STUDIJŲ KOKYBĖS VERTINIMO CENTRAS
CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

INFORMATICS ENGINEERING FIELD OF STUDY

Vilnius University

EXTERNAL EVALUATION REPORT

Expert panel:

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2. Academic member: Dr. Roman Danel
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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: Prof. Rafael Toledo-Moreo
2. Academic member: Dr. Agris Nikitenko
3. Academic member: Dr. Roman Danel
4. Social partner representative: Juozas Breivė
5. Student representative: Vitalija Jakubaitytė

1.3. SITE VISIT

The site visit was organised on 27 January 2026 onsite.

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

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

There was no need for translation and the meetings were conducted in English.

1.4. BACKGROUND OF THE REVIEW

Overview of the HEI

Vilnius University is a public state university and the oldest and largest higher education institution in Lithuania. Established in 1579, the University has a long-standing academic tradition and plays a central role in national and regional research, innovation, and higher education development. The University operates through a broad academic structure comprising faculties, institutes, and research centres covering the fields of humanities, social sciences, natural sciences, medicine and health sciences, technological sciences, and arts. Vilnius University offers study programmes at all three cycles and implements a wide range of nationally and internationally funded research projects. The institution is research-intensive and actively participates in European and global academic networks, contributing to its strong international profile.

Overview of the study field

The study field of Informatics Engineering at Vilnius University is positioned within the University's strategic priority areas of digital transformation, advanced technologies, and interdisciplinary research. The field contributes to the development of competencies in information systems, software engineering, data technologies, cybersecurity, and intelligent systems, aligning with both national innovation priorities and European digitalisation strategies.

The study field is carried out at the Faculty of Mathematics and Informatics and the Kaunas Faculty. It is implemented in close connection with the University's research activities in computer science, informatics, data science, and applied technologies. Academic staff involved in the study field participate in national and international research projects, collaborate with industry partners, and contribute to technology transfer and innovation initiatives. The programmes support progression to doctoral studies and foster research-based teaching, ensuring that students are exposed to current scientific developments and emerging technological trends.

Through cooperation with industry stakeholders, participation in international research consortia, and engagement in European mobility and project frameworks, the study field strengthens its academic relevance, supports graduate employability, and contributes to the University's broader mission of advancing knowledge-based society and high-value technological development.

Previous external evaluations

Field-level evaluations were introduced in 2020. Prior to that, evaluations had been conducted at the level of individual study programmes.

Overall, all submitted programmes received the maximum accreditation period. During the transitional period, institutions were required to prepare self-evaluation reports structured at the level of the study field rather than for individual programmes, in accordance with the newly introduced evaluation approach.

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 and its annexes
- Final theses
- Expanations regarding infrastructure improvement planning and financial viability

- Information given regarding internships
- Information on students dropouts

Additional sources of information used by the review panel:

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

- Information available in the university website and links included in the documentation.
- Usual references from EHEA
- General information about the situation of Higher Education in Lithuania and OECD reports provided by SKVC.

II. STUDY PROGRAMMES IN THE FIELD

First cycle/LTQF 6

Title of the study programme	**Information System Engineering**	**Information Systems and Cybersecurity**
State code	6121BX008	6121BX003
Type of study (college/university)	University	University
Study cycle	First	First
Mode of study (full time/part time) and nominal duration (in years)	Full-time, 4-years studies	Full-time, 3.5-years studies
Workload in ECTS	240	210
Award (degree and/or professional qualification)	Bachelor of Computing	Bachelor of Computing
Language of instruction	Lithuanian	Lithuanian, English
Admission requirements	Secondary education	Secondary education
First registration date	21.02.2017, No. S-2017-2-7	10.05.2016, No. SV2-34
Comments (including remarks on joint or interdisciplinary nature of the programme, mode of provision)	-	-

III. ASSESSMENT IN POINTS BY CYCLE AND EVALUATION AREAS

The **first cycle** of the informatics engineering field of study is given a **positive** evaluation.

No.	Evaluation Area	Evaluation points*
1.	Study aims, learning outcomes and curriculum	4
2.	Links between scientific (or artistic) research and higher education	4
3.	Student admission and support	3
4.	Teaching and learning, student assessment, and graduate employment	4
5.	Teaching staff	4
6.	Learning facilities and resources	3
7.	Quality assurance and public information	4
	Total:	26

*

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

IV. STUDY FIELD ANALYSIS

AREA 1: STUDY AIMS, LEARNING OUTCOMES AND CURRICULUM

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

FACTUAL SITUATION

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

The study programmes are designed to address the growing national and international demand for ICT professionals. In 2022, more than 50,000 professionals were employed in the Lithuanian IT sector, with approximately 5–10% specialising in cybersecurity. At the same time, the sector faces a shortage of approximately 13–14 thousand IT specialists, and strong demand for ICT professionals continues to persist.

The Information Systems Engineering (hereinafter referred to as ISI) programme at the Faculty of Mathematics and Informatics (hereinafter referred to as MIF) in Vilnius emphasises engineering knowledge and skills, interdisciplinary cooperation, and the development of practical competences. The programme is delivered primarily in Lithuanian, with several courses taught in English. Students have opportunities to participate in research and experimental development activities at the Institute of Data Science and Digital Technologies (DMSTI).

The Information Systems and Cyber Security (hereinafter referred to as ISCS) programme at the Kaunas Faculty is distinctive in Lithuania due to its strong focus on cybersecurity. It is currently the only bachelor-level programme in the country offering this specialisation. The programme can be studied in both Lithuanian and English.

The programmes are aligned with Lithuania's National Digital Roadmap and the European Commission's Digital Decade Policy Programme (2021), which anticipates a significant increase in demand for ICT specialists by 2030. Programme aims and learning outcomes are formulated based on an assessment of societal and labour market needs. Social partners are actively involved through participation in Study Programme Committees, final thesis defence committees, guest lectures, and supervision of students' internships.

Programme aims, intended learning outcomes, curriculum design, and course modules follow the Description of the Informatics Study Field and international guidelines (e.g., IEEE and ACM), ensuring that students acquire both theoretical knowledge and practical skills required for modern informatics engineering professionals.

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

The aims and learning outcomes are aligned with the University Strategic Plan for 2021–2025, which focuses on building a collaborative and sustainable university that contributes to society and the state. Key strategic objectives include improving the quality of studies, strengthening research activities, investing in staff development, and increasing public engagement and societal impact.

The aims and intended learning outcomes of the study programmes reflect the ambition to educate highly qualified professionals and experts, with an emphasis on integrating interdisciplinary knowledge and fostering creative and critical thinking. The programmes are designed in accordance with the Lithuanian Qualifications Framework, the Description of Study Cycles, and the learning outcomes for informatics engineering defined in the Description of the Informatics Study Field. Attention is given to adaptability in a rapidly changing technological environment, continuous

professional development, and critical thinking, thereby supporting the University's mission to promote lifelong personal and professional growth.
Alignment with strategic objectives is further supported by the provision of selected study courses in English, which enhances internationalisation.
The study programmes contribute to the institution's goal of strengthening Lithuania's regional and international visibility by preparing competitive professionals capable of meeting both local and global labour market needs. This is fully consistent with Vilnius University's mission to provide modern, socially responsible higher education in line with European standards.

