STUDIJŲ KOKYBĖS VERTINIMO CENTRAS
CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

SOFTWARE ENGINEERING FIELD OF STUDY

at Vilniaus kolegija

EXTERNAL EVALUATION REPORT

Expert panel:

1. Panel chair: FH-Prof. Mag. DI Dr. Friedrich Praus ……... (signature)
2. Academic member: Prof. (FH) Dr. Johannes Lüthi
3. Academic member: Asist. Prof. Roman Danel
4. Social partner representative: Vilma Narkevičienė
5. Student representative: Matas Zaloga

SKVC coordinator: Gabrielė Čėplaitė

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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: FH-Prof. Mag. DI Dr. Friedrich Praus, Professor at Vienna University of Applied Sciences (FH Technikum Wien);
2. Academic member: Prof. (FH) Dr. Johannes Lüthi, Professor and former Head of the Academic Council at the Kufstein University of Applied Sciences (FH Kufstein);
3. Academic member: Asist. Prof. Roman Danel, Assistant Professor at Institute of Technology and Business in České Budějovice (VŠTE in České Budějovice), Assistant Professor at Technical University of Ostrava (VŠB);
4. Social partner representative: Vilma Narkevičienė, IT Function Owner, UAB Hyand Lithuania;
5. Student representative: Matas Zaloga, Third-year student of the first-cycle study program "Computer Software Engineering" at Vilnius Gediminas Technical University, member of the Lithuanian Students' Union.

1.3. SITE VISIT

The site visit was organised on 24 February 2025 on-site.

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 (VIKO) / Higher Education Institution is an accredited state higher education institution of the Republic of Lithuania, offering collegiate studies, conducting applied scientific research, experimental activities, and professional art. It was established in 2000 and now is the largest institution of professional higher education in Lithuania.

The HEI has seven faculties (Agro Technologies, Economics, Electronics and Informatics, Arts and Creative Technologies, Pedagogy, Health care, Business Management) and offers study programmes in 12 study area groups. As of October 1, 2023, it provided 40 study programmes across 27 study fields, with 5,346 students, including 273 international students. Since its establishment, over 40,000 students have graduated from the institution.

Overview of the study field

The HEI offers 2 full-time programmes in the study field of Software Engineering: The Software Engineering program awards a professional bachelor's degree, while the Software Testing program grants professional qualifications, both producing highly valued specialists. Both align with the HEI's strategic goals by providing high-quality education that meets labor market demands. The student-centered approach includes opportunities for individualized learning, consultations, feedback improvement, and integration support for first-year students.

Previous external evaluations

The Software Engineering programme has been registered in 2017. The study programme is considered accredited until it is evaluated and accredited in accordance with the procedure established by the order of the Minister of Education, Science and Sport of the Republic of Lithuania. 10 recommendations have been given during the previous external evaluation.

The Software Testing programme has been registered in 2022. It is accredited until the expected next assessment of Software Engineering area of studies. 10 recommendations have been given during the previous external evaluation.

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:

- Self-evaluation report (SER) and its annexes
- Final theses
- Statistics and reasons of dropout of students in software engineering field
- Statistics on rating of programme by students
- Statistics and report regarding student mobility

Additional sources of information used by the review panel:

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

- The National Digital Decade Roadmap of the Republic of Lithuania;
- Invest Lithuania https://investlithuania.com/

II. STUDY PROGRAMMES IN THE FIELD

Short cycle/LTQF 5

Title of the study programme	**Software Testing**	
State code	5701BX004	
Type of study (college/university)	Short Studies	
Mode of study (full time/part time) and nominal duration (in years)	Full-time, 2 years	
Workload in ECTS	120	
Award (degree and/or professional qualification)	Tester qualification	
Language of instruction	Lithuanian	
Admission requirements	Secondary Education and Professional Qualification	
First registration date	02 09 2022	
Comments (including remarks on joint or interdisciplinary nature of the programme, mode of provision)	-	

First cycle/LTQF 6

Title of the study programme	**Software Engineering**	
State code	6531BX028	
Type of study (college/university)	College	
Mode of study (full time/part time) and nominal duration (in years)	Full-time, 3.5 years	
Workload in ECTS	210	
Award (degree and/or professional qualification)	Professional Bachelor of Computer Science	
Language of instruction	Lithuanian / English	
Admission requirements	Secondary Education	
First registration date	17 07 2017	
Comments (including remarks on joint or interdisciplinary nature of the programme, mode of provision)	-	

III. ASSESSMENT IN POINTS BY CYCLE AND EVALUATION AREAS

The **short cycle** of the Software Engineering field of study is given a **positive** evaluation.

No.	Evaluation Area	Evaluation points[1*]
1.	Study aims, learning outcomes and curriculum	3
2.	Student admission and support	3
3.	Teaching and learning, student assessment, and graduate employment	3
4.	Teaching staff	4
5.	Learning facilities and resources	4
6.	Quality assurance and public information	3
	Total:	20

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

No.	Evaluation Area	Evaluation points[2*]
1.	Study aims, learning outcomes and curriculum	4
2.	Links between scientific (or artistic) research and higher education	3
3.	Student admission and support	3
4.	Teaching and learning, student assessment, and graduate employment	3
5.	Teaching staff	4
6.	Learning facilities and resources	4
7.	Quality assurance and public information	3
	Total:	24

1*

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.
2

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 Software Engineering and Software Testing programmes at Vilniaus Kolegija (hereinafter referred to as "HEI") are designed to meet the growing demand for information and communication technology (hereinafter referred to as "ICT") professionals, particularly software engineers and testers. These programmes align with Lithuania's National Digital Roadmap[3] which anticipates a significant rise in demand for ICT specialists by 2030. The Software Testing Programme, launched in 2023, addresses the growing need for software quality assurance professionals, while the Software Engineering Programme focuses on critical areas and software development skills demanded by employers. Both programmes ensure students gain the skills needed for the workforce through a blend of theoretical knowledge and practical experience, including internships and final theses.

The Software Engineering and Software Testing programmes at the HEI are designed to meet the increasing national and international demand for ICT professionals. The institution plans for future labour market needs by collecting feedback from student internships, companies and members of organisations such as LINPRA and INFOBALT. This helps to ensure the curriculum remains aligned with market demands.

According to the SER, the institution integrates knowledge shared by graduates into the curriculum. For example, expertise in Amazon Web Services (hereinafter referred to as "AWS") and Cloud Computing (hereinafter referred to as "CC"), gained by a graduate who moved to Luxembourg, has been incorporated into the study content. The relevance of such programmes is also supported by national level research. A 2020 study by Invest Lithuania and the INFOBALT Association[4] highlights that while the demand for ICT professionals is growing rapidly, only 52% of ICT graduates work in the field one year after graduation. The study also notes that by 2030, the demand for ICT specialists in Lithuania is expected to grow five times faster than for other professions. Additionally, a 2016 study conducted by INFOBALT identifies the high demand for testers in the job market.

The number of enrolled students as mentioned in the SER has remained relatively stable in recent years based on the number of students enrolled in study programmes in the field of Software Engineering at Lithuanian HEIs in the period from 2020 to 2023. Therefore, the HEI continues to be the leading HEI in Lithuania in terms of student enrollment in the field of Software Engineering studies compared to numbers amongst the rest of the HEIs in Lithuania offering the same or similar programmes to Software Engineering and Software Testing.

[3] https://eimin.lrv.lt/media/viesa/saugykla/2024/5/wzspkh-PiZI.pdf
[4] https://investlithuania.com/wp-content/uploads/Nuo-abituriento-suolo-iki-karjeros-IRT-profesijose.pdf

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

The Software Engineering and Software Testing programmes reflect the HEI's commitment to providing higher education focused on practical training that is responsive to both national and international market demands. They contribute to Lithuania's ongoing digital transformation and the broader development of socially responsible professionals.

HEI's strategic focus is on student centered education, ensuring that students receive personalized support and active participation in their learning journey. This approach is evident in the integration of internships and consultations, as well as regular curriculum reviews which ensure that the programmes remain up-to-date and responsive to industry needs. The emphasis on practical experience is a key strength, providing students with the skills necessary to excel in highly competitive roles.

According to the SER, the Department of Software Development manages the Software Engineering study programme within the Software Engineering field which is offered in both Lithuanian and English, as well as the short cycle study programme in Software Testing. Students are also given the opportunity to choose elective subjects in either language. To support the development of English language skills, literature and additional references in English are mandatory in each subject. Furthermore, many professional terms used in the study area have their English equivalents which are systematically incorporated into the teaching process across multiple subjects such as Structural Programming, Object-Oriented Programming, and Multifunctional Programming. Additionally, students in the Open Professional Environment (hereinafter referred to as "OPE") programme can study in English.

As a response to the recommendation to place greater emphasis on developing English language skills and to meet social partner expectations for graduates with stronger English proficiency, as indicated in SER, the HEI has made efforts to include English in the study process without making it the only language used for teaching. Specifically, the Software Engineering Study programme can be conducted in English if needed, supporting students' gradual involvement into English based learning.

These programmes are integral to the institution's goal of strengthening Lithuania's regional and international presence, helping to produce competitive professionals who are equipped to meet both local and global market demands. This aligns with the HEI's mission to offer modern, socially responsible higher education that meets European standards.

ANALYSIS AND CONCLUSION (regarding 1.1.)

The programme aims and learning outcomes of the Software Engineering and Software Testing programmes at the HEI are aligned with the needs of society and the labour market. The curriculum is developed based on company surveys, ongoing review by study committees and active feedback from industry partners, ensuring it addresses skill gaps, particularly in high-demand fields like software testing and development. The Academic Council approves changes to keep the content relevant, ensuring it aligns with the increasing demand for ICT professionals. Additionally, the programme aims and learning outcomes are closely aligned with the HEI's mission and strategic goals.

The HEI offers a flexible study process that supports both working students and those seeking international experience, with session based studies that allow students to work while studying and

lectures scheduled to accommodate different timetables. The programme is designed to cater to individual needs, offering flexible lecturers and specializations to match students' schedules. Students also have access to tools like Moodle and opportunities for international exchange, with 4 out of 12 students participating in Erasmus mobility programmes.

The HEI actively collects feedback from students through periodical surveys on the relevance and outcomes of the programmes. This feedback is essential for making ongoing improvements to course content with new technologies introduced to keep the curriculum aligned with industry trends. While some students are not highly engaged, many trust that the programme will prepare them for the labour market. During the site visit, Alumni reported their studies prepared them well for life after accomplishment of study programmes at the HEI with a particular appreciation for the strong foundation in the basics of the software engineering field.

