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CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

EVALUATION REPORT

STUDY FIELD of FINANCE

at Vilnius Gediminas Technical University (VILNIUS TECH)

Expert panel:

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2. Prof. Dr. *Alexandru Tugui, academic member;*
3. Prof. Dr. *Jiří Strouhal, academic member;*
4. Dr. *Tadas Gudaitis, representative of social partners;*
5. Ms. Luljeta Aliu Mulaj, students' representative.

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Report language – English

Vilnius
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Study Field Data

Title of the study programme	***Financial Engineering***	***Financial Engineering***
State code	6121LX046	6211LX060
Type of studies	University studies	University studies
Cycle of studies	First	Second
Mode of study and duration (in years)	Full time (4 years)	Full time (1.5 years)
Credit volume	240	90
Qualification degree and (or) professional qualification	Bachelor of Business Management	Master of Business Management
Language of instruction	Lithuanian, English	Lithuanian, English
Minimum education required	Secondary education	Bachelor's degree a Professional Bachelor's degree in social sciences and 2 years of related professional work experience
Registration date of the study programme	2014-06-02	2013-08-14

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I. INTRODUCTION

1.1. BACKGROUND OF THE EVALUATION PROCESS

The evaluation of study fields is based on the Methodology of External Evaluation of Study Fields approved by the Director of the Centre for Quality Assessment in Higher Education (hereafter – SKVC) 31 December 2019 Order No. V-149.

The evaluation is intended to help higher education institutions to constantly improve their study process and to inform the public about the quality of studies.

The evaluation process consists of the main following stages: *1) self-evaluation and self-evaluation report (SER) prepared by Higher Education Institution (HEI); 2) site visit of the expert panel (EP) to the HEI; 3) production of the external evaluation report (EER) by the expert panel and its publication; 4) follow-up activities.*

On the basis of this external evaluation report of the study field SKVC takes a decision to accredit the study field either for 7 years or for 3 years. If the field evaluation is negative then the study field is not accredited.

The study field and cycle are **accredited for 7 years** if all evaluation areas are evaluated as exceptional (5 points), very good (4 points) or good (3 points).

The study field and cycle are **accredited for 3 years** if one of the evaluation areas is evaluated as satisfactory (2 points).

The study field and cycle are **not accredited** if at least one of evaluation areas is evaluated as unsatisfactory (1 point).

1.2. EXPERT PANEL

The expert panel was assigned according to the Experts Selection Procedure as approved by the Director of Centre for Quality Assessment in Higher Education on 31 December 2019 Order No. V-149. The site visit to the HEI was conducted by the panel on *25th of November 2022.*

Prof. Dr. Karsten Lorenz, University of Applied Sciences Mainz, Germany (panel chairperson);
Prof. Dr. Alexandru Tugui, "Alexandru Ioan Cuza" University, Iasi, Romania;
Prof. Dr. Jiří Strouhal; ŠKODA AUTO University, Czech Republic;
Dr. Tadas Gudaitis, CEO Swedbank investicijų valdymas, UAB;
Ms. Luljeta Aliu Mulaj, European Student Union

1.3. GENERAL INFORMATION

The documentation submitted by the HEI follows the outline recommended by SKVC. Along with the self-evaluation report and annexes, the following additional documents have been provided by the HEI before, during and/or after the site visit:

No.	Name of the document
1.	Course descriptions of master theses subjects;

1.4. BACKGROUND OF FINANCE FIELD STUDIES AT VILNIUS GEDIMINAS TECHNICAL UNIVERSITY (VILNIUS TECH)

Vilnius Gediminas Technical University (hereinafter: VILNIUS TECH) is a state higher education institution. The university consists of faculties, departments, research and training laboratories, research and academic institutes and centres, a library, a publishing house, the administrative unit and other divisions.

