STUDIJŲ KOKYBĖS VERTINIMO CENTRAS
CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

ELECTRONICS ENGINEERING FIELD OF STUDY

Vilniaus kolegija | Higher education institution

EXTERNAL EVALUATION REPORT

EExpert panel:

1. Panel chair: dr. Dmitrijs Pikulins …….. (signature)
2. Academic member: dr. Mário Pereira Véstias
3. Academic member: dr. Tamás Pardy
4. Social partner representative: dr. Donatas Pelenis
5. Student representative: Mindaugas Paškauskas

SKVC coordinator: Radvilė Blažaitytė

Report prepared in 2025
Report language: English

CONTENTS

I. INTRODUCTION

1.1. OUTLINE OF THE EVALUATION PROCESS

The field of study evaluations in Lithuanian higher education institutions (HEIs) are based on the following:

- Procedure for the External Evaluation and Accreditation of Studies, Evaluation Areas and Indicators, approved by the Minister of Education, Science, and Sport;
- Methodology of External Evaluation of Study Fields approved by the Director of the Centre for Quality Assessment in Higher Education (SKVC);
- Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

The evaluation is intended to support HEIs in continuous enhancement of their study process and to inform the public about the quality of programmes within the field of study.

The object of the evaluation is all programmes within a specific field of study. A separate assessment is given for each study cycle.

The evaluation process consists of the following main steps: 1) Self-evaluation and production of a self-evaluation report (SER) prepared by an HEI; 2) A site visit by the review panel to the HEI; 3) The external evaluation report (EER) production by the review panel; 4) EER review by the HEI; 5) EER review by the Study Evaluation Committee; 6) Accreditation decision taken by SKVC; 7) Appeal procedure (if initiated by the HEI); 8) Follow-up activities, which include the production of a Progress Report on Recommendations Implementation by the HEI.

The main outcome of the evaluation process is the EER prepared by the review panel. The HEI is forwarded the draft EER for feedback on any factual mistakes. The draft report is then subject to approval by the external Study Evaluation Committee, operating under SKVC. Once approved, the EER serves as the basis for an accreditation decision. If an HEI disagrees with the outcome of the evaluation, it can file an appeal.On the basis of the approved EER, SKVC takes one of the following accreditation decisions:

- **Accreditation granted for 7 years** if all evaluation areas are evaluated as exceptional (5 points), very good (4 points), or good (3 points).
- **Accreditation granted for 3 years** if at least one evaluation area is evaluated as satisfactory (2 points).
- **Not accredited** if at least one evaluation area is evaluated as unsatisfactory (1 point).

If the field of study and cycle were **previously accredited for 3 years**, the re-evaluation of the field of study and cycle is initiated no earlier than after 2 years. After the re-evaluation of the field of study and cycle, SKVC takes one of the following decisions regarding the accreditation of the field of study and cycle:

- To be accredited for the remaining term until the next evaluation of the field of study and cycle, but no longer than 4 years, if all evaluation areas are evaluated as exceptional (5 points), very good (4 points) or good (3 points).
- To not be accredited, if at least one evaluation area is evaluated as satisfactory (2 points) or unsatisfactory (1 point).

1.2. REVIEW PANEL

The review panel was appointed in accordance with the Reviewer Selection Procedure as approved by the Director of SKVC.

The composition of the review panel was as follows:

1. Panel chair: dr. Dmitrijs Pikulins;
2. Academic member: dr. Mário Pereira Véstias;
3. Academic member: dr. Tamás Pardy;
4. Social partner representative: dr. Donatas Pelenis;
5. Student representative: Mindaugas Paškauskas.

1.3. SITE VISIT

The site visit was organized on 24 April 2025 onsite.

Meetings with the following members of the staff and stakeholders took place during the site visit:

- Senior management and administrative staff of the Faculty (ies);
- Team responsible for preparation of the SER;
- Teaching staff;
- Students;
- Alumni and social stakeholders including employers.

There was a need for translation during the meeting with Senior management and administrative staff of the faculty(ies); Team responsible for preparation of the SER; Teaching staff; Alumni and social stakeholders including employers.

1.4. BACKGROUND OF THE REVIEW

Overview of the HEI

Vilniaus kolegija / University of Applied Sciences (VIKO) is a state-funded higher education institution in Lithuania, established in 2000 through the merger of several specialized colleges. It is the largest university of applied sciences in the country, offering professionally oriented first-cycle (college-level) studies. The institution comprises seven faculties: Electronics and Informatics, Economics, Business Management, Health Care, Pedagogy, Agrotechnologies, and Arts and Creative Technologies. As of October 2023, VIKO offers 40 study programmes across 27 study fields, serving over 5,400 students, and is known for its strong links to industry and applied research activities.

Overview of the study field

The Electronics Engineering study field at VIKO has expanded significantly in scope and institutional integration. Originally implemented at the Faculty of Electronics and Informatics with two professional bachelor study programmes — Electronics Engineering (with specializations in Electronic Systems and Mechatronic Systems) and Computer Engineering — the field was further strengthened by the 2023 merger with Vilnius College of Technology and Design (VTDK). This merger introduced a third programme, Automotive Electronics Systems, into the study field.

All three programmes are first-cycle (professional bachelor) studies aligned with Level 6 of the Lithuanian Qualifications Framework (LTQF) and structured to meet labour market demands. The Electronics Engineering programme was substantially renewed in 2016 and awarded the Investors' Spotlight label in 2020, recognizing its alignment with the needs of foreign investors. The newly added Automotive Electronics Systems programme — one of the most popular at the former VTDK — emphasizes transport sector applications and integrates updated topics such as autonomous vehicles, drone technologies, and AI.

The Faculty maintains close links with industry, participating in applied research and experimental development projects, collaborating on curriculum design, and participating in career days, where 80% of visiting companies represent the electronics sector. The HEI also fosters student involvement in research through scientific societies and integrates applied research activities into teaching staff workloads, strengthening the link between studies and professional practice.

Previous external evaluations

The most recent external evaluation of the study programmes in the Electronics Engineering field at Vilniaus kolegija was conducted in 2019 by the Centre for Quality Assessment in Higher Education. The Computer Engineering programme, newly established by merging the former Computer Systems and Telecommunication Systems programmes, was positively assessed and accredited for five years (Order No. SV6-27, 27 December 2019), with an overall score of 19 out of 24, including one evaluation area rated as very good and five as good.

Although the Electronics Engineering study programme was not re-evaluated then, it had undergone a substantial renewal in 2016 (Director's Order No. V-75 of 30 March 2016) to align with the growing demand for highly qualified professionals in the field. In recognition of its relevance and quality, the programme was awarded the Investors' Spotlight label in 2020.

Following the institutional merger, the Automotive Electronics Systems study programme from the former Vilnius College of Technology and Design was incorporated into the Electronics Engineering field. This programme was last evaluated in 2016, then under the broader Electronics and Electrical Engineering field, and was accredited for three years. After reclassifying study fields in 2017, it was assigned to the Electronics Engineering field. The programme has since undergone

substantial updates, including integrating modern subjects such as drone technologies, autonomous vehicles, and artificial intelligence systems. It is one of the most popular programmes in the college and has one of the highest numbers of enrolled students.

Documents and information used in the review

The following documents and/or information have been requested/provided by the HEI before or during the site visit:

- *2 Self-evaluation reports and their annexes:*
  - *Study plans*
  - *Number of students*
  - *Alignment with outcomes*
  - *Problem areas*
  - *Final project topics*
  - *Project list*
  - *Information about lecturers, their mobilities and improving competences*
  - *Course descriptions;*
- *Final theses (in Lithuanian).*

Additional sources of information used by the review panel:

The following additional sources of information have been used by the review panel:

Information provided by participants of the onsite visit to the VIKO.

II. STUDY PROGRAMMES IN THE FIELD

First cycle/LTQF 6

Title of the study programme	Electronics Engineering	Computer Engineering
State code	6531EX027	6531EX064
Type of study (college/university)	college	college
Mode of study (full time/part time) and nominal duration (in years)	Full-time studies (3,5)	Full-time studies (3,5)
Workload in ECTS	210	210
Award (degree and/or professional qualification)	Professional Bachelor of Electronic Engineering	Professional Bachelor of Computer Engineering
Language of instruction	Lithuanian	Lithuanian
Admission requirements	Secondary education	Secondary education
First registration date	04/07/2007	27/12/2019
Comments (including remarks on joint or interdisciplinary nature of the programme, mode of provision)		

Automotive electronics systems	Computer Systems	Telecommunication Systems
6531EX024	6531EX028	6531EX030
college	college	college
Full – time 3 years Part-time 4 years	Full-time studies (3,5)	Full-time studies (3,5)
180	210	210
Professional Bachelor of Engineering Sciences	Professional Bachelor of Engineering Sciences	Professional Bachelor of Engineering Sciences
Lithuanian	Lithuanian	Lithuanian
Secondary education	Secondary education	Secondary education
09.05.2012	30/12/2009	17/01/2008
	De-registered 26/02/2024	De-registered 26/02/2024

III. ASSESSMENT IN POINTS BY CYCLE AND EVALUATION AREAS

The **first cycle** of the Electronics Engineering field of study is given a **positive** evaluation.