As per additionally requested statistics after the visit on how many students evaluate their studies as very good, only 17% of graduates responded out of the total surveys sent. The HEI could explore ways to increase overall student engagement in feedback processes. The result of matching graduates‘ expectations towards the studies has decreased from 84% in 2022 to 75% in 2023 though still relevantly hard to define the real situation of both satisfaction and quality of the following study programmes by the graduates due to too low number of respondents.

During the meetings with senior management and faculty representatives, it became clear that the HEI applies a responsive and proactive approach to programme development. Graduates contribute not only by sharing insights but also by supporting teaching and helping shape specialisations. For instance, the introduction of a Machine Learning specialisation was a direct result of graduate feedback and input. Moreover, the HEI actively engages with its alumni and industry partners to adjust programme content to current trends.

The experts observed that employment outcomes for graduates are strong, with a reported 98% employment rate. The English language study programme also attracts a number of international students and has a low dropout rate. These findings suggest that the HEI’s efforts to maintain programme relevance and respond to labour market demands are effective.

However, the experts noted that while social partners are involved in curriculum development through participation in committee meetings and thesis evaluations, they were not involved in the preparation of the SER and do not participate in SER related activities.

The HEI is taking systematic and well informed steps to ensure its study programmes remain aligned with both the expectations of students and the evolving needs of the ICT sector. The institution’s close cooperation with graduates and industry, combined with curriculum updates, supports strong employability and programme quality.

The process for updating learning outcomes follows a clear quality assurance system with surveys and meetings informing necessary changes. Social partners’ expectation for a shorter than six month update timeline to respond more quickly to industry changes is challenging, as the curriculum needs to remain stable while adapting to changes, but the HEI could collaborate with employers to find a balance and meet these expectations.

To attract applicants, the HEI highlights its 98% employment rate, offers flexible study options, and hosts open days in collaboration with schools. The curriculum is continuously updated based on feedback from graduates, such as the introduction of a Machine Learning specialization.

Social partner engagement is incorporated into the development, delivery and ongoing review of study programmes through active collaboration with industry professionals, such as Accenture lecturers and other partners who deliver lessons to students. This collaboration helps to ensure the curriculum is responsive to market demands, and social partners provide valuable input in committee meetings and final thesis reviews. Though social partners have not been involved in the generation of the SER. During the on site meeting with social partners, it was confirmed that they were not directly involved in the preparation of the SER and do not participate in SER related activities. However, they are actively engaged through participation in Committee meetings, where they contribute to discussions related to programme development and improvement.

The HEI evaluates whether internships and practical components of the programme align with current labour market demands by setting special requirements for internship reports and establishing third party agreements between the student, company, and HEI as a usual practice amongst other HEIs.

To strengthen students' English skills and meet the expectations of social partners, the HEI has taken steps to include more English in the study process as per recommendations from the previous external evaluation. During the site visit, it was confirmed that the English language study programme is functioning, though it currently has relatively few students enrolled. However, the programme demonstrates low dropout rates, suggesting strong engagement and academic support for those who do participate.

While the existing measures contribute to English language development, the HEI could consider introducing mandatory courses taught fully in English within the evaluated programmes. This would provide more structured exposure and help strengthen students' academic and professional English, aligning more closely with the expectations of social partners.

HEI's Software Engineering and Software Testing programmes are well-aligned with industry needs and the active involvement of social partners ensures students are prepared for industry challenges. However, the increasing international opportunities for students and lecturers would further enhance the programmes' responsiveness to market changes.

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

The programme "Software Engineering" as a first cycle programme complies with the legal requirements: the total workload is 210 ECTS, 174 ECTS (minimum required is 120) are allocated to learning outcomes of the study field, 1853 hours - corresponding to one third of the credits - are dedicated to practice based learning. 36 ECTS (minimum required 30) are allocated to internships, 15 ECTS (minimum required 9) are credits for the final thesis,with 55% there are sufficiently many contact hours, and more than 30% of the workload is allocated to independent student work.

Also the short cycle programme "Software Testing" complies with the legal requirements: the total workload is 120 ECTS, 80 ECTS (minimum required is 50) are allocated to learning outcomes of the study field, 1698 hours are allocated to internships, there are 56% contact hours, and 44% of the workload is allocated to independent student work.

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

Within the Software Engineering Study area, two study programmes are offered: Software Engineering (first-cycle, from 2017) and Software Testing (short-cycle, from 2023). The aim of the Software Engineering Study Programme is to educate creative, communicative professionals capable of designing, developing, implementing, evaluating, and improving software. The aim of the Software Testing Study Programme is to prepare software testers capable of independently and in teams testing various software manually and automatically.

Learning outcomes of both study programmes are defined in the SER. They are divided into the following categories: knowledge and its application, research skills, special skills (e.g. ability to prepare documentation to deploy or use software product or service), social skills and personal skills.The results of the study programme (learning outcomes) are adequate for the professional bachelor's degree and professional qualification and comply with the aim and objectives of the study program on the first cycle and short cycle both. The SER is showing the narrow link between aim of the study subject, the expected outcomes of the study subject, their relation to the programme outcomes, the required preparation, the scope of contact and individual work of students, the main topics of the study subject, the methods of the study subject, the methods of assessing the students' achievements, and the criteria for assessment.

1.2.3 Curriculum ensures consistent development of student competences

There is the HEI’s strategy for 2021 to 2025 aims to implement vocational higher education studies and lifelong learning that meet the needs of the Lithuanian and international labour markets. Also the aim is to ensure the internationalisation of studies and creating a modern learning environment. The SER indicates the consistency of the results of studying software engineering in the study program with the study outcomes of the program's subjects, study and assessment methods for individual subjects.

According to the SER the HEI supports student participation in research, but during the interview was revealed that interest from students is low.

There is also support for students to take part in internships and lectures provided by company representatives. This allows students to develop additional competencies (contact with technologies, communication ability, understanding backgrounds of real software developing, analytical skills).

All recommendations from the previous evaluation of the Software Engineering programme (some Programme study outcomes are overly general or too narrowly focused, review the timing (semester) of some subjects, greater emphasis on developing English language skills, the hours of practical work provided in the programme, conducted in companies, and the hours of contact and independent work, descriptions of some study subjects are refined by reviewing recommended literature lists or assessment proportions of study outcomes) was in process of solving. The document 'Description of the Procedure for Internal Quality Assurance of Study Areas of Vilniaus Kolegija' has been published. The document 'DESCRIPTION OF THE GROUP OF STUDIES IN INFORMATION SCIENCES' was approved (December 2022). The Software Engineering Study Programme is conducted in English if there is a need to improve the English language skills.

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

The procedures for individualising study plans are defined in the official description approved by the Academic Council, serving as a foundation for ensuring and improving study quality, while outlining the rights and obligations of students in accordance with national law and the institution's statutes.

The Software Engineering program offers specialisations in the area Database Systems, Internet Technologies and Smart Device Programming. Students have to choose one of these three specialisations. According to the SER, students may additionally personalise their study by choosing to study subjects from a choice of general collegiate subjects, free electives or alternative electives. Starting from the 2022–2023 academic year, third-year Software Engineering students can choose two 3-credit elective subjects in the 5th and 6th semesters via the academic information system, with options including technical and interdisciplinary topics, and the list of electives is updated annually by the Study Programme Committee. From 2025–2026, students will also be able to select subjects from the HEI's broader OPE list, designed to enhance personal, social, or research skills without requiring special preparation. The topics include e.g. Health and Physical Activity, 3D Graphics, Python Programming Language, Face Recognition, Big Data Analytics and Visualisation, Computer Game Development, Programming Language Csharp, Programming Language Java, Internet of Body Sensors.

Second-year Software Testing students can choose two 3-credit elective subjects in the third semester, with options including 3D Graphics, Fundamentals of Artificial Intelligence, Operational Data Analytics, and Testing with Python or Java Programming Languages. No specialisation is available in the Software Testing programme.

The SER does not mention options relating to this section for working students to create an individual study plan or how study plans are designed for students with disabilities.

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

According to the SER, the final assessment within the Software Engineering programme is the final thesis. In the seventh semester of the fourth year, programme graduates develop a Final Project for organizations where they carry out their professional and/or final practice. The project focuses on a relevant topic aligned with the graduate’s chosen specialisation within the programme.

Besides, there is the possibility to perform final theses under the order of companies. Such theses make up to 20% in 2020/2021, 17.02% in 2021/2022, 34.78% in 2022/2023, and 26.15% in 2023/2024.

The SER lists the topics of final theses in the assessment period.

The final assessment of the Software Testing study is the applied project. First graduates of this program are expected for the 2024/2025 academic year. The SER does not mention additional details.

ANALYSIS AND CONCLUSION (regarding 1.2.)

Both programmes that are offered in the study field comply with the legal regulations.

Basically, the programmes offer students possibilities to personalise their study according to their needs. Within the Software Engineering program individualization mostly happens by choosing a

specialisation area. The Software Testing programme does not offer specialisations. Students of both programmes may study subjects (modules) in other study programmes. According to the students interviewed during the site visit, individualising a study seems to be easy at the HEI. Courses are taught in English as well as Lithuanian language, however not many students attend courses in English language. There already was a recommendation during the last external evaluation to put a greater emphasis on developing English language skills to meet the expectations of social partners.

The SER additionally mentions individualisation by “Changing of study programme” or “Recognising competences” as an opportunity to personalise studies in the field of study programmes. However, for students it is always possible to change the study programme or quit studying. This is not a possibility to personalise a curriculum within an ongoing study. Thus according to the indicator under evaluation, “Changing of a study programme” is not an appropriate method to personalise their studies in the programmes Software Testing or Software Engineering. “Recognising competences” is a basic right of students according to the formal process of recognition of foreign qualifications or competences. Thus, this can not be considered as a suitable method to personalise the structure of the programme of studies. Suitable methods are e.g. the possibility to choose specialisation, study foreign languages, free electives subjects, etc.

The HEI supports student participation in research, but interest from students is rather low. There are no credits for research activities for students.

The principles of final thesis preparation, committee formation and defence are publicly described. Indications on final theses commissioned by the social partners of the HEI are given. Final theses are prepared both by order of companies and on topics relevant to business and sustainable development. The topics of the final theses are conformant to the field studies. Thus, the final theses of the Software Engineering program seem to comply with the requirements for the field and cycle.

