STUDIJŲ KOKYBĖS VERTINIMO CENTRAS
CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

INFORMATICS FIELD OF STUDY

Vilnius Gediminas Technical University

EXTERNAL EVALUATION REPORT

Expert panel:

1. Panel chair: Prof. dr. Johann Gamper
2. Academic member: Prof. dr. Jyrki Nummenmaa
3. Academic member: Prof. dr. Vitalij Denisov
4. Social partner: Vilma Eidukynaitė
5. Student representative: Vytautas Kučinskas

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I. INTRODUCTION

1.1. OUTLINE OF THE EVALUATION PROCESS

The study field 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 study field.

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 a HEI; 2) a site visit of the review panel to the HEI; 3) the external evaluation report (EER) prepared by the review panel 4) accreditation decision taken by SKVC and its publication; 4) follow-up activities.

The main outcome of the evaluation process is the EER prepared by the review panel. The HEI is forwarded the draft EER to report 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 a HEI is not happy with the outcome of the evaluation, HEI 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).

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. Dr. Johann Gamper
2. Academic member: Prof. Dr. Jyrki Nummenmaa
3. Academic member: Prof. Dr. Vitalij Denisov
4. Social partner: Vilma Eidukynaitė
5. Student representative: Vytautas Kučinskas

1.3. SITE VISIT

The site visit was organised on 16 May 2024 in hybrid mode. Vytautas Kučinskas of the expert panel attended online, whereas the other panel members were onsite. Also, some of the participants of VGTU attended the meeting online.

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

The Vilnius Gediminas Technical University (VGTU) was established in 1956 as a state-owned public higher education institution. Today, VGTU is one of the largest higher education institutions in Lithuania and aims to become the leader in teaching and research in the field of technology and engineering.

The VGTU is governed by two collegial bodies: the University Council and the Senate. The Council is responsible for the vision/mission, strategic action plans, the budget, hiring policies, and the election of the Rector. The Senate is responsible for the management of all academic affairs and it works with five permanent committees: research committee, studies committee, students committee, development and quality committee, and legal committee and ethics committee. The rector in a team with the Vice-Rectors and the Deans of the faculties are in charge of all activities in research, teaching and third mission.

For the organisation of research and teaching, the VGTU is divided into faculties and departments. The faculty is governed by the dean and the Faculty Council as the faculty's collegial management body.

Overview of the study field

The VGTU is a technically-oriented University with a strong focus on engineering, offering study programmes in 26 different fields, which can be grouped into engineering, informatics (IT), mathematics, technology, social sciences, business and public management, and arts.

In the study field of Informatics, the VGTU offers two first cycle study programmes: Information and Communication Technologies launched in 2016 and Information Technologies launched in 2018. These two study programmes, which are subject of the accreditation, are jointly hosted by the Faculty of Fundamental Sciences and the Faculty of Electronics, with their associated research areas of Informatics (N 009), Informatics engineering (T 007), and Electrical and Electronics Engineering (T 001).

There are about 1500 bachelor students in the field group of Informatics (which includes such fields as Informatics, Informatics Engineering, Information Systems, and Software Systems), while in these two study programs, there are about 300 bachelor students.

Previous external evaluations

The SER mentions some recommendations from previous evaluations together with corresponding actions, which show that the recommendations have been largely implemented. However, from the SER it is not clear whether both programs have been evaluated or only one.

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*
- *List of final theses*

Additional sources of information used by the review panel:

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

- *Student admission results to each study program 2019-2023*
- *The list of publications and projects of teaching staff during the last 5 years*

II. STUDY PROGRAMMES IN THE FIELD

First cycle/LTQF 6

Title of the study programme	**Information and Communication Technologies**	**Information Technologies**
State code	6121BX019	6121BX033
Type of study (college/university)	University	University
Mode of study (full time/part time) and nominal duration (in years)	Full-time (4 years)	Full-time (4 years)
Workload in ECTS	240	240
Award (degree and/or professional qualification)	Bachelor in Informatics Sciences	Bachelor in Informatics Sciences
Language of instruction	Lithuanian, English	Lithuanian, English
Admission requirements	Secondary education	Secondary education
First registration date	27.05.2016	25.06.2018

III. ASSESSMENT IN POINTS BY CYCLE AND EVALUATION AREAS

The first cycle of the Informatics study field at the Vilnius Gediminas Technical University is given a **positive** evaluation.

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

[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.

III. STUDY FIELD ANALYSIS

AREA 1: STUDY AIMS, LEARNING OUTCOMES AND CURRICULUM

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

FACTUAL SITUATION

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

The aims and the expected learning outcomes of the study programmes under evaluation have been developed by considering both the strategic objectives of Lithuania and the needs of the society and the labour market.

There is an enormous demand for professionals in information and communication technology not only at the national level, but also at the EU level and worldwide. According to the Official Statistics portal in Lithuania, the ICT sector has one of the highest vacancy rates. In fact, in 2021 more than 62% of Lithuanian companies had problems finding employees for ICT positions.

The ICT sector plays a crucial role in Lithuania's digital transformation. According to an OECD study, Lithuania is one of the countries with the largest probability of high job automation. In fact, the ICT sector is also one of the main contributors to economic growth. Training ICT professionals is therefore of utmost importance for the country.

A similar demand for IT skills can be observed everywhere in Europe, and it is expected that the number of IT jobs in Europe is further growing in the future.

When designing/updating the study programmes under evaluation, not only the guidelines of the specific study field were considered, but also the needs for specific ICT job profiles on the market were analysed. The insights from the market guided the design process, yielding study programmes that on one hand provide a broad solid foundation in the core subjects of Informatics, and on the other hand offer a specialisation in one of four thematic areas. The specialisations are aimed as a fast response to the market needs.