ANALYSIS AND CONCLUSION (regarding 1.1.)

The study programmes demonstrate a clear and well-founded alignment between their aims, intended learning outcomes, and the needs of society and the labour market. They respond directly to the documented shortage of ICT professionals in Lithuania, particularly in the field of cybersecurity, and are supported by relevant national and European strategic priorities.
The two programmes have distinct and complementary profiles: the Information Systems Engineering programme focuses on engineering and interdisciplinary competences, while the Information Systems and Cyber Security programme offers a unique bachelor-level cybersecurity specialisation in Lithuania. This differentiation enhances the overall relevance of the programme portfolio.
The programmes are well aligned with the higher education institution's mission and strategic objectives, as well as with the Lithuanian Qualifications Framework and study field requirements. Active involvement of social partners in programme development, teaching, and assessment contributes to maintaining labour market relevance. Internationalisation is supported through the provision of courses in English.
The HEI actively collects feedback from students through periodical surveys on the relevance and outcomes of the programmes. This feedback contributes to improving course content with new technologies aligned with industry trends. During the site visit, alumni reported their studies prepared them well for life after accomplishment of study programmes.
The programme aims and learning outcomes are clearly defined and well aligned with labour market needs, societal expectations, and national and European strategic frameworks. They are consistent with the mission and strategy of the higher education institution and comply with relevant qualification requirements. Overall, the alignment of programme aims and learning outcomes can be assessed as strong.

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

All study programmes in the field fully comply with applicable legal and regulatory requirements. The Information Systems Engineering (ISI) programme has a total scope of 240 ECTS credits, of which 150 credits are allocated to field-specific course modules. The final thesis accounts for 15 credits, and internships comprise 25 credits (15 credits from 2024 onwards).
In the first cycle, contact teaching hours represent approximately 30% of the total student workload (1,243 contact hours in the academic year 2023/2024). A typical course unit consists of 48 contact hours and 82 hours of independent student work.

The Information Systems and Cyber Security (ISCS) first cycle programme at the Kaunas Faculty has a total scope of 210 ECTS credits, including 135 credits of field course modules, 15 credits for the final thesis, and 15 credits for internship.
In both programmes, one credit corresponds to 24–28 hours of student workload.

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

All study programmes in the field correspond to the profile of university-level studies, providing systematic theoretical knowledge and research-based skills. The programmes meet the requirements set out in the Description of the Informatics Study Field, and their objectives reflect current developments and expectations in informatics engineering.
Academic staff prepares detailed descriptions of course units (modules), clearly specifying the intended competences and learning outcomes, explicitly indicating their contribution to the programme learning outcomes. Teaching and learning methods, as well as assessment formats, are selected by lecturers in consultation with the Study Programme Committee. This process provides a system to detect errors or inconsistencies, fostering that student achievement can be appropriately measured against the defined learning outcomes of the study programme. Alignment between programme aims, learning outcomes, cycle descriptions, course modules, teaching methods, and assessment approaches is demonstrated through a structured mapping system. The coherence of this alignment is evidenced through mapping matrices provided in the annexes 1, 2 and 3 to the SER, which show the relationships between programme learning outcomes, course units, teaching and learning activities, and assessment methods. These matrices demonstrate how each learning outcome is introduced, developed, and assessed across the curriculum, ensuring coverage and progression. The onsite visit provided further examples of this coherence.

1.2.3. Curriculum ensures consistent development of student competences

The curriculum is coherently structured and ensures progressive development of competences. Foundational subjects in mathematics, programming, and computer science are introduced in the early semesters and are followed by more specialised courses, electives, internships, and the final thesis. This structure enables students to gradually deepen their knowledge and develop analytical, research, and professional skills. The balance between compulsory and elective modules, together with internships and final projects, supports both specialisation and practical application of knowledge.
Contact teaching hours account for approximately 30% of the total student workload. Internships, research projects, and the final thesis are integrated into the compulsory curriculum. The Self-Evaluation Report provides detailed descriptions of study plans, course coherence, and mechanisms ensuring the development of general and subject-specific competences.
The Study Programme Committee reviews study plans and the competence matrix annually. Teaching staff prepare detailed course unit descriptions specifying intended learning outcomes and the competences addressed. The alignment between programme learning outcomes and individual course units is well structured and clearly articulated.
Graduates of the programmes are qualified to work in a wide range of positions, from information systems design, development, and maintenance in the private sector to various ICT roles in public institutions.

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

Students are provided with opportunities to personalise their studies in line with individual learning goals and intended learning outcomes. These include participation in academic exchange programmes (partial study periods or internships) and enrolment in non-credit foreign language courses.
Students may also follow an individual study plan, subject to approval by the Study Programme Committee. Since 2023, up to 60 ECTS credits in undergraduate studies are allocated to individual studies, allowing students to choose from various course units, internships, or international mobility options. Additionally, students may allocate 15 credits to general university studies.
In the ISCS programme, 20 credits are allocated to optional subjects and 15 credits to general university studies. In the ISI programme, prior to the introduction of individual studies, 80 credits (including 15 credits of general university studies) were available for optional subjects, enabling students to form a specific specialisation.

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

Final theses are prepared and defended in accordance with regulations approved by the Vilnius University Senate. All relevant procedures and requirements are communicated to students through the “Final Thesis” course.
The management of final thesis defence is clearly defined and systematically implemented. Theses are submitted via the university information system (VUSIS) and checked using the Electronic Plagiarism Detection System (EPAS). Theses that do not meet formal requirements or submission deadlines are not permitted for defence.
Final theses are defended in public sessions before defence committees composed of academic staff, researchers, professional practitioners, and representatives of social partners, ensuring both academic quality and practical relevance.

ANALYSIS AND CONCLUSION (regarding 1.2.)

The analysis confirms that the study programmes comply with all relevant legal and regulatory requirements regarding scope, credit distribution, workload, and qualification level. The structure of both programmes corresponds to the requirements of the Informatics Study Field, with appropriate allocation of credits to core field modules, internships, and final theses. The balance between contact hours and independent study is consistent with first-cycle university study standards.
Programme aims, learning outcomes, teaching and assessment methods are coherently aligned. The curricula are systematically designed to ensure progressive development of both general and subject-specific competences. Regular review of study plans and competence matrices by the Study Programme Committee supports curriculum coherence and continuous improvement. The strong orientation toward practical engineering systems, including substantial internship components, enhances the applicability of acquired competences. The process for updating learning outcomes follows a clear quality assurance system with surveys and meetings informing necessary changes.
The programmes provide adequate opportunities for internationalisation and personalisation of studies through academic exchange, optional courses, individual study plans, and a growing share of credits allocated to individual studies. Institutional-level support mechanisms, including quality assurance procedures, stakeholder involvement, and regulations on the use of AI tools, further contribute to study quality.
During the visit were given examples of the suitability and how the system is designed in such a way that the feedback helps improved, including examples on teaching methodology, train the trainers.
Final thesis preparation and defence procedures are clearly regulated, transparent, and consistent with institutional and field requirements. The inclusion of academic staff, practitioners, and social partners in defence committees ensures both academic rigor and professional relevance.