No analysis can be given on the applied project of the Software Testing program, since no graduates finished within the evaluation period, yet.

Present and/or upcoming Artificial Intelligence (hereinafter referred to as "AI") tools, however, form a great challenge in education with respect to the current assessment methods. While it is quite easy for students to generate a lot of (written) content, assessment done by teachers becomes tricky. The HEI needs to cope with this upcoming challenge and support teachers as well as students. The currently available plagiarism checker Turnitin does not seem to be effective with respect to AI generated content. For the moment, students at the HEI seem to be afraid to use AI and are of the opinion that teachers will find out whether AI tools are used or not.

All recommendations from the previous evaluation of the Software Engineering programme were addressed. The SER lists the following recommendations for the Software Testing programme as “Pending”: “Clarify the purpose of the study programme, the expected outcomes, and the connections between the skills developed in the study programme and study subjects.”; “Review and update the study programme grid (or course descriptions), to ensure consistency between subjects and competences taught”. The expert panel has not been able to clarify the “Pending” status.

AREA 1: CONCLUSIONS

AREA 1	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements,	Good - 3 Meets the requirements, but there are	Very good - 4 Very well nationally and	Exceptional - 5 Exceptionally well nationally

		but there are substantial shortcomings to be eliminated	shortcomings to be eliminated	internationally without any shortcomings	and internationally without any shortcomings
Short cycle			X		
First cycle				X	

COMMENDATIONS

1. The study process is student-oriented. Students are provided with opportunities to individualise the study process, receive consultations.
2. The Software Engineering and Software Testing programmes are aligned with the growing demand for ICT professionals, curriculum is updated and it meets the market trends.
3. The HEI actively collaborates with social partners in the development, delivery and review of study programmes. Social partners also participate in thesis reviews and provide lectures to students.

RECOMMENDATIONS

To address shortcomings

1. Recommendations for the Software Testing program have been given during the last external evaluation, which have to be addressed. Currently, the SER states them as “Pending” for this evaluation area because the Software Testing study programme was newly launched, and students had not yet completed a full academic year which makes it difficult to determine the effectiveness of the implementation of the recommendations.
2. Challenges regarding internship availability, especially in Software Testing, have been noted. The HEI is encouraged to expand its internship opportunities, negotiating earlier with companies to provide more placements, particularly in high-demand fields.
3. It is recommended to further expand international opportunities for both students and lecturers, as this would enhance the programme’s responsiveness to market needs.

For further improvement

1. The HEI could explore ways to increase overall student engagement in surveys and feedback processes.
2. Strengthen alumni feedback integration - systematically involve them into the shaping of curriculum.
3. The HEI could teach some courses within the evaluated programmes in the English language on a mandatory basis to gently force students into improving their language skills.
4. The HEI should collaborate closely with social partners to find a balance between maintaining curriculum stability and meeting the expectation for a shorter curriculum update timeline to adapt to industry changes.

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

According to the SER, the HEI adheres to the Law on Science and Studies of the Republic of Lithuania, the HEI 's Statute, and the HEI 's strategy objective of developing applied scientific research relevant to the world, experimental development, and the impact of professional arts.

Within the evaluation period, the HEI has launched supporting measures to provide high quality Research & Development (R&D), such as joining the Coalition of the Alliance of Research Assessments, formalising scientific/artistic research groups and providing guidelines, regulating the HEI's research ethics compliance or periodic training sessions to familiarise researchers with the "Horison Europe" programme.

Students are taught by lectures working in the three research areas Computer Engineering, Computer Science, Electrical and Electronic Engineering. R&D teams are formed, based on the nature of the project. Lecturers in the area of Software Engineering authored 25 publications over a period of three years. The SER highlights key themes such as data analytics in cybersecurity, information and robotic systems, the use of digital tools in education (including distance learning), and enhancing study opportunities and quality for students with disabilities.

According to the SER, R&D activities (e.g. publication and dissemination) are considered within the workload planning of professors (not less than 33 % of total workload), lecturers and assistants (10% of total workload).

Starting from 2024, a new procedure for newly recruited lecturers has been established: A lecturer holding the position of professor/associate professor/assistant professor is allocated 582 hours per year for R&D activities, while a lecturer holding the position of junior assistant is allocated 506 hours per year for R&D activities. The position of lecturer/senior lecturer/professor does not include R&D activities.

From 2028, studies will be linked directly to their applied R&D activities. The R&D activities of the HEI will be evaluated based on their quality, economic and social impact, and future potential, with the assessment conducted by the Lithuanian Research Council and supported by independent international experts.

R&D funding at the HEI is allocated by the Ministry of Education, Science and Sport of Lithuania based on annual R&D performance, following Order No V-1593. Project activities and educational services, each accounting for 45 % of the total funds, are assessed by both the Ministry and the Lithuanian Research Council, with funds distributed according to the applied science activities planned by the faculties.

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

Students are taught by lecturers who work in three research areas: Computer Engineering, Informatics, Electrical and Electronics Engineering. The lecturers in the area of Software Engineering Studies have written 25 scientific publications (list of publications is provided in the SER annex) and the HEI encourages integration of research and applied science activities into studies. The research topics of lecturers' scientific research correspond to contemporary global research trends and align with the content of the Programmes, reflecting the latest trends in science and technology development. Conducting scientific research positively impacts the quality of teaching and enables the updating and supplementation of study content with the latest scientific achievements.

The level of technical equipment used in teaching corresponds to the industrial level in the field of enterprise systems and networks.

Interviews with school representatives revealed that the school supports student involvement in scientific research, however, student involvement in research activities is low.

During the interview, it was presented that business partners and graduates are interested in cooperation and receiving students for applied research during their internship and preparation of final theses. This allows students access to the latest technologies in the IT field.

The links between science and study are greatly influenced by the internationalization aspect of the curriculum. Involvement in international research is related to the confidence of lecturers to present their research at international events and to lecture courses in a foreign language at the faculty and abroad. The involvement of teaching staff in Erasmus mobility is active.

Alumni and social partners during the interview emphasized that the study programme reflects the needs from practice and diploma theses have practical focus. As an improvement they recommend stronger focus on soft skills and integrate advanced approaches in management of programming (e.g. using GitHub has been mentioned).

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

The opportunities for students to get in contact with, respectively engage in, research activities are based on a number of approaches. Lecturers that are active in research also integrate results from their research projects in their course. In some cases, students have been integrated as programmers or as test persons for usability tests in the context of research projects and practical projects with industry partners. Some lecturers (successfully) encourage their students to participate in writing scientific articles, usually as co-authors. In the years 2022 and 2023, 8 papers have been co-authored with students and published in the context of International student conferences. Given that more than 200 students have been enrolled in that period, the percentage of participating students is less than 5%.

Recently, a dedicated society, the “Student Scientific Society” has been founded to coordinate scientific activities of students and provide good opportunities to showcase their potential in the context of applied scientific work.

ANALYSIS AND CONCLUSION (regarding 2.1.)

The SER is missing additional statistical data on R&D activities (e.g. number of conferences, how many percent of students participate in R&D activities, analysis of results of the last 3 years of the

annual evaluation of HEIs' R&D and art activities and results of the last comparative expert evaluation of R&D activities of universities). Besides, numbers on financial viability regarding the amount of funding are missing. Neither, the SER analysis cooperations with external partners in carrying out research related to the field of study. Besides, the description of workload on R&D is not consistent, since it is mentioned that the workload of a "lecturer/professor" does not include R&D activities. It is not clear from the SER, how the HEI plans to promote international R&D activities or to carry out joint projects.

Discussions during the site visit highlighted several key points: Currently, R&D funding is provided by the Science Council and the Ministry. Lecturer workload planning, including R&D activities, is conducted annually. Invitations to participate in R&D projects are distributed via email, but student engagement remains low. Starting in 2028, student participation in certain research projects will become mandatory, with opportunities to earn credits through elective subjects linked to research involvement. Social or external partners currently appear to have limited involvement in R&D activities.

In principle, opportunities for students to get in touch with research activities exist. There seem to be a number of lecturers who are actively participating and/or managing research projects and applied/practical projects with industry partners. In these cases, students regularly are integrated in such projects and results are integrated in the teaching of such lecturers. Some lecturers also encourage their students to participate in scientific writing as co-authors of papers to be presented in the context of international student conferences. Although these activities allow interested students to get involved in research, not all (former) students report that they did have contact with scientific or practical research.

A dedicated "Student Scientific Society" has been founded in order to coordinate such activities and in order to bring scientific potential of students into life. However, apparently this society is not yet well-known to the students.

All recommendations from the previous evaluation of the Software Engineering programme were addressed.

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. The idea of a dedicated "Student Scientific Society" appears to be attractive and could be a useful way to coordinate student´s research activities, improve the visibility of such activities, and consequently contribute to the popularity of engaging in research among the students.

RECOMMENDATIONS

To address shortcomings

1. The percentage of students actively involved in research activities seems to be lower than 5%. Attention should be paid to opportunities to increase this participation rate.
2. Social and external partners should be included in R&D activities and cooperations shall be established to carry out scientific work
3. International R&D activities should be started.

For further improvement

1. The before-mentioned “Students Scientific Society” seems not to be known very well by the students. Communication to make this society more visible to the students and to inform them about the potential therein may be increased/improved.
2. More lecturers might become active in research projects. This would also increase the number of opportunities for students to get involved in scientific activities.
3. Pay more attention to integrating advanced approaches in programming management (such as GitHub).

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

Admission to the area study programmes is carried out in accordance with the student admission rules approved by the Academic Council of the HEI. The admission process is conducted through the national Lithuanian higher education admission system LAMA BPO, which ensures transparency and accessibility. Admission requirements, including the minimum competitive score and relevant subject lists, are publicly announced on the HEI's website. The competitive score is calculated based on secondary education achievements, state maturity examination results, and additional points for accomplishments such as Olympiads, vocational training distinctions, or voluntary activities.

Student first year dropout rates for the software engineering field in 2021 are alarmingly high, reaching 50.9%. However, in 2023 this number has decreased significantly to 23.73%, indicating an improvement of the situation.

For the short cycle software testing programme the situation remains stable, maintaining the dropout rate at 0.51% in 2021 and 2023.

The total number of admissions across all programmes fluctuated, with 125 in 2020, dropping to 91 in 2021, and rising again to 110 in 2023. The majority of admitted students secured state-funded (SF) places, indicating high academic performance. Missing data includes detailed breakdowns for part-time or non-state-funded admissions beyond the totals provided.