The high demand for IT graduates and for the specific profiles of the VGTU graduates is confirmed by a recent survey, which revealed that 83% of the graduates started working during their studies, 95% of which worked in their area of specialisation.

The VGTU runs other study programmes in fields that are related to Informatics, such as Software Systems, Information Systems, and Informatics Engineering. The programmes are designed in such a way that they cover a broad range of Informatics related fields to respond to the market, but are sufficiently different and specialised in order to avoid overlapping.

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

The aims and expected learning outcomes of the study programs are aligned with the mission of the VGTU and its development strategy for the years 2021-2030. By taking account of the European higher education

strategy and modern trends, the development strategy strives for pushing VGTU to become a core player in the Lithuanian and international higher education area.

In a broader context, the two study programmes under evaluation aim at contributing to Europe's Digital Future strategy with its strategic objective to address the digital skills gap. As part of this strategy, the VGTU is engaged in the EU project MERIT, which has developed a joint second cycle study programme to train the next generation individuals who are equipped with skills required to address the challenges of tomorrow's digital world.

The objective of the Information and Communication Technologies study programme is to equip graduates with a solid knowledge in informatics, electronics, and fundamental science, paired with the ability to apply this knowledge in solving engineering and technological problems. The objective of the information technology study programme is to prepare highly qualified and broad-profile IT specialists with a focus on IT infrastructures for organisations.

To emphasise the aim for internationalisation in the VGTU strategy, the two study programmes are offered in Lithuanian and English.

ANALYSIS AND CONCLUSION (regarding 1.1.)

The aims and the expected learning outcomes of the two evaluated study programmes are in line with the strategic objectives of Lithuania, the needs of the society and the labour market, as well as the vision and mission of the VGTU. There is a high demand for IT specialists on the labour market not only in Lithuania, but also in Europe and worldwide. The two study programmes are in response to this need and aim at contributing to the implementation of VGTU's strategic development plan to become a recognized higher education institute in Europe and to train young talents who are equipped with the necessary skills to solve the problems of tomorrow's digital world. The meeting with the stakeholders confirmed the high qualification of graduates from the VGTU.

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 two study programmes under evaluation are fully compliant with the existing legal framework, which contains a long list of laws, decrees, regulations, and orders from the European Union, the Republic of Lithuania, and the VGTU.

The two programs are also compliant with the recommendations of the Informatics science study group descriptor, as shown in Table 1.1 and Table 1.2. of the SER. The two programmes comprise 240 ECTS credits, which for full-time students are equally distributed over 4 years with 60 credits per year. This guarantees a balanced distribution of the workload for students and facilitates a continuous progress and acquisition of new competences.

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

The aims and learning outcomes of the study programmes have been designed by considering the recommendations in the legal documents that regulate higher education in Europe and Lithuania.

More specifically, the learning outcomes are based on the descriptor of the fields of study in Informatics, considering the specificity of the aims of the study programmes.

Based on the specific learning outcomes, a number of different learning and teaching methods are designed and applied with the aim to engage students as much as possible and guarantee the achievement of the intended skills. Examples of teaching methods include frontal teaching, debates, brainstorming, guest lectures, and problem-based learning. At a bottom line, all courses and the related course material are also delivered in the Moodle distance learning environment.

Similarly, different assessment methods are offered, considering the specific learning outcomes, the subject, and the teaching methods. The aim is to choose the most appropriate assessment method, which allows to judge the acquired competences of the students.

Table 1.2 in the SER provides the links between learning outcomes, study methods and assessment methods, which shall be used as guidelines for professors and teachers. Annex 1 of the SER specifies the complete learning outcomes, structure and course descriptions.

While the aims, learning outcomes and teaching methods seem largely aligned, the discussion with the students revealed that for some courses the number of allocated ECTS credit points does not correspond to the real workload required by the student, which is much higher.

1.2.3. Curriculum ensures consistent development of student competences

A careful scheduling of the study plan considers dependencies between subjects and learning outcomes, and guarantees an incremental acquisition and coherent development of competences by the students. The subjects taught in the first years are dedicated to the basics in Informatics and social and personal skills that are fundamental for more advanced courses. The courses in the higher semesters aim at developing advanced knowledge and skills, including research skills.

To further verify and analyse dependencies between subjects and to guarantee a coherent and progressive study plan, the learning outcomes have been grouped into categories of competences proposed by the ACM CS curriculum guidelines, which serve as an authoritative reference in Informatics (Table 1.3 in the SER).

While the study plan and schedule seem appropriate to facilitate a consistent and incremental development of competences, the discussion with the students revealed that for some courses the number of allocated ECTS credit points does not correspond to the real workload required by the student (which is much higher).

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

Students have various opportunities to customise their studies for their individual needs. First and most importantly, students can choose one of four different specialisation areas. Moreover, in the first year students can choose one of several foreign languages to study. In the second year, students can choose an optional study subject, e.g., in Ethics, Logics, or Public Communication. In the third year students can choose

from a list of free optional courses. Finally, students can also opt for an individual study plan, which allows to schedule the study subjects according to the individual needs.

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

The preparation and defence of the final thesis has been designed according to the requirements and guidelines specified in the corresponding Order of the Rector.

The work on the final thesis typically begins in semester 7. To facilitate this process, the students are introduced into methodological guidelines and principles.

Different types of theses are allowed: system implementation, application of solutions, and research, each of which has its own requirements. Approximately 21% of the final theses are carried out in collaboration with a company. A list of thesis titles is provided in Annex 2 of the SER.