The study programmes fully comply with legal and regulatory requirements and demonstrate coherent alignment between programme aims, learning outcomes, curriculum structure, and assessment methods. The curricula ensure systematic competence development, offer sufficient flexibility for individual learning paths, and provide robust quality assurance mechanisms. Final thesis requirements and defence procedures meet the standards of the study field and cycle. Overall, the programmes can be assessed as well structured, compliant, and effectively implemented.

AREA 1: CONCLUSIONS

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

COMMENDATIONS

1. The relevance of the final theses on assessing the acquisition of key competences that are part of the university strategy: adaptability, critical thinking, communication, etc.

RECOMMENDATIONS

For further improvement

1. Explore introducing courses in English within the Lithuanian programmes to nudge students to improve their language skills.
2. Continue towards greater flexibility and individualization of students' study paths.

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

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

FACTUAL SITUATION

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

The level of research in the Informatics Engineering study field is clearly strong and well-established nationally, with visible international integration:

- The field is embedded in active research institutes (Institute of Data Science and Digital Technologies at MIF; Institute of Social Sciences and Applied Informatics at KnF) that conduct research in AI, data science, cybersecurity, blockchain, optimisation, cyber-social systems, and high-performance computing.
- Academic staff are active in research, leading or participating in national and international projects, publishing in indexed journals, and organising or contributing to international conferences and seminars.
- The infrastructure supporting research (AI laboratories, cybersecurity labs, supercomputing resources) is adequate and modern and is explicitly linked to both research and studies.

However, while research quality and volume are convincing, the documentation provides limited quantitative benchmarking against leading international institutions (e.g. comparative publication metrics or project competitiveness at EU level).
Additionally, while the staff involved in the teaching is also active in research, the research priorities/direction are considered wide (7) for the rather limited team, which might lead to a wide range of projects, but due to lack of concentration also leads to a small number of high-quality competitive research successes like HE projects (just one declared).

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

The curriculum demonstrates a clear and systematic alignment with current scientific and technological developments.
Study programme according to the Annex 1 aims and learning outcomes explicitly reference data analytics, artificial intelligence, cybersecurity, cloud computing, big data, optimisation, and modern software engineering practices
Annex 3 shows a direct and traceable mapping between programme learning outcomes and course units that incorporate: modern programming paradigms; high-performance and cloud computing; cybersecurity engineering; data mining and statistical analysis; and contemporary software quality and testing practices.
Curriculum updates (introduction of individualised study paths, new elective modules, periodic content renewal) indicate responsiveness to technological change
Alignment with ACM/IEEE recommendations and national/international qualification frameworks is explicitly stated.
However, while science and technology links are very strong, explicit integration of artistic or creative disciplines (e.g. design thinking beyond technical UI design) is present but not systematic across the curriculum.
Although competence 4.2 (big data analysis and data mining) is clearly supported by several modules (e.g., Data Mining and Machine Learning, Statistical Data Analysis Methods), its positioning

within the curriculum appears primarily within optional tracks rather than as a compulsory core competence for all students.

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

Student engagement in research is clearly present and appropriate for first-cycle studies. Learning outcomes include explicit research competencies, such as literature review, research planning, data analysis, experimentation, and interpretation of results (Annex 1). Annex 3 demonstrates that many compulsory modules require: literature analysis; empirical investigations; project-based and problem-based learning; and data analysis tasks consistent with undergraduate-level research. Students may participate in research-oriented final theses, internships linked to R&D activities, and staff-led research seminars, particularly at MIF.
All students are exposed to research-related activities throughout their studies, as teaching staff consistently integrate research elements into the learning process, with the documentation providing relevant examples of this. However, deeper research engagement opportunities, while rich, appear optional rather than systematically embedded for all students. Evidence of structured undergraduate research tracks, research assistantships, or guaranteed early-cycle research immersion is limited. Participation depends strongly on individual initiative and supervisor involvement.

ANALYSIS AND CONCLUSION (regarding 2.1.)

The higher education institution demonstrates strong scientific performance at both national and international levels, supported by highly qualified and research-active academic staff. Research and teaching are closely interconnected, ensuring that scientific developments meaningfully contribute to the achievement of programme learning outcomes and overall study objectives. A transparent and well-structured incentive system serves as an important driving force, motivating staff and supporting their continuous professional and career development.
The curriculum is modern, relevant, and clearly research-informed. It reflects current technological developments and disciplinary advances, although there remains some potential to further strengthen interdisciplinary and creative dimensions.
Students are provided with appropriate research opportunities that meet cycle-level requirements and are pedagogically sound. However, to achieve a higher level of excellence, greater consistency and formalisation of undergraduate research engagement and structured research career pathways would be beneficial.
While the institution’s research performance is strong, minor gaps remain in demonstrating systematic international benchmarking. Continued efforts to strengthen structured international comparison, enhance global research positioning, and further support student research career development would contribute to sustained long-term advancement.

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	
Second cycle				X	

COMMENDATIONS

1. The Study direction team demonstrated a very good understanding of the current scientific and technology trends, which is reflected in both research activities and study programmes or individual course learning outcomes and content.
2. The number of cited and indexed (WoS) publications on average, 2 per FTE, is a very good achievement and reflects the staff's active position in science.
3. The correspondence of the learning outcomes of the programmes and individual courses, except for some minor issues, is very well aligned.

RECOMMENDATIONS

For further improvement

1. Strengthen systematic international benchmarking of research performance - The field is encouraged to complement the existing qualitative description of research activities with regular, structured benchmarking against comparable European Informatics Engineering units (e.g. publication indicators, competitive project participation, international co-authorship).
2. Increase visibility of research impact at international level - While research output and infrastructure are strong, clearer evidence of international leadership roles (e.g. coordination of EU-funded projects, editorial leadership in high-impact journals) would further strengthen the field’s profile.
3. Enhance interdisciplinary and creative dimensions of the curriculum - While the curriculum is strongly aligned with science and technology, the field could further strengthen links with design thinking or creative digital practices, especially in courses related to user interfaces, systems design, and innovation.
4. Systematise undergraduate research engagement - It is recommended to move from largely optional and initiative-driven research participation to a more structured and systematic model, ensuring that all students experience a minimum, clearly defined level of research engagement during their studies.

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

Vilnius University maintains adequate and transparent admission processes for its first-cycle Informatics Engineering programmes at the Faculty of Mathematics and Informatics and Information Systems and Cybersecurity at Kaunas Faculty, conducted via LAMA BPO with Senate-approved rules published on university websites, featuring a clear entrance score formula weighted 40% on mathematics final exam plus 20% each on Lithuanian language/literature and electives like IT/physics.
Extensive promotion through "Student for One Day," science festivals, 140+ school lessons, study fairs across Lithuanian cities, social media, and teacher seminars drives stable applications (average 427 yearly for Informatics Systems Engineering) and quality state-funded admits (57-59 yearly, highest scores rising to 11.81, means 8.82 in 2024 (MIF)), though minimal non-state-funded uptake (<1-2%) reveals heavy state-funding dependency.
Foreign interest surges for Kaunas Faculty Information Systems and Cybersecurity from over 30 countries, but issues like visa/payment cause 23-38% agreement drop-offs; stable high lowest scores confirm prepared entrants.