No.	Evaluation Area	Evaluation points*
1.	Study aims, learning outcomes and curriculum	4
2.	Links between scientific (or artistic) research and higher education	4
3.	Student admission and support	4
4.	Teaching and learning, student assessment, and graduate employment	4
5.	Teaching staff	5
6.	Learning facilities and resources	5
7.	Quality assurance and public information	4
	Total:	30

*

1 (unsatisfactory) - the area does not meet the minimum requirements, there are substantial shortcomings that hinder the implementation of the programmes in the field.
2 (satisfactory) - the area meets the minimum requirements, but there are substantial shortcomings that need to be eliminated.
3 (good) - the area is being developed systematically, without any substantial shortcomings.
4 (very good) - the area is evaluated very well in the national context and internationally, without any shortcomings.
5 (exceptional) - the area is evaluated exceptionally well in the national context and internationally.

IV. STUDY FIELD ANALYSIS

AREA 1: STUDY AIMS, LEARNING OUTCOMES AND CURRICULUM

1.1.	Programmes are aligned with the country's economic and societal needs and the strategy of the HEI

FACTUAL SITUATION

1.1.1. Programme aims and learning outcomes are aligned with the needs of the society and/or the labour market

The aims and intended learning outcomes of the programmes in the field of Electronics Engineering at Vilniaus kolegija are generally well-aligned with the national qualification framework and professional standards, including roles such as electronics engineers, technologists, and mechatronics specialists. The programmes clearly reflect the institution's mission to prepare practice-oriented professionals capable of integrating into the labour market and contributing to regional development. Core outcomes such as system development and programming align with practical industry demands.

However, the link between these outcomes and evolving labour market trends could be more explicit. While the programmes reference collaboration with social partners, the documentation does not describe how employer feedback or labour market data (e.g., AI, IoT, Industry 4.0) have influenced updates to the programmes' aims. It is unclear how often or through what mechanisms this feedback is gathered, nor how it translates into adjustments of study content. The absence of a formal labour market analysis and limited evidence of stakeholder-driven revisions slightly reduces the transparency of the programmes' responsiveness to real-world changes.

It is commendable that the institution engages in applied research and maintains partnerships with other universities, such as VILNIUS TECH. Yet, more explicitly articulating how these collaborations have shaped the programme outcomes is needed. There is also potential to enhance the visibility of modern tools and platforms in the learning outcomes.

Develop a structured mechanism to analyze employer input regularly and reflect it in programme revisions. Document concrete examples of feedback integration and publish evidence of impact. This would reinforce programme relevance and meet stakeholder expectations.

Overall, the programmes' aims are directionally sound and adequately defined, but would benefit from a more systematic and evidence-based link to the changing labour market needs.

1.1.2. Programme aims and learning outcomes are aligned with the HEI's mission, goals, and strategy

The study programmes in Electronics Engineering, Computer Engineering and Automotive Electronics Systems align with HEI's mission to provide modern, practice-oriented, and socially responsive higher education. The programmes aim to prepare professionals capable of applying theoretical knowledge in practical contexts and responding to national and regional development needs. This corresponds well to the institutional strategy outlined in the SER and introductory documents.

The aims and learning outcomes are formulated with evident attention to the labour market. Specializations such as Mechatronic Systems and Robotics address current industry demand and are well aligned with professional standards and qualification requirements. The programmes' descriptions also reflect an ambition to support applied research and international cooperation, consistent with the broader goals of the HEI.

Nevertheless, while the formal alignment is well established, the documentation would benefit from a more explicit demonstration of how strategic priorities, such as digitalization, sustainability, or Industry 4.0, are reflected in actual course content and learning outcomes. There is strong cooperation with VILNIUS TECH and examples of joint research projects (Annex 6), yet the impact of these partnerships on curriculum renewal or student learning practices remains underexplained.

It would be valuable to provide case-based examples of how collaborations with businesses or scientific institutions have led to programme-level improvements to strengthen the strategic coherence further. Additionally, more explicit references to measurable outcomes (e.g., graduate tracking, partner satisfaction, or innovation adoption) would improve transparency and strengthen the credibility of strategic implementation.

Overall, the study programmes demonstrate a thoughtful and mission-aligned structure, and the HEI shows commitment to applied and responsive education. This area can be fully aligned with best practices with minor improvements in demonstrating how strategic themes are integrated and monitored in practice. The criterion is met at a high level.

ANALYSIS AND CONCLUSION (regarding 1.1.)

The Electronics Engineering study field at VIKO is clearly aligned with practical labour market needs and complies with national qualification and professional standards; however, there is a lack of systematic and documented linkage to emerging trends such as artificial intelligence, IoT, and Industry 4.0. While collaboration with social partners and VILNIUS TECH is evident, its direct impact on curriculum updates is not sufficiently demonstrated. It is recommended to establish a formal mechanism for collecting and integrating employer feedback, document concrete examples of how this input influences programme revisions, explicitly integrate strategic themes into learning outcomes, and implement key performance indicators (KPIs) to monitor the programme's relevance and responsiveness to labour market dynamics.

1.2.	Programmes comply with legal requirements, while curriculum design, curriculum, teaching/learning and assessment methods enable students to achieve study aims and learning outcomes

FACTUAL SITUATION

1.2.1. Programmes comply with legal requirements

Higher education college studies. First cycle - professional bachelor. Qualification level IV

	Requirement	EE	CE
Total credits	>= 180	210	210
Study field/year credits	>= 60	60	60
Study field credits	>= 120	159	150
Practical placements credits	>= 30	39	39
Final project credits	>= 9	15	15
Practical training hours	1/3	2028	2356
Contact hours	>= 20%	2990	3008
Independent work hours	>= 30%	2610	2592
Total hours	>= 4800	5600	5600

	Requirement	AES
Total credits	>= 180	180
Study field/year credits	>= 45	60
Study field credits	>= 120	135
Practical placements credits	>= 30	30
Final project credits	>= 9	12
Practical training hours	1/3	1736

Contact hours	>= 20%	2266
Independent work hours	>= 30%	2534
Total hours	>= 4800	4800

The study cycles Electronics Engineering (EE) and Computers Engineering (CE) are first cycle study programmes with 210 study credits (four year programme) working as a full-time plan only. The study cycle Automotive Electronics Systems (AES) is a first cycle study programme with 180 study credits. Both full and parti-time plans are available for this study cycle.

The study field credits per year are according to legal requirements for both full and part-time studies.

The total number of credits allocated to achieve the outcomes of the study cycles should be at least 120. The programmes under analysis have over 120 study credits.

The total number of study credits for the internship should be at least 30, which is the number of credits allocated in the programme. The number of credits for the final project should be at least 9 and 9 study credits were allocated for the internship.

Full-time studies shall have 60 study credits per year, but not less than 45 credits, and parti-time studies should be at least 45 credits. The proposed full-time programmes have 60 credits each year and the part-time plan of AES has 45 credits per year.

The amount of contact work in the first cycle of studies shall be at least 20 per cent, and the student's independent work shall be at least 30 per cent. All study cycles fullfil these requirements.

Practical training hours should be at least one third of the total number of study field credits. This is true for all study programmes and study plans.

The programmes comply with legal requirements.

1.2.2. Programme aims, learning outcomes, teaching/learning and assessment methods are aligned

The learning outcomes of a first study cycle must span five dimensions:

- Knowledge and its application;
- Research skills;
- Special abilities;
- Social abilities;
- Personal abilities.

The SER establishes a link between the learning outcomes of the study cycle and the learning outcomes of the programmes. The offered subjects span the whole set of study cycle outcomes in a balanced way.

Traditional methods are used for knowledge teaching. To improve social, personal and research abilities, presentations, work reviews and research activities are considered together with generic subjects. All subjects include lectures to transmit the fundamental knowledge to accomplish the practical works. The social and personal abilities are achieved through the general subjects and through the work in groups and public presentations and demonstrations present in the contents of the subjects.

Different assessment methods are adopted to verify whether students have acquired the intended learning outcomes. These include examination, project work, practice, laboratory work, and oral presentations. These methods are essential to assess whether the student obtains the study cycle's different outcomes. The study programs' aims, learning outcomes, and assessment methods are consistent with the type and level of studies.

Practice is a strong component of the Study Cycle and determines the ability of the students to acquire most of the learning outcomes. A well-established set of methodologies is necessary among the set of laboratory classes to guarantee a coordinated practice development among the laboratory classes, which is not evident in the contents of the subjects.

The Study Program aims and learning outcomes, and assessment methods are consistent with the type and level of studies.

1.2.3. Curriculum ensures consistent development of student competences

The study programs follow a traditional approach for the development of student competencies:
Year 1 – general knowledge, fundamentals of the main subjects. Two special subjects are also introduced in the first year to motivate students
Year 2 – intermediate knowledge of the main subjects and problem analysis. Some design.
Year 3/4 – Advanced knowledge and problem design. Final internship and final thesis on a topic of relevance to companies. In the final internship, students may continue a task that has started in their professional practice or choose another option.

The programmes include elective subjects in general education: philosophy, psychology, sociology, and English.

A table with interconnections between results of the study programme, subjects' study results, teaching methods and assessment methods is provided in the SER. From these, it can be concluded that the identified aims and learning outcomes are consistent with the type and level of the study cycle. From the subject contents it is possible to identify the interconnections between the curriculum and the required student competencies for the study cycle. It guarantees the necessary knowledge and practice relative to the study field and the necessary general and social competencies.

Stakeholders and Social partners are satisfied with the graduates, which indicates that students are acquiring the right competencies. Some students work in areas different from the central area of the study field. However, it was not possible to conclude that the competencies acquired by the students are broad enough to allow a broader approach to the labor market.