Competitive scores for admitted students remained relatively stable from 2020 to 2023. The highest score for Program Systems decreased slightly from 9.65 in 2020 to 8.14 in 2023, while the average score ranged between 5.5 and 5.7. The Software Testing programme had a lower highest score of 5.99 and an average of 5.61 in its inaugural year.

Student enrollment in the area programmes peaked in 2020 with 433 students and stabilized around 390 in subsequent years. The Program Systems programme saw a decline from 392 students in 2020 to 332 in 2023, while the Application systems (English) programme fluctuated between 37 and 61 students. The Software Testing programme enrolled 5 students in 2023.

A notable proportion of admitted students achieved high scores (86-100) in at least one state examination, with 32 in 2021 and 2022, and 36 in 2023, demonstrating strong academic readiness. No data is provided for 2020 or for other programmes besides Program Systems in this category.

The admission system is designed to be fair and transparent, incorporating academic performance, additional achievements, and public reporting. However, detailed application statistics for part-time or non-state-funded modes, as well as data beyond 2023, are not included. Overall, the process reflects a competitive yet stable environment for prospective students in the area study programmes.

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

According to the SER, the evaluation and recognition of foreign qualifications and non-formal learning at the higher education institution (HEI) are managed by a designated Study Service employee. The procedures for assessing foreign qualifications are outlined in the Academic Council

resolution No. ATN-5 from June 2021. Non-formal and informal learning recognition is governed by the Procedures for the Assessment and Recognition of Non-formal and Informal Learning Achievements, adopted in December 2019. Candidates must have at least secondary education and three years of relevant work experience to participate in this process.

During the reporting period, there were no applications for recognition of foreign qualifications in the Software Engineering area. Up to 75% of the study program's subjects can be credited, excluding the final thesis.

ANALYSIS AND CONCLUSION (regarding 3.1.)

These results highlight an improving situation in regards to student dropout and some established procedures regarding recognition.

Admission trends from 2020-2023 show declining interest in core IT programmes like Program Systems (first-choice applicants fell from 146 to 101) despite stable academic standards (average scores 5.5-5.7), while the English-language Application Systems program struggled with low first-choice applicants (4-10 annually). The new 2023 Software Testing program saw minimal uptake (6 admissions from 9 applicants), reflecting poor awareness of vocational IT pathways. State-funded places dominated admissions, indicating strong performance among enrolled students, but demographic decline and competition from other fields threaten future enrollment sustainability across all programmes.

In regards to student dropout, even though the rate is decreasing, it is clear that the students are not well informed about what is expected from them upon enrolment in the software engineering study programme.

The process for recognition is present in this institution. The central office is responsible for questions regarding subject recognition for both: the ECTS credits gained during the mobility and from previous formal education. Some information regarding recognition was found and analyzed in the HEI website:

Neformaliojo švietimo ir savišvietos būdu įgytų kompetencijų vertinimas ir pripažinimas – VIKO

The general process is well described on the website, however it appears to be lacking transparency on a case-by-case basis. The subject recognition of prior learning is a paid process that costs 40 eur for application and a fee of 19.5 eur for 1 ECTS credit recognised. This fee is a significant cost, because if we consider 30 ECTS per semester, recognising 1 full semester’s worth of ECTS credits would amount to 40 + 19.5*30 = 625 (eur).

The recognition process is present in the institution, however it can become expensive and more transparency is needed due to the lack of use. It is unclear if students are informed about this process.

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

FACTUAL SITUATION

3.2.1. Opportunities for student academic mobility are ensured

The institution provides many opportunities for student academic mobility. They can study abroad and participate in various internships. Students participating in academic mobility can receive scholarships that help students to take these opportunities. During the site visit, 4 students have participated in the Erasmus academic mobility previously. All students have reported positive experiences. Students have also reported the application process as clear and transparent. They were well informed about the steps in the mobility process and have not pointed out any significant shortcomings.

Outgoing mobility remains limited (7 Software Engineering students participated in Erasmus+ from 2020-2024), while incoming numbers grew significantly - from 3 students in 2020/2021 to 14 in 2022/2023, primarily from India (7), Turkey (2), and Georgia (2). Mobility opportunities are promoted through multiple channels including international events, social media, and seminars featuring returned participants. The institution organizes cultural activities and provides structured feedback mechanisms, including post-mobility EU questionnaires. While participation numbers remain modest, the 50% increase in incoming students and stable outreach efforts demonstrate growing international engagement. Support services include dedicated coordinators and pre-departure guidance, though specific data on Erasmus+ internships could not be found. The HEI's focus on expanding mobility is evident through its participation in international projects and study weeks alongside traditional exchange programmes.

The HEI's student mobility data provided in the SER from 2020-2024 reveals gradual but consistent growth in international exchange participation. Outgoing mobility remains modest but shows steady improvement, increasing from just 1 student (0.23%) in 2020-2021 to 3 students (0.76%) in 2023-2024. Incoming mobility demonstrates more significant expansion, with the proportion of international students rising sharply from 0.69% (3 students) to 4.33% (17 students) over the same period. This growth trajectory is particularly notable in 2022-2023 when incoming students jumped to 3.57% (14 students), suggesting successful international recruitment efforts. While absolute numbers remain relatively small, the consistent annual increases in both incoming and outgoing participation indicate the institution's growing international engagement and the effectiveness of its mobility promotion strategies

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

The HEI provides comprehensive academic support to students through multiple channels. The Study Department staff offer guidance on study processes, schedules, and administrative matters, while lecturers provide scheduled in-person and distance consultations. First-year students receive orientation during introductory week, including information about study systems and digital resources, with academic groups assigned tutors for ongoing support. The library assists with research skills, including database navigation and citation methods. Since 2023, the institution has implemented attendance monitoring, with follow-up support for absent students. Career services include individual counseling for job preparation and internship searches, complemented by informational seminars on study programmes and mobility opportunities.

Financial support mechanisms are structured according to national regulations, encompassing merit-based scholarships (170230 EUR awarded from 2020-2023), social allowances, and targeted aid for students with disabilities (2982.11 EUR disbursed). Special provisions include tuition installment plans, fee reductions for academic achievers, and state-supported loans (utilized by 33 students for tuition and 4 for living expenses) for state non-funded positions. International students of Lithuanian descent qualify for specific scholarships, with one recipient in the reporting period. Corporate

partnerships, such as with Teltonika EMS, provide additional scholarships (300 EUR each for four first-year students).

Psychological support is available through free counseling services, actively promoted via institutional communication channels. Student representation is very limited, with 13 Software Engineering students participating in governance bodies during the review period. The Student Representation advocates for student interests in academic quality, housing conditions, and scholarship allocations, while organizing surveys and events. Extracurricular development is encouraged through subsidized sports, cultural activities, and affordable dormitory accommodations for non-local students.

Social integration is facilitated through peer networks, with senior students mentoring newcomers, and institutional events fostering community engagement. While no one-time social allowances were granted during the reporting period, the established framework allows for emergency financial assistance in cases of severe hardship. Social support for students is also provided by accommodating all students who request a dormitory. The combination of structured academic guidance, multifaceted financial aid, and personal support systems demonstrates the institution's commitment to student welfare across all phases of the educational journey. Students are eligible to receive grants for their academic achievements and for participation in academic mobility. The motivational scholarships consist of 1.5 BSI and 3 BSI (1 BSI as of 2025 is 70 EUR).

There are 4 students with disabilities in the HEI. Students are able to contact a psychologist for their needs. Although there are not many students with disabilities, the facilities are accommodated for wheelchair access and considering the strong informal culture in the HEI, the teaching staff is able to accommodate students with vision and hearing disabilities.

3.2.3. Higher education information and student counselling are sufficient

Higher education information and student counseling at the HEI are relatively well-structured and accessible. Accepted students in the Programme Systems receive comprehensive orientation in early September, including informational seminars organized by the Study Department. These sessions feature presentations from administrative staff, department heads, lecturers, and Student Representation, covering study programmes, subject requirements, and career prospects. Alumni and employers are also invited to share insights, ensuring students understand both academic expectations and industry relevance.

Academic support is reinforced through multiple channels. Lecturers provide scheduled consultations in departments, while digital platforms like MS Teams and Moodle facilitate remote guidance. Key information, including study processes and social activities, is published on the faculty website and compiled in the Student Handbook for easy reference.

The HEI prioritizes continuous improvement through regular feedback mechanisms. End-of-subject surveys evaluate teaching quality, with results reviewed by instructors and discussed in department meetings to implement enhancements. Final-year students complete program-level surveys, the aggregated results of which are publicly shared.

During the site visit, it was mentioned that tools to provide feedback regarding the study quality include Google Forms at the end of the semester and direct spoken feedback.

In summary, the HEI has basic information regarding student counseling and about its study programmes.

ANALYSIS AND CONCLUSION (regarding 3.2.)

The recognition of the prior learning system, while formally established, presents significant financial barriers (625 EUR for 30 ECTS recognition) that likely deter utilization. The absence of applications for foreign qualification recognition in Software Engineering, coupled with limited transparency in individual case processing, suggests this resource remains underdeveloped and underpromoted to students.

Student support systems are structurally comprehensive but exhibit implementation gaps. While psychological services, financial aid (170230 EUR in scholarships), and disability accommodations exist, the site visit revealed students' unawareness of complaint procedures. Feedback mechanisms rely excessively on informal channels, with no evidence of systematic analysis or action on collected survey data. Limited student representation (13 Software Engineering students in governance) further restricts participatory improvement.

Academic mobility shows positive but limited growth. Outgoing participation increased from 0.23% (1 student) in 2020-2021 to 0.76% (3 students) in 2023-2024, while incoming students grew more substantially from 0.69% to 4.33% in the same period. This imbalance indicates stronger recruitment than outbound promotion efforts. The SER-reported positive experiences of 4 mobility participants confirm process effectiveness, but minimal participation (7 total Erasmus+ participants in 2020-2024) suggests either low student awareness or persistent barriers to engagement.

Moving forward, the institution must focus on bridging these implementation gaps through targeted communication strategies, streamlined processes, and demonstrated responsiveness to student needs. Priorities should include making support services more accessible and visible to students, reducing financial barriers to recognition of prior learning, and actively promoting international mobility opportunities. By strengthening these areas, the institution can better serve its student population and ensure that well-designed policies translate into tangible benefits for all learners. The foundations for excellence are present, but require more consistent execution to achieve their full potential.