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

Vilnius University upholds robust, transparent procedures for recognizing foreign qualifications, partial studies, and prior learning in Informatics Engineering programmes, adhering to the Lisbon Recognition Convention and ministry-granted authority, with individual evaluations by the Student Admissions Sub-Division ensuring no essential differences from Lithuanian standards.
Formal learning credits up to 75% of first/second-cycle spans via Study Programme Committees (SPCs), based on transcripts matching programme outcomes, while non-formal/informal competencies (work, volunteering, self-study) cap at 50% excluding theses - successfully applied in over 60 cases at Faculty of Mathematics and Informatics (20 partial studies, 17 intra-programme switches) and over 100 at Kaunas Faculty (38 foreign credits, mostly Ukrainian, 26 non-formal).
High approval rates (zero rejections at Faculty of Mathematics and Informatics) support mobility and transfers, but vague "essential differences" criteria and heavy reliance on SPC discretion risk inconsistencies, especially with diverse foreign grading conversions.

ANALYSIS AND CONCLUSION (regarding 3.1.)

VU's admission processes are transparent and rigorous, with math-heavy scoring (40% weight), bonus points for Olympiads/volunteering, and extensive promotion via school lessons (over 140 yearly), study fairs, and social media, yielding stable high-quality state-funded admits but exposing over-reliance on state funding (<1% non-state-funded uptake) and geopolitical volatility in foreign enrolments.
Recognition procedures excel in flexibility under Lisbon Convention standards, crediting up to 75% formal/50% non-formal learning with zero Faculty of Mathematics and Informatics rejections across over 60 cases and robust Kaunas Faculty support for Ukrainian transfers (38 foreign credits), though discretionary SPC evaluations and absent outcome-mapping raise consistency risks.

In conclusion, these systems attract talented, prepared students and enable international mobility effectively, but state-funding dependency and recognition standardization gaps threaten long-term programme sustainability and equity.

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

Vilnius University ensures robust academic mobility opportunities for Informatics Engineering students through extensive Erasmus+ (96 Faculty of Mathematics and Informatics, 144 Kaunas Faculty agreements across over 30 countries), bilateral exchanges, ARQUS/COIMBRA alliances, and up to 12 months Erasmus+ funding, coordinated by dedicated International Studies Coordinators with pre-approved study plans guaranteeing credit recognition.
Strong incoming flows (19-18 Faculty of Mathematics and Informatics field modules yearly, primarily Spain/France; 11-17 Kaunas Faculty) contrast sharply with low outgoing participation (4-13 total yearly, rising post-pandemic), hampered by student employment conflicts, insufficient Erasmus+ grants (addressed via 2024 30-35% increase), and financial barriers, despite comprehensive promotion via seminars, newsletters, and websites.
Kaunas Faculty Information Systems and Cybersecurity thrive with 56-66% foreign full-degree students, enhancing internationalization, but Faculty of Mathematics and Informatics' Lithuanian-only instruction limits similar appeal.

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

Vilnius University delivers comprehensive and relevant student support across academic, financial, social, psychological, and personal domains, including around 29,000 annual consultations through the centralized Student Affairs and Career Office, dedicated faculty academic consultants and study administrators, a growing university-wide mentoring programme with 178 volunteer mentors from science and business in 2024, career counselling sessions that increased by 16 percent last year, hands-on job interview simulations, sports facilities at three Vilnius locations, cultural amateur groups like choirs and theatres, full dormitory availability for first-year students, and confidential psychological crisis counselling with stress management workshops.
Financial aid includes 277 incentive scholarships for good academic results, social scholarships, one-off targeted payments, state-supported loans, nominal awards for talented researchers, and tuition reductions, alongside special tuition reimbursements for Ukrainian and Belarusian students amid geopolitical challenges, though scholarship coverage reaches less than one-third of eligible students due to limited state funding, often forcing part-time work that contributes to underachievement and dropouts.
Strengths lie in active Students Representation and Erasmus Student Network integration for internationals, and proactive equal opportunities coordinators, creating a safe, holistic environment validated by rising participation. Weaknesses centre on an inadequate scholarship scale relative to living costs, which undermines study focus, while modest reporting on special needs uptake limits equity assessment.
These interconnected provisions effectively promote integration and wellbeing for diverse Informatics Engineering students, but expanding financial support is critical to reduce work-study conflicts and enhance retention beyond the robust academic and personal infrastructure already in place.

3.2.3. Higher education information and student counselling are sufficient

Vilnius University ensures sufficient higher education information and student counselling for Informatics Engineering through structured introductions like pre-September camps organised by Vilnius University Students Representation, Integration Week meetings with Study Programme Committees on programme aims, outcomes, and individualisation opportunities, and ongoing multi-channel access via Student Affairs and Career Office consultations (around 29,000 yearly, mostly by email and phone), the VUSIS information system for schedules, plans, and results, faculty websites, Facebook, Instagram, and dedicated Virtual Learning Environment courses for projects and internships.
Continuous support includes dedicated study administrators, Study Programme Committee consultations, lecturer office hours, Career Days, alumni and employer meetings, and feedback-driven updates like frequently asked questions sections and newsletters based on common student queries, with Kaunas Faculty's personal coordinator model and mid-semester student meetings providing targeted help for all cycles, including international students.
The Student Life Guide and information technology service surveys aid navigation, fostering a supportive environment confirmed by positive feedback, though heavy reliance on the central Student Affairs and Career Office could overlook faculty-specific needs without programme-level usage data.
This comprehensive system effectively introduces newcomers and maintains guidance from admission to graduation, fully meeting introduction and continuity requirements with room for more detailed tracking per programme.

ANALYSIS AND CONCLUSION (regarding 3.2.)

Vilnius University offers solid mobility choices with over 240 partner schools in over 30 countries and alliances like ARQUS, alongside helpful support services such as 29,000 yearly counseling sessions, 178 mentors in 2024, dorms, sports, and career guidance to ease student life.
However, outgoing mobilities remain low at 4-13 students per year, being possible reasons job conflicts and grants not fully covering costs - despite a 2024 increase - while incoming exchanges and 56-66% foreign students at Kaunas Faculty succeed well.
Counselling works smoothly from welcome camps and Integration Week through constant help via email, phone, VUSIS system, and faculty advisors on schedules, exams, and internships.
In summary, the setup attracts strong students and builds a welcoming place, but possible structural obtacles, more funding for travel and scholarships, plus dropout tracking, would benefit the students.

AREA 3: CONCLUSIONS

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

COMMENDATIONS

1. It is noticeable and commendable that there are strong community and collaboration between Vilnius and Kaunas students.
2. Students feel that their voice matter, they feel heard and after given feedback they see changes for the better.
3. Very diverse student admission and integration methods, students get all the relevant information and help that they need in the first study year.

RECOMMENDATIONS

To address shortcomings

1. Explore actions to improve student pre-admission phase and expanding their representation (like in the SER preparation).
2. Too much focus on state-funded spots create risks that could be fixed with more non-state-funded options and better tracking of who stays and why students leave.
3. Strengthen standardized outcome-mapping tools and published recognition volumes to guarantee equity and quality control.
4. Explore supplemental funding, flexible work accommodations, and targeted motivation beyond structural access to foster outgoing student mobilities.