In general, students speak English and are easy to communicate with. The elective general subjects are essential and contribute to this outcome.

Students and employers have said the study cycle ensures the necessary learning outcomes. The contents of the study programs reflect recent technologies with well-equipped laboratories. The competencies promoted by the HEI focus on the labor market.

1.2.4. Opportunities for students to personalize curriculum according to their personal learning goals and intended learning outcomes are ensured

The study plans provide many ways to personalize the curriculum:

- Students can individualize their studies with an individual study plan. Choose from elective subjects, recognize competencies from formal and informal education, and studies from other programmes.
- Students have the possibility to choose from two specializations in Electronics Engineering and from three specializations in Computer Engineering. No specializations are defined for the study programme Automotive electronics systems.
- One elective in the fourth year (3 credits). Two electives (3 credits each) in the 5th and 6th semesters.
- One elective "Wellness and Physical Activity" (3 credits).
- The programmes include elective subjects on general education and in the study field education (3 credits).
- Choose final thesis topics.

An individual study plan fundamentally applies to elective credits, which limits the opportunities to personalize curriculum. How credits obtained from ERASMUS are credited in this context is not specified.

The electives in the specialization of the Study Cycle allow the student to specify a profile further. Electives in general subjects give them critical transversal skills.

1.2.5. Final theses (applied projects) comply with the requirements for the field and cycle

Final Projects (FP) are developed and defended under HEI's official procedures and departmental methodological guidelines (latest from 2023). FPs are completed during the 7th semester (for 10 weeks) and reflect specialization-specific skills and learning outcomes. FP must include problem analysis, source evaluation, engineering justification and economic impact. Students mainly choose the design-oriented topics, and some projects focus on system modernization and automation. Industrial partners' involvement varies yearly and spans from 3.7% to 25%, which is explained by the limited trust from the company representatives and high qualification requirements. The distribution of topics for the Final Thesis varies from year to year. However, there are some areas (ES-AMR) and (ES-AAR) where no thesis was developed during the evaluation period.

ANALYSIS AND CONCLUSION (regarding 1.2.)

The study programmes in the Electronics Engineering field at Vilniaus kolegija are clearly aligned with national qualification requirements and professional standards. The programmes are well formulated, with intended learning outcomes supporting the preparation of practice-oriented professionals capable of addressing labour market needs. While cooperation with social partners and institutions such as VILNIUS TECH is evident, the documentation would benefit from a more structured mechanism for regularly integrating employer feedback and labour market trends—particularly regarding emerging themes such as AI, IoT, and Industry 4.0—into programme development. This is not a shortcoming, but rather an opportunity for further improvement on the path toward excellence.

The aims and learning outcomes are consistent with the strategic goals of the HEI, which emphasize applied education responsive to regional and national development. There is a clear ambition to support sustainability and technological innovation, although the integration of these priorities into learning outcomes and curriculum design could be better demonstrated through concrete examples and performance indicators. Nevertheless, the alignment between institutional strategy and programme-level design is strong overall.

The programmes fully comply with legal requirements concerning credit structure, workload distribution, practical training, and final project expectations. Teaching, learning, and assessment methods are aligned with the intended outcomes and support the development of theoretical knowledge, research capabilities, and professional competences. .

Curriculum design ensures the progressive development of student competences across study years, with a logical sequence from foundational knowledge to specialized applications. Students are offered a reasonable degree of personalisation through elective subjects and final thesis options

The final theses (referred to as final projects- FP) in the field of Electronics Engineering comply with the requirements for the field and cycle as defined by the relevant Field Descriptors and professional bachelor level. These applied projects demonstrate students' ability to integrate theoretical and practical knowledge in solving engineering problems, aligned with the program's learning outcomes. Students must independently design, implement, test, and verify engineering systems or components using modern tools and methods.

The principles governing the final theses' preparation, supervision, and defence are clearly defined and publicly available within institutional documentation. Students begin thesis preparation during the final practice period, often working on topics proposed or commissioned by industrial partners, ensuring high relevance to industry needs.

A review of the list of final projects (Annex 5) confirms their applied nature, practical relevance, and consistency with field requirements. Many projects are based on real technical assignments from companies, further strengthening the link between studies and industrial needs.

The final theses fully meet the requirements for the professional bachelor's cycle and the field of Electronics Engineering, with well-defined preparation and defence procedures, strong industry collaboration, and precise alignment with the intended learning outcomes.

AREA 1: CONCLUSIONS

AREA 1	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle				x	

COMMENDATIONS

1. Multiple curriculum paths to personalize curriculum, with many available electives in general and specific subjects.
2. Foreign language and general education.
3. The programmes strongly align with national qualification standards and the institutional mission to prepare practice-oriented professionals, while maintaining active partnerships with academic and industry stakeholders.

RECOMMENDATIONS

To address shortcomings

N/A

For further improvement

1. Encourage students to develop Final Projects in collaboration e.g. with ERASMUS+ partner or other foreign institutions and/or companies. This would open broader perspectives for the students on the international market. This would also comply with the general strategic goal of the HEI- internationalization.
2. Signing a framework agreement with industrial partners for the annual Final Project topic provision would ensure deeper and more sustainable cooperation with labour market representatives.
3. While a professional bachelor's degree is enough to have an applied project, it is recommended that students be involved in research activities (preparing publications and participating in projects). This would also boost the academic dimension of the final thesis.
4. Enhance the visibility of strategic themes such as digitalization, sustainability, and Industry 4.0 in course content and learning outcomes, supported by measurable indicators such as graduate employment data and partner satisfaction.
5. Establish a formal and recurring mechanism for collecting, analyzing, and applying labour market and employer feedback to ensure the programmes remain responsive to evolving industry needs.
6. Adopt newer teaching methodologies that promote the attendance of lectures.

7. Allow recognition of other competencies, including competencies from ERASMUS program.

AREA 2: LINKS BETWEEN SCIENTIFIC (OR ARTISTIC) RESEARCH AND HIGHER EDUCATION

2.1.	Higher education integrates the latest developments in scientific (or artistic) research and technology and enables students to develop skills for scientific (or artistic) research

FACTUAL SITUATION

2.1.1. Research within the field of study is at a sufficient level

The analysis of the research activities is based on 2 SER. As their content and relevance to the field differ, the factual situation is provided separately, leading to a general summary.

SER:

- VIKO:
  - At the HEI, 14 scientific research groups exist in total, related to all 27 fields of study. Total number of publications (2023): 75. Out of this, EE programs' lecturers published 35. Focus areas included AI, image processing, automated control, distance learning. Publication activities should form 33% of associate professors', and 10% of the total workload of lecturers and assistants by HEI's regulations, which is reflected in workplans.
  - All faculties have student scientific societies, where students made 164 presentations in 2023. Targeted allowances support students' scientific activities (one-off payments for achievements).
  - HEI has a register of institutional research available on the website, which, at the time of writing, is not available via the link in the SER but in English from the homepage. Reported institutional research priorities align with EU strategic directions (sustainability, digitalization, AI etc.). This is reflected on research groups' level and in R&D projects (Annex 6).
  - The HEI attempts to educate staff on Horizon Europe projects, which is commendable.
  - From research funding provided by the state, 45% is dedicated to projects, 45% to professional development, consultancy and other educational activities.
- VTDK:
  - SER reports on applied scientific projects in the volume of 25000-33000 EUR annually in the evaluation period related to the study field (for the HEI in total, 100000-126000 EUR). In addition, state funding is 115 000-319 000 EUR. Both are increasing volumes annually, pointing to stable financing.
  - HEI set up a Scientific Foundation to encourage scientific work of teaching staff and students, including dissemination and conference participation. In the evaluation period, approx. 150 000 EUR were allocated for the HEI, 32000 EUR for the EE field.
  - Automotive electronics research focus areas include: electric motor control, piezoelectronic actuators, vehicle safety and dynamics, hybrid powertrains etc. Most topics are relevant to current automotive industrial trends of electromobility, including EVs and HEVs.
  - Out of 27 publications, 8 articles with impact factor rating (quartiles Q1-Q3) and 5 conference papers were published. Teaching staff also participated in conferences, including one organized by the HEI ("Technological Innovations"), as well as international conferences (e.g. "IEEE Open Conference on Electrical, Electronic and Information Sciences").
  - Future research directions include green energy and sustainable transport, aligning with EU strategy directions. This includes taking part in a WIDERA-ACCESS-07 proposal.

Site visit:

- Research time is granted to teaching staff (min. 10% for lecturers, min. 30% for assoc. professors). Teachers are motivated to do science to increase student engagement during labs.
- Funding is provided by the state, EU, legal entities. State funding depends on private-sector income and publishing. While funding is sustainable according to senior staff, it could be improved. Funding is ~1-1.5 MEUR/year, but in 2025, 3 MEUR will come for study program development.
- Scientific foundation has been a step forward (according to SER team), but researchers need more guarantees, as funding is variable per year. Manuscript numbers increased. The fund will be extended to the whole university.
- Scientific publishing is financially supported (with bonuses based on impact, activity and support for high-level publishing). Research activities are factored into teaching hours. Anti-plagiarism and ethics compliance policies & practices are in place (e.g. Turnitin for assignments), and the Ethics Committee verifies survey questions. Plagiarism risks expulsion in study programs (students confirmed).

