcomes.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      As per methodology there is a working group for the development of the Educational-Professional Program. The working group responsible for updating the study programme in 2021 has included O.V. Ovdienko, a specialist in energy audit and energy management, certified at the international level, and head of the Association of Energy Engineers of Ukraine. Representatives of potential employers expressed their proposals in the provided feedback on the EPP (available on the department website), which were accepted for consideration by the working group.</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><b>Findings from the Self-Evaluation Report/ Visit:</b>  <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>                      The main feature of this study programme is the focus on the development of measures to increase energy efficiency, taking into account modern technologies and materials, as well as the economic feasibility of their implementation. Since the preparation for this study programme is conducted at the Power Supply Department, it is not only about the selection of individual sources of distributed generation but also about the design of complex energy-efficient systems with sources of distributed generation and renewable energy sources.                      The objectives of this study programme fully correspond to the concept of educational activity of the University, fixed in the Statute of Igor Sikorsky Kyiv Polytechnic Institute.                      Elements of the "Strategy for the development of the Igor Sikorsky Kyiv Polytechnic Institute for 2020-2025", namely the training of highly qualified specialists in the field of technical education in conditions of sustainable innovative scientific and technical development of society, which fully corresponds to the mission and vision of the strategy development of the university.</p>	Compliance

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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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      The types of economic activity are included in the section: eligibility of graduates for employment and are in line with the obtained qualification. According to the classifier of professions ДК003: 2010 (with amendments by the Ministry of Economy of Ukraine No. 1410 dated 16.01.2024) graduates can perform the following types of professional work:                      3113 Specialist in the operation of power stations, power plants and networks                      3113 Specialist in energy management                      3113 Energy engineer                      3111 Specialist in energy saving management in buildings                      3111 Specialist in non-traditional types of energy                      Professional certification is possible</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 (<a href="https://ec.europa.eu/esco/portal/home">https://ec.europa.eu/esco/portal/home</a>), and also with the ARACIS specific standards in the Bachelor's field.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      The curriculum is developed in accordance with the National Framework of Qualifications (NFQ), the standard of higher education of specialty 141 "Electrical Energetics, Electrical Engineering and Electromechanics" for the bachelor's level (order of the Ministry of Education and Culture of June 20, 2019 No. 867) and complies with the principles of Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG 2015).</p>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Not applicable. The evaluated programme is the only and unique one for Igor Sikorsky Kyiv Polytechnic Institute</p>	Not applicable
12.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Not applicable</p>	Not applicable
<b>A.1.3 Academic integrity</b>		
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</p>	Compliance



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	<p>possible frauds or deviations from its academic (didactic and scientific research) activities, including active measures to prevent and eliminate any form of plagiarism.<sup>3</sup></p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The policy, standards and procedures for compliance with academic integrity are defined in the following documents:                      The Code of Honour of National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute»,                      Regulations on the system of prevention of academic plagiarism at Igor Sikorsky Kyiv Polytechnic Institute,                      Regulations on the commission on ethics and academic integrity of Igor Sikorsky Kyiv Polytechnic Institute,                      Order on holding events for the formation and development of a culture of academic integrity in Igor Sikorsky Kyiv Polytechnic Institute (HOH/22/2021, 02/04/2021).                      Regulations on the examination commission and certification of applicants for higher education in Igor Sikorsky Kyiv Polytechnic Institute.</p>	
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>Observance of academic integrity is facilitated by checking all academic texts for signs of plagiarism using the “Strike Plagiarism” and placing them in the Electronic Archive of scientific and educational materials of Igor Sikorsky Kyiv Polytechnic Institute. The university has the Committee on Ethics and Academic Integrity of the Scientific Council of Igor Sikorsky Kyiv Polytechnic Institute, working group on academic integrity. Documents are systematized on the official website of the university.</p> <p>The promotion of academic integrity at the university is carried out through a number of measures. The most recent ones are the following:</p> <ol style="list-style-type: none"> <li>1) How to properly cite borrowings from other sources: open lecture, 08.11.2023,</li> <li>2) Who can conclude whether there is plagiarism in a work: all about checking academic texts: open lecture, 01.11.2023,</li> <li>3) Round table "Academic integrity: experience, practices, challenges, progress", 23.10.2023. The purpose of the event is to unite the academic community to discuss challenges in implementing academic integrity policies and procedures in the educational process; understand the mechanisms that hinder the culture of academic integrity; exchange experiences, ideas and develop joint solutions to overcome challenges,</li> <li>4) How to find quality educational and scientific information for your research: open lecture, 18.10.2023,</li> <li>5) Academic integrity: the most important things from theory for practical results: open lecture, 11.10.2023.</li> </ol> <p>In addition, the following initiatives are regularly implemented:</p> <ol style="list-style-type: none"> <li>1) informing applicants about the Code of Honor (at the stage of signing the contract), compliance with the principles of academic ethics, increased responsibility for compliance with the rules of citation and references, including regular explanatory work of the curator, teachers;</li> </ol>	Compliance

<sup>3</sup> 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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	<p>2) the work of the Center for Information Support of Education and Research scientific and technical library of the university named after G.I. Denisenko, including webinars, in particular, from SAIUP.</p> <p>3) the work of the Commission of the Scientific Council on Ethics and Academic Integrity (popularization is encouraged), the working group on issues of academic integrity;</p> <p>4) Educational and Scientific Centre of Applied Sociology "Socio+" regularly conducts surveys of applicants, scientific and pedagogical staff. Applicants are informed about the policy of academic integrity and 94% of them noted its compliance.</p> <p>Code of Honor of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" approved by the Decision of the Scientific Council of April 5, 2021 (Protocol No.4).</p> <p>Checking for academic plagiarism of qualifying works includes:</p> <p>1) submission by the applicant of the final version of the bachelor's thesis to the supervisor in electronic form;</p> <p>2) uploading work to the "Strike Plagiarism";</p> <p>3) implementation of the work verification process, formation of a similarity report;</p> <p>4) analysis of the similarity report by the scientific supervisor, a conclusion about the originality of the work. If the work is accepted for defence, the academic plagiarism screening process is considered complete. Academic texts, diploma projects and dissertations are placed in the Electronic Archive (ELAKPI) in public access. Students are involved in didactic activities and other activities (seminars, performances, competitions, industrial exhibitions, etc.), which motivates them to continue their education through lifelong learning and the desire to maintain an updated level of their knowledge in the chosen field after graduation.</p> <p>40% of students with the highest ranking in their speciality receive stipends. Students with disabilities also receive a social scholarship. Students with the highest academic results receive an increased stipend. Also, they can apply for personalized stipends from government agencies.</p> <p>For students with learning difficulties, adaptation programs are provided in a number of disciplines: mathematics, physics. In cases of good reasons, students with learning difficulties are provided with individual schedules for the implementation of the study programme.</p>	
<b>A.1.4 Public liability and responsibility<sup>3</sup></b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>Annually, according to the orders of the rector of the University (<a href="https://document.kpi.ua/list/2024">https://document.kpi.ua/list/2024</a>), a self-analysis of the activities of the departments (internal accreditation) is carried out in order to determine the compliance of the educational process at the departments (according to the relevant OP) with the criteria of external accreditation educational programs. All procedures defined by the above Regulations and the rector's order are applied to the Department of Power Supply. No deficiencies in the OP and in the educational activities of the department for the implementation of the OP have been identified. This is ensured by the annual improvement of educational plans, the educational program, syllabi of the educational components of OP, the updating of educational and methodical materials, and the improvement of the qualifications of scientific and pedagogical workers.</p> <p>In addition, the University:</p> <ul style="list-style-type: none"> <li>- has a Department of Labour Protection, which monitors the state of occupational health and safety in units (<a href="https://kpi.ua/web_op">https://kpi.ua/web_op</a>);</li> </ul>	Compliance

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	<p>- has a Security Department to ensure the appropriate level of public law and order and the safety in the units.                      Also, the departments of the University including the Department of Power Supply annually prepares a self-analysis report on many areas of activity during the year and the compliance of the results with the licensing requirements for the specialty approved at the state level (<a href="https://document.kpi.ua/list/2024">https://document.kpi.ua/list/2024</a>).</p>	
<b>A.1.5 Managerial activity of the institution<sup>3</sup></b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Regulations on the Organization of the Educational Process at Igor Sikorsky Kyiv Polytechnic Institute.                      Regulation on the development, approval, monitoring and revision of study programmes at Igor Sikorsky Kyiv Polytechnic Institute.                      The procedure for creating and approving work programs (syllabus) of educational disciplines (educational components) in Igor Sikorsky Kyiv Polytechnic Institute.                      Regulations on the examination commission and certification of applicants for higher education in Igor Sikorsky Kyiv Polytechnic Institute                      Regulations on the right to free choice of disciplines by applicants for higher education at the Igor Sikorsky Kyiv Polytechnic Institute                      Regulations on the dual form of obtaining higher education at Igor Sikorsky Kyiv Polytechnic Institute                      Regulations on individual learning plan of an applicant for higher education in Igor Sikorsky Kyiv Polytechnic Institute                      Regulation on academic mobility at Igor Sikorsky Kyiv Polytechnic Institute / Regulation on academic mobility at Igor Sikorsky Kyiv Polytechnic Institute                      Regulations on the procedure for conducting the practice of higher education Igor Sikorsky Kyiv Polytechnic Institute                      Regulations on recognition in Igor Sikorsky Kyiv Polytechnic Institute results of preliminary studies                      Regulations on double degree programs at Igor Sikorsky Kyiv Polytechnic Institute                      Regulations on recognition learning outcomes acquired in non-formal/informal education at Igor Sikorsky Kyiv Polytechnic Institute                      Provisions on the system of evaluation of learning results in Igor Sikorsky Kyiv Polytechnic Institute                      Rules for admission to higher education at Igor Sikorsky Kyiv Polytechnic Institute in 2024                      The procedure for admission to higher education in 2022 of the Ministry of Education                      Order of the Ministry of Education “On approval of conditions for admission to higher education in 2022”</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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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 automated system for collecting, registering, processing, storing and protecting information and data</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p>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>The scholar documents of the students have been verified at the Dean's office, during the on-site visit on January 24 of evaluator prof. SHRAM Oleksandr.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The external periodic review of the educational program Energy Management and Energy Efficient Technologies (EMEET) took place in accordance with the Legislation of Ukraine and the provisions of the National Agency for Quality Assurance of Higher Education, in 2024, and the program was accredited with certificate No. 5471, date of issue of the certificate of accreditation of the educational program 07.07.2023, valid until 01.07.2028. 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 Kyiv Polytechnic Institute in 2024</p> <p>Working curriculum of the educational and professional bachelor's program “Energy Management and Energy Efficient Technologies”</p> <p>Provisions on the system of evaluation of learning results in Igor Sikorsky Kyiv Polytechnic Institute</p>	Compliance
<b>A.1.6 Financial activity</b>		
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.<sup>3</sup></p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The main contingent of students does not pay for tuition and enters the university on a budget form of education (according to the state order). Students under the contract form of education enter vacant places within the licensed volume. Cost of the contract form of education is presented on the website of the University Admissions Committee. The cost of education for students of higher education for the 2023/2024 academic year is calculated by the department of economics and finance of the university.</p> <p>In Igor Sikorsky Kyiv Polytechnic Institute students of the budgetary form of education have the opportunity to receive scholarships of three types: academic, social, and personal. Academic scholarships are awarded to students for academic success on the basis of a performance rating. Students of the first year of study receive an academic scholarship based on the entrance competitive score before the first semester control. The accrual of the academic scholarship is reviewed after each session. Social scholarships are awarded to eligible students on the basis of laws establishing state benefits and guarantees for awarding social scholarships to certain categories of students. The right to receive a social scholarship is available to students who study full-time under the state order and who are not on academic leave.</p> <p>Personal scholarships are awarded to outstanding students who have excelled the most in academic and scientific work, and also study on a budget. Candidates for their receipt are determined by the scholarship commission of the university, which carries out its work on the basis of the Regulation</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	on the organization of the work of scholarship commissions of Igor Sikorsky Kyiv Polytechnic Institute and approved by the Scientific Council of Igor Sikorsky Kyiv Polytechnic Institute.	
2.	<p>The students are informed about the possibilities of financial assistance provided by the institution and the modality of using the fees.<sup>3</sup></p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b> Personal scholarships are awarded to outstanding students who have excelled the most in academic and scientific work, and also study on a budget. Candidates for their receipt are determined by the scholarship commission of the university, which carries out its work on the basis of the Regulation on the organization of the work of scholarship commissions of Igor Sikorsky Kyiv Polytechnic Institute and approved by the Scientific Council of Igor Sikorsky Kyiv Polytechnic Institute.</p>	Compliance
3.	<p>The evaluated study programme disposes of sufficient financial resources for the proper performance of the activity.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b> The University was established as a state higher education institution, which is funded by the State Budget of Ukraine, which makes it possible to fully ensure the implementation of the curriculum. Financial resources for the proper implementation of bachelor's training activities under the study programme come to the University from state budget expenditures (state order), as well as from individuals and legal entities in accordance with the final training contracts. Such funding allows for the achievement of educational programme evaluation goals (discussions at the evaluation visit).</p>	Compliance
<b>A.2 Facilities</b>		
<b>A.2.1 Availability of educational establishments</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b> 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 department is equipped with the necessary material, technical and laboratory facilities necessary for the implementation of the educational program. The area of the department premises corresponds to the norms established by the Legislation of Ukraine. The main educational spaces are presented in films and uploaded on ARACIS cloud. Also, the educational spaces have been visited on-site, during the on-site visit on January 24 of evaluator prof. SHRAM Oleksandr and presented in an online video transmission. The on-site visit confirms what is presented in SAR and films that describe the laboratories.</p>	Compliance
2.	<p>The capacity of the educational facilities for the study programme subjected to evaluation should be of: minimum 1 m<sup>2</sup>/seat, in the class rooms; minimum 1.4 m<sup>2</sup>/seat in the seminar rooms; minimum 1.5 m<sup>2</sup>/seat in the lecture rooms from the libraries; minimum 2.5 m<sup>2</sup>/seat in the computer laboratories and specialty discipline laboratories which use the computer; minimum 4 m<sup>2</sup>/seat in the laboratories of the technical, experimental, design disciplines etc.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
Faculty of Educational and Research Institute of Energy Saving and Energy Management  
National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