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

Teaching and learning in the Informatics Engineering study field are well aligned with the intended learning outcomes and the requirements of first-cycle studies. The Self-Evaluation Report demonstrates a coherent link between programme learning outcomes, course-level outcomes, teaching methods, and assessment approaches. A wide range of teaching methods is used, including lectures, laboratory work, project-based learning, teamwork, problem-oriented tasks, and independent study, which support different learning styles and competence development.
Teaching staff are appropriately qualified, and the learning environment (including laboratories, digital platforms, and software tools) supports effective learning. Students are provided with opportunities to apply theoretical knowledge in practical contexts through projects, internships, and final theses.
While the Self-Evaluation Report did not reveal how the various methods mentioned and applied align into a coherent and systematic approach to yield the full potential of the methods, resulting in higher teaching and learning quality, onsite visit confirmed the suitability.

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

The University has established institutional policies and support systems to ensure access to higher education for socially vulnerable groups and students with individual needs. These include financial support, psychological counselling, academic advising, accessibility measures for students with disabilities, and flexible study arrangements. Information on support services is publicly available, and students can access assistance when needed.
It is evident that some of the actions taken, including dedicated personnel taking care of different situations regarding disabled or handicapped students, are appropriate and demonstrate deep understanding and care about those students and their needs.
The institution has established a supportive environment for students with special needs who are already enrolled in the informatics engineering programme. However, there is no structured or systematic approach aimed at actively identifying and attracting prospective students from this target group. Cooperation with external organizations, associations, and institutions that work directly with people with disabilities and special needs is limited or informal. There is no clear evidence of regular, individualized communication, targeted promotional activities, or partnership agreements focused specifically on increasing participation of these candidates in the programme.
The evidence shows that most measures are implemented at the institutional level, with limited programme-level monitoring of how effectively these measures reach and support students within the Informatics Engineering field. More proactive communication and systematic evaluation of support effectiveness at the field level would be needed.

ANALYSIS AND CONCLUSION (regarding 4.1.)

The study field ensures that students acquire the knowledge, practical skills, and professional competences necessary for independent activity in Informatics Engineering. The curriculum

integrates theoretical foundations with applied components, including laboratory work, project-based assignments, internships, and final theses, which collectively support the development of analytical, technical, and problem-solving abilities. The strong involvement of qualified academic staff and active engagement with contemporary technologies further enhance graduates' preparedness for the labour market. While the overall framework is robust and aligned with intended learning outcomes, continued strengthening of systematic monitoring of graduate progression and structured reflection on competence development across study cycles would further consolidate preparedness for independent professional practice.
Further development towards systematic personalised learning and field-level monitoring mechanisms would strengthen the quality framework.
Although internal support mechanisms are in place, the absence of proactive outreach limits access to the informatics engineering programme for potential applicants with disabilities and special needs. As a result, the programme may not be reaching individuals who could successfully study and later integrate into the labour market in this field.

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

FACTUAL SITUATION

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

Student learning progress is monitored through continuous assessment methods, examinations, project work, laboratory assignments, and internships. Feedback is provided through written comments, consultations, and discussions during and after assessments. These practices enable students to understand their performance and support learning improvement.
Nevertheless, feedback practices vary between courses and depend largely on individual lecturers. Unfortunately, we did not identify a common, standardised approach from course to course, from programme to programme to ensure systematic, evidence-based decisions on needed interventions to reduce dropout and ensure meeting learning outcomes.

4.2.2. Graduate employability and career are monitored

Graduate employability is systematically monitored using several data sources, including institutional graduate surveys, national employment statistics, alumni feedback, and information from social partners. The study programmes are closely aligned with labour market needs, particularly in high-demand areas such as software engineering, data analytics, and cybersecurity.
Internships, practical assignments, and final thesis topics often reflect real professional tasks, contributing positively to graduates' employment outcomes. Cooperation with employers and social partners further strengthens career relevance.

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

Clear institutional policies on academic integrity, tolerance, and non-discrimination are in place and effectively implemented. The University applies plagiarism detection tools, has established codes of ethics, and provides clear procedures for dealing with academic misconduct. Students are informed about academic integrity requirements at the beginning of their studies.
The academic environment promotes equal treatment and respect, and there is no evidence of systemic issues related to discrimination. The assessment reflects strong implementation; however,

more systematic training and preventive activities at the programme level could further strengthen this area.

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

Procedures for submitting and handling appeals and complaints are clearly defined, publicly available, and aligned with institutional regulations. Students are informed of their rights, and appeals are processed within established timelines. The existence of multiple levels of appeal contributes to procedural fairness.
During the period under analysis, a limited number of formal appeals were recorded, indicating a relatively low level of disputes. The MIF Dispute Resolution Commission received four student applications, all related to the final assessment of course performance, while no complaints concerning procedural irregularities or other academic disputes were submitted. At the Kaunas Faculty, one application was received concerning the assessment of a final thesis; following its examination, the student was granted the opportunity to defend the thesis before a different committee. No cases related to academic ethics violations were reported to the Academic Ethics Commission. These figures suggest that the procedures are functional and accessible.
At the same time, the information available for the panel provided limited evidence on the systematic analysis of appeals and complaints outcomes or their use for quality improvement. Greater transparency and feedback to the academic community would strengthen confidence in these procedures and justify a higher assessment.

ANALYSIS AND CONCLUSION (regarding 4.2.)

Overall, the expert panel concludes that teaching and learning, student assessment, and graduate employment in the field of Informatics Engineering meet the requirements and are generally well implemented. The study field demonstrates a student-centred approach, strong labour market relevance, and a supportive academic environment. Implementation of the recommendations would further enhance consistency, transparency, and effectiveness, supporting continuous improvement of the study field.
Areas for improvement include standarising student self-assessment, enhancing long-term career tracking and systematic use of alumni data, promoting internal training on tolerance and non-discrimination and academic integrity, and feedback after appeals and complaints.

AREA 4: CONCLUSIONS

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

COMMENDATIONS

1. Some of the actions taken, comprising personnel taking care of socially vulnerable students, are good practices not only to further develop but also to share with other universities or other study directions.
2. A significant advantage on close cooperation with industry, which strengthens both sustained motivation and internal community, as well as the HEI reputation.

RECOMMENDATIONS

For further improvement

1. The panel recommends continuing regular awareness-raising activities and training for both students and staff to further strengthen a shared culture of academic integrity and ethical conduct.
2. The panel recommends strengthening long-term alumni tracking and expanding the systematic use of graduate career data in curriculum review and strategic planning at the programme level.
3. The panel recommends further systematising feedback practices across all course units to ensure consistency in quality and timeliness. Greater emphasis on assessment and structured self-assessment opportunities would further support students in planning their learning progress
4. It is recommended that the institution develop and implement a structured outreach strategy specifically focused on engaging prospective students with disabilities and special needs. This should include establishing formal cooperation with relevant organizations and support centres, organizing targeted information sessions, providing accessible promotional materials, and appointing a responsible contact person for communication with these partners. Such measures would strengthen equal access to the informatics engineering programme and support broader social inclusion objectives.

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

Teaching staff are recruited through publicly announced competitive procedures. Appointments are made for a five-year term. Staff performance is evaluated annually, and contracts are extended following a positive evaluation. In cases of negative performance assessment, teaching staff may be transferred to a lower academic position. Employment contracts expire upon reaching the age of 65. The correspondence between staff qualifications and their academic positions is ensured through a certification process conducted every five years. Student feedback on teaching performance is considered as part of this process. Certification commissions include a student representative and at least one international expert.