2.1.2. Curriculum is linked to the latest developments in science, art, and technology

SER:

- VIKO:
  - Research focus areas were identified based on the latest research trends (ScienceDirect), and include EU strategic priorities (e.g. AI, IoT, digitalization topics). Image recognition, robotics and machine learning are emphasized (with C and Python programming languages taught, giving a balanced foundation).
  - Table 12 is evidence that these focus areas are reflected in the curriculum. Attention is given to interdisciplinarity. Annex 1 details specialization avenues related to the science/technology focus areas, offering theoretical (e.g. PLC, robotics, AI & electronics systems), as well as practical (e.g. CAD, programming) grounding.
- VTDK:
  - The Automotive Electronics Systems study programme is regularly updated, including faculty-led studies on hybrid technologies, gait analysis with sensors, and engine efficiency improvements.
  - Collaboration with Toyota Baltic AS enables Faculty to stay current with industry innovations through training and hands-on research opportunities, such as experiments conducted using a TOYOTA RAV4 HV.

Site visit:

- Industry representatives participate in study program committees and report their needs. An example of Teltonika is cited.
- Research topics in automotive come from the industry, the ministry, and own initiative. Students graduation theses in electronics are related to their internship or actual work in industry.
- SER team: Cybersecurity and AI are now included in study programs. Practical work is done in small groups, allowing personal contact.
- Lecturers visit companies and attend professional trainings, and can say how to improve the study program during committee meetings (department, Faculty, study program). There's evidence that these inputs are taken into account. This ensures the programs are up to date.
- Study programs are updated based on student feedback, e.g. SOLIDWORKS instead of AutoCAD. Evidence of state-of-the-art materials provided (e.g. object recognition with machine vision). Evidence was provided that practical knowledge taught by HEI was up to date (for example, company onboarding didn't teach new methodologies to students).
- Alumni and society partner reported a survey on how to improve the study program after graduation. Alumni reported a lack of SOLIDWORKS training (has been changed since), industrial communication protocols (e.g. CAN – alumni reported, will be integrated asap).
- Alumni confirmed that all research material (or most) is available digitally.

2.1.3. Opportunities for students to engage in research are consistent with the cycle

SER:

- VIKO:
  - SER reports 10 success stories related to students' scientific engagement and significant challenges in integrating students into scientific research.
  - SER reports on Lithuanian Research Council programs to develop a scientific career model, and 2 students have developed related projects.
  - In the evaluation period, students and staff had 7 joint publications.
  - To promote collaboration between students and staff, the SSS (Student Scientific Society) was registered, which connects staff members, students and external experts. It currently has 13 members.
- VTDK:
  - Students actively engage in applied research through projects, theses, and scientific conferences, resulting in 17 student presentations.
  - Practical skills are further developed through participation in initiatives like the international "Innovation Labs for Climate Action – ILCA,"
  - 32% of students were involved in applied research.

Site visit:

- Students can participate in an international electronics competition with students from Poland, Latvia, Ukraine. International student conference participation is encouraged but has not been very popular.
- Teaching staff provided evidence of scientific activity, including participation (~10-15%). Student research groups for specific projects are also organized.
- Student scientific community: students meet lecturers and join projects. Now there are 20 members, an increased compared to SER.
- 2nd year students already participate in extracurricular activities (fab, fix, robotic lab). They are aware of industrial guest lectures and career days.
- One alumnus reported writing 2 computer vision papers. 2 confirmed that teachers encourage interested students and support projects (e.g. Arduino-based drone built from scratch), hobbies and company-related tasks (e.g. ABB collaborative robots). A social partner emphasized supporting students' hobbies.

ANALYSIS AND CONCLUSION (regarding 2.1.)

The HEI has a research strategy aligned with EU strategic priorities and latest scientific trends. This strategy is propagated down to research projects and the curriculum. However, it is still unclear whether industrial needs are also considered, and how research funding is distributed between state-funded projects, research grants and industrial projects.

Student engagement in scientific activities is supported and encouraged but has yet to catch on. There are some success stories, and the SSS is expected to promote engagement. However, the low number of students in the program and society should be addressed (e.g., promoting incoming mobility).

In the area of automotive industry, HEI has a research portfolio and focus areas that align well with EU strategic priorities. There is also evidence of successful industrial collaboration (e.g. Toyota Baltic AS), and staff engage in publishing activities (some publications with an impact factor, as well as conference proceedings). A third of students have been engaged in research in the evaluation period.

Research by teaching staff is encouraged and supported by granting research time and funding for publishing activities. Research funding is sustainable according to senior management staff. Industry representatives' reported needs are taken into account in study program development. Leading-edge topics are included in study programs (cybersec, AI). Students can engage in research in labs outside regular hours and are allowed to work on their own projects. Practical knowledge is up to date, and labs are very well-equipped. Student participation in research could be higher, but

alumni reported successful engagement, and active students emphasized extracurricular activities (fix, fab, robotic lab). SSS also shows encouraging growth.

AREA 2: CONCLUSIONS

AREA 2	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle				x	

COMMENDATIONS

1. HEI has a research strategy, and institutional research is well-aligned with it and EU strategic directions. HEI makes efforts to educate staff on Horizon Europe project participation. Research directions are reflected well in the study program. State-of-the-art materials are provided (e.g. machine vision, autonomous vehicle-related topics).
2. A robust framework is in place to increase student engagement in scientific research, and evidence of growing engagement. International electronics competitions engage students.
3. Labs are very well-equipped, and available to students flexibly, encouraging practical work according to students' interests. Study programmes are updated according to student feedback (e.g. replacing AutoCAD with SOLIDWORKS).

RECOMMENDATIONS

To address shortcomings

N/A

For further improvement

1. Applied research engagement of students should be increased further, particularly in international conferences.

AREA 3: STUDENT ADMISSION AND SUPPORT

3.1.	Student selection and admission is in line with the learning outcomes

FACTUAL SITUATION

3.1.1. Student selection and admission criteria and procedures are adequate and transparent

Admissions are conducted according to the rules approved by the HEI Academic Council and are publicly available on the HEI website. General admission is organized by LAMA BPO under national regulations, ensuring transparency and accessibility. Admission is primarily based on secondary education attainment, using state matriculation exam scores and minimum competition scores set by the Minister of Education, Science and Sport. Additional points are awarded for achievements in Olympiads, vocational training, and international volunteering projects funded by Erasmus+, the European Solidarity Corps, or the National Youth Voluntary Action Programme. Institutional admission to non-state-funded places continues after the general period, with clear communication via the HEI website and social media.

Student admissions to the Electronics Engineering study field peaked in 2021, but have since declined, due to demographic shrinkage, low national mathematics exam pass rates, and the demanding nature of engineering studies. Most admitted students secure state-funded places, indicating high competition scores. The average competition scores of 2020-2023 applicants are stable across the study programme Electronics Engineering, with the lowest scores only slightly around 4.3 and the highest admission competition score reaching 8.9 in 2023. The average competition score for the 2020-2023 academic year for the Electronics Engineering Field is 5.3.

As of 2024, all applicants must pass three State Maturity Exams: Lithuanian language, mathematics, and one elective subject. In addition, the arithmetic average of these exam results must be at least 16 points, corresponding to a satisfactory achievement level according to national standards. Competitive admission scores are calculated from four maturity certificate subjects, with weights assigned to each: Mathematics (0.4), one science or technology subject such as IT, Physics, Geography, Chemistry or Biology (0.2), a third non-repeating subject (0.2), and Lithuanian language and literature (0.2).

The dropout rate in the Electronics Engineering study programme due to non-compliance with the requirements of the study programme is: 16 students out of 54 dropouts in 2020, 16 out of 62 dropouts in 2021, 7 out of 49 dropouts in 2022.

3.1.2. Recognition of foreign qualifications, periods of study, and prior learning (established provisions and procedures)

Recognizing foreign qualifications, study periods, and prior learning at VIKO is regulated by publicly available procedures. Foreign qualifications are assessed and recognized by an employee of the Study Department, appointed by order of the Director of the HEI, following the Rules for the Academic Recognition of Education and Qualifications Related to Higher Education and Obtained under the Educational Programmes of Foreign States and International Organisations (approved by the Academic Council's Resolution No. ATN-5 of 16 June 2021). Non-formal and informal learning achievements are recognized according to the Description of the Procedure for the Assessment and Recognition of Non-formal and Informal Learning Achievements at Vilniaus Kolegija / HEI (approved by the Academic Council Resolution No. AT N-9 of 11 December 2019); candidates must have upper secondary education and at least three years of relevant work experience. No non-formal and informal learning recognition candidates were recorded during the review period. Partial study results are credited based on the Description of the Procedure for Crediting Partial Study Results (approved by the Academic Council Resolution No. AT N-1 of 25 January 2021). Students must submit relevant academic documents to the Head of the Study Department, who forwards them for evaluation by the

Head of Department. Decisions are formalized within one month. During the review period, 44 students received credit for 1309 credits, mainly from other Lithuanian higher education institutions.

ANALYSIS AND CONCLUSION (regarding 3.1.)

Admission to all three programmes in the Electronics Engineering field is governed by the general admission system coordinated by LAMA BPO, based on national standards and centrally set minimum competition scores. Applicants must pass three State Maturity Exams (Lithuanian language, mathematics, and one elective), and their competition scores must meet or exceed thresholds established by the Ministry of Education, Science and Sport. Additional points may be granted for achievements in vocational training, voluntary service, or extracurricular distinctions, further promoting access for motivated and experienced candidates.