<b>Domains, criteria, standards, performance indicators</b> <b>Findings and recommendations</b>	<b>Degree of compliance<sup>1</sup></b>
<p>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 department additionally have the 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>The subject classrooms of the department (316, 318, 702), where lectures and practical classes are held, are equipped with multimedia equipment - projectors.</p> <p>The computer classroom (402) and 2 laboratories (205, 308) are equipped with stationary projectors. The rest of the premises, if necessary, can be equipped with portable projectors, which the department has in the amount of two units.</p> <p>Computer workshops on disciplines are held in a computer classroom with 12 seats (room 402). For the computer class of the department, 35 newest monitors were received as charitable donations (Charitable Donation Agreement). The computers are equipped with the necessary software. Licensed software (Matlab), free versions of software products for universities (AutoCAD), free software products with free access (FreeCAD, Open Office) are used in the work.</p> <p>For students' self-dependent work, preparation of course and diploma projects and papers, the department has a course and diploma design room (309). The room is equipped with the necessary teaching materials in the form of stands, reference books, textbooks, and books.</p> <p>Individual counselling of students by the department's teachers is carried out in the teaching departments - 111a, 204, 211a, 306. Group consultations are scheduled after classes and are held in subject classrooms, course and diploma design offices, or laboratories as needed.</p> <p>Distance learning is provided on the basis of the specialised Sikorsky platform, the Google Classroom web service, and the "Electronic Campus" for information support of the educational process. Distance learning is carried out using video conferencing software such as Google Meet and ZOOM.</p> <p>Applied activities on OPP disciplines take place in the department's laboratories and general institute laboratories with special equipment, such as (Annex 7 - VS):</p> <ul style="list-style-type: none"><li>- room GO 15 – Electrotechnical Materials;</li><li>- room GO 16 – Fundamentals of Metrology and Electrical Measurements;</li><li>- room GO 17.1 – Theoretical foundations of electrical engineering. Part 1: Linear systems;</li><li>- room GO 17.2 – Theoretical foundations of electrical engineering. Part 2. Nonlinear systems. Transient processes;</li><li>- room GO 18 – Electric Machines;</li><li>- room GO 19 – Electrical Equipment of Electric Power Plants and Substations;</li><li>- room GO 20 - Electric Drive;</li><li>- room GO 21 - Electrical Networks and Systems;</li><li>- room GO 22 - Relay Protection and Power System Automation;</li><li>- room PO 01.3 - Relay Protection and Power System Automation;</li><li>- room PO 03 - Technical Thermodynamics;</li></ul>	

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<ul style="list-style-type: none"> <li>- room PO 05 - Mathematical Tasks of Power Engineering;</li> <li>- room PO 06 - Energy efficient technologies of electricity consumption;</li> <li>- room PO 10 - Energy Audit.</li> </ul> <p>The main educational spaces are presented in films and uploaded on ARACIS cloud. Also, the educational spaces have been visited on-site, during the on-site visit on January 24 of evaluator prof. SHRAM Oleksandr and presented in an online video transmission. The on-site visit confirms what is presented in SAR and films that describe the laboratories.</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><b>Findings from the Self-Evaluation Report/ Visit:</b> 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 the 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>The standard number of students in lecture streams and when conducting group training sessions is determined by the Regulations on the Organization of the Educational Process at Igor Sikorsky Kyiv Polytechnic Institute (<a href="https://osvita.kpi.ua/index.php/node/39">https://osvita.kpi.ua/index.php/node/39</a> ) and order No. HOH/47/2022 dated 02.07.2022 "On the organization and planning of the educational process for the 2024-2025 academic year" (<a href="https://document.kpi.ua/2024_HOH-47">https://document.kpi.ua/2024_HOH-47</a>) and consists of:</p> <ul style="list-style-type: none"> <li>- lectures - 50-100 people;</li> <li>- group classes - 20-30 people;</li> <li>- practical classes - 15-25 people;</li> </ul> <p>laboratory classes - 10-15 people</p> <p>The main educational spaces are presented in films and uploaded on ARACIS cloud. Also, the educational spaces have been visited on-site, during the on-site visit on January 24 of evaluator prof. SHRAM Oleksandr and presented in an online video transmission.</p>	Compliance
4.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b> Not applicable</p>	Not applicable
<b>A.2.2 Endowment of the educational establishments</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<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>There is a video presentation of the material and technical support of Igor Sikorsky KPI presented in the department web-site.</p> <p>The list of educational spaces with capacities is provided and shows 11 Lecture rooms, 19 Seminar rooms and 22 laboratories.</p> <p>The main educational spaces are presented in films and uploaded on ARACIS cloud (Video_premises).</p> <p>Also, the educational spaces have been visited on-site, during the on-site visit on January 24 of evaluator prof. SHRAM Oleksandr and presented in an online video transmission.</p>	
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>To provide laboratory work on the educational components of the study programme and provide scientific research of students at the study programme, ten university-wide laboratories, six laboratories of the Power Supply Department (Laboratory of Electricity Consumers, Laboratory of Relay Protection and Automation, Laboratory of Power Supply Systems, Laboratory of Electrical Apparatus, Laboratory of Measuring Equipment and Energy Audit, Laboratory of Metrology and Electrical Measurements) are used. Information about the general material and technical support of Igor Sikorsky Kyiv Polytechnic Institute is presented in the video review. An overview of the department's laboratories is presented on the website.</p> <p>The main educational spaces are presented in films and uploaded on ARACIS cloud (Video_premises).</p> <p>Also, the educational spaces have been visited on-site, during the on-site visit on January 24 of evaluator prof. SHRAM Oleksandr and presented in an online video transmission.</p>	Compliance
3.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>Not applicable</p>	Not applicable
<b>A.2.3 Availability and endowment of scientific research premises</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></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 department, 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 22 Laboratories including details of laboratory equipment with lab works that can be conducted.</p> <p>The main educational spaces are presented in films (<a href="https://ep.kpi.ua/uk/laboratory">https://ep.kpi.ua/uk/laboratory</a>) and uploaded on ARACIS cloud (Video_premises).</p>	Compliance



## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	Also, the educational spaces have been visited on-site, during the on-site visit on January 24 of evaluator prof. SHRAM Oleksandr and presented in an online video transmission.	
<b>A.2.4 Availability and endowment of the library</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b> 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. The list of educational spaces with capacities is provided and shows 11+ Library rooms. The facilities offered by the library have been verified during the on-site visit on January 24 of evaluator prof. SHRAM Oleksandr.</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><b>Findings from the Self-Evaluation Report/ Visit:</b> The university owns a scientific and technical library. The facilities offered by the library have been verified during the on-site visit on January 24 of evaluator prof. SHRAM Oleksandr.</p> <p><b>Recommendations:</b> Consider adopting an institutional strategy for the transition towards the full digital books and educational materials; Ensuring the appropriate coverage of the topics in the curriculum and syllabuses with recent bibliographic.</p>	Partial 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><b>Findings from the Self-Evaluation Report/ Visit:</b> 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. The library provides access to international databases of publications and an electronic archive of educational materials. The library has reading rooms for self-dependent work of students, as well as a smart shelter - an underground room equipped with a backup power source (diesel generator), separate access to the Internet, which operates in conditions of a power outage, separate work areas, both open and separate. The facilities offered by the library have been verified during the on-site visit on January 24 of evaluator prof. SHRAM Oleksandr.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	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.	
5.	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. <b>Findings from the Self-Evaluation Report/ Visit:</b> Education in the bachelor's program "Energy Management and Energy Efficient Technologies" is conducted in Ukrainian. However, in the future, it is planned to gradually teach some subjects in English.	Compliance
6.	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. <b>Findings from the Self-Evaluation Report/ Visit:</b> The library provides access to international databases of publications and an electronic archive of educational materials. The library has reading rooms for self-dependent work of students, as well as a smart shelter - an underground room equipped with a backup power source (diesel generator), separate access to the Internet, which operates in conditions of a power outage, separate work areas, both open and separate.	Compliance
7.	<i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i> <b>Findings from the Self-Evaluation Report/ Visit:</b> Not applicable	Not applicable
<b>A.3 Human resource</b>		
<b>A.3.1 Quality of the teachers</b>		
1.	The academic staff from the study programme are hired according to the recruitment criteria established at institutional level, in accordance with the legal provisions. <b>Findings from the Self-Evaluation Report/ Visit:</b> The recruitment of academic staff (assistant, teacher, senior teacher, associate professor, professor) for the educational program is conducted on a competitive basis, following Article 55 of the Law of Ukraine "On Higher Education". General recruitment criteria are fixed in the University Statute, and all particularities of conducting the competition to fill vacant positions are described in the university's internal document – the Procedure for competitive recruitment of research and teaching staff, approved by the Academic Council of the Igor Sikorsky Kyiv Polytechnic Institute. The procedure outlines the following basic list of qualification criteria for applicants for academic positions: - assistant, teacher: higher education (master's, specialist), no restrictions on work experience, proficiency in the state language; - senior teacher: higher education (master's, specialist), usually a scientific degree relevant to the educational components, at least 2 years of academic work experience, proficiency in the state language; - associate professor: higher education (master's, specialist), scientific degree of Doctor (Candidate) of Sciences and/or academic title of professor (associate professor, senior researcher), at least 3 years of academic work experience, proficiency in the state language;	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators		Degree of compliance <sup>1</sup>
	<p><b>Findings and recommendations</b></p> <p>- professor: higher education (master's, specialist), scientific degree of Doctor (Candidate) of Sciences and/or academic title of professor (associate professor, senior researcher), at least 5 years of academic work experience, proficiency in the state language.</p> <p>Annex 10 to the Procedure for competitive recruitment of research and teaching staff includes a list of achievements in professional activity, that corresponds to point 38 of the Resolution of the Cabinet Ministers of Ukraine № 1187 dated 30.12.2015 "On Approving Licensing Conditions for Educational Activities", requiring at least four achievements in professional activity of applicants for academic positions over the past five years.</p> <p>All applicants for academic positions should also provide information about their educational, methodological, research and innovative activities over the past five years using a standard form (Annexes 12 and 13 to the Procedure for competitive recruitment of research and teaching staff). These lists and indicators aim to identify the best candidate among the applicants based on their professional, pedagogical, scientific, and personal achievements through a transparent and objective competitive selection process. A contract is signed with the winning candidate using a standard form of contract for a term of up to five years. Upon the expiration of the contract, a new competitive selection procedure is conducted for the respective position.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></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 Kyiv Polytechnic Institute, 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. 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>	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><b>Findings from the Self-Evaluation Report/ Visit:</b></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.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></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 work for the study program EMEET.</p>	Compliance
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>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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 EMEET, all 38 with the basic norm for the higher education KPI. For 1 Senior lecturers (OT), 1 lecturer (MS) and 3 assistants (OM, LT and DB), there are no specifications of Specialization and scientific title.</p>	
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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>	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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Annex 3 includes lecturers responsible for preparing and teaching an academic discipline according to the educational program in the current academic year (2024 - 2025) in accordance with the individual plans and pedagogical workload - 27 persons. Annex 4 also includes teachers of the power supply department who participates in laboratory and practical work on the discipline under the guidance of a lecturer - an additional 11 persons table regarding the Scientific activity in the field of disciplines shows 38 tenure teachers working for the study program EMEET, with the list of scientific papers.</p>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      The table regarding the Scientific activity in the field of disciplines shows 27 tenure teachers working for the study program EMEET, developed courses and other didactic material in the field of subjects in the teaching position.</p>	Compliance
9.	<p>The teachers who occupy positions of assistant should have certified pedagogical training.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      There are no legal requirements for teaching assistants to have a pedagogical training certificate. However, for the educational and scientific programs of Masters (<a href="https://osvita.kpi.ua/sites/default/files/opfiles/141_onpm_emepietk_2024.pdf">https://osvita.kpi.ua/sites/default/files/opfiles/141_onpm_emepietk_2024.pdf</a>) and Doctors of Philosophy (<a href="https://osvita.kpi.ua/sites/default/files/opfiles/141_onpd_eeetem_2024.pdf">https://osvita.kpi.ua/sites/default/files/opfiles/141_onpd_eeetem_2024.pdf</a>), there are educational components related to the development of pedagogical skills. For the 141 programs of the specialty Electrical Energetics, Electrical Engineering and Electromechanics, these are “High School Pedagogy” and “Pedagogical Practice”, respectively. By studying these disciplines, future teachers acquire the necessary skills of pedagogical</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	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.	
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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.                      Most of the teaching staff improve their qualifications at the Institute of Postgraduate Education. Over the past five years, the most popular courses have been «International Projects: Writing, Submitting, Implementing», «Using Google Advanced Services for Learning», «Advanced B2 English», «Developing Distance Learning Courses Using the Moodle Platform», and «Creating Photos and Videos, animation for the educational process», «Commercialisation of research results».                      Also, teaching staff of study programme actively participate in training on the topics of their educational components from leading organisations and institutions in the industry: «European Energy Manager (CCI)», EUREM; teaching units, European Energy Manager; «Training of energy auditors to work with the Energy Efficiency Fund», GIZ; «Designing PV Systems Using Professional Software (PV*SOL Premium / Valentin Software)», Civil Society Energy 2022; «Industrial Energy Audit», Association of Energy Engineers of Ukraine; «Consulting enterprises on energy efficiency», GIZ; «Energy Management in Public Institutions», NET4SENERGY.                      The educational platforms of distance learning courses PROMETHEUS and COURSERA are popular.                      Professional development can also include participation in conferences, publication of textbooks, and certification of foreign language proficiency.                      The professional development of instructors is further supported by academic mobility programs, participation in international conferences, international projects, and the preparation of project applications for participation in international competitions, such as Horizon Europe.                      The knowledge and skills of the teaching staff have enabled the organization and delivery of advanced training courses for industry professionals. Within the Power Supply Department, part of the Educational and Research Institute of Energy Saving and Energy Management at the university, the Energy Manager Training Centre was established, which includes the Qualification Centre as a structural unit. The Centre is responsible for assessing and recognizing learning outcomes, including those acquired through non-formal or informal education; awarding and confirming professional qualifications; Recognizing in Ukraine professional qualifications obtained in other countries for roles such as "Energy Auditor of Buildings," "Energy Auditor of Processes," and "Energy Auditor of Transport." The Director of the Centre is Associate Professor Anatolii Cherniavskiy from the Power Supply Department, who is also a lecturer in the study programme. The Head of the Centre's professional qualifications confirmation unit is Olena Borychenko, the Head of the Power Supply Department and a lecturer in the study program.</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p>An additional incentive for improving their professional skills teaching staff is the incentive system created at the university, which is implemented on the basis of the following Regulations:</p> <ul style="list-style-type: none"> <li>- Regulations on rewarding employees in the scientific structural units of the Igor Sikorsky Kyiv Polytechnic Institute. The Regulation provides for the organisation of an annual competition for the best textbooks, manuals and monographs in the relevant areas of science and technology development. The winners of the competition for the best textbook in 2020 are Volodymyr Prokopenko and Oleg Zakladnyi for the textbook «Energy Audit»;</li> <li>- Regulations on rewarding employees of the Igor Sikorsky Kyiv Polytechnic Institute for publications included in the international scientometric databases Scopus and/or Web of Science Core Collection;</li> <li>- Organising and holding the annual competition «Young Lecturer-Researcher of the Year», the winners of which receive a 20% salary supplement for one year, which can be attended by full-time university teachers up to 35 years old. The winners of the «Young Lecturer-Researcher» competition were A. Cherniavskyy (2007), O. Zakladnyi (2009-2014), O. Borychenko (2015), Y. Veremichuk (2016, 2018-2021), O. Yaromoliuk (2021), D. Derevianko (2017-2021), H. Bielokha (2023).</li> </ul> <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>	
12.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b> Not applicable</p>	Not applicable
<b>A.3.2 Availability of the auxiliary staff necessary to implement the study programme</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></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 auxiliary staff of the department includes two technicians, one specialist, two engineers, and two leading engineers. All members of the auxiliary staff meet the qualification requirements for their respective positions. These requirements include:</p> <ul style="list-style-type: none"> <li>• Engineer: completed higher education in the relevant field of study (master's or specialist's degree). No work experience is required for a master's degree.</li> <li>• Specialist: at least two years of work experience as a category II engineer.</li> <li>• Technician: basic or incomplete higher education (bachelor's or junior specialist's degree).</li> <li>• Leading Engineer: completed higher education in the relevant field of study (master's or specialist's degree) and at least two years of work experience as a category I engineer.</li> <li>• Leading Specialist: completed higher education (specialist's or master's degree) in the relevant field of study and at least two years of work experience as a category I specialist.</li> </ul>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p>The appointment and dismissal of auxiliary staff are carried out by order of the First Vice-Rector, in compliance with the labour legislation of Ukraine. Responsibilities are distributed among the auxiliary staff according to their job descriptions, ensuring that all tasks related to organizing and implementing quality educational activities, as well as achieving the study program's goals, are covered. This indicates that the number of auxiliary staff is sufficient for the department's needs.</p> <p>It should also be noted that, according to the Law of Ukraine "On Higher Education," higher education institutions are autonomous and independent, with the right to form and approve their staffing lists.</p> <p>The qualitative and quantitative composition of the staff at the Igor Sikorsky Kyiv Polytechnic Institute Library fully comply with the requirements of the "On Approval of the Standard Structure and Standard Staffing Standards for Libraries of Higher Education Institutions of III-IV Accreditation Levels." The qualification requirements for library staff positions are clearly outlined in their job descriptions and are mandatory.</p>	
<b>B. EDUCATIONAL EFFICACY</b>		
<b>B.1 Content of the study programmes</b>		
<b>B.1.1 Student admission</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></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. 42).</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 (<a href="https://zakon.rada.gov.ua/laws/show/z0487-22#Text">https://zakon.rada.gov.ua/laws/show/z0487-22#Text</a>), 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.</p> <p>Full information about the admission company is posted on the main website of the university <a href="https://pk.kpi.ua/">https://pk.kpi.ua/</a>, 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>	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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The Rules of admission to Igor Sikorsky Kyiv Polytechnic Institute (<a href="https://pk.kpi.ua/wp-content/uploads/official-documents/rules.pdf">https://pk.kpi.ua/wp-content/uploads/official-documents/rules.pdf</a>), which regulate all aspects of the entrance campaign for the bachelor's educational level, are provided at the university. The rules of admission to Igor Sikorsky Kyiv Polytechnic Institute 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>	Compliance
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>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p><b>Findings from the Self-Evaluation Report/ Visit:</b> 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>	
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><b>Findings from the Self-Evaluation Report/ Visit:</b> 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. 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>	Compliance
5.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b> Not applicable</p>	Not applicable
<b>B.1.2 Structure and presentation of the study programme</b>		
1.	<p>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><b>Findings from the Self-Evaluation Report/ Visit:</b> 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 (<a href="https://ecampus.kpi.ua/home">https://ecampus.kpi.ua/home</a>) individual study plans of students are placed. 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</p>	Compliance



## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

	Domains, criteria, standards, performance indicators Findings and recommendations	Degree of compliance <sup>1</sup>
	<p>(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>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): <a href="https://ep.kpi.ua/uk/node/514">https://ep.kpi.ua/uk/node/514</a>                      in English: <a href="https://ep.kpi.ua/en/node/514/">https://ep.kpi.ua/en/node/514/</a>  <a href="https://drive.google.com/drive/folders/1DO1doms_tUIV10lmnqjOeFUjYbKLIXRR">https://drive.google.com/drive/folders/1DO1doms_tUIV10lmnqjOeFUjYbKLIXRR</a></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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The project team includes associate professors, candidates of sciences with extensive pedagogical and scientific experience in the subject field of the educational program, student representatives, a certified specialist in energy audit and energy management of the international level, are also involved in the project group.</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.</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>	Compliance
3.	<p>The study programme curriculum is approved at institutional level.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The curriculum of the programme is adopted by the Academic Council of Igor Sikorsky Kyiv Polytechnic Institute</p> <p>University has uploaded signed curriculums via WEBSITE of the department (in Ukrainian) : <a href="https://ep.kpi.ua/uk/node/513">https://ep.kpi.ua/uk/node/513</a>                      and in English: <a href="https://ep.kpi.ua/en/node/513">https://ep.kpi.ua/en/node/513</a>                      exactly: <a href="https://drive.google.com/file/d/1jAiNpq110QebHuK_ljWyHHOaKur-ohiS/view">https://drive.google.com/file/d/1jAiNpq110QebHuK_ljWyHHOaKur-ohiS/view</a></p>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	The curriculum and syllabuses of disciplines are drawn up in accordance with the educational program, respectively, time for lectures, practical, laboratory and self-study	
5.	<p>Based on the content of the fundamental disciplines, the curriculum for the 1<sup>st</sup> year of study is conceived so that to help and motivate the students for the study of the engineering sciences.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The curriculum for the first-year students includes courses of general training as: Physics, Higher mathematics, Computing and programming, etc., the content of which give the basis and motivation for studying the subsequent courses of vocational training.</p> <p>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.</p> <p>The university also offers adaptation courses (<a href="https://kpi.ua/adapt">https://kpi.ua/adapt</a>), which help first-year students in the study of fundamental disciplines and motivate them to continue their studies.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>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>	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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <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 SPP 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 legislation in the field of higher Education 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>The selection procedure for educational components includes several key steps. The study programme project group forms a catalogue of elective educational components based on proposals from research and pedagogical staff, students and stakeholders. Stakeholder suggestions, particularly regarding the expansion of the list of elective disciplines focused on using the latest technology were taken into account by the project group. Additionally, training is provided under two certificate programs: "Energy conservation and energy management at budget and municipal facilities" and "Energy conservation and energy management at industrial infrastructure facilities". For the 2024/2025 academic year, in line with</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations	Degree of compliance <sup>1</sup>
<p>recommendations from stakeholders, the catalogue was expanded to 43 disciplines, and the list of elective courses was differentiated to better align with the study programme.</p> <p>The catalogue is approved by the Scientific Council of Educational and Research Institute of Energy Saving and Energy Management and the methodical council of Igor Sikorsky Kyiv Polytechnic Institute. The catalogue of elective educational components with a description of annotations, syllabuses of elective educational components are posted on the university's website. A student chooses educational components in accordance with the study programme curriculum, which provides for the choice of 14 disciplines to be studied throughout the course of study. The selection is made using the catalogue and syllabuses of elective educational components. For the study programme, 14 educational components have been included to allow students to expand and deepen their areas of study. Additionally, students have an opportunity to choose educational components from the catalogue of two certificate programmes: "Energy conservation and energy management at budget and municipal facilities" and "Energy conservation and energy management at industrial infrastructure facilities". In the electronic cabinet, a student familiarizes himself with the list of educational components, chooses and confirms his or her choice. Research and pedagogical staff, group curator, study programme guarantor provide consulting support. In the case that the student could not, for a valid reason, choose educational component on time or made a mistake, he can write a statement to dean's office to register for the study of the disciplines chosen by him, by submitting the relevant documents:</p> <ul style="list-style-type: none"> <li>• Regulations on academic mobility of Igor Sikorsky Kyiv Polytechnic Institute (clause 7 Procedure for drawing up an individual study plan of an academic mobility participant);</li> <li>• Regulations on the dual form of obtaining higher education at Igor Sikorsky Kyiv Polytechnic Institute;</li> <li>• Regulations on the individual study plan of a student of Igor Sikorsky Kyiv Polytechnic Institute;</li> <li>• Regulations on the procedure for the practice of higher education applicants of Igor Sikorsky Kyiv Polytechnic Institute;</li> <li>• Regulations on the exercise of the right to free choice of academic disciplines by higher education applicants of Igor Sikorsky Kyiv Polytechnic Institute.</li> </ul> <p>According to the curriculum, about 50 % of the time is allocated for independent work of students. Another 50 % falls on the didactic process and classroom types of learning.</p> <p>Individual training includes performance of calculation and graphical works, course works and projects (all on individual tasks), work in scientific groups, performance of research works. Given the remote system, training takes place asynchronously through various means of communication (Zoom, Google Meet, Sikorsky Distance, etc.).</p> <p>Students receive individual consultations and additional individual tasks, which reduce the influence of martial law circumstances on the course of the educational process.</p> <p>The study programme was developed in collaboration with stakeholders from employers, the academic community and students (undergraduates and graduates).</p>	
<p>8. 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><b>Findings from the Self-Evaluation Report/ Visit:</b></p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<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>	
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>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.</p> <p>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.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>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.</p> <p>The share of students' independent work hours in relation to the total number of hours is on average 48,4%, which amounts to 3484 hours. The number of classroom hours gradually decreases from 30 hours (1st year of training) to 25 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>	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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The study programme “Energy Management and Energy Efficient Technologies (EMEET)” is conducted in the field of 141 Electrical Energetics, Electrical Engineering and Electromechanics and has fundamental and professional-oriented core disciplines.</p> <p>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>	Compliance
12.	<p>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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The syllabuses of the study programme EMEET are located on the website of the Department (<a href="https://ep.kpi.ua/en/node/514">https://ep.kpi.ua/en/node/514</a>).</p> <p>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</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	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). <b>Recommendations:</b>	
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. <b>Findings from the Self-Evaluation Report/ Visit:</b> 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. <b>Recommendations:</b>	Compliance
14.	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. <b>Findings from the Self-Evaluation Report/ Visit:</b> According to point 1.3 of the Regulation on the organization of the educational process at Igor Sikorsky Kyiv Polytechnic Institute ( <a href="https://osvita.kpi.ua/node/39">https://osvita.kpi.ua/node/39</a> ) educational activity is based on the principles of student-centred learning. Applicants are trained according to individual study plans ( <a href="https://osvita.kpi.ua/node/117">https://osvita.kpi.ua/node/117</a> ). 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; homework from different disciplines. The curriculum includes course projects and works, in total, provides 3484 hours (up to 50%) for independent work of students.	Compliance
15.	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. <b>Findings from the Self-Evaluation Report/ Visit:</b> List of curriculum disciplines and their content correspond to the Bachelor's field and study programme.	Compliance
16.	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. <b>Findings from the Self-Evaluation Report/ Visit:</b> 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	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p>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.</p> <p>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 25 to 30 hours of classroom instruction per week.</p>	
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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>	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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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>	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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      The ratio between theoretical and practical training meets the requirements of the Ukrainian legalisation in the field of higher education and the specialty standard 141 Electrical Energetics, Electrical Engineering and Electromechanics.                      According to the curriculum 50% hours are allocated to practical classes. In addition, students complete three course works (120 hours).</p>	Compliance
20.	<p>At least 50% of the forms of verification of the disciplines provided in the programme curriculum are examinations.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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 48 disciplines and takes 22 exams and 29 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 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.                      As such the exams to credits ratio is: <math>22/48 \cdot 100 = 46\%</math>.</p>	Partial Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p><b>Recommendations:</b>                      Consider increasing the number of exams in the educational programme, in order to reach at least 50% (in order to be in accordance with the ARACIS methodology).</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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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, to ensure the acquisition of practical skills in the 2nd and 3rd years, industrial equipment provided by stakeholders is utilized in the department's educational laboratories.</p> <p><b>Recommendations:</b>                      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>	Partial 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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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>	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> <p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      The practice is organized in accordance with "Regulations on the procedure for the practice of higher education applicants of Igor Sikorsky Kyiv Polytechnic Institute"                      The syllabuses of the practice credit module have been properly prepared, focused on the acquisition of practical skills by students, which will allow them, after graduation, to ensure the possibility of employment in the labour market. Practice syllabuses are compiled taking into account the previous wishes of employers, the topics of practical tasks provided by employers during consultations, the profile of enterprises, the material base of enterprises, feedback from employers about the practice of previous years, feedback from graduates of previous years.                      According to the curriculum, has one practice (pre-diploma) in 8th semester, with duration of 5 weeks and 6 ECTS study credits.                      According to the results of the defence, 100% of students received positive marks.</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