A feedback loop is introduced before the final thesis defence, where the department staff can serve as reviewer. Based on the feedback and the supervisor's assessment, the Degree Awarding Commission is evaluating the final thesis, considering content and quality of the thesis, the final presentation, and the question-answering part.

ANALYSIS AND CONCLUSION (regarding 1.2.)

The evaluated study programmes fully comply with the legal framework at the national and University level. The study subjects and the teaching, learning, and assessment methods are largely aligned to guarantee a coherent and gradual acquisition and development of competences and skills in order to achieve the study aims and learning outcomes. For this, a number of different teaching methods are offered together with appropriate assessment methods to verify the acquired competences. Students have various possibilities to customise the study plan to individual needs. The content, preparation, and evaluation of the final thesis is in line with the requirements for the field and cycle.

The recommendations from the previous external evaluation have been implemented.

The discussion with the students revealed that for some courses the number of allocated ECTS credit points does not correspond to the real workload required by the students. Hence, a careful analysis and reflection on the allocation of credits should be done.

AREA 1: CONCLUSIONS

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

		shortcomings to be eliminated	shortcomings to be eliminated	without any shortcomings	without any shortcomings
First cycle				4	

COMMENDATIONS

1. The description of the study programme, including the mapping between learning outcomes, teaching/learning/assessment methods, and the study subjects is exemplary, very precise, consistent and at the right level of detail.

RECOMMENDATIONS

For further improvement

1. For some courses the number of allocated ECTS credit points does not correspond to the real workload that is required by the students, especially for courses with a significant practical part. This leads to a certain unbalance in the workload between the semesters, despite the fact that each semester has the same number of credits points. A careful analysis and reflection on the alignment between the credit points and the real workload of some courses (which might also depend on the teaching methods) would be helpful to achieve a more balanced workload distribution for the students.

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 research activities in the VGTU concentrates on seven priority areas. One of these areas is Information and communication technologies, which covers five research fields that are relevant for the two study programmes under evaluation.

The STRATA Comparative Assessment of Research Units in 2023 has shown good to very good results for departments offering the two study programmes: 4 points for Electrical and Electronic Engineering (best result among Lithuanian universities), 3.5 points for Informatics Engineering and 3 points for Informatics (second place).

To further strengthen research activities, the Council of the VGTU decided to provide financial incentives for academic staff if they achieve a research output beyond the minimal requirements.

Figure 2.1 in the SER report shows that both the number of scientific publications and the third-party funded research projects (including three Horion Europe projects) of the teaching staff in Informatics is growing over the past five years. Moreover, they are regularly involved in the organisation of national and international conferences. These are good signs and show the potential of the structures for further development and improvements.

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

The integration of new results of research activities into the content of studies is supported in different ways. First, teachers are encouraged to integrate research results into the content of each individual study subject. In many courses, teachers devote at least one lecture to present the latest research that is relevant for the specific course. Second, to increase the exposure to research students are invited to attend scientific conferences and events organised by the VGTU. Third, the University seeks collaboration with companies and other organisations in order to transfer the latest technologies. Fourth, students have to attend each year at least one lecture delivered by a guest teacher, which are often research-oriented, targeting researchers and teachers as well.

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

The VGTU, and in particular the two study programmes in evaluation, provide several opportunities for students to get involved in research activities. One way is to work on a final thesis which requires some basic research tasks. Around 22% of graduates in the two study programmes opt for this type of final thesis. Another opportunity to get exposed to research is in the context of an internship, which can be done at the University by getting involved in a research project.

To further increase the number of students engaged in research, the VGTU started a competition. Professors propose research topics, and second and third year students can apply and also get financial incentives if they get involved in a topic.

Finally, students are invited to participate in scientific conferences organised by the VGTU, which is often the way to raise awareness and interest in research. If a student achieves publishable results, he/she is invited to give a presentation at the Annual Young Scientists' Conference "Science - the Future of Lithuania" or at another conference, for which funding is provided. The authors of the best presentations will also be invited to publish the results in a journal edited by the VGTU.

ANALYSIS AND CONCLUSION (regarding 2.1.)

The VGTU is doing active research in the study field under evaluation and got a good to very good evaluation in the recent STRATA evaluation. The research performance has been improving over the past five years in terms of publications, acquired third party funding and engagement in the organisation of scientific events. To further improve the performance, the VGTU introduced financial incentives.

There are several ways to systematically integrate newest research results into the course content as well as to engage and expose students to research.

The expert panel suggests continuing this direction to improve research, focusing more and more to present the research results in high quality international outlets. An important step in this direction might be to install a competitive PhD programme, potentially in collaboration with international partner universities. Finally, measures should be taken to engage also lecturers who are currently not active.

AREA 2: CONCLUSIONS

AREA 1	Negative - 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			3		

COMMENDATIONS

1. There are a number of initiatives in place to improve the research performance in general, and in particular to engage students in research activities. Examples are the student competitions as well as the incentives and support for students to present and publish the research results, which are perceived very positively by the students.

RECOMMENDATIONS

To address shortcomings

1. The VGTU has several measures in place to reach excellence in research at an international level (e.g., minimum requirements for the qualification of the teaching staff, financial incentives), which is very much appreciated. Nevertheless, many publications of the professors and teachers are still published

in outlets that cannot be considered as high quality international standard, e.g., MDPI or journals published by the VGTU. To achieve the goal of an internationally recognized research and education institution and to achieve a top result in the next research evaluation in all three areas under evaluation, it is recommended to compete with the international research community and publish in recognized top journals and conferences. The participation in international research projects (e.g., EU projects) would also be helpful towards these goals.

2. The expert panel advises the VGTU to develop further measures (in addition to the financial incentives) to engage potentially all teachers to become active researchers (or at least as many as possible), in particular in the two areas that did not perform top in the last STRATA research evaluation. This would have an important impact to position the University in the international landscape.