Admissions trends reflect a broader national decline in interest toward engineering studies, attributed to demographic shifts, low national mathematics pass rates, and the demanding nature of the programmes. Electronics Engineering and Computer Engineering have seen steadily declining admissions since their peak in 2021 (51 and 34 students respectively), reaching 23 and 24 admitted students in 2023.

In contrast, the Automotive Electronics Systems programme — integrated after the VTDK merger — has maintained relatively stronger demand, particularly in 2021 and 2022 (68 and 70 students admitted), though numbers also fell to 35 in 2023.

The average competition scores across all programmes have remained stable. For 2020–2023, Electronics Engineering had an average of 5.3, Computer Engineering 5.35, and Automotive Electronics Systems ranged from 3.98 to 5.59, reflecting wider accessibility in the latter due to its vocational appeal and popularity.

Dropout rates remain a concern, particularly in Electronics Engineering, where withdrawals are often due to academic underperformance or failure to meet programme requirements. Between 2020 and 2022, dropout numbers ranged from 49 to 62 students annually, with 7 to 16 cases each year explicitly linked to academic non-compliance.

In contrast, dropout data for Computer Engineering and Automotive Electronics Systems are less detailed. Still, lower dropout rates are implied by their higher year-on-year retention and increased enrolment trends.

In conclusion, while admission criteria are transparent and well-aligned with national legislation and institutional goals, the programmes face challenges common to the engineering field in Lithuania, including declining enrolment and retention. The Automotive Electronics Systems programme shows stronger applicant interest, likely due to its alignment with industry trends and broader accessibility. Strengthening career guidance, promoting engineering as a viable and rewarding field, and offering targeted support to at-risk students could mitigate dropout rates and improve long-term sustainability.

3.2.	There is an effective student support system enabling students to maximize their learning progress

FACTUAL SITUATION

3.2.1. Opportunities for student academic mobility are ensured

Students in the Electronic Engineering field actively participate in the Erasmus+ programme, supported by extensive information campaigns, counselling, and selection procedures managed by the International Relations Unit. During the evaluation period, 16 Automotive Electronics Systems programme students engaged in study or internship exchanges in Austria, Portugal, Finland, and Norway. Additionally, 4 Electronic Engineering students participated in the Erasmus+ Blended Intensive Programme (BIP) alongside 16 incoming students from partner institutions. Internships were also jointly organized with partners from Portugal and France. However, no full-time incoming students enrolled in Electronic Engineering during the period, mainly due to the complexity of studies and language barriers.

3.2.2. Academic, financial, social, psychological, and personal support provided to students is relevant, adequate, and effective

Academic support for Electronic Engineering students is ensured through systematic counselling by teaching staff, additional tutorials in Mathematics and Physics, and opportunities to clear academic debts. Financial support includes state-supported loans, social scholarships (granted to all applicants), incentive scholarships (awarded to 95 students), and company grants for Erasmus+ internships. Personal support includes options for individual study schedules, academic leave, and instalment payment plans. Social support is provided through career counselling, job fairs, and active cooperation with companies. Students also have access to sports, cultural activities, modern dormitories, and free psychological support since 2021.

3.2.3. Higher education information and student counselling are sufficient

Students in the Electronic Engineering study field receive timely and systematic information through the college's website, group emails, and meetings with faculty staff and the Study Programme Committee. First-year students participate in "Introduction to Studies" lectures, covering study structure, regulations, internships, and career prospects. Lecturers communicate course objectives, assessment systems, and consultation opportunities. Library staff introduce the database and resource use. The effectiveness of counselling is regularly evaluated through student surveys and discussions, with students confirming its adequacy and relevance.

Students are included in various committees and councils including study program committees, the university council and the student representation. Student representatives are included in each board and committee. This ensures clear communication between administrative staff and students as well as their involvement in university growth.

To gather students` feedback numerous surveys are conducted. Based on students' recommendations, several new subjects have been introduced and the descriptions of existing courses have been updated to stay relevant—such as incorporating topics like cybersecurity and the use of AI tools in teaching. Lectures start and end times have also been adjusted for better alignment with student needs. Feedback from surveys provides clear issues at hand that can be solved immediately to improve the studies.

During practical lessons, students work in small groups, which allows instructors to get to know each student personally and better understand the group dynamic. In addition, the timing of student internships was adjusted, as the autumn practice often was doing seasonal tasks like tire changes, which required a shift in practice work scheduling.

There were no mentors (no need for mentors was voiced), information from the administration staff was sufficient, and there is a class representative. If problems arise, students can reach out to the administrative staff. Such a way seems to be working for students and having a good ability to reach administrative staff directly proves to be a sufficient way of communicating and getting the necessary information.

ANALYSIS AND CONCLUSION (regarding 3.2.)

Students in the Electronic Engineering field has high participation in the Erasmus+ programmes alongside high incoming students' participation rates from other countries. This suggests that university manages to provide good opportunities for incoming students and create a number of its` own students that are able to participate in such mobility programmes themselves and gather multicultural experience as well as expand their worldview.

Students have access to academic support through counselling sessions from teaching staff, financial support through state-supported loans and scholarships, personal support through

individual study schedules and social support through job fairs and career counselling. This shows that university is able to sustain and help their students through several crucial ways.

Students' inclusion in various committees and councils shows that is close relationship between students and administrative staff, which ensures clear feedback and communication between two parties. By being able to communicate in clear ways students can express their need more clearly and directly and university can act accordingly without any delay. This proves to be an efficient way of improving studies and students` experiences.

Practical lessons are good way for students and teachers to work more closely and iron out information of a subject that couldn`t be explained as well in theoretical classes as in practical. Also, during those sessions, teachers get more one on one time with students which gives them an opportunity and ability to teach more directly to personal student needs and helps them to get to know each other better.

Since students are so highly involved with administrative staff there are no mentors and there was expressed no need for such. Direct information that students get from staff is sufficient and if any question arises it can be addressed by reaching a responsible party. Such an open and clear information exchange system is favoured by students and administrative staff alike since it gives students ability to solve problems on more personalised level or get an information that is particularly oriented to them.

AREA 3: CONCLUSIONS

AREA 3	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle				x	

COMMENDATIONS

1. Students are involved in multiple layers of the study management system.
2. Feedback system between students and teachers works well and has shown some positive results Economics credits were reduced, Solid Works was started to be used instead of AutoCAD. Based on student recommendations, several new subjects have been introduced, and the descriptions of existing courses have been updated to stay relevant, such as incorporating topics like cybersecurity and AI tools in teaching. Lecture start and end times have also been adjusted for better alignment with student needs.
3. Teachers are easily accessible to students through additional counselling sessions or direct emails.

RECOMMENDATIONS

To address shortcomings

N/A

For further improvement

1. Implementing Blended Intensive Programmes offers students a more accessible route to international academic mobility.

AREA 4: TEACHING AND LEARNING, STUDENT ASSESSMENT, AND GRADUATE EMPLOYMENT

4.1.	Students are prepared for independent professional activity

FACTUAL SITUATION

4.1.1. Teaching and learning address the needs of students and enable them to achieve intended learning outcomes

The study programs of EE and CE are conducted in full–time study (direct contact with the lecturer every week), and a sessional study cycle (studies in sessions). The AES full and part-time studies consider direct contact with the lecturer every week.

Theoretical and practical studies are used to guarantee the intended learning outcomes. Different teaching and learning methods are utilized, such as problem-based learning, teamwork, creative tasks, discussions, etc. Lectures consider real cases to improve the attendance and attention of the students.

To further enhance the competencies of the students, these are motivated to participate in extracurricular activities to not only allow them to acquire extra practice but also to follow individual and group projects.

Internships are used to apply the knowledge and competencies achieved by the students in the final year in a real work environment and to apply their knowledge in real situations.

The assessment methods follow the regulated assessment procedures. All information about a subject is provided in the introductory lecture of the subject and made public in the adopted information sharing platform - Moodle.

Graduate students may continue their studies in Lithuanian and foreign HEIs, but only a few students continue their studies. To achieve this, extra studies are needed to achieve the necessary background to initiate their studies in a University.

Students face difficulties in the first year performing basic subjects, such as mathematics and physics. Teachers try to motivate students in these subjects by adopting real cases from the study field and applying concepts to solve real problems.

4.1.2. access to higher education for socially vulnerable groups and students with individual needs is ensured.

Students receive free psychological support through email, phone, or face-to-face counselling, with information on the Faculty and HEI websites. Students from socially vulnerable groups and those with special needs receive accessibility advice at the Faculty's Study Department. They can request an individualized study process by submitting documentation within two weeks of the semester start. The study process is adapted as needed, as was done for one Electronic Engineering student between 2020 and 2023. The Faculty ensures physical accessibility with lifts, an elevator, a portable ramp, adapted toilets, adjustable desks, keyboard trays, and access to MS Windows tools for visually and hearing-impaired students.

ANALYSIS AND CONCLUSION (regarding 4.1.)

The differences in teaching and learning methods in different years of the study cycle are important, but they are not explicitly referred to in the SER.

Laboratories should have open-access or semi-open access, where some technicians control the lab access.

Feedback on students' work should be compulsory.

The HEI provides accessible and well-structured psychological, academic, and physical support services for all students, including those with special needs, ensuring an inclusive study environment in the Electronics Engineering field.