	Domains, criteria, standards, performance indicators Findings and recommendations	Degree of compliance <sup>1</sup>
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The graduation examination is carried out in the form of a defence of the qualification work and ends with the issuance of a document of the established template on the awarding of a bachelor's degree with the qualification: bachelor's degree in Electrical engineering under the educational professional programme. 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. The qualifying work is rigorously checked to ensure the absence of academic plagiarism, fabrication and falsification. After successful defence, the work is placed in the University Library's repository for free public access.</p> <p>Attestation is carried out openly and publicly. The topic of the diploma project is formed taking into account the wishes and needs of employers and industrial partners of the department.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></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 topics for the preparation of the diploma project are formulated in cooperation with representatives of stakeholders and are presented on the website of the department. Topics of diploma projects must be approved at the department meeting. Students have the right to independently choose the topic of the diploma project from the pre-presented list of topics. The number of diploma project topics is greater than the number of students.</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
26.	<p>The structure of the study programme remains unchanged for one study cycle; it may be modified only as of the 1<sup>st</sup> year of the following academic year.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>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 in Igor Sikorsky Kyiv Polytechnic Institute.</p> <p>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>	Compliance
27.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p>	Not applicable



## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

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Not applicable		
<b>B.1.3 Relevance of the study programme</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      The project group that developed the program includes representatives of the academic sector, a representative of industry and a graduate of the program.</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><b>Findings from the Self-Evaluation proposals Report/ Visit:</b>                      The development team took into account the following: employer reviews of the study programme, letters of support regarding the study programme, annual requests from companies for graduates, meetings of students with representatives of employers, round tables with the participation of stakeholders, meetings during the annual "Fair of Professions", reviews from representatives of companies that participated in the defence of diploma projects, protocols of regular meetings with enterprise specialists. Taking into account the demands and proposals of employers was approved at the department meetings (and with the participation of industry representatives).</p>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Igor Sikorsky Kyiv Polytechnic Institute annually conducts complex monitoring of the quality of specialist training (<a href="https://kpi.ua/monitoring-about">https://kpi.ua/monitoring-about</a>). 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:                      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.                      Monitoring indicators are determined based on the methodology (<a href="https://kpi.ua/files/monitoring/5-13.pdf">https://kpi.ua/files/monitoring/5-13.pdf</a>).</p>	Compliance
<b>B.1.4 Organisation and coordination of the study programme</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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.</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	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.	
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> <p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      The assessment of the knowledge of the applicants is carried out in accordance with the Regulations on the system of evaluation of learning results at Igor Sikorsky Kyiv Polytechnic Institute for all types of classes and extracurricular work (current, calendar, semester control); oral and written exams, tests, practice reports, defence of a bachelor's project.                      Students are evaluated according to the rating system, which is mandatory in every syllabus. The structure and content of the syllabuses are regulated by the relevant provision. The lecturer presents the rating system to the students in the first lesson and provides answers and comments to the students' questions throughout the semester. Re-examination of the assessment system together with students is conducted before the session. The syllabus with the evaluation system is available on information resources: on the "Electronic Campus", on the website of the department. The student has access to the results of current monitoring of each discipline on the "Electronic Campus", which supports the rhythm of learning. The evaluation system considers all types of classes and independent activities outlined in the curriculum. It also accounts for qualitative aspects of task performance, such as a creative approach, presenting multiple solutions, and justifying the effectiveness of decisions.                      Completion of the study programme involves the preparation and public defence of a diploma project. The diploma project demonstrates the student's ability to independently perform the assigned task at the level of the established standards of specialty 141 "Electrical Energetics, Electrical Engineering and Electromechanics". The project presents the use of acquired competencies on examples of practical issues.</p>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Teachers strictly follow the provisions of Igor Sikorskyi Kyiv Polytechnic Institute about the system for evaluating learning results (<a href="https://osvita.kpi.ua/index.php/node/37">https://osvita.kpi.ua/index.php/node/37</a>) and about the current calendar and semester control of learning results (<a href="https://osvita.kpi.ua/index.php/node/32">https://osvita.kpi.ua/index.php/node/32</a>).                      For each discipline, the learning outcomes that the student must obtain are stated in the syllabus. These outcomes, which include skills, abilities, knowledge, and competencies, are aligned with the study programme. The confirmation of these learning outcomes is demonstrated through the student's performance of the tasks provided by the discipline, such as practical tasks, laboratory work, calculation and graphical tasks, individual and group assignments, assessments, and the final evaluation of the discipline. The study of all disciplines follows a logical scheme that regulates</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations	Degree of compliance <sup>1</sup>
<p>the sequential connection of post-requisites and pre-requisites. This ensures that the learning outcomes of each discipline build upon one another and are ultimately demonstrated in the final attestation work of the study programme – the diploma project.</p> <p>The curriculum of the programme is developed in accordance with the structural and logical scheme presented in the study programme in a way that confirms the learning outcomes declared for all disciplines. Every semester, at the department meetings, the results of the session are discussed and checked to identify the results of the study programme and make the necessary changes and additions. Also, twice each semester at the department meetings, the results of the current control of students are discussed and checked to determine the results of training in the study programme and conduct guidance conversations with students.</p> <p>Each syllabus has a section on the methods of mastering the discipline, which outlines the optimal approaches for achieving the declared learning outcomes. The syllabuses of educational disciplines ensure consistency between the declared learning outcomes provided by the discipline, its content, and the modality of evaluating the achieved outcomes, using a rating system of evaluation specified in the syllabus.</p> <p>A student's study of all disciplines is divided into semesters and organized according to the curriculum, which is an integral part of the study programme.</p> <p>The educational plan of the study programme is approved at multiple levels, including the Scientific Council at the university level, the methodical committee of the Educational and Research Institute, and department meetings. This process is detailed in the Regulation on the organization of the educational process at Igor Sikorsky Kyiv Polytechnic Institute.</p> <p>The study programme provides students with the opportunity to choose elective disciplines, totaling 60 credits, from the catalogue of elective courses. Registration of the learning trajectory managed through the student's individual study plan, which is displayed in the interactive Electronic Campus system. Students have the opportunity to obtain learning outcomes through informal forms of learning: working in scientific groups, taking courses in didactic centres of enterprises, participating in student Olympiads, etc.</p> <p>The study programme provides academic mobility and a dual form of education. Within the framework of the cooperation agreement on the organisation of the dual form of higher education between the university and the Private Joint Stock Company "DTEK Kyiv Regional Electric Networks", agreements were established between the Power Supply Department, Private Joint Stock Company "DTEK Kyiv Regional Electric Networks " and students. Over the last five years twelve students of the study programme "Energy Management and Energy Efficient Technologies" were trained in this dual educational format. Each student was assigned a mentor at a real enterprise, where they successfully mastered disciplines such as "Relay Protection and Automation of Power Systems", "Occupational Safety", "Distribution Network Dispatch", while performing production functions as duty electricians. Their graduation from the National Qualifications Framework involved practical experience as "dispatcher", and the success of this initiative laid the foundation for further cooperation between the Power Supply Department and Private Joint Stock Company "DTEK Kyiv Regional Electric Networks". Since January 2023, the dual education opportunities have expanded, and a new agreement was signed between the Open Joint Stock Company "Ternopiloblenergo" and Igor Sikorsky Kyiv Polytechnic Institute, enabling one student to study in the dual form within this framework.</p>	
<p>5. 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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <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>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