No recommendations have been given in the previous evaluation of the Software Engineering programme. The SER lists the following recommendations for the Software Testing programme as “Pending”: “Ensure the possibility for students who have completed vocational schools or have practical experience to credit at least part of the study subjects.”; “Ensure student exchange opportunities”. According to the HEI, this is because students enrolled in the Software Testing study programme had not yet completed a full academic year.

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
Short cycle			X		
First cycle			X		

COMMENDATIONS

1. Informal student-teacher communication is encouraged and students are able to resolve conflicts on a student-teacher level.
2. During the site visit, students report high satisfaction both: in person and according to the statistics (84%, in 2021 and 2022 and 75% in 2023) of both study programmes which is also reflected in the statistics.
3. Student housing is provided.

RECOMMENDATIONS

To address shortcomings

1. Recommendations for the Software Testing program have been given during the last external evaluation, which have to be addressed. Currently, the SER states them as “Pending” for this evaluation area because the Software Testing study programme was newly launched, and students had not yet completed a full academic year which makes it difficult to determine the effectiveness of the implementation of the recommendations.
2. Students should receive more information before enrolment in the Software Engineering study programme in regards to the expectations and requirements to further reduce the dropout rate.
3. Short cycle Software Testing program has alarmingly low acceptance rates with only 6 students in 2023.
4. The activity of the student program committee, student union and student leader institutions are not well known for students. Additional tools should be implemented to spread awareness of aforementioned student institutions to all students.
5. Recognition process is not used at all and is quite expensive which deters experienced and international students.
6. The HEI should explore additional strategies to enhance participation in the Erasmus program and international mobility opportunities with a focus on increasing international opportunities by offering more exchange programmes for both students and teachers, as the current focus is primarily on incoming students.

For further improvement

1. More tools of feedback collection should be provided for students. A few examples could include optional student-teaching staff meetings for all students, additional anonymous forms to provide feedback regarding auditoriums, teaching staff, and the general study experience.
2. Students should be encouraged to actively participate in internationalisation. There seem to be international weeks hosted at the HEI. It could be a benefit to send local students to this event to encourage international exchange by e.g. being a buddy for incoming students.

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 programmes of the Software Engineering field are carried out in the full-time study form. Depending on the programme, the implementation is flexible and allows students to choose between a full-time schedule with direct contact with teachers during weekdays or a sessional study schedule, where direct contact with lecturers takes place during sessions. The Software Engineering programme is conducted on a daytime schedule (in Lithuanian and English) and on a sessional schedule. The Software Testing programme is conducted exclusively on a daytime schedule.

HEI students have the option to study through blended or distance learning, which is governed by an official description outlining the procedures, responsibilities of teachers and students, and the requirements for preparing and certifying study modules at the HEI.

In order to achieve the intended learning outcomes, the study process at the HEI combines theoretical and practical lectures with individualised learning through a blended format, using both in-class and digital tools like Moodle and MS Teams. Students follow the study plan but can work at their own pace on methodological materials and assignments, with access to lecturer consultations. Each subject concludes with a graded final assessment—exam or project—calculated using a formula defined in the subject description. Intermediate assessments, which are mandatory and diverse in format, contribute 20–60% to the final grade. Certified methodological materials for all subjects are uploaded to Moodle to support both guided and independent learning, supplemented by additional resources in various formats and languages.

Graduates of the Software Engineering study programme can continue their studies in professional Master's programmes in IT offered by foreign higher education institutions or at Lithuanian universities. Graduates of the Software Testing study programme can continue their studies in the Software Engineering study programme (at HEI or another Lithuanian HEI).

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

As outlined in the SER, the procedure for individualizing the study process for students with disabilities or learning difficulties is outlined in the "Description of the Organisation of the Individualised Study Process." This document provides a framework for addressing individual needs.

Students from socially vulnerable groups and those with special needs can seek consultations on study accessibility at the Faculty Study Department. To initiate the individualization process, students must submit an application along with documentation from relevant institutions within two weeks of the semester's start. Faculty staff then inform lecturers and involved personnel each semester about the students' needs.

Lecturers are trained to enhance study accessibility through IT methods and tools. V. Judickaitė-Žukovskė and Dr. S. Kubilinskienė organize training sessions for both students and faculty. These trainings cover topics such as preparing accessible office documents and understanding the

specifics of special needs. Faculty members also participate in several Erasmus+ projects aimed at promoting digital skills and supporting students with disabilities.

In the spring semester of 2023-2024, training on creating accessible educational materials was conducted for lecturers. This initiative was led by Dr. S. Kubilinskienė and V. Judickaitė-Žukovskė. Additionally, the Faculty implements a flexible assessment system for students with special needs, ensuring that evaluation methods are tailored to their capabilities. However, there are currently 0 students with special needs reported during the assessment period.

During the site visit, there was no report of students with disabilities as well, however the facilities are accommodated for wheelchair access and considering the strong informal culture in the HEI, the teaching staff is able to accommodate students with vision and hearing disabilities.

ANALYSIS AND CONCLUSION (regarding 4.1.)

This part of the SER is written in inconsistently, translation errors (i.e. “Programme Systems”) are present and especially the beginning of section 4 is formulated in a confusing way (e.g. two paragraphs with the same content but different formulations), which makes an analysis and conclusion hard. The site visit clarified some of the indicators.

The organization of the Software Engineering programme allows a very flexible way of studying. 2 time tables for “study on a sessional study schedule” and a “full-time-study” exist and according to the site visit, it is up to the teachers that students meet the standards. The Software Testing programme is only organized on a full-time schedule. The site visit revealed that communication between teachers and students is working well and students can reach their teachers. Thus, teaching/learning methods are adequate and assessment methods are transparent and encourage students to be active participants. Students’ individual work seems to be appropriate. Care has to be taken with current and future use of AI tools in teaching especially in distance learning and assessment methods.

The SER provides a very thorough view on the compatibility of the study programme outcomes of the software engineering study area with the outcomes of subjects, study and assessment methods.

The relationship between the study subjects and the Software Engineering as well as Software Testing study programme learning outcomes is analysed and described in detail.

Additionally, an analysis of the description of alignment of the study programme outcomes of both studies with the study results of the programme subjects, study and assessment methods clearly demonstrates how each course contributes to the study programme learning outcomes and how assessment is being done.

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

Monitoring of the student progress is carried out on various levels. At the lecturer's level teachers are responsible for providing feedback. At the student’s level students can follow their achievements in the academic information system. At the department’s level the head of department collects and

analyses student feedback. At the programme's level the results of professional and final practices and the assessment of final theses are analysed. At the faculty's level problematic areas are discussed and addressed by the dean.

Assessment results are published within five working days in the Academic Information System, with final assessments released the day after the examination session ends. Lecturers provide feedback on students' mistakes while ensuring compliance with academic ethics and data protection laws. A structured, criterion-based assessment system supports continuous student learning, with clear evaluation criteria and immediate feedback available through VMA Moodle.

4.2.2. Graduate employability and career are monitored

The study process at HEI for both the Software Engineering and Software Testing programmes is well structured, with clear procedures for curriculum development, assessment, and feedback, all aimed at ensuring graduate employability. The programmes are designed to meet the evolving needs of the ICT sector with a strong alignment to market demands, as demonstrated by the impressive 98% employment rate for graduates.

Graduate career outcomes are closely monitored through regular surveys and feedback from industry partners which help ensure that the skills acquired during studies match the requirements of the workforce.

Students are encouraged to seek academic support through consultations with lecturers available both on site and remotely via the "Microsoft Teams" platform, ensuring flexible and accessible communication. In addition, career related activities, such as the annual Career Days and organized company visits, further strengthen students' engagement with the industry and help them make informed decisions about their career paths. However, challenges remain in securing internship placements, particularly in specialised areas such as Software Testing. In response, the HEI is actively working to negotiate earlier with industry partners and to expand internship opportunities in high-demand fields, aiming to better align practical training with labour market needs.

The HEI actively adapts its curriculum based on market surveys, feedback from social partners, and the shifting demands of the ICT industry and social partnerships with employers. This proactive approach includes practical, industry aligned education and the use of modern tools like "VMA Moodle" and "Microsoft Teams" offer a personalized learning experience for students. Graduates consistently report that the programmes meet their expectations, providing valuable practical skills and experiences that are directly applicable to the job market, further reinforcing the HEI's commitment to enhance graduate employability.

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

At the HEI, a Code of Academic Ethics defines the principles of integrity, trust, fairness, respect, responsibility, and equality. Students sign a so-called Integrity Declaration, in which they declare to commit to the principles of academic ethics. To ensure academic integrity, HEI addresses challenges such as plagiarism or violations of the code of conduct with a strict policy that allows no more than 20 % plagiarism - only one case has been dropped for exceeding this threshold. The institution uses the "Ouriginal" plagiarism detection tool to prevent and identify plagiarism in written work.

Policies ensure that students have the right to freely express their thoughts and opinions. Procedures are in place to provide alternative assessment methods and social and material support for students with disabilities. During the reporting period, there were no violations of tolerance and non-discrimination principles.

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

Students can submit their appeals and complaints in writing to the administration. The “Appeal Regulations of Vilniáus Kolegija” govern the process for submitting appeals, the composition of the appeal commission, the examination of appeals, and the way decisions are made in the HEI. The students may appeal against results of course assessments, the assessment procedure of the final thesis, the (refusal of the) recognition of prior learning.

According to the Appeal Regulations of the HEI, appeals are submitted to the Dean of the Faculty (with the exception of appeals against decisions about the conformity of study results achieved in other HEIs, which are to be submitted to the Rector). The appeal is subsequently registered and validated. Upon receipt of a valid appeal, a 5-person Commission is established no later than 3 working days. The Appeal Commission is composed of at least one representative of the faculty´s administration, one member of the Student Representation, and teachers of the study field to which the course unit is attributed.

These procedures appear to be consistent, transparent, and well-documented. During the evaluation period, no appeals or complaints have been reported.

ANALYSIS AND CONCLUSION (regarding 4.2.)

The document structure of the SER does not comply with the structure of the evaluation areas (e.g. SER has sections 4.1-4.7 while evaluation areas are structured as 4.1.1, 4.1.2, 4.2.1, 4.2.2, 4.2.3, 4.2.4). Besides, section 4 is written in a confusing way, with translation errors (e.g. “Programme Systems”) and some arguments are presented without evidence or statistics. Some statistics (drop outs, rating of the programme by graduates) have been requested as additional documents and have been provided by the HEI after the site visit.