According to the Self-Evaluation Report, the average annual intake of approximately 54 students is appropriate in relation to the available teaching staff and resources capacity, ensuring favourable conditions for study quality. The programmes place a strong emphasis on real-world engineering systems, supported by two internship courses totalling 25 credits

The Information Systems Engineering (ISI) study programme is delivered by 36 members of teaching staff, of whom 66% hold a doctoral degree. Teaching staff are actively involved in international scientific associations and professional organisations.

The Information Systems and Cyber Security (ISCS) programme is implemented by 24 teaching staff members, 87% of whom hold a university degree. At least 40% of the teaching staff have relevant professional experience in their field.

During the evaluated period, the teacher–student ratio in the ISCS programme has decreased, indicating improved study conditions. In the ISI programme, the ratio remains stable at approximately 1:1.5. In addition, some teaching staff are involved in research projects that include student participation.

ANALYSIS AND CONCLUSION (regarding 5.1.)

The analysis indicates that the recruitment, evaluation, and certification of teaching staff are governed by clear, transparent, and publicly regulated procedures. Competitive recruitment, fixed-term appointments, and regular performance evaluations contribute to maintaining academic standards and accountability. The inclusion of student feedback and international experts in the certification process supports objectivity and quality assurance.

The composition of teaching staff demonstrates an adequate level of academic qualification and professional experience. In the ISI programme, a substantial proportion of staff hold doctoral degrees and are actively engaged in international scientific and professional networks, supporting research-based teaching. In the ISCS programme, a significant share of staff have relevant professional experience, which strengthens the applied and practice-oriented nature of the programme.

Teacher–student ratios are favourable in both programmes and have remained stable or improved during the evaluated period. The involvement of teaching staff in research projects that include students further enhances the integration of research and studies and contributes to the development of students' research and professional competences.

The staffing arrangements of the study programmes meet institutional and quality assurance requirements and ensure an appropriate balance between academic qualification, professional experience, and teaching capacity. Recruitment, evaluation, and certification procedures are

transparent and effectively implemented. Overall, the composition and management of teaching staff provide a sound basis for the delivery of high-quality studies and can be assessed as adequate and sustainable.

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

Academic mobility is supported through participation in programmes such as Erasmus+, NORDPLUS, COST, and ISEP. Teaching staff may also apply for dedicated funding provided by Vilnius University to support the development of their professional competences. Within the Erasmus+ framework, staff can apply for funding for short-term study visits of up to one week at a foreign higher education institution, as well as longer study visits of up to two months at companies or institutions abroad.
The Self-Evaluation Report identifies two main dimensions of internationalisation: funding to support academic mobility and funding for teaching or expert visits. Additional mobility opportunities are available through project-based activities financed by the European Union.
During the period 2021–2024, a total of 37 outgoing teaching visits and 36 learning visits were implemented. Teaching staff also actively participate in international conferences and professional development courses, including distance learning courses organised by foreign partner institutions. Participation in mobility programmes and projects is largely based on individual initiative. The University has established a practice of sharing feedback from mobility visits with colleagues.
In addition, lectures delivered by visiting professors are regularly organised.

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

The Self-Evaluation Report describes a structured system for the development of teaching staff pedagogical competences, which has been in place since 2018. To support this process, the Centre of Educational Competence at Vilnius University has been established. The Centre regularly organises programmes for the development of basic pedagogical competences, induction programmes for newly appointed teachers, and specialised training for new teaching staff.
During the site visit, a well-managed motivation system based on clearly defined key performance indicators (KPIs) was confirmed. To support the effective implementation of changes in the study process, training activities are also organised for administrative staff.
Teaching staff may request the acquisition of new learning and research resources for the university library, with the associated costs covered by the institution. The University also provides opportunities for improving language competences through funded English-language courses in English-speaking countries during the summer, as well as through annual language courses offered locally. The Vilnius University Institute of Foreign Languages provides training in several languages at different proficiency levels. In addition, the Personnel Department is responsible for the development of general competences and soft skills and organises various training activities at no cost to participants.
Since 2021, teaching staff have been able to apply for targeted funding to support the updating and preparation of course units. Research competences are strengthened through participation in national and international conferences, involvement in research projects, and active cooperation with foreign universities. Some academic staff supervise doctoral candidates and master’s theses. The University organises regular Monday research seminars, where staff and doctoral students present scientific or applied research, as well as interdisciplinary seminars for early-career staff held once or

twice per month. The Vilnius University Science Support Foundation provides funding for conference participation and researcher-initiated projects, and staff have access to the Research Professional database for identifying external funding opportunities. In addition, researchers further develop their skills by addressing real-world challenges proposed by social partners.
Arrangements for substituting teaching staff in cases of sudden or long-term absence are in place and function effectively.
Teaching staff and students have access to high-performance computing resources, including a supercomputer (with limited availability during the semester), to support tasks requiring substantial computational capacity.
Procedures for collecting and responding to student feedback on teaching after each semester are clearly defined, and appropriate evaluation and follow-up actions are systematically implemented.

ANALYSIS AND CONCLUSION (regarding 5.2.)

The analysis confirms that Vilnius University has established a comprehensive and well-functioning system for the development, motivation, and support of teaching staff. Pedagogical, research, and professional competences are systematically enhanced through dedicated institutional structures, targeted funding, and regular training activities. The existence of a clearly defined motivation system based on key performance indicators (KPIs) demonstrates a strategic and transparent approach to staff development and performance management.
A notable strength is the strong institutional support for research activities, including funding for conference participation, initiated research projects, and publications in high-level journals. Access to advanced infrastructure, such as high-performance computing resources, further enhances both teaching and research capacities.
Internationalisation and knowledge sharing are well supported through academic mobility, visiting professors, and a structured practice of disseminating feedback from international visits among colleagues. The process for requesting new library resources is straightforward and responsive, contributing positively to the quality of teaching and research.
The university provides a strong and supportive environment for teaching staff development, characterised by transparent performance management, systematic pedagogical training, effective use of student feedback, and substantial support for research and internationalisation. Access to advanced infrastructure, including supercomputing resources, and efficient administrative processes further enhance the quality of studies.

AREA 5: CONCLUSIONS

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

COMMENDATIONS

1. Well managed motivation system for teachers based on clearly defined KPI.
2. Access to the supercomputer for teachers (and students).

3. The university provides funding for scientific activities of the teachers and support publications in high-level journals.
4. Feedback for colleagues from visiting abroad is organised.
5. Easy process to ask new resources to the library.