	Domains, criteria, standards, performance indicators Findings and recommendations	Degree of compliance <sup>1</sup>
	<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>	
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><b>Findings from the Self-Evaluation Report/ Visit:</b></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 (<a href="https://zakon.rada.gov.ua/laws/show/1134-2002-%D0%BF#Text">https://zakon.rada.gov.ua/laws/show/1134-2002-%D0%BF#Text</a>).</p> <p>The number of full-time employees is 38: 3 professors, 28 associate professors, 2 senior lecturers, 1 lecturer and 4 assistants work at this study programme.</p> <p>According to the Annex 5, the number of teaching staff with activities to the evaluated study programme is 38 and the number of the students enrolled in the current academic year is 106 with a maximum of 44 per year of study.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></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 in Igor Sikorsky Kyiv Polytechnic Institute / Regulations on the Organization of the Educational Process at Igor Sikorsky KPI (<a href="https://osvita.kpi.ua/index.php/node/39">https://osvita.kpi.ua/index.php/node/39</a>):</p> <ul style="list-style-type: none"> <li>- lectures - 50-100 people;</li> <li>- group classes - 20-30 people.</li> <li>- practical classes - 15-25 people;</li> <li>- laboratory classes - 10-15 people.</li> </ul> <p>The schedule is made according to the capabilities of the auditorium fund (<a href="https://schedule.kpi.ua/">https://schedule.kpi.ua/</a>).</p>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b></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 (<a href="https://schedule.kpi.ua/">https://schedule.kpi.ua/</a>). 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%.</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	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.	
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Grades are posted in information on the electronic campus (<a href="https://ecampus.kpi.ua/">https://ecampus.kpi.ua/</a>), 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.                      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>	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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      The University has a Regulation on the expulsion, interruption of studies, renewal and transfer of students of higher education in Igor Sikorsky KPI (<a href="https://osvita.kpi.ua/index.php/node/178">https://osvita.kpi.ua/index.php/node/178</a>), formed on the basis of the Law of Ukraine "On Higher Education".                      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.                      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 (<a href="https://osvita.kpi.ua/index.php/node/178">https://osvita.kpi.ua/index.php/node/178</a>) 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 (<a href="https://kpi.ua/adapt">https://kpi.ua/adapt</a>).</p>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      This is an evaluation for maintaining the accreditation. Currently, the study programme operates within the framework of the license granted by the National Agency for Quality Assurance of Higher Education.                      The training of students is conducted on an ongoing basis (Certificate of accreditation No. 5471 issued by the National Agency for Quality Assurance of Higher Education on July 7, 2023, valid until July 1, 2028).</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
<b>B.1.5 Partnerships</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The internship is organized in accordance with "Regulations on the procedure for conducting the practice of higher education Igor Sikorsky Kyiv Polytechnic Institute". The practice of the applicants is carried out at the leading enterprises in the energy sector.</p> <p>Part of the training sessions (in dual form of education) are held based on the "DTEK Kyiv Regional Electric Networks" with the direct participation of representatives of production units; students undergo production practices at operating enterprises within the framework of the contract with Igor Sikorsky Kyiv Polytechnic Institute No. D/0002/112ts.01/24/2021 dated 06/24/2021 (No. 2613-KOE). Since January 2023, the bases of dual education have expanded, and a corresponding agreement was concluded between OJSC "Ternopiloblenergo" and Igor Sikorsky Kyiv Polytechnic Institute, according to which one student of the OH-91 group was trained in the dual form.</p> <p>Practice 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
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>Since 2021, the working group responsible for updating the study programme has included O.V. Ovdiienko, a specialist in energy audit and energy management, certified at the international level, and head of the Association of Energy Engineers of Ukraine.</p> <p>The project of the updated study programme underwent external expertise by the employers, including A.M. Pustovyi, director of "Blusan Solar Energy Tech Ukraine" LLC (2020); P.P. Pertko, director of "Energy Management Pro" LLC (2020, 2022); V. I. Lytvyn, chairman of the board of the NGO "Association of Energy Auditors of Ukraine" (2020, 2022), who recommended additional competencies in heat engineering (relevant elective study components enhanced the educational programme); G. O. Romanyuk, director of "ESCO Ukraine" LLC (2021), K. Shyshka, general director of Energy Service Company "EnergoEngineering" (2021); E.M. Inshekov, national coordinator for training and standardization of the UNIDO Project /GEF UKR IEE "Implementation of the standard of energy management systems in the industry of Ukraine" (2021); S. Huttsul, Chairman of the Board of JSC "Kirovogradgaz" (2022), V. Bezus, Head of The State Agency on Energy Efficiency and Energy Saving of Ukraine (2022); V. Lozynskiy, acting Minister of the Ministry of Development of Communities and Territories of Ukraine, who contributed recommendations on energy efficiency of buildings (2022), (the updated educational programme covers study of topics related to legal regulation in the field of ensuring energy efficiency of buildings; determination of energy efficiency of buildings; minimum requirements for energy efficiency of buildings; introduction of energy management and energy monitoring); A. Berestyan, general director of Danfoss LLC (2024); M. Politykin, director of City Energy LLC (2024); M. Malaya, first deputy head of The State Agency on Energy Efficiency and Energy Saving of Ukraine (2024); Lytovchenko O.V., director of Agrotechklimat LLC (2024); prof. K. Swirski, Warsaw University of Technology, Transition Technologies SA (Warsaw, Poland). Positive reviews and feedback have been received from all mentioned employers. During the public discussion of the projects of the updated study programme, feedback</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations	Degree of compliance <sup>1</sup>
<p>was received from Rybak-Khelbl O.O., executive director of iC Consulanten Ukraine, and Lytvyn V.I., director of LLC "CEE" (2020, 2022). Academic representatives consistently participate in discussions and updates of the study programme; favorable feedback was received from Basok B.I., the head of the Department of Thermophysical Foundations of Energy-Saving Technologies of the Institute of Engineering Thermophysics, National Academy of Sciences of Ukraine (2021); Shevchenko S.Yu., head of the Department of Electricity Transmission, National Technical University "Kharkiv Polytechnic Institute" (2021); Prof. Novoseltsev O.V., member-cor. National Academy of Sciences of Ukraine, Doctor of Technical Sciences, (2021); Dr. Sc., S. Res., Blinov I.V., Deputy Director of the Institute of Electrodynamics of the National Academy of Sciences of Ukraine (2021)<sup>15</sup>. Other stakeholders were actively involved in the discussion of the study programme, shaping its goals and learning outcomes. This included a meeting at the Training Centre for Energy Managers of the Educational and Research Institute of Energy Saving and Energy Management, Igor Sikorsky Kyiv Polytechnic Institute, with representatives from UNIDO, the Technical Committee for Standardization No. 48 "Energy Saving", Association of Energy Engineers of Ukraine. Additionally, during a visit to the Warsaw University of Technology as part of the NAWA "Good Practice Days" program, a working meeting was held between Halyna Bielokha, associate professor of the Power Supply Department, Yulia Chernetska, senior lecturer, and Konrad Świrski, Professor of the Warsaw University of Technology. Key cooperation topics were discussed, such as studying students at the Warsaw University of Technology under a double diploma program, internship opportunities for students at Polish energy enterprises, and joint scientific projects on energy efficiency, energy markets, and the reconstruction of Ukraine's energy industry. These discussions contributed to incorporating progressive and modern topics into the study programme's educational components.</p> <p>Representatives of employers are involved in the educational process of this study programme: Opryshko V.P., head of the Ukrainian Energy Initiative of the UN Global Compact in Ukraine; Zamulko A.I., Deputy Head of the State Energy Supervision Inspection of Ukraine.</p> <p>On November 19, 2019, an open seminar of the department was held with representatives of employers regarding the organization of the educational process under the study programme, professional requirements for employment of students, the material base of the Power Supply Department (protocol No. 5). The stakeholders were present: A.I. Zamulko, B.I. Basok, O.V. Ovdienko. Also, to improve the quality of the educational process, the stakeholders provided equipment to the Power Supply Department free of charge, namely monitors for the computer class from "Skywind Tech UA" LLC; modern relays for the relay protection laboratory from LLC "NVP RELSIS"; devices for conducting energy audits from GIZ and State Agency on Energy Efficiency and Energy Saving of Ukraine.</p>	
<p><b>3.</b> 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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The study programme provides academic mobility and a dual form of education.</p> <p>Starting from the third year, students can participate in the research of the department, join scientific workshops, take part in the organization, conducting and competitions of the All-Ukrainian Student Olympiad "Energy Management", take part in international internship programs.</p> <p>A student of the group ON-p01 Reznichenko Danila, who studied under the study programme "Energy Management and Energy Efficient Technologies" within the framework of international academic mobility, was sent to Aalto University School of Science (Espoo, Finland), from 01.09.2022 to 11.06.2023 to study under the programme of support for Ukrainian higher education students during the period of wartime legal regime. Documents issued for the implementation of the applicant's academic mobility: order of Igor Sikorsky Kyiv Polytechnic Institute on sending for study dated 29.08.2022 No. 2105-s. Student of group ON-91 Yelyzaveta Tupotina, within the framework of international academic mobility, was</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p>sent to the University of Ecology and Management (Warsaw, Republic of Poland), from 20.02.2023 to 19.07.2023 to study under the European academic mobility programme Erasmus+. Upon completion of the academic mobility period, the applicants provided an academic transcript issued by Aalto University School of Science and University of Ecology and Management, respectively, with a list of courses taken and final grades, as well as prepared a written report on the results of participation in the programmes. Based on the submitted documents and the Regulations on Academic Mobility of Igor Sikorsky Kyiv Polytechnic Institute, the results of the study were recognised under the academic mobility programme.</p> <p>The department has partnerships with the Otto-von-Guericke University of Magdeburg (Germany), Aalto University School of Science, Espoo, Finland, and the University of Applied Sciences Hamm-Lippstadt, Germany. The partnership is carried out in accordance with the Regulations on Academic Mobility at Igor Sikorsky Kyiv Polytechnic Institute, meets the goal of achieving an international level of mobility and ensuring the results of the study program, including pre-diploma practice at the bases of foreign partners. The study programme was discussed with the academic staff of the universities with which the department carries out scientific and technical cooperation in accordance with the existing agreements. Thus, the educational program was improved thanks to the suggestions of representatives of the foreign academic community.</p> <p>For 2 years in a row, some students have been studying in parallel at the Joint Ukrainian-German Centre for Mechanical Engineering and aim to take part in the double degree program at the Master's degree program with the Otto-von-Guericke University of Magdeburg (Germany), according to the Regulations on double degree programs at Igor Sikorsky Kyiv Polytechnic Institute.</p> <p>The university has a central structure for registering student mobility - Academic Mobility Office. Associate Professor Yuliia Chernetska is responsible for organizing academic mobility at the Institute of IEE and the Power Supply Department. Currently, 6 students have taken advantage of the academic mobility program.</p> <p>For the academic year 2024/2025, it is planned to train 2 students at the industrial base of practice of the University of Applied Sciences Hamm-Lippstadt, Germany. Travel of male students outside Ukraine has been restricted since February 2022 due to the introduction of martial law.</p>	
<b>B.2 Learning results</b>		
<b>B.2.1 Pass rate of students and graduates</b>		
1.	<p>For the accreditation of the study programme, the higher education institution should prove as follows:</p> <ul style="list-style-type: none"> <li>- minimum 51% of the total graduates of each series have passed the Bachelor's degree examination;</li> <li>- minimum 40% of the graduates of the first series are hired with legal labour contract on positions corresponding to the specialization obtained when graduating.</li> </ul> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>According to the results of the defence of certification work (diploma projects) under the study programme "Energy Management and Energy Efficient Technologies", the following indicators were obtained for five years: from 95 % to 100 % of the total number of students of each graduation defended a diploma project for a bachelor's degree; more than 95 % of graduates each year continued their studies at the master's level. All other students are employed under an employment contract for positions corresponding to the specialization of the study programme. This is confirmed by the lists of students enrolled in the master's program and the employment lists of graduates. There were no unemployed students for the last five years.</p>	Compliance
2.	<p>The institution disposes of internal mechanisms to monitor the student progression with regard to:</p> <ul style="list-style-type: none"> <li>- academic results during the years of study,</li> </ul>	Compliance



## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

	Domains, criteria, standards, performance indicators Findings and recommendations	Degree of compliance <sup>1</sup>
	<ul style="list-style-type: none"> <li>- drop-out rate,</li> <li>- credits accumulated by the students which pass from one year into another (as credited students),</li> <li>- time to graduation.</li> </ul> <p>The results of the monitoring confirm the efficiency of the educational process.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>All student learning results are registered in the "Electronic Campus", to which any student has permanent access. The results obtained by the student during the years of study are registered in the academic certificate and certified on the basis of the Supplement to the diploma.</p> <p>University has a regulation approved by the Scientific Council on the system of evaluation of study results and its application. This system is a methodical basis for the development of rating systems of evaluation for each discipline and credit module, and evaluation of individual components (individual tasks, laboratory works, seminars, etc.). Some credit modules have a special structure, which is reflected in the evaluation system, for example, the credit module of the pre-diploma practice. For such credit modules, there is additional study guide at the department level. This study guide takes into account the peculiarities of the study programme and the specialty.</p> <p>The assessment of the knowledge of the applicants is carried out in accordance with the Regulations on the system of evaluation of learning results at Igor Sikorsky Kyiv Polytechnic Institute for all types of classes and extracurricular work (current, calendar, semester control); oral and written exams, tests, practice reports, defence of a bachelor's project.</p>	
<b>B.2.2 Valorisation of the university qualification by hiring on the labour market or by continuing the university studies</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The research center of applied sociology "Socioplus" (<a href="https://kpi.ua/socioplus">https://kpi.ua/socioplus</a>) 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 (<a href="https://robota.kpi.ua/">https://robota.kpi.ua/</a>) helps with the employment.</p> <p>Students can receive career counselling at the Department of Professional Guidance - Career Development Centre. This unit has published on its website a catalogue developed by the Department for Student Affairs of Igor Sikorsky Kyiv Polytechnic Institute, the Department of Employment Promotion and Professional Development - Career Development Centre, "Career Guide of Igor Sikorsky Kyiv Polytechnic Institute". The catalogue contains vacancies, in particular, in the program "Energy Management and Energy Efficient Technologies", the University's employment partners, and information on hard and soft skills that are required for a particular employment position. On the pages of the site, you can find useful information on employment, for example, how to successfully pass an interview, how to write and format a resume, etc.</p> <p>The Career Centre organizes various seminars, master classes, and workshops on special, important employment issues.</p> <p>To provide students with a broader view of career opportunities, the Power Supply Department organizes 3-4 excursions during the academic year to the facilities of successful energy companies in Ukraine. For example, in the spring of 2024, students had the opportunity to visit the photovoltaic</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

	Domains, criteria, standards, performance indicators Findings and recommendations	Degree of compliance <sup>1</sup>
	<p>plant of Skatek Solar Solutions Ukraine LLC, to visit the academy at the headquarters of HERZ Ukraine in Kyiv; in the fall of 2023, students visited the electrical substation of "DTEK Kyiv Electric Networks".</p> <p>Direct meetings with employers are also organized in the form of seminars, open lectures, and recruiting events: June 2024 - Webinar on internships at the international company GEA; May 2024 - Webinar on "BIM technologies in design" from SJS Electric; April 2024 - a meeting with the directors of Kovalska Group's production divisions on the topic "What you need to know about a career path in the industrial and construction industry"; an open lecture by YASNO Energy Efficiency on "The use of equipment and technologies in energy service contracts - from calculation to implementation"; an open lecture by Wilo-Ukraine on pumping equipment, the methodology for its selection for various engineering systems, installation requirements, and problems that arise during operation; March 2024 - an open meeting with Mykhailo Bubnov, CEO of Schneider Electric Ukraine, etc. Meetings with employers are organized on a regular basis, on average, 2-3 times a month during the academic year.</p> <p>The department has a successful practice of involving students in specialized webinars held at the national and global level by leading companies in the industry, for example, a series of UWEA 2024 webinars "Integration of Renewable Energy Sources into the IPS of Ukraine", a training workshop for students from DiXi Group "ENERGY MAP WORKSHOP", etc.</p>	
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>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>	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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>More than 95 % of graduates each year continued their studies at the master's level. All other students are employed under an employment contract for positions corresponding to the specialization of the study programme. This is confirmed by the lists of students enrolled in the master's program and the employment lists of graduates. There were no unemployed students for the last five years.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The university has a career development center (<a href="https://roboata.kpi.ua/">https://roboata.kpi.ua/</a>), which takes care of graduate employment issues. Results are monitored according to the surveys held by the Socioplus Research Center of Applied Sociology (<a href="https://kpi.ua/socioplus">https://kpi.ua/socioplus</a>).</p> <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><b>Recommendations:</b></p> <p>Consider developing more effective procedures for monitoring the employment.</p>	Partial Compliance
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>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Most of the graduates of the programme are employed at the leading partner enterprises. These enterprises are leaders in the energy sector. 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>	
<b>B.2.3 Level of satisfaction of the students in relation to the professional and personal development provided by the university</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Student feedback is continuously monitored at the university, institute, and department levels. The university and institute maintain a "Good KPI/Bad KPI" page on their Telegram channel, which serves as an informal platform for gathering current student feedback. Based on the analysis of this feedback, conclusions are drawn quickly, and adjustments to the educational process are made if necessary.                      The university also features a Student Council BOT for students to voice their dissatisfaction and a BOT from the Department of Educational Work that compiles and summarizes student feedback at the university level.                      Each semester, students participate in a survey on the "Electronic Campus" to assess their satisfaction with the educational process. This survey addresses various aspects, including the current state of education and satisfaction with all components of the Campus, such as university infrastructure and services. Additionally, the Power Supply Department maintains a webpage to showcase current student opinions. The content of this page is reviewed during department meetings and is considered when updating the study programme and syllabuses.</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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Monitoring of students' feedback at the Institute level is ensured through the BOT of the Institute of energy saving and energy management. The response period is limited to two days.                      The department of educational work of the university provides answers to questions within one day.                      For example, the "Electronic Campus" has a "Teacher through the eyes of students" section, information is constantly processed.                      Student requests submitted through the Department's website are reviewed during internal department meetings. The results of these surveys are considered by the university, institute, and department administration within the established timelines. Students maintain constant communication with academic group curators and student curators, and issues are addressed in order of priority. Overall, more than 50% of students are actively involved in monitoring and providing feedback on their educational experience.                      The monitoring process is relevant because it is analyzed every semester, and answers to current questions are provided within the next day.                      Additional confirmation of the students' opinion is the following: more than 85% of students after defending their bachelor's diploma continue their studies in the master's programme in the field of "Energy management and energy efficient technologies".                      The Department's website has a page for open communication with students and anyone interested. This page is a means of ongoing monitoring of student opinion.</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p>The results of monitoring students' opinions are regularly analyzed during internal department meetings and methodological seminars. Based on this analysis, updates are made to the study programme and course syllabuses annually. Additionally, the results of students' assessments of the learning and development environment at the university are highlighted in Socio+ polls.</p> <p>Through student surveys, it is established that teaching methods are adequate for students to achieve learning outcomes, including transversal skills. Student evaluations of teachers are voluntary. Students can use the "Teacher through the Eyes of Students" evaluation form available in the Electronic Campus system to assess their teachers. This form has been approved by the Scientific Council. The results from these evaluations are considered during the competitive selection of teachers and are reviewed after each semester.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>Igor Sikorsky Kyiv Polytechnic Institute provides comprehensive support, including educational, organizational, informational, advisory, and social assistance, in accordance with the Regulations on the Organization of the Educational Process at Igor Sikorsky Kyiv Polytechnic Institute. This support is continually refined based on the results of regular surveys conducted by the Educational and Scientific Center of Applied Sociology "SocioPlus".</p> <p>According to the annual survey analysis, more than 90% of students are satisfied with the educational support they receive, while approximately 80% find the organizational support at the university sufficient.</p> <p>Overall, more than 50% of students are actively involved in monitoring and providing feedback on their educational experience.</p> <p>The monitoring process is relevant because it is analyzed every semester, and answers to current questions are provided within the next day.</p> <p>Additional confirmation of the students' opinion is the following: more than 85% of students after defending their bachelor's diploma continue their studies in the master's programme in the field of "Energy management and energy efficient technologies". (<a href="https://ela.kpi.ua/">https://ela.kpi.ua/</a>).</p>	Compliance
<b>B.2.4 Student-centred learning</b>		
1.	<p>The teaching methods are adequate in order for the students to obtain the learning outcomes, including transversal skills.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The "Regulations on the Organization of Inclusive Education at Igor Sikorsky Kyiv Polytechnic Institute" is implemented at the university (<a href="http://osvita.kpi.ua/node/172">http://osvita.kpi.ua/node/172</a>).</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 (<a href="https://osvita.kpi.ua/index.php/node/37">https://osvita.kpi.ua/index.php/node/37</a>), as well as the current calendar and semester control of studying results (<a href="https://osvita.kpi.ua/index.php/node/32">https://osvita.kpi.ua/index.php/node/32</a>).</p> <p>The educational process is organized in accordance with the schedule of the educational process, the curriculum of the study programme "Energy Management and Energy Efficient Technologies" and the regulations on the organization of the educational process at Igor Sikorsky Kyiv Polytechnic Institute.</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