Monitoring of the progress of the students including their attendance of the courses is performed in a systematic way on various levels. Results are used to improve the study quality. It seems that for students attending the courses it is possible to finish the studies on time.

The statistics provided by the HEI after the site visit as well as talks during the site visit, however, show that the drop out of students in the Software Engineering program is high. The reasons for student dropout are difficult to quantify precisely but appear to stem primarily from an inability to meet the programme’s academic requirements or complete necessary applications. Contributing factors include poor attendance, unsatisfactory academic performance, employment that diminishes the perceived need for a formal qualification, and misconceptions about the skills required for employment in the IT sector. The HEI is encouraged to utilise monitoring results to implement targeted measures aimed at reducing the dropout rate.

SER mentions no cases of plagiarism in the final papers for the software engineering study program and final theses of the programme systems programme. The software testing programme (if considered in this section), however, does not have graduates, yet.

According to the statistics provided by the HEI after the visit, the overall percentage of students who responded to a survey on the satisfaction and evaluation of the software engineering study field has significantly decreased from 84% to 74%. However, it is difficult to assess the true situation, as student participation in the surveys was only 17% in 2023, compared to 24% in 2022, which is still too low for meaningful conclusions.

During the visit to the HEI, Alumni claimed, they received feedback on their performance through surveys, discussions with teachers, and evaluation marks. This feedback played a significant role in shaping their further planning of studies and guiding their academic decisions.

Feedback and improvement proposals based on graduate survey results lead to the enhancement of the programmes through committees that review the study program and implement the necessary changes to ensure its continuous improvement.

Employers regularly receive questionnaires about the professional skills and competencies of graduates. While the feedback is highly valued, the implementation of changes can take time due to bureaucratic processes. Employers are generally very satisfied with graduates' ability to learn quickly, but they have highlighted a need for stronger soft skills, particularly in communication and English language, which are in high demand. Additionally, there is a request to incorporate more focus on AI and Cloud computing into the study programmes.

Alumni and employers are involved in study committees, where their feedback is considered and, at times, acted upon. Employers, in particular, feel they have the ability to influence changes in the study programme. The practical experience provided by the HEI is highly valued, with companies expressing satisfaction with the students and their readiness to employ them. However, there is room for improvement in further enhancing cooperation between the HEI and businesses to better align the curriculum with industry needs.

In summary, feedback provided to students is crucial for self-assessment and academic planning. Alumni receive feedback through surveys, teacher discussions, and evaluation marks, which guide their future studies. The university uses feedback from alumni, students, and employers to enhance the curriculum, with committees making improvements based on survey results. Employers regularly provide feedback on graduates' competencies, emphasizing the need for stronger soft skills and a focus on emerging fields like AI and Cloud computing. This feedback helps to align the curriculum with industry needs and supports students in planning their academic progress.

The HEI has established a Code of Academic Ethics and procedures to deal with violations of that code of ethics. Students seem not to be aware of that Code of Academic Ethics as it may be desirable. Although they have to sign a declaration at the beginning of their studies, during the site visit experts gathered information that students do not appear to be well-informed about the regulations and processes. This is also true for the processes regarding submission and examination of appeals and complaints. Consequently, it is not surprising that during the evaluation period, no violations of academic ethics have been reported and no appeals or complaints have been submitted. Although in principle it may be viewed as positive that there seems to be a communication and conflict management culture that allows most issues to be solved personally, e.g. in direct communication to the responsible lecturer, a higher degree of informedness would be valuable.

All recommendations from the previous evaluation of the Software Engineering programme were addressed. The SER lists the following 3 recommendations for the Software Testing programme as “Pending”: “Define the concept of an applied project and non-overlap with professional practices.”; “Refine the descriptions of study subjects (working hours, topics, outcomes).”; “Develop the methodology for assessing study results achievement.” The expert panel has not been able to clarify the “Pending” status.

AREA 4: CONCLUSIONS

AREA 4	Unsatisfactory - 1	Satisfactory - 2	Good - 3	Very good - 4	Exceptional - 5

	Does not meet the requirements	Meets the requirements, but there are substantial shortcomings to be eliminated	Meets the requirements, but there are shortcomings to be eliminated	Very well nationally and internationally without any shortcomings	Exceptionally well nationally and internationally without any shortcomings
Short cycle			X		
First cycle			X		

COMMENDATIONS

1. The HEI effectively gathers and utilizes feedback from alumni, students, and employers through surveys, discussions with teachers and evaluation marks.
2. Alumni and employers are actively involved in study committees, where their feedback is taken into consideration and at times acted upon. Employers feel empowered to influence changes in the study programme, demonstrating effective collaboration between the HEI and industry stakeholders.
3. Employers are satisfied with the graduates' ability to learn quickly and are pleased with the practical experience as well as good basic education provided by the HEI. Companies express confidence in the graduates' readiness for employment, reflecting the effectiveness of the academic programmes.
4. The HEI offers programmes within the Software Engineering field which have an employment rate of 98%.
5. Based on the information gathered during the site visit, it was observed that the HEI effectively demonstrates how the learning outcomes of the Software Engineering study programme align with the intended outcomes of individual subjects, as well as the corresponding study and assessment methods used in practice.
6. The HEI actively collects feedback from students through periodical surveys to improve course content.

RECOMMENDATIONS

To address shortcomings

1. Recommendations for the Software Testing program have been given during the last external evaluation, which have to be addressed. Currently, the SER states them as “Pending” for this evaluation area because the Software Testing study programme was newly launched, and students had not yet completed a full academic year which makes it difficult to determine the effectiveness of the implementation of the recommendations.
2. Employers have highlighted the need for graduates to possess stronger soft skills, particularly in communication and English language.
3. Students seem not to be well-informed about formal options to submit appeals and/or complaints. Currently, informal ways to solve disagreements and conflicts are used. There seems to be a lack of transparency. Although the formal options are available on the website and the HEI representatives argue that students are informed during introductory lectures, the factual informedness of students and teachers should be improved. We encourage the

HEI and responsible staff to see complaints and appeals as a positive contribution to the conflict culture and find ways to increase the informedness of all stakeholders.

For further improvement

1. Employers have requested a greater focus on emerging areas like AI and Cloud computing in the study programmes.
2. Further strengthening cooperation between the HEI and social partners is recommended in order to align better future curriculum and ensure high employability rates as well as ensure long term collaboration.
3. The process of implementing changes based on feedback is slow due to bureaucratic processes. It is recommended to explore ways to improve this area.
4. The instruments that have been established (Code of Academic Ethics, email for reporting violations of e.g. non-discriminations, the opportunity to make an appeal, etc.) need to be made more visible to the students and the students should be actively encouraged to use them.
5. Current and future AI tools will change teaching and especially assessment. This needs to be taken into account.
6. The dropout rate is pretty high. It is advisable for the HEI to deal with this challenge in the software engineering field and use the results of the monitoring.

AREA 5: TEACHING STAFF

5.1.	Teaching staff is adequate to achieve learning outcomes

FACTUAL SITUATION

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

According to SER, in Software Development Department Courses total number of teachers in the year 2023/202 was 22 (9 of them associate professors) teaching 393 students (overall teachers/students ratio is 17.8%). 20 lecturers who have been working at the HEI at least half-time and for at least 3 years teach the subjects of the area of studies. Proportion of lecturers teaching subjects in the area of studies who have been employed at least half-time and for at least 3 years is 91 %. Average number of years of teaching experience of the lecturers teaching the subjects of the area of studies is 16 years. Number of teachers and overall teacher/student ratio have almost not changed within the last 5 years. 77% of the lecturers teaching in the area have practical experience, with an average of 12 years of practical experience. 50% of the lecturers teaching in the area have obtained a doctoral degree.

The workload of lecturers is measured in full-time equivalents (FTE). One FTE of the lecturer is 1,520 hours per year (of these 720 hours are for contact work with students). Each year, lecturers in the study programme prepare a Lecturer's Work Report, which includes a self-analysis of their activities.

New teachers are recruited to faculty positions at the HEI through a public competition, taking into account their education, practical work experience, and relevance to the subject matter of the intended teaching course. A fixed-term contract for a period of five years is signed with the successful candidate.

The replacement of teachers in the event of their sudden unavailability during the semester is not formally established.

During the interview, it was said that there is a management of funding research (commercial funding, funding from projects), publications, and translation to English.

Teachers' approach to students with disabilities is on an individual level, there is no general management for students with read/write disability.

One per year teachers have the possibility to ask for new resources in the library.

A system of evaluation of teaching by students exists, but the process of responding to potential complaints from students is not well defined and managed. There is no written response introduced, complaints are resolved individually.

All recommendations from the previous evaluation of the Software Engineering programme and the Software Testing programme (e.g. involve more practising lecture, ensuring the requirements for the practical activities of teachers, encouraging more active promotion of subject-specific, practical competences of teachers) were addressed.

ANALYSIS AND CONCLUSION (regarding 5.1.)

Based on information provided by the SER and during the interview, it is obvious that the academic staff is stable and professionally competent for teaching the assessed study program. The workload (amount of lessons per week, amount of theses led) of teachers is managed.

A process for hiring new teachers is established. The findings show that funding for projects and scientific research is being addressed.

To ensure teaching, teachers can use a library with extensive resources, which is continuously updated with an emphasis on electronic resources.

An area where there is a space for improvement is student feedback on the course of teaching. This is an important tool for continuous improvement of the pedagogical process, which should be set up appropriately (not every student complaint is relevant, teachers must be given enough opportunity to comment on comments and then assess whether and how the comments will be implemented in teaching). There is also space for improving work with students with disabilities, where the HEI successfully addresses students with mobility problems, but less space is devoted to students with specific reading and writing disorders.

It is also recommended to have backup plans ready in case of sudden indisposition of teachers (how will continuity of teaching be ensured and, in the event of a longer-term absence, other activities, such as guaranteeing subjects, etc.).

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

The HEI provides support for the internationalization of teaching (in details at HEI's webpage https://en.viko.lt/international-relations-2/staff-mobility/, social media and emails). Teachers can use Erasmus for teaching exchange to foreign universities. Information about the possibilities is available on the university and faculty website. In 2021-2022, 2 faculty members went on practices to foreign countries. One instructor visited three different locations. During 2022-2023, there were 15 visits to foreign and Lithuanian higher education institutions – 9 visits were for practices and 6 visits were for teaching purposes.