4.2.	There is an effective and transparent system for student assessment, progress monitoring, and assuring academic integrity

FACTUAL SITUATION

4.2.1. Monitoring of learning progress and feedback to students to promote self-assessment and learning progress planning is systematic

HEI ensures a structured system for monitoring learning progress and provides meaningful feedback to students. Monitoring organize on the Lecturer, Student, Department, Programme and Faculty level, ensuring the integrity of the results and allowing to summarize and analyze process on different scales. Accordingly, it is possible to identify some systematic problems within specific courses and with specific teachers, as well as problems on the level of study groups/courses.

Before every course, the students are introduced to the requirements and assessment elements. The students are also aware that their study progress and the result will directly influence their abilities to receive grants and get international experience of better practical placement.
The students can follow their progress within VLE Moodle.

4.2.2. Graduate employability and career are monitored

From the perspective of a social partner, it is commendable that the institution highlights a high graduate employment rate—97% in 2023—which reflects strong integration with the labour market. Using national databases such as "Sodra" and the Government Strategic Analysis Centre demonstrates a commitment to tracking graduate outcomes using reliable, external data sources.

However, at the programme level, there remains room for enhancement. While the aggregate employment figure is high, there is no clear breakdown by specialization, employer type, or relevance to the field of study—such as positions in electronics, automation, or mechatronics. This limits the ability to draw actionable insights for curriculum development or targeted improvements.

The SER does not clearly describe whether a systematic graduate career tracking system is in place. There is no mention of regular alumni or employer surveys or evidence of a feedback loop whereby career data informs teaching practices or programme adjustments. This raises questions about how graduate employability is strategically managed across different study cycles and specializations.

Nonetheless, the institution shows awareness of the importance of these issues and appears open to improving its career monitoring mechanisms. During the visit, representatives mentioned that around 60% of graduates work in their field, and that employers are involved in career days, student internships, and collaborative initiatives. This shows an active partnership with industry, which could be further formalized into structured feedback systems.

To further strengthen the graduate tracking process, it is recommended to implement a consistent methodology that combines quantitative employment data with qualitative feedback from alumni and employers. Special attention should be given to determining the alignment between graduate competencies and job roles, especially in technical fields. Annual programme-level employability reports, supported by targeted surveys and stakeholder consultations, could significantly enhance strategic decision-making.

In summary, the high employment rate and engagement with industry are strong foundations. To elevate this area to a higher level of maturity, the college is encouraged to develop a transparent and continuous career monitoring system, with measurable indicators and specialization-specific insights. Such improvements would contribute to evidence-based programme enhancement and reinforce stakeholder confidence in graduate readiness.

4.2.3. Policies to ensure academic integrity, tolerance, and non-discrimination are implemented

The HEI has implemented clear and publicly accessible policies and procedures to ensure academic integrity, tolerance and non-discrimination. Students are required to sign the Student Declaration of Integrity, confirming their understanding of ethical conduct in their studies.

To ensure academic integrity, the HEI uses the plagiarism detection tool OURIGINAL across all levels of student work- from homework reports to final project reports. This systematic use of antiplagiarism tools helps to ensure transparency and accustoms students to fairness throughout the assessment process. The on-site interviews provided no evidence of any violations of academic integrity.

In terms of tolerance and non-discrimination, the HEI ensures equal treatment for all students and supports those from socially vulnerable groups, such as those with special needs.

During the evaluation period, there were no violations of the principles of tolerance and non-discrimination.

4.2.4. Procedures for submitting and processing appeals and complaints are effective

The procedures for submitting and processing appeals and complaints at HEI are clearly defined, transparent, and accessible to all students. The students are informed about their right to appeal to decisions related to the study process, including assessment outcomes and organizational or study course recognition issues.

SER states that no formal appeals were submitted during the entire evaluation period, which may indicate the effectiveness of prevention measures, timely communication with the students, and satisfaction with the study process.

ANALYSIS AND CONCLUSION (regarding 4.2.)

Although graduate employability is reported as very high (97% in 2023), there is a lack of systematic tracking at the programme level to assess employment outcomes by specialization, employer type, or relevance to the field of study. While national databases are used to gather aggregate data, the absence of structured alumni and employer feedback mechanisms limits the ability to draw meaningful conclusions for curriculum enhancement. To strengthen strategic planning and ensure alignment with labour market needs, the HEI is encouraged to implement regular, detailed graduate career monitoring supported by surveys, consultations, and programme-level employability analysis.

While the procedure of student progress evaluation is clear and well-structured, there is a lack of mechanisms during the semester to identify and support students underperforming across multiple courses. Such cases may only be noticed by individual lecturers within their specific subjects. A comprehensive picture of a student's academic difficulties will be clear only at the end of the semester. It may be too late to implement timely and effective support measures by then.

The positive point is that the plagiarism checks are already provided in the early stages of the studies, thus ensuring that the students respect academic integrity rules during the whole study process, not just before the defence of the Final Project.

It should be noted that the SER does not mention if there were any violations of academic integrity within the evaluation period and what measures were taken to resolve the situations.

AREA 4: CONCLUSIONS

AREA 4	**Unsatisfactory - 1** Does not meet the requirements	**Satisfactory - 2** Meets the requirements, but there are substantial shortcomings to be eliminated	**Good - 3** Meets the requirements, but there are shortcomings to be eliminated	**Very good - 4** Very well nationally and internationally without any shortcomings	**Exceptional - 5** Exceptionally well nationally and internationally without any shortcomings
First cycle				x	

COMMENDATIONS

1. Emphasis is given to practical activities and motivation for extracurricular activities.
2. All students are informed about the assessment process in the first lecture
3. The College demonstrates a strong overall graduate employment rate (97%) and uses reliable national data sources such as "Sodra" and the Government Strategic Analysis Centre to monitor employability outcomes, indicating an institutional commitment to evidence-based quality assurance.

RECOMMENDATIONS

To address shortcomings

N/A

For further improvement

1. Introduce a mid-semester monitoring system to identify students struggling across multiple courses. This would allow timely interventions, such as individual consultations or mentoring, to help prevent failure and improve the academic success of the students at risk.
2. Introduce a mechanism for identifying repeated academic integrity violations across multiple courses. If a student is systematically caught for plagiarism in several subjects, this information should be visible to programme or faculty-level coordinators, not just individual lecturers.
3. Produce annual programme-level employability reports that integrate quantitative data and qualitative feedback, focusing on trends by specialization and aligning findings with strategic planning and curriculum development.
4. Consider different teaching and learning methods in different years of the study cycle.
5. Laboratories should be open access or semi-open access, where some technician controls access to the labs.

AREA 5: TEACHING STAFF

5.1.	Teaching staff is adequate to achieve learning outcomes

FACTUAL SITUATION

The analysis of the teaching staff is based on 2 SER. As their content and relevance to the field differ, the factual situation is provided separately, leading to a general summary.

5.1.1. The number, qualification, and competence (scientific, didactic, professional) of teaching staff is sufficient to achieve learning outcomes

SER:

- VIKO:
  - 20-25 teachers over evaluation period. Focusing on min. 3 year employment at min. 0.5 FTE: ~20-23 teachers (~2/3 lecturers, ~20-30% assoc. professors). Student:lecturer ratio = 10:1-12:1. Numbers have been fairly stable over the years.
  - For theoretical teaching, all groups are taught together; sub-groups can be formed for practical teaching. One supervisor supervises 4 BSc theses on average.
  - The majority of staff (75%) have at least 3 years of practical experience (company/organization/projects), with an average of ~12, plus 18 yrs of teaching experience. 30% are PhD holders.
  - The age distribution of staff follows a Gaussian distribution with a peak around 40-50 yrs, shifting slightly over the years. Younger staff members up to the age of 30 are also involved. These promote sustainability. New teaching staff are recruited through an open competition for 5 years.
- VTDK:
  - 27-37 teachers over evaluation period (student: teacher ratio 4.5-5.5:1). the number of teachers declined in eval. period (due to the retirement rate being higher than the hiring of young staff) but is proportional to the decline in a number of students in the evaluation period. Out of this, the number of teaching staff with min. 0.5 FTE and 3-years experience: 22-32 (>80%).
  - Out of 27 staff in 2023, 8 were associate professors, 19 lecturers. 13 held a PhD (48%). Internships are supervised by MSc holders with >3 years' practical experience.
  - Practices are in place to replace retiring staff with incoming young staff (including training them, with 4-6 new staff in training in the eval. period), and knowledge exchange between outgoing and incoming staff members. Young staff are prioritized in taking retirees' positions over external hires. New staff are supported in doing doctoral studies.
- Active students reported that their feedback was considered and gave an example of a lecturer being fired for not meeting quality standards.

ANALYSIS AND CONCLUSION (regarding 5.1.)

The HEI demonstrates a solid and sustainable academic staffing structure. The student-teacher ratio is highly supportive — ranging between approximately 5:1 and 10:1 — which allows for personalized attention and high-quality teaching. Staff numbers have remained stable over time, and the age distribution appears balanced, ensuring continuity and resilience.

A significant proportion of the teaching staff (>30%) holds PhD degrees, indicating a strong academic qualification profile. Moreover, the institution promotes practical expertise among its educators and has established effective mechanisms to involve and develop younger academic staff, including mentoring, doctoral study support, and succession planning — all of which contribute to long-term institutional sustainability.

However, the current staffing levels may be underutilized, as the institution could operate effectively with a higher student-to-staff ratio. This raises concerns about long-term financial

sustainability and the need to optimize human resource allocation in line with enrolment trends and strategic goals.