	Domains, criteria, standards, performance indicators Findings and recommendations	Degree of compliance <sup>1</sup>
	<p>The university has "Regulations on the Organization of the Educational Process" and "Statute of Igor Sikorsky Kyiv Polytechnic Institute", which are approved by the Scientific Council of the university and correspond to current legislation of Ukraine.</p> <p>The didactic process is organized using modern technologies and communication tools. Various components of the educational process, such as credit modules, practical training, laboratory classes, and individual or group work, are coordinated to ensure the fulfilment of the programme's mission and goals, as well as the achievement of its intended outcomes. The successful attainment of these outcomes is demonstrated through the defence of diploma projects, the quality and content of the projects, and the recommendations for their implementation.</p> <p>Over the past 5 years, the number of diploma projects with excellent marks is from 30 to 35%, recommended for implementation from 35 to 55%, from 20 to 35% are diplomas completed on topics proposed by stakeholders. 15-20% of students receive a diploma with honours.</p> <p><b>Recommendations:</b></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><b>Findings from the Self-Evaluation Report/ Visit:</b></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 in Igor Sikorsky Kyiv Polytechnic Institute, <a href="https://osvita.kpi.ua/node/37">https://osvita.kpi.ua/node/37</a>).</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>If students disagree with a grade, they can follow the official procedure for challenging it and resolving appeals. A special commission to address conflicts is formed at the level of the Educational and Research Institute and, if necessary, at the university level. The commission typically includes specialized discipline teachers, the head of the department, and students, provided they consent. The total number of commission members does not exceed five people, and the response period is limited to five days.</p> <p>Students can submit an appeal regarding a grade from one credit module only once. The regulations also outline provisions for re-examinations and postponed exams for valid reasons, governed by the evaluation system guidelines and the Regulations on semester control, organization and defence of qualifying papers, and attestation exams in distance mode.</p>	Compliance
3.	<p>The teaching-learning process considers both face-to-face didactic activities and individual study.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></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 (<a href="https://osvita.kpi.ua/node/179">https://osvita.kpi.ua/node/179</a>).</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	The ratio between lecture hours and hours of applied didactic activity - seminars, laboratories, projects, practice - corresponds to the standard of specialty 141 “Electrical Energetics, Electrical Engineering and Electromechanics” (project), which is reflected in the curricula and is 50/50.	
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The didactic process is organized using modern technologies and communication tools. Various components of the educational process, such as credit modules, practical training, laboratory classes, and individual or group work, are coordinated to ensure the fulfilment of the programme’s mission and goals, as well as the achievement of its intended outcomes. The successful attainment of these outcomes is demonstrated through the defence of diploma projects, the quality and content of the projects, and the recommendations for their implementation.</p> <p>Achieving the programmatic results of training at the study programme is possible thanks to the optimal combination of such forms and methods of training as lectures, practical work, seminar classes with the organization of discussions, laboratory classes, implementation of course projects, practical training, use of the electronic distance learning platform "Sikorsky", which is based on the specialized web environment Moodle and Google Workspace for Education. Teaching is carried out with the active use of multimedia tools and specialized software. In Igor Sikorsky Kyiv Polytechnic Institute, thanks to the educational process support system "Electronic Campus", students from each educational component have access to information about the author of the course, the syllabus of the educational component, a list of recommended literature, semester control questions, and a knowledge assessment system, glossary, lecture materials, methodological recommendations for performing laboratory, practical and course works (projects), test tasks for self-control, etc.</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 (<a href="https://www.library.kpi.ua/">https://www.library.kpi.ua/</a>).</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>To align students' aspirations with the requirements of employers, a syllabus include a combination of individual and group work. This approach helps students develop both independent problem-solving skills and the ability to collaborate effectively within a team, reflecting real-world professional environments. Individual work of students includes homework, calculation and graphical works, term papers, course works or projects. Most laboratory works in practical disciplines (using industrial equipment) is performed by a group of students. Work in scientific groups, research projects implementation and All-Ukrainian Student Olympiad "Energy Management" have a team organization.</p> <p>Power Supply Department supports students and stimulates them in scientific activity, involves them in research projects, international internship programs, academic mobility with participation in international projects, supports participation in all-Ukrainian and international research conferences.</p> <p>In the distance learning environment, teachers conduct virtual laboratory work .</p>	Compliance
6.	The higher education institution has recognition and completion procedures fit for purpose in cases of students' study mobility/ practice.	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

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Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The procedures for recognizing the results of studies obtained at other educational institutions and the procedures for completing studies are outlined in the Regulations of Igor Sikorsky Kyiv Polytechnic Institute. These regulations cover student mobility, internships, and formal and informal education; they are designed to ensure the full implementation of the study programme.</p> <p>The results of formal and informal education can be incorporated into the syllabuses of disciplines. For example, courses taken by students outside the university on various educational platforms, such as Coursera, Prometheus, and others, can be recognized and counted as part of the discipline. A student of the group ON-p01 Reznichenko Danila, who studied under the study programme "Energy Management and Energy Efficient Technologies" within the framework of international academic mobility, was sent to Aalto University School of Science (Espoo, Finland), from 01.09.2022 to 11.06.2023 to study under the programme of support for Ukrainian higher education students during the period of wartime legal regime. Documents issued for the implementation of the applicant's academic mobility: order of Igor Sikorsky Kyiv Polytechnic Institute on sending for study dated 29.08.2022 No. 2105-s. Student of group ON-91 Yelyzaveta Tupotina, within the framework of international academic mobility, was sent to the University of Ecology and Management (Warsaw, Republic of Poland), from 20.02.2023 to 19.07.2023 to study under the European academic mobility programme Erasmus+. Upon completion of the academic mobility period, the applicants provided an academic transcript issued by Aalto University School of Science and University of Ecology and Management, respectively, with a list of courses taken and final grades, as well as prepared a written report on the results of participation in the programmes. Based on the submitted documents and the Regulations on Academic Mobility of Igor Sikorsky Kyiv Polytechnic Institute, the results of the study were recognised under the academic mobility programme.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>For students' self-dependent work, preparation of course and diploma projects and papers, the department has a course and diploma design room (309). The room is equipped with the necessary teaching materials in the form of stands, reference books, textbooks, and books.</p> <p>Individual counselling of students by the department's teachers is carried out in the teaching departments - 111a, 204, 211a, 306. Group consultations are scheduled after classes and are held in subject classrooms, course and diploma design offices, or laboratories as needed. Students maintain constant communication with academic group curators and student curators, and issues are addressed in order of priority. Teachers have additional contacts with students within the framework of guiding students' scientific activities.</p>	Compliance
<b>B.3 Scientific research activity</b>		
<b>B.3.1 Research planning</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>Educational programme has a scientific plan, proved by the numbers of publications of the teaching staff</p> <p><b>Recommendations:</b></p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

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	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.	
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The topics of scientific research are correlated from the directions of scientific research of the department's teachers. The topics for the preparation of the diploma project are formulated in cooperation with representatives of stakeholders and are presented on the website of the department. Topics of diploma projects must be approved at the department meeting. Students have the right to independently choose the topic of the diploma project from the pre-presented list of topics. The number of diploma project topics is greater than the number of students.</p>	Compliance
<b>B.3.2 Research resources</b>		
1.	<p>The research disposes of sufficient financial resources in order to meet the proposed goals.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>Research is carried out on commercial and initiative topics and on the topic of research by managers, for example: "Development of tools for demand management and energy supply using hybrid low-power systems" (state registration number 0122U001827); "Investigation of optimal functioning of integrated systems of power supply of consumers with the use of integrated accumulation of electric and thermal energy" (state registration number 0117U003825).</p> <p>Research activity has sufficient financial resources, which are formed from state funding and orders from enterprises.</p>	Compliance
2.	<p>The research disposes of sufficient logistic resources in order to meet the proposed goals.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>Power Supply Department supports students and stimulates them in scientific activity, involves them in research projects, international internship programs, academic mobility with participation in international projects, supports participation in all-Ukrainian and international research conferences.</p> <p>Higher education students are widely involved in research, as the combination of training and research is one of the principles of the educational process under the study programme "Energy Management and Energy Efficient Technologies". For example, in May, the Educational and Research Institute of Energy Saving and Energy Management Igor Sikorsky Kyiv Polytechnic Institute hosts an annual scientific conference of young specialists on advanced developments and new solutions "Energy. Ecology. Human", the permanent participants of the section "Sustainable development of energy. Modern Electricity Supply Systems" and "Energy Management and Engineering" are students of different years of study under the study programme.</p> <p>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 (<a href="https://iff.kpi.ua/stuktura/tsentr-kolektyvnoho-korystuvannia-naukovym-obladnanniam">https://iff.kpi.ua/stuktura/tsentr-kolektyvnoho-korystuvannia-naukovym-obladnanniam</a>),</p> <p>To ensure scientific work of students, the following laboratories function: "Laboratory of electric energy consumers", "Laboratory of relay protection and automation", "Laboratory of power supply systems", "Laboratory of electrical devices", "Laboratory of measuring equipment and energy audit", "Laboratories of fundamentals of metrology and electrical measurements".</p>	Compliance



## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

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3.	<p>The research disposes of sufficient human resources in order to meet the proposed goals.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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 university for this educational program consists of 38 full-time employees mostly PhD or doctors in their domains.</p>	Compliance
<b>B.3.3 Performance and valorisation of research</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      The teachers of the program regularly publish the results of their research. 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>	Compliance
2.	<p>Every teacher has at least one annual publication or didactic or scientific achievement.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Annual publication is obligatory for the teachers which is taken into account when hiring and renewing contracts (<a href="https://osvita.kpi.ua/competition">https://osvita.kpi.ua/competition</a>). On average, each teacher has more than two publications per year.</p>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      Higher education students are widely involved in research, as the combination of training and research is one of the principles of the educational process under the study programme "Energy Management and Energy Efficient Technologies". For example, in May, the Educational and Research Institute of Energy Saving and Energy Management Igor Sikorsky Kyiv Polytechnic Institute hosts an annual scientific conference of young specialists on advanced developments and new solutions "Energy. Ecology. Human", the permanent participants of the section "Sustainable development of energy. Modern Electricity Supply Systems" and "Energy Management and Engineering" are students of different years of study under the study programme.                      Anastasiia Yevdokimova, a student of ON-01 group, took part in the conference "Science and Technology of the XXI century" with a report as part of her work in the group "Smart Grid systems with sources of distributed generation", and Yuliia Onishchenko, a student of ON-91, participated in the workshop "Implementation of green and digital technologies in the international educational environment". Students annually participate in the conference "International Scientific, Technical and Educational Conference "Problems of Energy Management System".</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
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	<p>Students conduct their own research, including as part of their bachelor's degree projects. They present their findings at international scientific conferences, publish in professional journals, and even co-author textbooks. This engagement in research and academic publishing enhances their expertise and prepares them for future professional or academic careers. For example, publications with the participation of 4th year students:</p> <p>1. Практичний посібник з енергетичного аудиту промислових підприємств / А. Чернявський, А. Сафьянц, Н. Усенко, О. Соловей, О. Бориченко, П. Пертко, Ю. Шишко, А. Гоєнко// За загальною редакцією Н. Усенко та А. Чернявського. – К.: Проект «Консультування підприємств щодо енергоефективності» Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the Federal Ministry for Economic Cooperation and Development of Germany (BMZ), 2020. – 280 с.</p> <p>2. Дерев'янюк Д.Г., Колодяжна А.О., Ницун Ю.Г. Особливості визначення економічних показників доцільності впровадження заходів з підвищення енергетичної ефективності. Енергетика: економіка, технології, екологія. 2021. № 2. С. 83–90.</p> <p>3. Веремійчук Ю.А., Пригоцький В.В. Дослідження графіків електричних навантажень груп споживачів в умовах функціонування ринку електричної енергії. VII Міжнародна науково-технічна та навчально-методична конференція. "Енергетичний менеджмент: стан та перспективи розвитку". Київ 9-11 березня 2021 р. С 42-44.</p> <p><b>Recommendations:</b></p>	
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The department organizes annual scientific conference of young specialists on advanced developments and new solutions "Energy. Ecology. Human" (<a href="https://en.iee.kpi.ua/">https://en.iee.kpi.ua/</a>); international conference "PROBLEMS OF ENERGY MANAGEMENT SYSTEM – PEMS" (pems.kpi.ua); International Conference on Energy Smart Systems (ESS) (<a href="https://ess.ieee.org.ua/">https://ess.ieee.org.ua/</a>); Postgraduate readings named after Professor Artur Veniaminovich Prakhovnik and Scientific and technical conference of IEE undergraduates (based on the results of dissertation research of undergraduates (<a href="https://iee.kpi.ua/en/conferences/">https://iee.kpi.ua/en/conferences/</a>))</p>	Compliance
5.	<p><i>Other requirements provided in the standards specific to the Bachelor's field/ study program.</i></p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>Not applicable</p>	Not applicable
<b>C. QUALITY MANAGEMENT</b>		
<b>C.1 Quality assurance strategies and procedures</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The university utilizes an interactive electronic platform known as the "Electronic Campus". This system tracks and analyzes students' performance in various areas, including:</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

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

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	<ul style="list-style-type: none"> <li>● Ongoing assessment of current learning outcomes</li> <li>● Mid-semester evaluations conducted twice per term</li> <li>● Semester academic results</li> <li>● Academic performance from previous years</li> <li>● Student dropout rates</li> <li>● Accumulated credits earned during studies</li> <li>● Eligibility for advancement to the next course</li> <li>● Time to graduation.</li> </ul> <p>Analysis of the results of each type of control is discussed at the department, faculty and university levels. The monitoring results confirm the effectiveness of the educational process. The university-wide quality assurance system encompasses all study programmes. Both the administration and faculty regularly monitor the quality of the educational process and conduct annual reviews of study programmes and syllabuses. These practices are governed by the Regulation on the Organization of the Educational Process and the Regulation on the Development, Approval, Monitoring, and Revision of Study programmes. The university houses the Center for Innovative Monitoring of Education Quality, which operates in alignment with the provisions set by the National Agency for the Quality of Higher Education. Additionally, the university has a department dedicated to the verification and control of study programmes, functioning on an integrated basis, along with relevant methodological units within each faculty. At the department level, which oversees training, there is also a commission (as a part of study programme support group) responsible for the evaluation and quality assurance of the study programme.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>A study programme support group is continuously active within the department. This group monitors student appeals, collaborates with stakeholders, and oversees academic results. The support group presents its recommendations during department meetings, where they are discussed. If the proposals are approved, the necessary changes are incorporated into the study programme during its update. The schedule for updating study programmes is governed by a specific provision that coordinates the application process.</p> <p>There is a system and schedule for checking the quality of education (Protocol No. 5 dated September 10, 2022). The department regularly analyzes the results of the current control (2 times per semester). Students with low current indicators are identified, the reasons for slow learning are studied, and options for improving the quality of education are offered. For example, in connection with the martial law, there is an irregular work of students. Additional lectures and consultations, an extended list of tasks for independent work are organized for them.</p> <p>At the end of each session, the department reviews the results and adjusts the syllabuses of courses and the topics of individual assignments as needed. Following the defence of diploma projects, the department analyzes the outcomes and collaborates with stakeholders to develop strategies for improving the quality of education and refining project topics. Additionally, the department conducts an annual review of teacher ratings, their professional development, and the appropriateness of their appointments.</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

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	<p><b>Recommendations:</b> Consider the formalization of the selection process and the requirements that must be fulfilled by personnel who want to be in this department.</p>	
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><b>Findings from the Self-Evaluation Report/ Visit:</b> An annual report regarding the modality of complying with the provisions of the programme of quality policies is prepared and presented.</p> <p><b>Recommendations:</b> Publish the report on the faculty website, of quality policies and to the positive and negative aspects of the internal quality assurance, in order to ensure transparency.</p>	Partial 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><b>Findings from the Self-Evaluation Report/ Visit:</b> 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 Methodical Council of Igor Sikorsky KPI, protocol No. 7 dated 09.05.2024. 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 Kyiv Polytechnic Institute.</p>	Compliance
<b>C.2 Procedures regarding the initiation, monitoring and periodic review of study programmes</b>		
1.	<p>A regulation regarding the initiation, approval, monitoring and periodic review of the study programmes exists, and it is applied.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b> The university has developed and applies regulations on the initiation, approval, monitoring and periodic review of study programmes. The university conducts a comprehensive assessment of study programmes once a year. The educational and methodological commission of the university is responsible for checking the content of study programmes and the disciplines included in them, thereby preventing their overlapping and ensuring the harmonization of the content of the disciplines. Methodical control over the content of educational disciplines at the level of faculties and graduating department has been also implemented:</p> <ul style="list-style-type: none"> <li>• Regulations on the organization of the educational process at Igor Sikorsky Kyiv Polytechnic Institute;</li> <li>• Regulations on the development, approval, monitoring and revision of study programmes at Igor Sikorsky Kyiv Polytechnic Institute;</li> <li>• The procedure for creating and approving work programs (syllabuses) of educational disciplines (educational components) in Igor Sikorsky Kyiv Polytechnic Institute.</li> </ul> <p>Every year, the study programme is revised by the working group, the department and the methodical commission. The working group includes teachers, representatives of students and stakeholders (in particular, 3 candidates of science, a student, an employer -certified specialist in energy audit and energy management of the international level). Based on the results of meetings of the working group with employers, the interest of</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

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	employers in using specific Energy Management&Audit Software tools (RETScreen, Energy Footprint, Energy Performance Indicator (EnPI), Plant Energy Profiler, Edge etc.) was revealed.	
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><b>Findings from the Self-Evaluation Report/ Visit:</b> According to the Self-Evaluation Report, the study program is reviewed once a year taking into account the survey of students and graduates, as well as within the framework of discussions of this study programme with stakeholders and employers.</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><b>Findings from the Self-Evaluation Report/ Visit:</b> According to the self-assessment report, the Study 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. 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>	Compliance
4.	<p>An annual study programme internal evaluation report is prepared, and it includes proposals to improve the quality of the education.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b> 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, university conducts an internal self-analysis of all study programmes each year. The results are reviewed by the university's methodological commission and subsequently approved by the Academic Council. For example, the system and schedule of conducting self-analysis according to study programmes and the procedure and indicators of self-evaluation were recently approved and discussed on the departments meeting (Protocol No. 6 dated October 18, 2023). The self-analysis considers a range of indicators, including the educational process, teaching staff, material resources, scientific research, methodological work, organizational aspects, financing, publications, and engagement with stakeholders. To assess the adequacy of the study programme in meeting labor market needs, the university conducts meetings and surveys involving students, employers, representatives from the academic sector, and industry professionals. Additionally, the department's website serves as a valuable resource for collecting feedback. It allows individuals to submit suggestions and comments directly through the website page.</p>	Compliance
<b>C.3 Objective and transparent procedures for the evaluation of the learning outcomes</b>		
1.	<p>The higher education institution has a regulation regarding the examination and grading students, which is rigorously and consistently applied.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

	Domains, criteria, standards, performance indicators Findings and recommendations	Degree of compliance <sup>1</sup>
	<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>	
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><b>Findings from the Self-Evaluation Report/ Visit:</b>            University has a regulation approved by the Scientific Council on the system of evaluation of study results and its application. This system is a methodical basis for the development of rating systems of evaluation for each discipline and credit module, and evaluation of individual components (individual tasks, laboratory works, seminars, etc.). Some credit modules have a special structure, which is reflected in the evaluation system, for example, the credit module of the pre-diploma practice. For such credit modules, there is additional study guide at the department level. This study guide takes into account the peculiarities of the study programme and the specialty.            The assessment of the knowledge of the applicants is carried out in accordance with the Regulations on the system of evaluation of learning results at Igor Sikorsky Kyiv Polytechnic Institute for all types of classes and extracurricular work (current, calendar, semester control); oral and written exams, tests, practice reports, defence of a bachelor's project.            Typically, exams or tests are administered by the lecturer and the teacher responsible for conducting practical or laboratory classes. The assessment methods and criteria specified in the syllabuses are tailored to the content and focus of each discipline. All exam tasks are designed to be comprehensive and include theoretical and practical questions, along with an individual practical task. The number of tasks exceeds the number of students in the group to ensure fairness and variety. Additionally, extra points are awarded for creative and exceptional performance on calculation assignments.            Students are evaluated according to the rating system, which is mandatory in every syllabus. The structure and content of the syllabuses are regulated by the relevant provision.</p>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b>            The lecturer presents the rating system to the students in the first lesson and provides answers and comments to the students' questions throughout the semester. Re-examination of the assessment system together with students is conducted before the session. The syllabus with the evaluation system is available on information resources: on the "Electronic Campus", on the website of the department. The student has access to the results of current monitoring of each discipline on the "Electronic Campus", which supports the rhythm of learning.</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	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.	
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      According to the document Syllabuses of the disciplines of the educational and professional bachelor's program "Energy Management and Energy Efficient Technologies", the evaluation methods and criteria included contain detailed information on the evaluation of the students in different types of activity.</p>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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>	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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      The document Syllabuses of the disciplines of the educational and professional bachelor's program "Energy Management and Energy Efficient Technologies" 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>	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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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>.                      If students disagree with a grade, they can follow the official procedure for challenging it and resolving appeals. A special commission to address conflicts is formed at the level of the Educational and Research Institute and, if necessary, at the university level. The commission typically includes specialized discipline teachers, the head of the department, and students, provided they consent. The total number of commission members does not exceed five people, and the response period is limited to five days.                      Students can submit an appeal regarding a grade from one credit module only once. The regulations also outline provisions for re-examinations and postponed exams for valid reasons, governed by the evaluation system guidelines and the Regulations on semester control, organization and defence of qualifying papers, and attestation exams in distance mode.</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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" (<a href="https://kpi.ua/document_control">https://kpi.ua/document_control</a>). 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>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      All student diploma theses were checked for plagiarism by the Unicheck programme, until 2024: <a href="https://unicheck.com/uk-ua">https://unicheck.com/uk-ua</a>. Starting with next year, plagiarism checks will be carried out in the StrikePlagiarism system: <a href="https://panel.strikeplagiarism.com">https://panel.strikeplagiarism.com</a>. 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 StrikePlagiarism system for verification, which generates a similarity report.</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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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>	Compliance
<b>C.4 Procedures of regular quality assessment of the academic staff ESG 1.5</b>		
1.	<p>The peer-review is organised on regular basis, being based on general criteria and clear and public procedures.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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» (<a href="https://osvita.kpi.ua/sites/default/files/downloads/REGULATIONS%20_Eng.pdf">https://osvita.kpi.ua/sites/default/files/downloads/REGULATIONS%20_Eng.pdf</a>).</p>	Compliance



## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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><b>Recommendations:</b>                      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>	Partial Compliance
3.	<p>The academic staff carries out self-evaluation and he/she is also evaluated by the head of the department.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b>                      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>	Compliance
<b>C.5 Accessibility of the adequate learning resources</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b>                      In Igor Sikorsky Kyiv Polytechnic Institute students of the budgetary form of education have the opportunity to receive scholarships of three types: academic, social, and personal. Academic scholarships are awarded to students for academic success on the basis of a performance rating. Students of the first year of study receive an academic scholarship based on the entrance competitive score before the first semester control. The accrual of the academic scholarship is reviewed after each session.                      Social scholarships are awarded to eligible students on the basis of laws establishing state benefits and guarantees for awarding social scholarships to certain categories of students. The right to receive a social scholarship is available to students who study full-time under the state order and who are not on academic leave.                      Personal scholarships are awarded to outstanding students who have excelled the most in academic and scientific work, and also study on a budget. Candidates for their receipt are determined by the scholarship commission of the university, which carries out its work on the basis of the Regulation on the organization of the work of scholarship commissions of Igor Sikorsky Kyiv Polytechnic Institute and approved by the Scientific Council of Igor Sikorsky Kyiv Polytechnic Institute.                      Students with outstanding results are rewarded with the following scholarships: academic scholarship of the President of Ukraine, the</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