From 2021 to 2024 nine faculty members from foreign higher education institutions visited the Faculty for teaching purposes.

The HEI encourages faculty members to participate in other international events as well. in conferences, seminars, project meetings.

International weeks are organized at the HEI.

The interview revealed that only some of the teachers participated in Erasmus+ mobility.

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

The aim, objectives, principles, methods, forms, and types of competence development of HEI staff are described in 'Description of Vilniaus Kolegija Staff Competence Development Procedure' (2020). The document emphasises that each instructor has equal rights to develop competences. Teachers

are encouraged to participate in teaching visits and conferences, and are motivated to enhance qualifications in EU Structural Funds-financed projects.

Lecturers of study area subjects improved their subject-specific, didactic, and general competencies annually by participating in practices, seminars, conferences, and courses in Lithuania and abroad.

According to the SER, in the years 2020-2023 teachers take part in didactic internships at a range of 360 hours and didactic seminars at a range of 284 hours (within 3 academic years: 7, 9 and 8 teachers).

Lecturers of the study area have individual memberships in various professional networks (12 teachers, e.g. ISACA, Lithuanian Mathematical Society, Lithuanian Economics Teachers Association LEDA, VISORIAI ITP, LITNET, Computer Workers Union, and others). Membership in professional networks allows lecturers to enhance qualifications, follow current trends, and integrate them into the study process.

ANALYSIS AND CONCLUSION (regarding 5.2.)

The HEI provides support for the professional growth of teachers. When teaching subjects related to IT technologies which are developing at a rapid pace, continuous development of lecturers competences and knowledge is essential. The development of other competencies in the field of didactics of these subjects is also important.

Faculty members participate in a wide range of professional organizations and societies, which allows them to apply new knowledge and technological trends to the teaching process.

The HEI supports teachers' international mobility and lectures of teachers coming from abroad also. Awareness of the possibilities of mobility exchanges and their formal aspects is sufficient.

Due to the trend towards the internationalization of teaching, it is important to continuously support the development of the language competences of lecturers.

All recommendations from the previous evaluation of the Software Engineering programme were addressed. All recommendations from the previous evaluation of the Software Testing programme were clarified in this SER and are in ongoing process.

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
Short cycle				X	
First cycle				X	

COMMENDATIONS

1. The workload of teachers is managed
2. Stable teachers staff with sufficient additional professional competences and experiences

3. High participation of teachers in professional organizations and networks

RECOMMENDATIONS

For further improvement

1. Greater emphasis on continuous support for improving the foreign language skills (English) of lecturers
2. Establish procedure of substitutability in case of long-term or sudden absence of a teacher
3. According to the interviews, students did not try to change the grade given in a situation where they disagreed with the grade. A process for how to proceed in such a situation should be defined and published.
4. The procedure for dealing with student feedback and complaints towards the way how the subjects are taught should be clearly defined. Complaints should be recorded in a written form, the teacher should have the opportunity to comment on the complaints and then it should be evaluated whether the complaint is relevant and how to act toward it.
5. Internationalization of teaching, greater scope of teaching subjects in English and stronger support for Teachers Erasmus+ mobility and teachers visits from abroad.

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

According to the SER the Faculty has 43 classrooms (including 18 classrooms adapted for hybrid/remote lectures and 11 shared computer classrooms) and 12 laboratories equipped with specialised equipment for practical and laboratory work. For evaluated study programmes there are used CAD Lab, Game Development Lab, IoT Lab, Automatic System Lab, Computer Network and Telecommunication Lab and Computer Networking Laboratory. Laboratories equipment is up-to-date and meets the current needs for the given study program..Computer equipment is regularly upgraded (approx. 20% each year). All teachers and students have access to Office365 licence and a wide selection of software (e.g. Oracle database and developer tools, Matlab, Autocad suite, Visual Paradigm, Azure platform, Power BI and others). In cooperation with Microsoft, students and staff of the HEI have the opportunity to purchase Microsoft products like Windows operating system or Office free of charge (or at a reduced price).

During the laboratory tour, the technology demonstrated corresponded to the equipment descriptions given in the SER (workstations, usage of robots, single-board computers for IoT, sensors).

The SER notes as a strength point the ability to use software for study purposes not only in computer labs but also on personal computers.

Electronic similarity detection system Ouriginal is used to detect possible cases of plagiarism.

For students with special needs the faculty installed four lifts (one in a new building), a portable ramp for wheelchairs, adapted toilets and 3 units of adjustable keyboard trays. During the interview with faculty employees, high support for students with mobility difficulties was noted. While the procedure for students with reading and writing disorders (dyslexia, dysgraphia, and others) is not formalized and these disabilities are addressed only by agreement with teachers.

A well-funded library has a good quantity and quality of up-to-date scholarly resources (44 thousand of publications in printed form, 133 thousand units) both paper and digital, as well as good subscription and interlibrary links available to all students and faculty. The average annual allocation for library resources for the period 2021 to 2023 is 153,000 € (25 € per student). The faculty library has 42 workplaces in the reading rooms (15 computerised). The library subscribed to 40 professional periodics (35 foreign). Currently, there is an emphasis on electronic resources. There are 22 databases subscribed (20 international, 2 Lithuanian) with access to 487 thousand books, 30.6 thousand title journals (WoS 13.6 thousand, Scopus 16 thousand) and 14400 Peer Reviewed Journals from international databases like EBSCO, Wiley, Taylor & Francis, Springer. The HEI subscribes to eBook collections like Skillsoft, Academic Complete ProQuest and eBook Academic Collection (EBSCOhost). The library also offers various open access resources through HEI's virtual library. The library provides individual consultations and training on library services and resources.

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

Updates of the equipment in the laboratories, including software, is done annually. On average, about 20 % of the computer equipment is updated per year. From 2020 to 2023, 60% of IT technical equipment has been updated. Free as well as paid software is updated on a yearly basis.

The HEI realises replacing all WIFI access point devices to support dual frequencies and wider bandwidth channels and continuously consolidate WIFI access points.

The planning process includes opportunities for lecturers to express their needs in terms of teaching/laboratory resources, a corresponding form is filled out for every course every year. The faculty's procurement plan is reviewed by the Dean´s office, and subsequently submitted to the HEI´s procurement and finance department.

ANALYSIS AND CONCLUSION (regarding 6.1.)

The HEI has a sufficient capacity of lecture rooms and computer labs. Specialized laboratories are available for teaching specialized subjects (automation, IoT, robotics).

The HEI appears to be well equipped with the required resources necessary for achieving the learning outcomes of the study program. The library is equipped with extensive printed and electronic resources and spaces for students. It also has an extensive collection of subscription scientific databases. There is continuous planning and updating of resources needed to carry out the study areas. The planning process however does not appear to be very transparent and it is not clear how e.g. the needs of the students are included in the planning procedure.

The HEI is aware that rapidly changing technologies and a wide variety of specialised software used in business organisations complicate the selection and acquisition of software for the study process.

All recommendations from the previous evaluation of the Software Engineering programme (Air conditioning equipment in computer classrooms) were addressed. All recommendations from the previous evaluation of the Software Testing programme (Ensuring the sufficiency of practice bases, including close cooperation with company representatives) were clarified in this SER and are in ongoing process.

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
Short cycle				X	
First cycle				X	

COMMENDATIONS

1. Sufficient capacity of lecture rooms, computer labs and specialized laboratories.
2. The software available to students is extensive and covers teaching needs, the HEI is aware of continuous updating and expansion

3. Well-equipped and accessible library.

RECOMMENDATIONS

For further improvement

1. The HEI might consider ways to formally and explicitly include students' needs in the planning and updating process of the resources (e.g. hardware, software, other additional equipment, literature) required to carry out their studies.

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 internal quality assurance system for studies is governed by the HEI's internal documents, strategic development plans, and reports, which outline the procedures for decision-making and approval.

The Quality Manual outlines internal quality assurance processes to promote transparency, accountability, and continuous improvement across the HEI's activities, while building trust among internal and external stakeholders.

The Internal Quality Assessment Procedure defines the processes for monitoring HEI activities and preparing self-analysis, aiming to ensure the effective implementation of the Vilnius Kolegija Strategy 2021–2025, address identified shortcomings, and evaluate progress for continuous improvement in the context of higher education.

The internal quality assurance procedures for study areas establish processes for developing, implementing, evaluating, and improving study programmes in line with relevant academic requirements. These procedures apply to both planned and ongoing study programmes, as well as to external assessment, accreditation, and related follow-up or appeals. Responsibilities are clearly defined: the Director ensures overall study quality and educational standards, the Academic Council approves and oversees the quality assurance system, the Deputy Director for Studies manages quality activities, the Study Office monitors study quality, and the Study Quality Department coordinates quality assurance efforts across study areas.

The dean is responsible for the faculty's strategy, coordinates and organises academic activities, recruits teachers, promotes the development of their skills and professionalism, and is responsible for the quality of the studies conducted.

The vice dean, in collaboration with the departments managing the study programmes, the study area committee, and the study programme committees, coordinates the internal quality assurance of the study area at the faculty.

The study area and programme committees are responsible for ensuring that the study programmes align with societal and/or labour market needs. The programme committees ensure alignment between the study programme's aim, learning outcomes, and the applied teaching and assessment methods. They collaborate closely with the Direction Committee, the overseeing department, and the programme's lecturers. Their functions include proposing improvements to the Area Committee, addressing feedback from the dean, study quality coordinator, and Area Committee, holding annual discussions with teaching staff to enhance course descriptions, and drafting study programme descriptions for review. The Committee meets at least twice a year to maintain the programme's quality and development.

The Area Committee is responsible for ensuring the quality, sustainability, and continuous development of the study area in alignment with the HEI's strategic objectives. Specifically, the Finance Study Area Committee assesses the compliance of study programmes with institutional goals and academic requirements. When deficiencies are identified in a programme description, the

Committee mandates the Programme Committee to address them. It also reviews and approves the summarised conclusions from the annual quality monitoring of the study area and provides recommendations for its improvement.

The Department serves as the primary organizer and promoter of academic studies. In line with the Model Departmental Regulations, it plays a central role in managing and developing degree programmes by coordinating academic staff development, overseeing the creation of teaching and learning materials, ensuring the quality of course/module descriptions, and implementing improvement measures recommended by the Programme Committees and external assessments. The Department prepares progress and annual quality monitoring reports, submits them to the relevant study area committees, and advises the Dean on enhancing physical resources. It also conducts a range of surveys—on teaching quality, student readiness for professional practice, graduate competencies, and employer needs—according to the Study Quality Improvement Procedure, and publishes summary results on the Faculty website. Additionally, the Department may propose content updates for study programmes to the curriculum committees.