For further improvement

1. An additional measure to strengthen the research profile of the VGTU might be to install a competitive PhD programme, potentially in collaboration with international partner universities.

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

Student admissions to the programs are conducted in accordance with the requirements and procedures set by the Ministry of Education, Science and Sport of the Republic of Lithuania. This follows the admission rules for first and second cycle studies approved by the VGTU rector and the general admission procedures for Lithuanian higher education institutions. The programs are open to individuals who have completed secondary education.

It is important to note that the entrance score averages at the bachelor level for state-funded (SF) and non-state-funded (NSF) students are very similar.

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

Since 2015, VGTU has had the authority to conduct academic recognition of education and qualifications obtained through the educational programs of foreign countries and international organisations.

Over the past three years, there has been a significant increase in student transfers to VGTU's Bachelor's programs in Informatics from other higher education institutions. This trend has been influenced by the political situations in Ukraine and Belarus. Each transfer case was individually assessed, and personalised study plans were created. Most students began their studies in either the 2nd or 4th semesters.

Over the past five years, the assessment and recognition of non-formal and informal competencies in the field of Informatics have been initiated three times. During these consultations, individual solutions are typically devised through teacher collaboration, particularly for internship assessments.

ANALYSIS AND CONCLUSION (regarding 3.1.)

The admissions system of VGTU, as well as the system of recognition of foreign qualifications and other prior learning outcomes, appear to function effectively and meet the needs of students at both the institutional level and within the context of the field of study of Informatics.

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

VGTU students have the opportunity to study or intern in 58 different countries through Erasmus+ and bilateral cooperation programs.

Students in the field of Informatics have relatively low mobility because they are often employed during their studies and are in high demand in the Lithuanian market. This makes it challenging to achieve higher levels of student mobility.

Before students leave to study at another higher education institution, their study plan is coordinated in advance. This ensures that all credits are properly accounted for upon their return, allowing them to seamlessly continue their current study program. Consequently, all foreign credits in the field of Informatics have been successfully transferred so far. In a few instances where students returned without assessments for planned study subjects, individual study plans were created to help them address the gaps in the following years.

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

Academic support is provided to students throughout the entire academic year, and information about the field programs is delivered in various forms. For newly enrolled first-year students, "Introduction to Studies" lectures and an inclusive week are organised to familiarise them with the University, faculty structure, and study process. Additionally, the VGTU library staff conducts training sessions on library rules, using electronic catalogues, online information searches, databases, and copying equipment. Other sessions cover student sports and art opportunities, dormitory procedures, rights and responsibilities, career planning, Erasmus+ opportunities, and include lectures from psychologists.

Students receive social support through various scholarships, including incentive scholarships for academic achievements, one-time incentive scholarships from VGTU and faculty funds, social scholarships awarded by the State Studies Foundation, and personal scholarships.

Social partners and companies provide financial support to the most advanced students. These incentives not only enhance the well-being of recipients but also motivate other students to strive for higher academic achievements.

3.2.3. Higher education information and student counselling are sufficient

All first-year students start their studies with an integration week, which includes an introduction to the study procedures, University departments, library services, and information about faculties and departments.

In the first semester, students take the "Introduction to Studies" course, tailored differently for each program. For instance, the ICT program offers "Introduction to Information and Communication Technologies."

ANALYSIS AND CONCLUSION (regarding 3.2.)

In all three areas evaluated, the situation at the VGTU appears to be appropriate and beneficial to students, both in terms of the University's general situation and the field of informatics studies. The comprehensive support structures in place ensure that students are well-equipped to succeed academically and personally, fostering a conducive learning environment. Moreover, the proactive coordination of study plans and

seamless credit transfer processes highlight VGTU's commitment to maintaining high standards in academic mobility and student progression.

AREA 3: CONCLUSIONS

AREA 1	Negative - 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				4	

COMMENDATIONS

1. The VGTU, in particular one of the two study programmes (Information Technologies) under evaluation, has a high number of international students, which confirms it to be an attractive study place.

RECOMMENDATIONS

For further improvement

1. Additional measures (e.g. simplify the administrative processes for applying to mobility programs, provide additional assistance during the process) should be taken to achieve higher levels of student mobility.

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

4.1. Students are prepared for independent professional activity

FACTUAL SITUATION

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

The study year consists of autumn and spring semesters, with a week-long winter break (between the two semesters) and a 2-month summer break. The duration of studies is defined by the VGTU study calendar. A study semester consists of periods of courses and examination sessions, the timing and duration of which are specified in the study plan. One study week is equivalent to 40 hours of student work.

ICT and IT programmes are full-time, with lectures taking place during the day or on an individual basis for students studying after working hours. Contact work is carried out live or via videoconferencing, on University campus or in other venues, when company outings or other activities are organised. The study subjects included in the study programmes are included in the study schedules available to the University community, coordinated by the dean of the faculty and approved by the responsible person from the Study Directorate. For the sake of the individualization of studies, there are opportunities to study remotely.

Theoretical and practical studies are carried out in order to meet the objectives of the programmes and to achieve the intended study results. Learning forms and methods are presented on the card of every study subject.

To ensure active student involvement throughout the study period, the University applies the cumulative types of performance assessment. During the first lecture of the study subject the teaching staff member presents a programme of the study subject (module) to the students as well as the list of recommended literature, the expected study results and the number, form, instructions and preliminary dates of the credits to be earned. The studies of each study subject (module) are completed by the full credit (FC) assessed by a grade, or a credit record passed/ failed.