Students confirmed their feedback was taken into account. Staff excellence is ensured, age distribution is sustainable. Many staff speak English well, although English language skills should be improved further for internationalisation.

5.2.	Teaching staff is ensured opportunities to develop competences, and they are periodically evaluated

FACTUAL SITUATION

5.2.1. Opportunities for academic mobility of teaching staff are ensured

SER:

- VIKO:
  - The HEI has Erasmus+ mobility agreements with 54 foreign HEIs in 22 countries. In the evaluation period, 65% of teachers have moved staff to 20 foreign HEIs in 10 countries, 39 visits in total. Teaching staff mobility is growing in number.
  - Despite the aftereffects of Covid-19, 11 foreign lecturers visited from 4 countries in 2022-23 and 7 lecturers from Ukraine in 2023.
- VTDK:
  - Mobility support includes conferences, internships, seminars, and secondments. Academic mobility is supported under Erasmus+ framework, focused on developing new teaching materials and networking.
  - During the eval. period, 60 staff members travelled to 17 countries for 2-14 days (outgoing mobility), and 11 staff members visited for 8-14 days (incoming mobility). Post-Covid recovery trends are visible (in 2023, 21 outgoing visits).
  - Erasmus+ strategic partnership projects aimed to improve digitalization-related competences of teaching staff. 9 staff members gave lectures to Erasmus+ exchange students. An example is also provided for a visiting expert giving a lecture to VTDK students (Huawei Sweden, on state-of-the-art control systems).
  - HEI organized 2 distance learning seminars in 2022 and started organizing Erasmus BIP activities in 2023, with TTK in Estonia and Braganca Polytechnic in Portugal, related to automation.

Site visit:

- The number of incoming Erasmus+ staff mobilities is expected to increase through HEROES alliance membership
- Professional self-improvement options are confirmed by teachers, which ensures up-to-date knowledge in the field and didactics.

5.2.2. Opportunities for the development of the teaching staff are ensured

SER:

- VIKO:
  - Teaching staff are encouraged and supported to participate in traninings, internships, and conferences. In the evaluation period, teaching staff have spent 1418 hours interning, 806 participating at seminars, 400 at conferences, and 1345 at courses dedicated to professional self-improvement. For 21 staff members participating in self-improvement (Annex 9), 3969 hours, ~190 hours/teacher were spent on self-improvement, with a more or less even distribution between subject-specific, didactic and general trainings.
  - Approx. half the teaching staff are members of national professional networks, such as Lithuanian Mathematical Society, some in leading positions.
- VTDK:

- Teaching staff have the right to receive financial support for professional self-improvement (courses, seminars, conferences, internships, Erasmus+, and other international programs). Trainings are planned on departmental level.
- During the evaluation period, staff participated in didactic (e.g. problem and project-based learning, total of 32 academic hours) and English language training (40 academic hours). In 2022 several staff members participated in international professional trainings related to industry 4.0 topics (manufacturing, AR, robotics, e.g. Kuka Robot technical training).
- Addressing the last expert review's comments, staff cooperation is improved by departmental, study program committee and faculty meetings. Also, a "teaching staff café" was set up in 2022 to share best practices.

Site visit:

- Teachers confirmed development opportunities related to scientific research (see area 2 report).

ANALYSIS AND CONCLUSION (regarding 5.2.)

The teaching staff is highly active in professional self-improvement, both domestically (training, internships, professional network activity), and internationally (Erasmus+ mobility). Availability of outgoing self-improvement opportunities is exceptional. However, incoming mobility should be encouraged further to help exchange knowledge with foreign professionals and promote sharing of new practices employed at HEI. The latest didactic methodologies are also integrated.

New HEROES alliance membership should increase incoming ERASMUS+ staff mobilities. Professional self-improvement opportunities confirmed by the staff.

AREA 5: CONCLUSIONS

AREA 5	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle					x

COMMENDATIONS

1. Professional self-improvement opportunities are excellent, and staff engagement is high.
2. Teaching staff is sustainable (age, number, level of experience), and practices to integrate young talent are in place.
3. Exceptionally high number of PhD holders on staff.
4. During site visit, staff seemed highly motivated and actively seeks opportunities to improve students' learning experience (e.g. study program changes, staff changes, fix, fab, robotic lab).

RECOMMENDATIONS

To address shortcomings

N/A

For further improvement

1. Incoming staff mobility should be encouraged to promote knowledge exchange and sharing of teaching practices with EU peers.
2. Utilization of teaching staff could be increased, perhaps through involvement in other study programmes. A 5:1 or 10:1 teacher: student ratio may benefit students but may not be financially sustainable in a long term.
3. While many of the teaching staff exhibited good English language skills, most should have comparable English skills and be willing to use them for further internationalisation. The national dimensions of the HEI seem well-developed, and avenues are present to increase international visibility. Internationalization could help mitigate the declining number of local students, but spotty English skills can be a barrier.

AREA 6: LEARNING FACILITIES AND RESOURCES

6.1.	Facilities, informational and financial resources are sufficient and enable achieving learning outcomes

FACTUAL SITUATION

6.1.1. Facilities, informational and financial resources are adequate and sufficient for an effective learning process

HEI provides sufficient facilities, information and financial resources to support effective learning in Electronics Engineering. The Faculty has dedicated laboratories (Annex 10), classrooms and computer rooms regularly updated with new equipment. These include PLC labs, measurement and signal processing labs, robotics and electronics assembly facilities.

During the site visit, it was possible to conclude, that all the laboratories are very well equipped with up-to-date equipment, which is robust enough to utilize actively by students, and also future-proff, as not only allows to get hands-on experience on the basics of electronics, but also dive deeped into more advances topics, such as drones, robotics, sensor technologies, augmented reality. Specific laboratories are equipped with complete soldering kits and corresponding equipment, allowing the acquisition of these useful skills, which industrial partners highlight.

Access to the well-developed and recently upgraded 3D printing facilities also expands students' opportunities to work with modern technologies, acquiring highly demanded skills in rapid in-house prototyping.

The facilities are adapted to the needs of students with special needs or disabilities, providing access to all infrastructure and ensuring their appropriate training through special Moodles courses (EESI-Digi).

The internships are conducted with various industrial partners, allowing them to utilize their infrastructure for student training and apply their knowledge and skills in real-world environments.
The library offers a sufficient number of digital and printed materials relevant to the field of study, complemented by access to various electronic databases. Students can access materials directly or through a VPN.

6.1.2. There is continuous planning for and upgrading of resources.

HEI ensures continuous planning and systematic upgrading of resources in the Electronics Engineering field. Software and hardware components are upgraded yearly, according to the needs and based on the Faculty's annual budget.

ANALYSIS AND CONCLUSION (regarding 6.1.)

In general, the available resources and laboratory equipment fully meet the needs of students in the Electronics Engineering field. The site visit confirmed that laboratories are modern, well-maintained, and equipped with industry-relevant tools that support both fundamental and advanced training, including areas such as robotics, drones, and augmented reality. Students also benefit from access to upgraded 3D printing facilities and comprehensive soldering stations, which enable the development of highly demanded practical skills. Learning spaces are accessible to students with special needs, and digital resources are readily available through library services and VPN access.

However, the process of upgrading and renewing equipment currently depends solely on the annual budget allocated by the Faculty. While this has so far ensured a high level of technical infrastructure, it raises questions about the sustainability of resource renewal in the long term—particularly if major investments are needed for the replacement or establishment of entire laboratories. To mitigate this risk, it would be beneficial to explore additional funding channels, such as industry co-financing, research projects, or targeted investment programmes.

AREA 6: CONCLUSIONS

AREA 6	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle					x

COMMENDATIONS

1. Excellent Laboratory Infrastructure: The Faculty provides modern, well-equipped laboratories that not only support fundamental electronics education but also enable advanced hands-on experience in cutting-edge areas.

RECOMMENDATIONS

To address shortcomings

1. N/A

For further improvement

1. To ensure the long-term sustainability of infrastructure and laboratory equipment, it is suggested that funding sources be diversified, EU structural funds should be applied, and donations or at least co-investment from local and international industrial partners should be sought.

AREA 7: QUALITY ASSURANCE AND PUBLIC INFORMATION

7.1.	The development of the field of study is based on an internal quality assurance system involving all stakeholders and continuous monitoring, transparency and public information

FACTUAL SITUATION

7.1.1. Internal quality assurance system for the programmes is effective

The study quality management system is regulated by internal and official documents.

Internal quality assurance of the field of study is promoted and checked hierarchically, including the Dean, who guarantees the material and human resources to achieve the necessary quality level; the Vice-Dean, the Study Area Committee and the Study Programme Committees coordinate the internal quality assurance process.

Once a year, the programme committees discuss the study programme with lecturers.

The SER describes the quality assessment process based on the regulations.

Several different surveys are promoted by the Department, such as Quality of teaching, evaluation of internships, preparation of students for professional activities, about the study programme, its contents and operation; alumini surveys, and employers' survey.

At the end of the academic year, the Programme Committee discusses and approves a report on the quality and elaborate recommendations based on the Department's annual quality report and the social partners feedback. At the beginning of the academic year plan actions based on this report are followed to improve the quality of the study programme.

The metrics used to assess the quality and the set of thresholds to determine when problems are not specified.

The internal quality assurance methodology and processes are well defined, but their functionality and effectiveness are not demonstrated.