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

The informatics engineering study programmes offered at two Vilnius university locations: in the capital city Vilnius and a regional faculty in Kaunas. Both units operate dedicated teaching premises, including lecture halls, seminar rooms, computer laboratories, specialised research laboratories, and spaces for independent student work. The availability and scale of premises are adequate for the scope of the field studies. The premises are used both for teaching and for practical activities related to informatics engineering. Computer laboratories are equipped to ensure that students have access to individual or small-group workstations during practical sessions. Additional working places are available in libraries, reading rooms, and public access study zones.
The programme is supported by computer labs, specialised research facilities, and developed IT infrastructure. Students and staff have access to both licensed and open-source software relevant to informatics engineering, as well as computing resources for advanced data analysis, modelling, and research-focused work. While the lecture auditoriums are suitable for teaching, a limited number of electrical outlets in theoretical lecture halls has been noted by panel, which can be inconvenient for students who wish to use their personal laptops during lectures, as example, for taking a notes.
SER indicates that students undertake internships and practical training outside the HEI in various organisations related to informatics engineering, including private companies and public sector institutions. Cooperation with social partners exists and that external practitioners are involved in supervising internships and student projects.
The adaptation of premises and facilities for students with special needs reflects a structured approach to accessibility, though some solutions still require additional assistance rather than enabling full independence (example, premises in Didlaukio street).
Students and staff have access to electronic scientific publications through institutional subscriptions and open access resources. These include major international databases, e-journals, e-books, and digital conference proceedings relevant to informatics. Remote access is available, allowing use of resources outside campus premises.
There is no separate canteen or cafeteria on the Didlaukio premises, but employees and students can use the catering facilities of the other universities located nearby.
Dormitories for students studying computer engineering are located near the Institute of Mathematics and Informatics, where lectures are held, on Didlaukio Street, while students studying at the Kaunas Faculty of Vilnius University are given the opportunity to live in dormitories at other educational institutions. The premises on Didlaukio Street have been renovated and meet all the necessary accommodation requirements.
The Panel did not have the opportunity to visit the Kaunas faculty premises, which were therefore presented virtually.

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

Additional feedback from university were used to identify emerging needs upgrade process related to infrastructure, software, and learning environments.
SER provides general information on institutional governance, quality assurance mechanisms, and strategic documents at university and faculty level. Concrete descriptions of a field specific or

infrastructure focused planning process, including timelines, responsible units, prioritisation criteria, or recent examples of resource upgrades linked directly to student or staff needs in informatics engineering, were provided on additional request by panel members: fundamental infrastructure upgrades and their planning are carried out at the university level; while Sub-university level upgrades are carried out at the faculty level, in accordance with faculty action plans (e.g., https://mif.vu.lt/lt3/en/about/documents) and current update needs.
The SER does not include a dedicated infrastructure development plan for the informatics engineering study field, instead referring more generally to future improvements and investments planned at the institutional level. However, the additional information provided by the university demonstrates a more comprehensive planning approach, covering both equipment and resources, as well as auditoriums and study areas.

ANALYSIS AND CONCLUSION (regarding 6.1.)

The The Faculty of Mathematics and Informatics in Vilnius manages four buildings where the assessed study programs take place. Some of the buildings are located 4 to 7 kilometres apart. Despite the fact that public transport runs between the study locations, it can be difficult to organize the study process when different lectures take place in distant locations, as time must be reserved for travel, and this method of organizing studies can also make it difficult for students with special needs to commute.
The library offers comprehensive and relevant print and electronic resources tailored to informatics engineering study programmes, with convenient access both on campus and through remote services. It supports learning outcomes related to study research, independent learning, and engagement with current technological developments.
High performance computing infrastructure supporting research activities are available to academic staff and students involved in research and project-based work. This access is particularly relevant for final thesis work, advanced study projects working with large datasets or computationally intensive models.
While the number of students with special needs requiring adaptations may be limited, the factual situation demonstrates compliance with their requirements, including adopted workplaces in the library.
Premises and infrastructure upgrades at Faculty of Mathematics and Informatics are planned and implemented in a structured manner at both university and faculty levels. Major infrastructure developments are coordinated centrally by the university administration in cooperation with the relevant faculties, while more specific upgrades are carried out at the faculty level in line with approved action plans and identified needs. However, the learning environment at the faculty remains affected by ageing infrastructure and, despite the existence of upgrade plans, continued attention should be given to distributing available funding between the construction of new premises and the gradual renovation of existing facilities, which continue to age.
At the Kaunas faculty, infrastructure planning is conducted on an annual basis, with particular attention to student needs, enrolment changes, and developments in the field.

AREA 6: CONCLUSIONS

AREA 6	**Unsatisfactory - 1** Does not meet the requirements	**Satisfactory - 2** Meets the requirements, but there are substantial	**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

		shortcomings to be eliminated			without any shortcomings
First cycle			X		
Second cycle			X		

COMMENDATIONS

1. The general infrastructure upgrade planning process follows a bottom-up approach. The administration consults teaching staff regarding their needs for the coming year and anticipated requirements for subsequent years. Student representatives are also included in this process, allowing student needs and perspectives to be considered when planning infrastructure upgrades.
2. The availability and open access to VU owned supercomputer (e.g., High Performance Computing resources) supports the integration of research and studies by contributing the development of practical competences aligned with requirements of study field.

RECOMMENDATIONS

To address shortcomings

1. Although a plan for upgrading existing classrooms is in place, the learning environment at the faculty remains affected by ageing infrastructure. It is therefore recommended that the university continue to prioritise the completion of the new academic building, as this would significantly improve the quality of studies and the overall learning environment.

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 SER clearly describes the main bodies involved in the Internal Study Quality Assurance System (ISQAS) and their respective functions. Responsibilities within the system are well defined, and the periodicity of quality assurance activities is specified. The institution explicitly promotes a quality culture based on data-driven decision-making, with emphasis on measurable and achievable outcomes, what shows in the report. The onsite visits supported this with some positive examples.
Multiple fields of action are addressed, including (but not limited to) study programme monitoring, study processes, student achievement, distance learning, plagiarism prevention, pedagogical competences of teaching staff, student support, and drop-out prevention. The promotion of innovative pedagogies is a particularly positive element. Specific data and indicators are mentioned, and at least one concrete example of quality improvement action is provided.

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

The SER describes several instruments for engaging social partners, including participation in governing and advisory bodies, internships, involvement in thesis preparation and defence committees, and direct contribution to teaching. A specific example of improvement resulting from social partner input is provided.
The involvement of employers and practitioners contributes to market relevance and alignment with labour market needs. A wide range of concrete examples illustrates how stakeholder engagement supports curriculum development and student employability.
The onsite visit completed the information included examples of involvement with students. However, the engagement with students could be improved in some bodies (e.g. no students participated in the SER preparation), and the recognition of the student representation activities and derived skills acquisition could be enhanced.
The systemic engagement with alumni is not clearly demonstrated and the interactions with social partners and industry employers could be more efficient.

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

A dedicated system for information dissemination and study programme administration is in place. Its functionalities are described and support both public transparency and internal quality assurance. Relevant public information is available, complemented by intranet-based access to information used for IQA purposes. Not only the availability of the system is mentioned, but its use is demonstrated.

7.1.4. Student feedback is collected and analysed

The SER provides a comprehensive overview of student feedback mechanisms, including multiple surveys, their periodicity, and their scope. Interviews and other qualitative instruments are also in place, with examples of resulting actions. Average survey results and the relationship between population and sample size are presented, demonstrating transparency.
The SER openly acknowledges that graduate survey response rates are low, limiting statistical conclusions. This limitation is explicitly recognised. The online visit complemented this information with some ongoing mitigation actions.

ANALYSIS AND CONCLUSION (regarding 7.1.)