Different study methods and assessment are used during the studies: oral lectures, solving problems on paper and by using computer software, discussions, work result delivery in reports and presentations, group work, etc. Such a comprehensive system of study implementation guarantees that students will acquire the necessary subject-specific knowledge, practical skills, and will be able to summarise as well as analyse research results, and will learn to use the acquired knowledge and skills in a creative manner.

Some study subjects have an iterative development process where students are given the opportunity to improve their work, while at the same time enhancing their knowledge or skills.

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

VGTU considers the needs and conditions of disabled students to apply a flexible payment schedule. Students with severe disabilities and ones studying at their own expense are partially or fully exempt from tuition fees.

The majority of the University facilities are adjusted for the movement of students with disabilities at the university premises.

In 2021 a University disability affairs coordinator started providing assistance to students with individual needs and consultations to teachers working with these students.

ANALYSIS AND CONCLUSION (regarding 4.1.)

In the view of the expert panel, the teaching and learning process at the University meets the needs of students and enables them to achieve the intended learning outcomes. The cumulative learning achievement evaluation system motivates students to study throughout the study period.

VGTU has created conditions to study for students with special needs. VGTU supports students with special needs through flexible payment schedules, tuition fee exemptions, and a waived registration fee for those with severe disabilities. Students receive a monthly benefit for study-related expenses. The university provides specialised equipment, adapted facilities, and training for staff. A disability affairs coordinator ensures a smooth study process and offers consultations.

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

The SER report states that VGTU monitors the progress of its students at the levels of the University, faculty, and specific study program committees. In order to ensure better student achievements, VGTU has developed a "Student Achievement Monitoring and Improvement Plan." The tasks of this plan include analysing students' progress to improve the quality of studies, providing academic and social assistance to VGTU students, promoting academic honesty among students, and analysing survey results for feedback implementation.

An essential component of ensuring internal quality is the feedback loop. Creating and implementing a feedback system in the study process aims to effectively and systematically monitor the quality of education.

According to the Description of the procedure for organising surveys of VGTU study process participants, 8 different surveys are required in order to collect periodic feedback from students, residents, postgraduates, alumni and employers. The results of surveys are being analysed at the University on a regular basis. They are discussed at rectorate meetings, academic departments of the University, study programme committees, and meetings with students. Based on the opinion of the students' decisions are made to improve the study process and the obtained feedback results are disseminated. Feedback on survey results is available for students on the mano.vilniustech.lt account: students can see not only the summarised survey results of their faculty and study programme, but also the reports of study programme committees.

To facilitate monitoring, VGTU has various information systems in place. The University runs an e-system for interim credits to analyse the student progress.

In the opinion of the expert panel, the monitoring of students' learning progress and achievements is effective and systematic. The applied monitoring methods and analysis help students achieve good study results.

4.2.2. Graduate employability and career are monitored

Monitoring of student employment and graduate careers at the University is carried out regularly at several levels (faculties, study programme committees, Study directorate, career consultant) and methods (surveys, data collection from electronic systems/portals of relevant institutions): Government strategic analysis centre; the Employment Service under the Ministry of Social Security and Labour of the Republic of Lithuania; the Centre for Quality Assessment in Higher Education (SKVC) together with the National Agency for Education prepared indicators of study fields; and LinkedIn.

Surveys of companies regarding the training of graduates in the field of Informatics are not conducted due to potential risks associated with disclosing and using graduates' personal data, as well as the challenge of reaching the target companies. However, companies' opinions are gathered after students complete their internships (feedback is obtained from all the companies hosting interns), and by involving companies in the students' thesis defence committees (following the final thesis defence, discussions are held on the overall impression and potential opportunities for enhancing students' competencies).

The SER report states that VGTU bachelor's in informatics are advanced and in demand in the market. This is also confirmed by feedback from social partners and company representatives.

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

The principles of academic integrity at Vilnius Gediminas Technical University, as defined in the University's Code of Academic Ethics, guide both lecturers and students, including non-enrolled students, in their studies. This code promotes a culture of quality in study and research activities, emphasising social responsibility, academic honesty, transparency, and accountability to stakeholders. It serves a regulatory function, protecting the needs and interests of its intended audience, and helps the academic community recognize their societal mission and responsibilities.

Academic integrity at Vilnius Gediminas Technical University is upheld through internal legislation and various preventive measures. The Study Regulations outline the procedures for different study levels, quality assurance, financing principles, and evaluation of students. Key documents like the Procedure Description for Student Performance Assessment and the Description of the Final Thesis Preparation and Defence Procedure define unfair practices and sanctions for plagiarism, with student representatives involved in their creation. Tools like Turnitin are used to prevent plagiarism.

Tolerance and non-discrimination in the academic community are ensured by the Vilnius Gediminas Technical University gender equality plan 2022-2027. The main objective of the gender equality plan is to help ensure equal opportunities for all current and future members of the Vilnius Gediminas Technical University community, regardless of their gender, and to systematically solve gender issues.

Vilnius Gediminas Technical University personal data protection policy establishes the basic guidelines and provisions fulfilled by the University while processing the entrusted or otherwise collected personal data of natural persons.

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

The student has the right to appeal to the University. The vice-rector for studies refers the received appeal or complaint to the Appeal commission of the Faculty or the University.

The University Appeal commission deals with appeals and complaints concerning: violation of the procedures for the assessment or evaluation of achievements, if the assessor was the dean of the faculty, the vice-dean, the rector of the University, the pro-rector, or the head of the department; violation of the procedures for the assessment of achievements or the evaluation of evaluations, if the assessment was performed by the commission; the decision of the faculty Appeal commission or refusal to enforce a decision by the Appeal commission; the decision taken by the admissions Appeal commission; decision of the Appeal Board of the Admissions entrance test; actions by the administration, except for complaints about the content of study programmes, academic ethics or labour relations.