VILNIUS TECH has two governing bodies: the Council and the University Senate. The Council approves the vision and the mission of the University, the principles of selection and evaluation of the University's staff; elects, appoints and dismisses the Rector, and raises funds for activities of the University. The Council also controls and approves the University's budget and finances, as well as the strategic activity (development) plan. The Senate is a collegial governing body of the University's academic affairs. There are four permanent commissions in place: the Commission of Research, the Commission of Education and Students, the Commission of Development and Quality, and the Commission of Legal Affairs and Ethics.

According to the website, VILNIUS TECH has nine faculties and one institute. The HEI has a more technical profile, therefore studies in the engineering study field prevail. VILNIUS TECH has been implementing studies in 27 study fields from the following groups of study fields: Engineering Sciences, Computer Science, Technological Sciences, Social Sciences, Business and Public Administration, the Humanities and Arts. At VILNIUS TECH, the Faculty of Business Management implements the SP in the field of finance.

There is one 1st cycle study programme (SP) offered in the field of Finance and one 2nd cycle SP with the same name ("Financial Engineering").

The bachelor SP was implemented in 2014 and had no previous external evaluation. The master SP was evaluated positively in 2016 (scored 21 out of a maximum of 24 points) and accredited for six years.

II. GENERAL ASSESSMENT

Finance study field and first cycle at Vilnius Gediminas Technical University is given **positive** evaluation.

Study field and cycle assessment in points by evaluation areas

No.	Evaluation Area	Evaluation of an Area in points*
1.	Intended and achieved learning outcomes and curriculum	4
2.	Links between science (art) and studies	5
3.	Student admission and support	5
4.	Teaching and learning, student performance and graduate employment	4
5.	Teaching staff	4
6.	Learning facilities and resources	5
7.	Study quality management and public information	5
	Total:	**32**

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

Finance study field and second cycle at Vilnius Gediminas Technical University is given **positive** evaluation.

Study field and cycle assessment in points by evaluation areas

No.	Evaluation Area	Evaluation of an Area in points*
1.	Intended and achieved learning outcomes and curriculum	4
2.	Links between science (art) and studies	5
3.	Student admission and support	5
4.	Teaching and learning, student performance and graduate employment	4
5.	Teaching staff	4
6.	Learning facilities and resources	5
7.	Study quality management and public information	5
	Total:	**32**

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

III. STUDY FIELD ANALYSIS

3.1. INTENDED AND ACHIEVED LEARNING OUTCOMES AND CURRICULUM

Study aims, outcomes and content shall be assessed in accordance with the following indicators:

3.1.1. Evaluation of the conformity of the aims and outcomes of the field and cycle study programmes to the needs of the society and/or the labour market (not applicable to HEIs operating in exile conditions)

The SER points out that Lithuania has declared its ambition to become one of the leading countries in the FinTech sector. There are more than 230 FinTech companies operating in Lithuania, and their number has increased by about 35% between 2018 and 2020. Furthermore, the activities in the banking sector, in electronic money and payment institutions, collective investment undertakings, credit unions, insurance institutions and various funds have also been actively growing.

According to the SER, the aim of the **bachelor SP "Financial Engineering"** is to develop "the competences required for professionals to form, evaluate and independently make effective financial decisions based on systematic, critical and constructive thinking, as well as the ability to integrate and apply financial knowledge, financial process management and financial engineering, encompassing both innovative financial instruments and ways of understanding the financial system, as well as advances in other sciences and technologies."

During the bachelor SP, students acquire knowledge in the fields of fundamental sciences, humanities, social and technological sciences, which create preconditions for getting to know the peculiarities of the processes taking place in the modern financial system; and special knowledge in the field of financial engineering, which enables knowledge of the content of specific processes in the field of finance, applied technologies and peculiarities of management procedures. They acquire special skills to form adequate financial models for the analysed processes, to prepare financial management strategies by studying subjects as Banking, Econometrics, Financial Behaviour, Fundamentals of Financial Decisions, Investment Management, Pricing, Quantitative Modelling Methods, Insurance Finance, Financial Engineering, etc.