The quality of the HEI's study areas is maintained through continuous internal quality monitoring, ensuring compliance with established standards and enabling timely responses to identified issues. These quality assurance procedures and responsibilities are defined in the HEI's official internal quality assurance guidelines. At the end of each academic year, Study Area Committees review annual monitoring reports prepared by departments, along with feedback from Programme Committees and social stakeholders, to approve summarised conclusions and propose improvement recommendations. These are presented to faculty councils, while Curriculum Committee meetings at the start of the academic year are used to plan specific actions for enhancing study programme quality.

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

The involvement of students, lecturers, social partners, and alumni in HEI's internal quality assurance processes is well structured and integral to the continuous improvement of study programmes. Feedback is collected through diverse channels, including Programme Study Committees, Faculty Council, round table discussions and regular surveys, ensuring that multiple perspectives are integrated into decision making processes. This inclusive approach enhances the relevance and responsiveness of quality assurance mechanisms.

Students are actively engaged in governance, serving on committees, participating in accreditation processes and providing feedback on their educational experiences. This involvement enables students to contribute to the change and improvement of the programmes. Lecturers play a vital role by updating course content and participating in academic and quality assurance activities, while also contributing to the continuous refinement of the curriculum through research, conferences and development meetings.

Social partners are essential in aligning study programmes with industry needs. Their involvement in curriculum development, internship placements, and final project evaluations offers valuable insights into students' readiness for the workforce. Strategic partnerships with companies like TELTONIKA IoT GROUP UAB, Accenture Lithuania, UAB Blue Bridge Code and UAB Getweb and others further strengthen this connection offering students exposure to industry practices, technologies and career opportunities.

Despite close collaboration, social partners were not involved or somehow engaged in the generation of the SER and have no possibility to participate in R&D activities within the HEI as confirmed during

the on-site visit. 25–30% of students gain employment following their internships which is a strong outcome, though short-term internship options are not addressed that would give more flexibility and strengthen graduates' transition from education to employment.

Employers, who are regularly invited to participate in guest lectures and thesis committees, also provide feedback through surveys on the readiness of students. Their input ensures that the programmes meet industry expectations and adequately prepare graduates for professional careers. This collaboration has earned HEI's programmes recognition for aligning with current market trends, with the Programme Systems study programme being ranked among the top in the field of Application Systems.

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

Mandatory publication of information on the activities of the HEI is described in the procedure for public communication on quality issues.

The HEI publishes information regarding its study programmes (objectives and learning outcomes of the programmes, the scope, subjects of study and career opportunities, studies and their organisation, assessment) and student counseling on websites such as the HEI's website and the faculty's website or websites used by the Association of Lithuania's Higher Education Schools.

The HEI's internal academic information system (AIS) gathers all the information related to the study's programme goals and results, descriptions of subjects, assessments of students' knowledge, etc. Feedback from graduates and employers about programmes is published on the HEI's website. Feedback of students is collected at the end of the semester using tools including Google Forms. Students are mostly informed about these tools and more information can be found on either www.viko.lt or the institution intranet.

The HEI publishes the conclusions of external assessments of study areas, the progress reports on the implementation of the resulting recommendations and graduate and employer feedback on study programmes on the HEI's website.

Social media platforms, such as Facebook and Instagram, are used to share the views of social stakeholders on the Programme, highlight career opportunities, and showcase individual success stories.

Suggestions for improving the study programme may come from various sources within the academic community, including departments that gather insights through surveys, discussions with social partners, and student roundtables, as well as lecturers who identify the need for changes due to legislative updates, shifts in course scope, or adjustments to the study plan. Programme and Curriculum Committees may propose revisions based on emerging circumstances or identified shortcomings, while deans or vice-deans may initiate improvements in response to organisational or content-related issues. Student representatives also play a role by submitting proposals. These suggestions are reviewed by the Programme Committee, which prepares a submission for the Area Committee. The Area Committee, in turn, forwards a proposal to the Dean. Depending on the extent and nature of the changes, the updates are approved either by the Dean, through a Director's order, or by resolution of the Academic Council.

7.1.4. Student feedback is collected and analysed

By regularly gathering verbal feedback and providing opportunities for students to engage with faculty and administration, the institution promotes a culture of open communication and continual refinement. Student feedback is actively collected and published on the HEI's website, with surveys conducted to assess the quality of studies and teaching. At the end of each semester, first to third-year students participate in surveys that evaluate lecture effectiveness, teacher support, and communication. Surveys are conducted anonymously through the LimeSurvey platform. Results indicate that students feel lectures are well-structured, with clear assessment criteria and respectful interactions. Attendance rates for the program range from 75% to 100%. Additionally, evaluations of professional practice highlight positive relationships with supervisors and effective communication regarding assessment.

Final-year students also provide feedback on their study programmes, with about 53% already employed in their field during the 2022-2023 academic year. Most students express satisfaction with their studies, noting that the skills acquired are relevant to the job market. Graduates report high-quality education with practical experience, and six months post-graduation, 67% are employed in roles related to their studies. Graduates suggest more focus on cloud technologies and current programming languages in the curriculum to enhance their readiness for the job market.

ANALYSIS AND CONCLUSION (regarding 7.1.)

The HEI’s internal quality assurance system is described well and seems to be effective. All required information is published. According to the site visit, students have sufficient information related to their studies and lecturers are aware of the internal quality assurance system.

HEI’s study programmes are aligned with current market needs, and the institution actively seeks feedback to ensure continuous improvement. Employers and social partners regularly contribute as guest lecturers, participate in exam evaluations, and serve on thesis committees. Companies like Teltonika contribute to teaching subjects such as sales, electronics, and C# programming, while employers offer internships, mostly to third-year students.

The current internship system shows promising results, with 25–30% of students gaining employment afterward. Nevertheless, considering expanding internship opportunities by including short-term options would possibly strengthen and increase the practical knowledge and employment opportunities for graduates. Developing clearer structures and offering more flexibility in internship formats could further improve the effectiveness of this transition into the workforce.

HEI has a strong system in place for involving students, lecturers, social partners, and alumni in the internal quality assurance processes. Feedback is gathered through Programme Study Committees, surveys, and discussions, ensuring that the study programmes meet both academic and industry standards. Students are actively involved in decision making, while lecturers contribute to maintaining high educational standards. Social partners provide valuable input in aligning the curriculum with industry needs, and employers help assess students' readiness for the workforce. HEI reports a feedback rate of 30% from students, but only 10% by graduates after one year.

To further enhance its study programmes, HEI could consider engaging social partners in more collaborative opportunities, such as attending HEI organized events, and incorporating their feedback into programme revisions. Expanding the list of social partners to include industry companies investing in R&D and emerging technologies like AI would ensure the curriculum stays forward looking and relevant.

The lack of involvement of social partners in both the generation of reports and participation in R&D activities presents a missed opportunity for collaboration and innovation. Their engagement could enhance the relevance and quality of educational outcomes by aligning them more closely with labor market needs.

Additionally, offering more flexible and clearly structured short-term internships would better accommodate the evolving needs of both students and employers. Collaborating with the Education Exchanges Support Foundation (https://smpf.lrv.lt/lt/) could also enhance student and teacher mobility, fostering greater exchange and development opportunities. By focusing on these areas, HEI can continue to strengthen its programmes and ensure they meet both academic and industry demands.

In addition to course-based surveys regarding teaching quality, also broader surveys to collect the opinions and experiences of the students are performed. Students report the perception that the HEI takes their opinions into account.

All recommendations from the previous evaluation of the Software Engineering programme were addressed. No recommendations have been given in the previous evaluation of the Software Testing programme.

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
Short cycle			X		
First cycle			X		

COMMENDATIONS

1. HEI provides students with career related events, including annual Career Days and company visits which enhance student engagement with the industry and provide valuable networking opportunities.

RECOMMENDATIONS

To address shortcomings

1. Feedback collection methods should be improved and include additional anonymous feedback regarding lectures, auditoriums and overall study quality during the semester.
2. Feedback rate of student as well as graduate surveys should be improved.

For further improvement

1. Involve social partners in reviewing previous recommendations to HEI to ensure their feedback is integrated into programme revisions.

2. Explore collaboration with Education Exchanges Support Foundation (https://smpf.lrv.lt/lt/) to enhance student and teacher mobility, foster greater exchange and development opportunities.

3. Actively engage social partners in study programme improvements by attending HEI organized events and exploring other collaborative opportunities (for e.g.ensuring social partners participation in R&D), to keep the programme aligned with market demands.

4. Revise the list of social partners to include industry companies investing in R&D and emerging technologies like AI, ensuring the study programmes stay relevant and future focused.

5. Consider expanding and developing more flexible internship opportunities, including short-term internships for students to strengthen and increase the practical knowledge and employment opportunities for graduates.

V. SUMMARY

The goal of re-accreditation is to enhance the program by implementing improvements and gathering valuable feedback from the evaluation panel. Modifications since the previous accreditation have been made based on the feedback received.

The quality of the SER actually could be improved. Some incorrect translations, formal issues, typographical errors, incorrect table titles and document structure are present. Besides, there is a need for statistical evidence to support many of the claims. As a good example, Annex 3 Table 3 clearly shows the contribution of courses to the overall study program. The report mentions some areas of improvement, from the SER, however, it is not clear how this should be achieved. Regarding the Software Testing programme, a lot of recommendations from the previous evaluations will remain pending.

The site visit gave a good insight into the HEI. The organization appears to have a good work environment with no major complaints. The programmes are performing well, with a high 98% employment rate. However, there is an opportunity to improve the feedback rate on surveys.

In the future, the HEI actively should deal with AI in education to support teachers and students and especially the market and the social partners. Probably in R&D projects including students, social partners and lecturers.

Two main possibilities for Improvement can be given:

The HEI should enhance student retention and engagement by e.g. implementing targeted support systems (mentorship, academic advising, well-being initiatives) to reduce dropout rates, leading to increased student numbers.

The HEI should expand internationalization efforts by e.g. developing strategic partnerships with global institutions to facilitate staff mobility and exchange programmes or by providing more incentives, scholarships, and streamlined processes for outgoing students to encourage participation in international opportunities.