Faculty Appeal commissions deal with appeals concerning the assessment of students' achievements or the violation of assessment procedures, provided that such appeals are not within the competence of the University Appeal commissions. The faculty-level Appeal commission is set up within 5 working days from the date of receipt of the appeal by the order of the dean of the faculty in which the department of the subject/module of study is functioning. "The Description of procedures for resolving student appeals and complaints at Vilnius Gediminas Technical University"

ANALYSIS AND CONCLUSION (regarding 4.2.)

Detailed feedback/evaluation system provided to students allows them to evaluate the progress made during the studies and to achieve the intended learning outcomes.

Suitable conditions for studying are ensured for socially vulnerable groups and students with special needs. Adequate conditions for the implementation of the policy of academic honesty, tolerance and non-discrimination are ensured. AI policy already in place (or at least ready to be activated).

The student has the right to appeal to the University regarding the assessment of achievements, including violations of the assessment procedures, as well as complaints by students against the actions of the administration, the establishment of appeal commissions and organisation of their work.

The recommendations from the previous external evaluation have been implemented.

AREA 4: CONCLUSIONS

AREA 1	Negative - 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				4	

COMMENDATIONS

1. The University has already established a policy on AI. While some professors actively encourage students to use AI tools, others are less supportive. Overall, both professors and students have a positive attitude towards AI tools. Professors emphasise educating students on how to effectively use AI rather than imposing strict regulations.

2. Good study conditions for students with special needs.

RECOMMENDATIONS

For further improvement

1. Students feel that some of the teachers show a bad attitude towards them. The University should be proactive to avoid such non-inclusive behaviour and ensure the shared values are not missing.

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 the SER, the total number of students in the Informatics Bachelor's degree study programmes is 304 and there are 106 different lecturers, which would roughly give 1:3 teacher to student ratio. However, there are course modules that are combined between different study programmes and course modules that are not. This is especially true for non-field general University study subjects. Meanwhile, 65 lecturers teach in both programmes, which would amount to 1 : 4.7 students ratio. However, a teacher does not work with a group of fewer than 12 students. As a conclusion, the teacher to student ratio is satisfactory from all angles.

There are separate teachers that are practical experts. In particular, there are 3 permanent, long-standing practical expert teachers working as associate professor partners and professor-partners. Some of the other teachers have practical experience, too.

The teaching staff fulfils the legal requirements. Additionally, the study programmes are also taught in English, and 77% of the teaching staff speak English language on at least level B2.

Students in the meeting were generally happy with the teaching staff, however there were some exceptions. One student said that some teachers do not seem to share common values with the students. Generally, the students had the opinion that some teachers' attitude was not that good, while they were very happy with the majority of the teachers.

The staff gave a very good impression at the site visit. - they seemed to be actively following the developments with e.g. AI.

ANALYSIS AND CONCLUSION (regarding 5.1.)

The situation is generally good, with respect to both the quantity and the quality of the teaching staff. Quality here includes scientific competence, pedagogical education and language skills. There are some problems, though, indicated by the students. It seems possible that the student feedback has not been dealt with completely.

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.

VGTU participates in Erasmus+ but also other exchange programmes such as DAAD and others. All detailed information on international opportunities for teachers is available on the web and sent to each employee personally by e-mail. In addition, the Faculty's international coordinator provides information and advice to the faculty's teachers on the selection process. The criteria prioritise creating added value during the previous

visits (for example, the invited visiting teachers for lectures, projects, articles, internships, etc.), staff with experience in teaching in English at VGTU or other higher education institutions, and those going on an Erasmus study visit for the first time.

In the period 2020-2022 18 teachers teaching in the informatics programmes were sent on 35 short-term visits to 15 foreign countries and 18 different people from 12 different countries came to short-term visits in the departments related to Informatics studies.

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

Scientific research achievements and didactic improvement achievements are appropriately rewarded. While the overall situation is satisfactory, It seems that there is not big pressure to participate in research or mobility, this is more on the reward basis, which may leave some teachers outside of the development, while of course the ones who take the opportunities do have an effect on the rest.

Some staff members have a relatively high research activity, but there are in particular lecturers who do not seem to be active in research. The site visit gave the impression that this was somehow accepted and those who did not want to do research were given more teaching hours (instead of trying to push them to do research).

The Informatics Bachelor study programmes are also given in English. The teachers who want to improve their English can participate in free courses given at the University.

Teaching staff members are provided with opportunities to systematically improve their educational competencies in different forms.

ANALYSIS AND CONCLUSION (regarding 5.2.)

The situation with exchanges and didactic competence development seems good. Generally this is also the case with research, but there are teachers who do not do research. The site visit gave the impression that this problem was not taken very seriously - instead of trying to activate the non-research-oriented teachers to do more research, they were given more teaching, making research even more difficult.

AREA 5: CONCLUSIONS

AREA 1	Negative - 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			3		

RECOMMENDATIONS

To address shortcomings

1. The students should be asked about the problems with the teaching staff, and their feedback should be analysed and the situation should be rectified.
2. There should be ways to activate the more passive staff members to research. Potential ways to do that include collaboration with other researchers or research groups.

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 University has impressive and well-connected IT infrastructure, with a Data Centre consisting of 57 physical and 200 virtual servers with 1,185 processor cores, 5.06 terabytes of RAM and 766 terabytes of long-term storage. There are over 200 titles of software products that are installed to be used by the students and the staff. There is a self-service portal to facilitate the study process. The portal provides all the information of the study process and its implementation: lecture and examination schedules, study programmes,classroom information, documents regulating the study procedures, etc.

The new campus facilities seemed modern generally with new labs and good equipment. Some very modern equipment has been obtained from industry collaborators. At the same time, VGTU still has students in the old campus, where the facilities apparently were not equally good.