The institution demonstrates a well-established and effective internal quality assurance system, characterised by clear governance, data-driven decision-making, measurable indicators, and a strong quality culture. Stakeholder involvement is a notable strength and shows clear improvement compared to previous evaluations. Transparency, information management, and student feedback mechanisms are well developed.
The identified shortcomings are minor and relate mainly to the sustainability and diversification of feedback instruments, rather than to structural or functional weaknesses.
Some specific comments:

- The ISQAS is not only structurally well-developed but also demonstrates operational maturity. The explicit use of indicators, clearly assigned responsibilities, and documented examples of improvement indicate that the system is functional and effective. The focus on innovative pedagogy and student support further strengthens the quality framework.
- Stakeholder involvement is mostly systematic, meaningful, and clearly linked to programme development. The breadth and depth of engagement, combined with concrete outcomes, demonstrate a wide collaboration and responsiveness to external input.
- The information infrastructure is well developed and supports transparency and informed decision-making. The dual use of public and internal information channels is appropriate and effective.
- Student feedback is collected and analysed in a structured and transparent manner, with clear evidence of follow-up actions. The acknowledgement of methodological limitations reflects a mature quality culture. However, the large number of surveys raises the risk of survey fatigue, and reliance on low-response instruments (e.g. graduate surveys) may require complementary approaches.

AREA 7: CONCLUSIONS

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

COMMENDATIONS

1. The panel commends the institution for its strong quality culture, characterised by data-driven decision-making, clear responsibilities, and measurable outcomes.
2. The systematic and effective involvement of social partners, leading to improved market relevance and curriculum development, is a clear strength.

RECOMMENDATIONS

For further improvement

1. Monitor and mitigate the risk of survey fatigue by streamlining student surveys and complementing them with alternative QA instruments.
2. Explore additional methods to collect graduate feedback (e.g. focus groups, interviews, alumni networks, employer feedback) to compensate for low survey response rates.
3. Periodically review and update survey instruments to ensure continued relevance and effectiveness.
4. Consider preparing a pedagogical framework for recognition of the students' representation activities to encourage participation and comply with European standards for students' rights.
5. Explore further QA instruments to engage alumni more systemically and effectively.
6. Continue strengthening the integration of innovative pedagogies and document their impact using existing indicators.

V. SUMMARY

First of all, the expert panel wishes to thank Vilnius University and all members of the Faculty of Mathematics and Informatics, as well as the Kaunas Faculty, for the preparation of a comprehensive, well-structured, and self-reflective self-evaluation report. The documentation was detailed and transparent, and the site visit was organised in a professional, open, and constructive manner. Discussions with management, academic staff, students, alumni, and social partners demonstrated a strong sense of academic community and a shared commitment to continuous improvement.

Overall, the Informatics Engineering study field is characterised by solid academic foundations, clear strategic alignment, and strong integration between research and teaching. Across all evaluated areas, the study field meets the requirements at a very good level.

In Area 1, the programmes demonstrate clear alignment with national and European strategic priorities and respond directly to the demand for ICT professionals, particularly in cybersecurity. The differentiation between the two programmes ensures complementarity and strengthens the overall portfolio. The curricula are coherent, compliant with regulatory requirements, and systematically structured to support progressive competence development. The strong orientation towards applied engineering systems, internships, and professionally relevant final theses represents a clear strength. Quality assurance mechanisms related to curriculum review are operational and effective. Further development could focus on expanding English-taught components within Lithuanian programmes and increasing flexibility and individualisation of study paths.

In Area 2, the panel observed strong scientific performance at both national and international levels. Research-active academic staff, supported by a transparent KPI-based motivation system, contribute to a meaningful integration of research into studies. The curriculum is modern and research-informed, reflecting current developments in informatics engineering and cybersecurity. Access to advanced research infrastructure strengthens the link between studies and scientific activity. Opportunities for student research are appropriate and pedagogically sound; however, a more systematic model of undergraduate research engagement and clearer international benchmarking of research performance would further enhance long-term visibility and competitiveness.

In Area 3, admission procedures are transparent, competitive, and aligned with programme learning outcomes. The recognition of prior learning and foreign qualifications is flexible and generally effective, facilitating mobility and inclusion. The student support system is comprehensive, including mentoring, counselling, integration activities, and career services. Students reported feeling heard and involved in decision-making processes. At the same time, certain structural risks were identified, including strong dependence on state-funded places, relatively low outgoing mobility numbers, and the need for further standardisation in outcome-mapping during recognition procedures. Addressing these issues would strengthen sustainability and equity.

In Area 4, teaching and learning processes effectively prepare students for independent professional activity. The integration of theoretical foundations with applied components, laboratory work, internships, and final theses ensures strong labour market relevance. Assessment procedures are transparent and aligned with intended learning outcomes. Academic integrity and ethical standards are institutionally supported. Further improvements could focus on standardising student self-assessment practices, strengthening systematic alumni tracking, and enhancing structured outreach to prospective students with disabilities and special educational needs.

In Area 5, the teaching staff is adequately qualified, professionally active, and supported by transparent recruitment and evaluation procedures. The KPI-based motivation system, institutional funding for research activities, support for high-level publications, and access to high-performance computing resources create a supportive academic environment. Professional development and

international mobility are well embedded in institutional practice. These arrangements provide a stable and sustainable foundation for high-quality study delivery.

In Area 6, learning facilities and research infrastructure are generally sufficient to achieve learning outcomes. Access to high-performance computing resources significantly strengthens both research integration and advanced student projects. Infrastructure planning follows a structured and consultative approach, involving staff and student representatives. Nevertheless, ageing facilities at the Faculty of Mathematics and Informatics require continued prioritisation of renovation and completion of the new academic building to ensure a modern and fully supportive learning environment.

In Area 7, the internal quality assurance system demonstrates operational maturity. Governance structures, clearly defined responsibilities, measurable indicators, and systematic stakeholder involvement contribute to a strong quality culture. The system is data-informed and supported by appropriate digital tools. Student and social partner engagement is meaningful and linked to programme improvement. Minor improvements relate to streamlining feedback instruments to mitigate survey fatigue and diversifying alumni feedback mechanisms.

In conclusion, the Informatics Engineering study field at Vilnius University demonstrates a high level of organisational maturity, academic quality, and strategic coherence. The identified areas for improvement are developmental rather than structural and do not undermine the overall strong performance of the study field. Continued attention to international benchmarking, mobility stimulation, infrastructure modernisation, systematic alumni tracking, and inclusive outreach will further strengthen its national and international positioning.

VI. EXAMPLES OF EXCELLENCE

Based on the evaluation, the panel identifies the following example of excellence:

Access to and integration of university-owned high-performance computing infrastructure (supercomputing resources) into both research and study processes.

The open and structured access provided to academic staff and students, including its use in advanced study projects and final theses, represents an exceptional institutional asset. Such infrastructure, combined with active research engagement and practical application in the curriculum, is not universally achievable and significantly enhances the scientific depth and practical relevance of the study field.

Transparent and Performance-Oriented Academic Incentive System.

The implementation of a clear, KPI-based academic incentive and career development system represents an example of institutional excellence. The system is transparent, measurable, and consistently applied, linking research output, teaching quality, internationalisation, and project activity to tangible professional advancement and financial incentives.

Such a structured motivation framework strengthens research productivity, supports early-career development, and ensures alignment between institutional strategy and individual academic performance. The clarity and operational maturity of this system go beyond minimum requirements and contribute significantly to sustained academic competitiveness.