	Domains, criteria, standards, performance indicators Findings and recommendations	Degree of compliance <sup>1</sup>
	In terms of recovery programmes for the students with learning difficulties, the university only offers the right to take a break from studies.	
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The document Regulation on academic mobility at National technical university of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute” (<a href="https://osvita.kpi.ua/sites/default/files/downloads/Regulation_acad_mobility.pdf">https://osvita.kpi.ua/sites/default/files/downloads/Regulation_acad_mobility.pdf</a>) 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.</p> <p>A student of the group ON-p01 Reznichenko Danila, who studied under the study programme "Energy Management and Energy Efficient Technologies" within the framework of international academic mobility, was sent to Aalto University School of Science (Espoo, Finland), from 01.09.2022 to 11.06.2023 to study under the programme of support for Ukrainian higher education students during the period of wartime legal regime. Documents issued for the implementation of the applicant's academic mobility: order of Igor Sikorsky Kyiv Polytechnic Institute on sending for study dated 29.08.2022 No. 2105-s. Student of group ON-91 Yelyzaveta Tupotina, within the framework of international academic mobility, was sent to the University of Ecology and Management (Warsaw, Republic of Poland), from 20.02.2023 to 19.07.2023 to study under the European academic mobility programme Erasmus+. Upon completion of the academic mobility period, the applicants provided an academic transcript issued by Aalto University School of Science and University of Ecology and Management, respectively, with a list of courses taken and final grades, as well as prepared a written report on the results of participation in the programmes. Based on the submitted documents and the Regulations on Academic Mobility of Igor Sikorsky Kyiv Polytechnic Institute, the results of the study were recognised under the academic mobility programme.</p>	Compliance
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>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 (<a href="https://kpi.ua/en/web-studmisto">https://kpi.ua/en/web-studmisto</a>).</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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The study programme provides relevant support to student for the learning process.</p> <p>Students are offered support at the appropriate and relevant levels of the University's functioning throughout all stages of the educational process in the study programme.</p> <p>Igor Sikorsky Kyiv Polytechnic Institute provides comprehensive support, including educational, organizational, informational, advisory, and social assistance, in accordance with the Regulations on the Organization of the Educational Process at Igor Sikorsky Kyiv Polytechnic Institute. This</p>	Compliance

**REPORT OF THE ARACIS COUNCIL**

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

<b>Domains, criteria, standards, performance indicators</b>		<b>Degree of compliance<sup>1</sup></b>
<b>Findings and recommendations</b>		
	<p>support is continually refined based on the results of regular surveys conducted by the Educational and Scientific Center of Applied Sociology “SocioPlus”.</p> <p>The curator's role involves organizing and managing the system of relationships with the students assigned to them; conducting various activities, including educational, organizational, advisory, and extracurricular activities; ensuring the smooth operation of the educational process by organizing and controlling students' academic progress; supporting students in their educational journey and guiding their extracurricular and developmental activities. The list of academic group curators can be found on the Power Supply Department website. The responsibilities and rights of the curator are clearly outlined in the Regulations on the Curator at Igor Sikorsky Kyiv Polytechnic Institute.</p> <p>Tutoring assistance and involvement of students in solving issues of the University's functioning throughout the entire period of study are provided by representatives of the University's student government.</p> <p>Students have the opportunity to receive consultations and services on specialized issues in the relevant structural units of the University, namely the Department for Student Affairs, the Student Trade Union, the Military Mobilization Department, the Student Sector of the Human Resources Department, the Academic Mobility Office, International Collaboration Department, the Department of Economics and Finance, and others. The procedure and schedules for admission of students by the University's structural subdivisions are posted on the websites of the structural subdivisions.</p> <p>Students can receive career counselling at the Department of Professional Guidance - Career Development Centre.</p> <p>The Career Centre organizes various seminars, master classes, and workshops on special, important employment issues.</p> <p>To provide students with a broader view of career opportunities, the Power Supply Department organizes 3-4 excursions during the academic year to the facilities of successful energy companies in Ukraine. For example, in the spring of 2024, students had the opportunity to visit the photovoltaic plant of Skatek Solar Solutions Ukraine LLC, to visit the academy at the headquarters of HERZ Ukraine in Kyiv; in the fall of 2023, students visited the electrical substation of "DTEK Kyiv Electric Networks".</p>	
<b>5.</b>	<p>There are sufficient personnel with adequate training to provide support services to students.</p> <p><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>According to the Self-Evaluation Report, each laboratory of the department is assigned a scientific supervisor from the list of research and teaching staff, who manages the planning of staffing and development of the relevant laboratory and provides the laboratory with methodological and didactic materials. As a rule, the head of the laboratory is the leading teacher of the disciplines provided by this laboratory. The auxiliary staff of the department ensures the operability of the laboratory equipment, adjusts its operation, ensures the cleanliness and tidiness of the equipment, performs routine maintenance of the laboratory teaching materials, ensures the safety of portable laboratory equipment, and performs other work to ensure the operation of the laboratory, according to their job descriptions.</p> <p>Individual counselling of students by the department's teachers is carried out in the teaching departments - 111a, 204, 211a, 306. Group consultations are scheduled after classes and are held in subject classrooms, course and diploma design offices, or laboratories as needed.</p> <p>The university has the Scientific and Technical Library of the Igor Sikorsky Kyiv Polytechnic Institute, which provides access to international databases of publications and an electronic archive of educational materials. The library has reading rooms for self-dependent work of students, as well as a smart shelter - an underground room equipped with a backup power source (diesel generator), separate access to the Internet, which operates in conditions of a power outage, separate work areas, both open and separate.</p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
 Faculty of Educational and Research Institute of Energy Saving and Energy Management  
 National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	<p>In general, the educational environment created at the university meets the needs and interests of higher education students due to the constant interaction of students with the management, which allows for changes aimed at improving learning conditions. An important role in creating an educational environment is played by the Student Council, which operates at Igor Sikorsky Kyiv Polytechnic Institute. As part of the educational process, classrooms, laboratories and computer labs are equipped, and there is free access to the Internet. I</p> <p>Curators of academic groups ensure that students are promptly familiarized with the relevant documents, and safety briefings are conducted as part of this process. The Development Strategy of Igor Sikorsky Kyiv Polytechnic Institute for 2020-2025 includes initiatives to enhance the safety of the educational environment.</p> <p>For medical care, the university provides access to a polyclinic and a preventive clinic, as well as a psychologist's office for mental health support. Students are encouraged to participate in clubs and activities that promote their psycho-emotional well-being.</p> <p>Additionally, the university offers a student art space called "Vezha" and facilities at the Centre for Physical Education and Sports, which include gyms and a swimming pool. For recreation, there are four available recreation centres.</p>	
<b>C.6 Information management</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p> <p>The university implements an interactive system called "Electronic Campus," which includes the electronic dean's office. This system facilitates the collection, processing, and analysis of data across all areas essential for the effective organization and operation of study programmes and related activities. It encompasses study programmes, electronic schedules, session timetables, individual plans, rating results, survey outcomes, ongoing assessment results, semester examination results, and methodological materials for courses, among other resources. All users can access the rating system for evaluation through their electronic accounts.</p> <p>This comprehensive system management of all educational process components, aligned with the curriculum, ensures the achievement of programme learning outcomes. The effectiveness of this approach is demonstrated by the consistently high demand for graduates, the university's strong ranking, and the high standing of the department. As a result, over 85% of graduates enroll in master's programs annually, with 3-4 continuing their studies at the doctoral level.</p> <p>In 2023, the university introduced the information system "MyKPI", which supports the design of the educational process from the creation of study programmes to the generation of individual student plans. Also, the organization of students' choice of disciplines is carried out at the beginning of each academic year through the information system "MyKPI".</p> <p><b>Recommendations:</b></p> <p>Review once a year the Electronic Campus in terms of new features that will enable students to find more valuable information.</p>	Compliance
<b>C.7 Transparency of the information of public interest with regard to the study programmes</b>		
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><b>Findings from the Self-Evaluation Report/ Visit:</b></p>	Compliance

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**  
Faculty of Educational and Research Institute of Energy Saving and Energy Management  
National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

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Domains, criteria, standards, performance indicators Findings and recommendations		Degree of compliance <sup>1</sup>
	According to the Self-Evaluation Report, the official website of department of Power supply is <a href="https://ep.kpi.ua">https://ep.kpi.ua</a> 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.	
2.	The graduates receive, free of charge, the Diploma Supplement, which contains all the information provided by the regulations in force. <b>Findings from the Self-Evaluation Report/ Visit:</b> According to the Self-Evaluation Report, pages 33-35, 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.	Compliance
<b>C.8 Quality assurance by periodic external review</b>		
1.	The higher education institution complies with the legal provisions regarding the external cyclical review of the evaluated study programme. <b>Findings from the Self-Evaluation Report/ Visit:</b> According to the Self-Evaluation Report, page 3, the higher education institution complies with the legal provisions regarding the external cyclical review of the evaluated study programme. The programme Energy Management and Energy Efficient Technologies was accredited by the National Agency for Quality Assurance of Higher Education in 2023, the certificate is valid until 01.07.2028.	Compliance

Other observations/findings:

The evaluation of the bachelor study programme **Energy Management and Energy Efficient Technologies (EMEET)**, at the National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute» (KPI) was organized in blended format, according to the ARACIS methodology, in January 22 and 24, 2025.

Recommendations of the external evaluation committee:

- Consider to set-up an official board (teachers, stakeholders, partners) to participate to the improvement of the educational programme, meeting minimum once a year, with an official report.
- Consider establishing more systematic and procedural approach to the consultation of the stakeholders and the analysis and use of their feedback, including the documentation of the proceedings/consultations.

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management

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

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- Enhance interaction between students/graduates and leadership/teaching staff in this area by conducting this interaction in a more official way. For example, by creating a round table/discussion panel for these categories with results of this discussion and actions taken being listed on-line for public review (not just publishing the offer, but also a reaction and implementation of given offer)
- Consider adopting an institutional strategy for the transition towards the full digital books and educational materials.
- Ensuring the appropriate coverage of the topics in the curriculum and syllabuses with recent bibliographic.
- Consider increasing the number of exams in the educational programme, in order to reach at least 50% (in order to be in accordance with the ARACIS methodology).
- Consider the introduction in the curriculum of practice / internship in enterprise, for a total of at least 6 weeks (with 30 hours/week workload).
- Consider developing more effective procedures for monitoring the employment.
- Publish the report on the faculty website, of quality policies and to the positive and negative aspects of the internal quality assurance, 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.
- 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
- 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.
- Consider adding to the curricula of free elective disciplines (with extra credits to the 30 compulsories of the semester);
- Publish the English version of the syllabuses for all the components of practice.
- Consider publishing the list of the companies that are ready to host the students for the practice with contact details (with the consent of the companies);
- Consider providing information on research activities (on web site), both in Ukrainian and English languages.
- Consider increasing the visibility of the published research (higher ranked journals and conferences);
- Ensuring the translation of all public interests' content in English language.

## ► 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*** and ***awarding*** EUR-ACE certification of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**, for the form of education full-time, with **240** of credits and tuition capacity in the first year of studies of **45** students, according to the Extract from the minutes, the Evaluation Report of the Commission and the Evaluation Sheets, registered at ARACIS with no. 478 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 **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES** **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** and ***awarding*** EUR-ACE label undergraduate study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**;
- ⇒ Bachelor field – **141 Electrical Energetics, Electrical Engineering and Electromechanics / G3 Electrical Engineering**;
- ⇒ from the Faculty of **Educational and Research Institute of Energy Saving and Energy Management**;
- ⇒ **National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“**;

## REPORT OF THE ARACIS COUNCIL

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management  
National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

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- ⇒ form of education – full-time;
- ⇒ number of credits – **240**;
- ⇒ tuition capacity in the first year of study of **45** 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 SEGHEIN  
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 for the attention of the National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“.*

Bucharest, February, 2025  
UA01/ 478 MA

NCM/CM



**REPORT OF THE ARACIS COUNCIL**

regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**

Faculty of Educational and Research Institute of Energy Saving and Energy Management  
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 and English)	National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"
2.	The field of undergraduate university studies of the evaluated programme (name in Romanian and in English)	Bachelor's degree field: 141 Electrical Energetics, Electrical Engineering and Electromechanics / G3 Electrical Engineering
3.	Bachelor's degree programme (title in Romanian and English)	Energy Management and Energy Efficient Technologies (EMEET)
4.	The number of enrolled students per year of study	1 year: 44 2 year: 18 3 year: 20 4 year: 24
5.	The number of teaching staff teaching at the programme, of which holders	38
6.	Diploma issued	Bachelor diploma
7.	Qualification level according to CNC	NQF of Ukraine - 6 level QF-EHEA – 1 cycle EQF-LLL – 6 level
8.	Duration of schooling (expressed in number of semesters)	8
9.	Total number of ECTS credits	240 credits ECTS
10.	Targeted qualifications/occupations	According to the classifier of professions ДК003: 2010 (with amendments by the Ministry of Economy of Ukraine No. 1410 dated 16.01.2024) graduates can perform the following types of professional work: 3113 Specialist in the operation of power stations, power plants and networks

**REPORT OF THE ARACIS COUNCIL**regarding the periodic evaluation of the bachelor's study programme **ENERGY MANAGEMENT AND ENERGY EFFICIENT TECHNOLOGIES**Faculty of Educational and Research Institute of Energy Saving and Energy Management  
National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute“

No. crt.	Naming of the indicators	Remarks
		3113 Specialist in energy management 3113 Energy engineer 3111 Specialist in energy saving management in buildings 3111 Specialist in non-traditional types of energy
11.	The approval given to the evaluated study programme	-
12.	Date of last ARACIS assessment	-
13.	ARACIS commission of expert evaluators:	1. Prof. Dr. Eng. HORGOS Mircea, 2. Prof. Dr. Eng. FLORICAU Dan, 3. Employer representative. - RADU Alexandru, NAQA 1. Prof. SHRAM Oleksandr, 2. Stud. YERII Andrii,
14.	Evaluation visit period	22-24.01.2025