The Central Library is open to the University community 24 hours a day. It hosts a good amount of study spaces and workstations.

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

The resources needed for the studies are planned and updated at both faculty and University level. Each year, the faculties and their units do a planning round including funds for hardware, software and methodological literature. The Faculty of Electronics has been relocated to new premises, which implied needs for the infrastructure. In 2023 EUR 800 000 were used to renew labs, and study and research equipment. This new campus with its facilities is impressive. VGTU also benefits from its partners who have made important donations to the labs. The site visit gave the impression that there is no method in place to install all computers in a centralised way from a server.

ANALYSIS AND CONCLUSION (regarding 6.1.)

The situation is very good and there are no actual shortcomings. There is an imbalance between the old campus and the new campus. The maintenance and update strategy of the IT infrastructure was not thoroughly convincing, judging from that there seems to be no method in place to install all computers in a centralised way from a server.

AREA 6: CONCLUSIONS

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

		substantial shortcomings to be eliminated	shortcomings to be eliminated	without any shortcomings	without any shortcomings
First cycle				4	

COMMENDATIONS

1. The new campus labs were modern, tidy, and well equipped.

RECOMMENDATIONS

For further improvement

1. The old campus infrastructure should be improved to match the one in the new campus.
2. There should be a way to install all computers in a unified way from the servers.

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

VGTU has created and is developing a quality management system which complies with European higher education quality assurance provisions and guidelines (ESG). The quality policy guidelines are publicly available, and description of internal study quality assurance is an integral part of the University's quality management. The internal study quality assurance system at VGTU involves different stakeholders and is essentially distributed to include different perspectives in the quality management process.

The distribution of responsibilities between the administrative bodies at different levels is presented in detail and very clearly in section 7 of the report. The Study Programme Committee (SPC), in cooperation with different departments of the University and social partners plays the main role in monitoring and organising the quality of the study programme, its improvement based on the feedback received and implementation of the follow-up activities.

During the expert panel's meetings with the SER group and academic staff, evidence was provided that the roles and responsibilities within the internal quality assurance system are well known to members of the academic community. It was also confirmed that the system is capable of ensuring timely updating of informatics curricula, which is very important for a field where changes occur quite frequently.

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

As stated in the SER document and confirmed during the site visit, students, employers, alumni, teachers and administrators are actively involved in improving the quality of studies. The main mechanism for ensuring this is the inclusion of students and employers in the SPC, the Faculty Study Committee and the Faculty Council. In addition, students are also part of the Faculty's competition and attestation commission, their representatives participate in the meetings of the Dean's office. Systematic surveys of students and graduates are carried out to assess how they feel about their studies and what they could improve from their current perspective.

At VGTU, employers and social partners are the chairmen of the Final Thesis Defence Commissions. They give their assessment of the final thesis, and their proposals are periodically discussed at SPC and department meetings. The resulting recommendations are accepted by consensus and users to improve the quality of final theses and study programs. SPCs and departments also systematically collect feedback and suggestions from representatives of IT companies on the preparedness of students who have completed their internships. This information is analysed to identify areas for further improvement.

Finally, lecturers regularly propose changes to their own and related study subjects; they can always contact SPC, FSC and USC to share their observations and ideas to improve the quality of teaching and learning.

The expert panel basically agrees with the statements made in the SER document that "balance is reached between formal, systematic internal study quality monitoring mechanisms and less formal methods based on personal communication". However, experts believe that regular periodical formal meetings between the

SPCs and employers would be very useful and would allow even more effective involvement of social partners in the modernization of study programs and their quality improvement.

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

The objectives of the study program and study results can be found on the VGTU website. They can also be accessed through centralised Lithuanian portals for school graduates (LAMA BPO) and the general public (AIKOS). The same is valid to the results of external evaluation of the study programmes.

Since 2020, the SPC produces annual reports of all study programmes operating in the field and provides summarised information. These reports are now made available in the internal information system, so that both students and teachers could be informed of the ongoing changes in their study programme. Based on the recommendations provided during the previous external evaluation, in addition to regular working meetings, the SPC began to hold separate reporting meetings and joint discussions among teachers of related subjects.

The information systems is.vilniustech.lt and analitika.vilniustech.lt are used by the faculty administration and teaching staff to manage all information related to implementation of studies. Since 2023, working with the later sub-system, the SPC members can monitor various indicators of study programmes, study group and student progress and use them to plan targeted mentoring, drop-out prevention, etc.

7.1.4. Student feedback is collected and analysed

The feedback is collected systematically each semester from students in both study programmes. Programme graduates are also surveyed every three years and asked about their studies from their current career point-of-view. The data is then analysed by the SPC and compared with other data available on study quality.

The data from the most recent student surveys on the quality of studies in the informatics study field is shortly presented and analysed in the SER report. The results provided show that about 80% of students evaluate their studies rather well, demonstrating their agreement with all of the 11 statements describing the quality of their studies positively. Meanwhile, all statements received very similar results, which suggests that the entire instrument is not very sensitive to measuring different opinions of students.

Students' opinions about the quality of teaching of a particular academic subject are also assessed during teacher certification. The results of this survey are scored, and if the result is negative (i.e. below the threshold), the teacher is not eligible for certification for the next semester. If a negative assessment is received before the teacher is certified, the teacher’s lectures are monitored and, if necessary, additional measures are taken (for example, helping to update the educational material). Although somewhat controversial, this practice involves not only observing lectures in at-risk groups, but also searching for best practices, analysing general perceptions of the diversity of teaching methods, etc.