7.1.2. Involvement of stakeholders (students and others) in internal quality assurance is effective

The study field demonstrates a structured and formal approach to stakeholder involvement in quality assurance. Various groups—students, alumni, social partners, and teaching staff—are formally included in key quality management structures such as study programme committees, faculty councils, and assessment bodies. Evidence shows that student representatives actively participate in decision-making, including programme development and teacher evaluation. Alumni and employers also take part in consultations and meetings related to programme improvement.

Nonetheless, during meetings with stakeholders, several aspects of the involvement process emerged as areas with potential for enhancement. While the formal structures are in place, it remains unclear how consistently stakeholder feedback leads to concrete improvements in study quality. For instance, although the SER reports that student surveys are conducted regularly, it does not provide clear examples of recent programme changes based on these surveys. Likewise, employer and alumni engagement appear more episodic than systematic, and some social partners noted a lack of direct feedback on how their input was used.

During the evaluation visit, some students expressed uncertainty regarding the impact of their feedback, and there was limited evidence of a feedback loop being closed—i.e., informing students how their comments were addressed. Similarly, while employers are invited to final thesis defences and other events, there is little systematic documentation showing how their feedback feeds into programme renewal.

Despite these shortcomings, the foundation for effective stakeholder engagement is strong. The institution's willingness to formalize participation and maintain communication channels demonstrates a commitment to quality culture. By implementing mechanisms to regularly inform stakeholders about how their input contributes to changes and systematizing the feedback-to-action process, the study field could move closer to achieving full effectiveness in this area.

7.1.3. Information on the programmes, their external evaluation, improvement processes, and outcomes is collected, used and made publicly available

HEI systematically collects, analyses, and applies the information related to study programmes, external evaluations, and improvement processes, and makes this information publicly accessible. As outlined in SER, data on admission criteria, learning outcomes, study plans, teaching staff, employment prospects, and quality assurance measures are regularly updated and published on the HEI's official website and faculty pages.

External evaluation results, including accreditation decisions and improvement recommendations, are also published to inform programme development and strategic planning. Updates resulting from these evaluations—such as curriculum changes or teaching methodology adjustments—are reflected in internal documents and communicated to students and staff through KONTORAJA system.

Student and stakeholder feedback and employment data are collected and considered in programme enhancement efforts. Summaries of key improvements are made available in annual reports or published online.

In addition to the official HEI website, the institution actively uses social networks (e.g., Facebook, Instagram, etc.) to promote study programmes, share success stories, and communicate with prospective students, industry partners, and the wider public. These platforms enhance the visibility, accessibility, and transparency of HEI and the study field.

7.1.4. Student feedback is collected and analyzed

HEI systematically collects and analyses student feedback through targeted surveys provided at different stages of studies. A Teaching Quality Survey is organized each semester among students of all years, focusing on teaching effectiveness, use of resources, clarity of evaluation criteria, and lecturer-student communication. Results indicate high satisfaction with respectful treatment, rational use of lecture time, and access to consultations and feedback.

After professional practice, students evaluate the quality of internships, both in Faculty and at companies. Feedback confirms clarity in expectations, respectful supervision, and meaningful practical engagement.

Final-year students provide feedback on their overall study experience during the final internship and thesis preparation. They report that the programme meets their expectations, develops relevant skills, and offers access to all necessary learning resources. Key competencies developed include critical thinking, collaboration, creativity, and digital literacy.

Additionally, a graduate survey six months after graduation shows that 75% of respondents are in specialized, highly qualified roles. Graduates rate their studies as high-quality, motivating, and practice-oriented, while suggesting more focus on specific advanced topics like AI, databases, and control systems.

ANALYSIS AND CONCLUSION (regarding 7.1.)

HEI demonstrates a well-structured approach to information management and quality assurance. Information on study programmes, external evaluations, and improvement actions is systematically collected, updated, and publicly accessible through official platforms such as the HEI website, the KONTORAJA system, and social networks. This ensures broad visibility, accessibility, and stakeholder engagement.

Furthermore, the systematic collection and analysis of student feedback is a strong element of the internal quality system. Surveys proposed at various study stages provide valuable insights into teaching quality, practical training, study relevance, and graduate employability. Student satisfaction and employment rates indicate the study programmes' effectiveness and alignment with market needs. The only drawback of this section in the SER is that it is unclear how many students (%)

participate in surveys each semester and whether participation rates are sufficient to represent the wider student body.

The internal quality assurance system is formally structured and supported by clear roles and responsibilities across programme committees, faculty leadership, and quality units. However, the practical implementation could benefit from greater clarity in applying methods and thresholds. While survey results are analyzed and discussed, it is not evident how data is used to trigger concrete improvements or restructuring efforts. More transparent metrics, defined indicators, and timelines for action would enhance the system's responsiveness and functional impact.

Stakeholder involvement is formally embedded in the quality assurance process through representation in committees and advisory structures. Students, alumni, and employers participate in programme development and assessment discussions. Nonetheless, during the site visit, it became evident that the feedback loop—demonstrating how input leads to visible change—is not always clearly communicated. Strengthening this loop and systematizng the involvement of external stakeholders, particularly in feedback integration and follow-up, would contribute to a more effective and dynamic quality culture.

AREA 7: CONCLUSIONS

AREA 7	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle				X	

COMMENDATIONS

1. Well organized methodology to assess quality.
2. The institution has established formal mechanisms for stakeholder involvement, including students and social partners, through participation in study programme committees and institutional bodies.
3. Student representation is ensured at multiple governance levels, including the Faculty Council and Academic Council, contributing to transparency and inclusiveness.
4. Employers and alumni are involved in final thesis evaluations and periodic consultations, reflecting openness to external input.

RECOMMENDATIONS

To address shortcomings

1. N/A

For further improvement

1. Consider creating a stakeholder feedback dashboard or summary report that tracks input, decisions, and resulting improvements annually.
2. Develop and document a systematic feedback loop that demonstrates how stakeholder suggestions (especially from students and employers) are evaluated and implemented.
3. Ensure that students and social partners receive regular updates on the outcomes of their feedback to reinforce trust in the quality assurance process.
4. Distinguish between short-term changes from long-term changes for quality management.

5. Include indicators about the effectiveness of the restructuring measures and the time expected for a measure to take effect.
6. Include clear metrics and thresholds to assess quality that determine when some aspect needs restructuring.

V. SUMMARY

The external evaluation of the Electronics Engineering study field at Vilniaus kolegija / University of Applied Sciences (VIKO) confirms the institution's strong performance and commitment to delivering high-quality, practice-oriented education. The evaluation covered three first-cycle professional bachelor study programmes: Electronics Engineering, Computer Engineering, and Automotive Electronics Systems, all of which align with national qualification requirements and institutional strategic goals.

Key strengths identified by the review panel

- **Alignment with labour market needs.** All study programmes are well-designed to prepare graduates for employment in industry. The curricula correspond to societal and economic needs, especially in electronics systems, mechatronics, and automotive technologies.
- **Integration of research and practice.** Applied research activities are actively pursued and linked to teaching. The institution maintains strong collaborations with industry (e.g., Toyota Baltic AS), and topics such as AI, robotics, and sustainability are increasingly reflected in study content and student projects.
- **Student support and engagement.** VIKO offers comprehensive academic, financial, psychological, and infrastructural support. Students benefit from personalized study paths, flexible learning options, and access to modern, well-equipped laboratories. They are actively involved in programme management and quality assurance processes.
- **Highly qualified and motivated staff.** The teaching staff includes a significant proportion of PhD holders, many with extensive practical experience. Continuous professional development and participation in international mobility schemes (e.g., Erasmus+) are strongly supported.
- **Well-developed infrastructure.** Learning resources, including up-to-date laboratories, 3D printing facilities, and digital learning tools, are of excellent quality and accessible to all students, including those with special needs.

Areas for improvement and further development

- **Labour market responsiveness.** While employer cooperation is evident, there is a need for a more systematic and documented mechanism to integrate feedback from industry into programmes updates, especially concerning emerging trends such as Industry 4.0, AI, and IoT.
- **Graduate tracking.** Although overall graduate employment rates are high (97% in 2023), programme-level tracking and analysis of employability by specialization and sector are limited. Strengthening feedback loops with alumni and employers would support evidence-based curriculum refinement.
- **Student research participation.** Opportunities for student engagement in scientific activities are available but should be expanded, particularly internationally.
- **Incoming staff mobility.** While staff participate actively in outgoing mobility, incoming academic exchanges should be encouraged to enrich teaching practices and promote internationalization.

Aknowledgement

The panel would like to commend VIKO for its professional and well-organized self-evaluation process, the documentation quality, and the openness and engagement demonstrated during the site visit. The institution's strong commitment to quality improvement and industry relevance was evident throughout the evaluation process.

VI. EXAMPLES OF EXCELLENCE

Examples of excellence should include examples exhibiting exceptional characteristics that are, implicitly, not achievable by all.

- Area 5: Teaching staff is exceptionally active in professional self-improvement both domestically and internationally, and opportunities for outgoing mobility are also exceptional. Staff is proactively improving didactics and student involvement through extracurricular activities, demonstrating a strong commitment to educational excellence, innovation, and continuous quality enhancement in teaching and learning.
- Area 6: Labs are exceptionally well-equipped with all possible modern kits and devices, providing the possibilities for students to get the knowledge on the state of the art in many fields, covering electronics, embedded systems etc.