The results of the latest graduate survey presented in the report show that the average quality of the programme in Informatics is rated as good by the graduating students. Interestingly, post-college students rate the quality of their studies higher, which they attribute to higher academic standards and the personalised learning opportunities offered by the University.

ANALYSIS AND CONCLUSION (regarding 7.1.)

VGTU has created and is developing a quality management system which complies with European higher education quality assurance provisions and guidelines (ESG). A variety of methods and tools are used to involve all stakeholders in the processes of quality assurance and continuous improvement of studies. Information on the study programmes and their external evaluation is compiled and made public. The feedback from students, graduates and alumni is periodically collected and systematically analysed. Overall, this demonstrates a fairly positive assessment of the quality of studies in the informatics study field at VGTU.

AREA 7: CONCLUSIONS

AREA 1	Negative - 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				4	

COMMENDATIONS

1. Social partners are involved in the study process already from the very beginning, i.e. various companies and agencies take part in the Introduction Week.

RECOMMENDATIONS

For further improvement

1. Social partners are not always informed how their proposals are implemented in practice. Therefore, it is advisable to involve them more actively in updating the study programs, for example by organising discussions and regular formal meetings with the SPCs and the departments that implement both study programs.
2. Although student surveys are conducted regularly and teachers are informed of and satisfied with the results, in the SER the results themselves are presented in aggregated form, making them difficult to use for decision-making. So, the follow-up process should be better defined, in particular the treatment of problematic cases.
3. Student workload should be better monitored on individual courses, e.g., the number of credits allocated to some programming subjects (for instance, for Java projects) seems to be too low.
4. During the experts' meeting with the employers, the latter emphasised the need to further improve the students' soft skills, such as communication and teamwork skills. Experts recommend that relevant SPCs and Departments pay more attention to the development of such soft skills by updating the methods of teaching relevant subjects and assessing students' knowledge and skills. It is also suggested to formulate more relevant thesis topics, especially those that require the use of modern AI methods and tools.

IV. SUMMARY

First of all, the expert panel wishes to thank the VGTU and all who worked hard to compile a coherent, detailed, and excellently written SER. It provided valuable insights into the institution, its strategies, and the study programmes under evaluation. The onsite visit was well prepared and happened in a friendly, transparent and cooperative atmosphere, demonstrating a positive team spirit with the objective to continuously improve the study programmes delivered by the institution.

The VGTU is one of the largest higher education institutions in Lithuania and aims to become the leader in teaching and research in the field of technology and engineering. Based on the SER and the onsite visit, the overall impression about the University, the faculty, and the study programmes under evaluation gathered by the expert panel is very good. Nevertheless, the expert panel identified a few aspects that need further improvements and are summarised below.

The two study programmes comply with the legal frameworks at all levels, and the aims and the expected learning outcomes are in line with the strategic objectives of the Lithuanian country, the needs of the society and the labour market, and the mission and strategic development plan of the VGTU. The study subjects and the teaching, learning, and assessment methods are largely aligned and ensure a coherent and gradual acquisition and development of competences and skills. While the description of the study programme, including the mapping between learning outcomes, teaching/learning/assessment methods, and the study subjects is very precise, consistent at the right level of detail, in some courses with a significant practical part the allocated ECTS credit points and the student workload are not aligned

The research performance of the VGTU is good to very good, with an increasing number of publications, third party funding, and engagements in scientific events in the past five years. There are also several initiatives to systematically integrate research and teaching and to engage and expose students to research. The expert panel believes this is the right way to go, but recommends increasingly focusing on competing with and presenting the research results to the international scientific community. Furthermore, it is important to enlarge the number of professors who are active in research. A competitive, potentially international PhD programme might be considered as a further step to strengthen the research profile.

There is an effective system in place for the admission of the students and the recognition of previous qualifications. The support to the students is considered very good. The evaluated study programmes have a comparably high number of international students, confirming the recognition of the University and the quality of the programmes. To further improve and strengthen the internationalisation level, measures should be taken to increase the student mobility, which is considered rather low.

The teaching and learning process meet academic and international standards and enable students to achieve the intended learning outcomes, also for students with special needs. Policies are in place to ensure academic honesty, tolerance and non-discrimination. The use of modern AI tools for study purposes has been addressed and regulated at the faculty level. The meeting with the students revealed that some teachers show a bad attitude towards students, which calls for proactive measures to avoid such non-inclusive behaviour in the future.

The situation regarding the teaching staff is generally good, with sufficient possibilities for competence development and staff exchange. While some professors are active in research, there are teachers who do not do research at all. Thus, measures are recommended to engage such passive members into research. The

meeting with the students revealed problems with some teachers. To resolve these problems, the student feedback should be taken into consideration, which seems not always to happen.

The facilities and the equipment are generally very good, modern and adequate for an effective learning process. This is particularly true for the new campus, whereas students reported some minor problems with the IT infrastructure in the old campus. It would be good to offer the same quality of IT services also in the premises of the old campus.

The VGTU has an elaborated internal quality management system in place, which is in line with the European Higher Education Quality Assurance Guidelines and provides a variety of methods and tools to involve all relevant stakeholders in the quality assurance process. Information about external evaluations is made public, and the feedback from students is regularly collected and analysed. Social partners are involved from the very beginning, however they are not always informed about whether and how their feedback has been considered. Similarly, the regularly collected student feedback about the teachers performance requires a more transparent follow-up analysis, in particular for problematic cases. Finally, the stakeholders emphasised the need to better train the soft skills of the students as well as to pay more attention to modern AI methods in the thesis topics.

As a final note, the expert panel hopes that the feedback and suggestions provided in this evaluation report will be motivating and helpful for the VGTU to continue along the path initiated in the past and to strive for a internationally recognized university with a strong teaching and research track.