The learning outcomes of the bachelor SP intend to train specialists who understand peculiarities of the field of modern financial engineering and are able to make management decisions.

According to the SER, graduates of the SP can pursue careers in the private or public sector, banks, credit unions, pension and investment funds, payment institutions, insurance companies and other companies in a variety of jobs as financiers, financial analysts, financial accounting specialists, statisticians. There are many opportunities for employment in these positions, as companies working in the field of finance are establishing in large numbers, especially in connection with FinTech's activities, and graduates also work in jobs other than finance.

The aim of the **master SP "Financial Engineering"** is "to train highly qualified masters in the field of finance, able to apply the acquired knowledge of financial engineering science and practice in creating evaluating and independently adopting effective and scientifically based development and application of financial technologies, investment management, value creation decisions taking into account the risks and uncertainties, the changing societal needs and technological progress."

In this SP students acquire skills to conduct research and to model financial engineering solutions in a chosen specialisation in the field of finance, namely Investment Management, Financial Technologies (FinTech) and Value Engineering. These specialisations cover a large part of activities related to modern financial markets and offer opportunities for graduates to pursue successful careers in the selected fields.

The aims and learning outcomes of both SPs fully correlate with the needs of the labour market as the growth of the financial sector in Lithuania leads to a growing demand for professionals in the area of finance both for bachelor and master graduates.

3.1.2. Evaluation of the conformity of the field and cycle study programme aims and outcomes with the mission, objectives of activities and strategy of the HEI

According to the SER, the mission of VILNIUS TECH is "to develop a civically responsible, creative, competitive personality, receptive to research and the latest technologies and cultural values, to promote scientific progress, social and economic well-being, to create value that ensures the development of Lithuania and the region in the world."

VILNIUS TECH defines four operating goals to ensure the successful implementation of the mission that are listed in the SER:

- "to train qualified specialists, creative and socially active professionals who would be able to work successfully in both Lithuanian and foreign research and labour markets;
- to conduct international-level research focusing research activities in the highest-performing research divisions and pursuing a policy of attracting renowned researchers;
- to create research-based innovations for the society and business, to become a leader of the Baltic universities in the fields of sustainable construction, transport, sustainable environment, information technology and communication science;
- to promote sustainable development of the country and regions, to train an innovative society."

According to the SER the aim of the **bachelor SP** is to prepare graduates who have fundamental and up-to-date knowledge of financial science and practice and are able to use innovative methods, financial instruments, information technologies and mathematical models in their professional financial activities, to substantiate the financial decisions made and to apply systematic, critical and constructive thinking in conducting applied research in the field of finance. Though the aims of the SP cover most of the four operating goals described above, as to train specialists, to create innovations and to promote sustainable development.

According to the SER the aim of the **master SP** is to prepare graduates who are able to apply the acquired knowledge of financial engineering science and practice, forming, evaluating and independently making effective and scientifically based decisions on financial technology development and use, investment management, value creation, taking into account risk and uncertainty, and changing societal needs and technological advances. Though the aims of the SP cover most of the four operating goals described above, as to train specialists, to create innovations and to promote sustainable development.

In the opinion of the expert team, the aims of the SPs are very well-defined, reachable and publicly accessible. The study plans of both SPs (Appendix 1) proves the attainability of these aims. Moreover, the study programmes aim is based on the academic requirements and the

needs of the labour market. Therefore, the aims of the two SPs are clearly in line with the mission, objectives of activities and strategy of VILNIUS TECH.

3.1.3. Evaluation of the compliance of the field and cycle study programme with legal requirements

Table No. 1 Study Programme's ***Financial Engineering*** compliance to general requirements for *first cycle study programmes*

Criteria	Legal requirements	In the Programme
Scope of the programme in ECTS	180, 210 or 240 ECTS	240 ECTS
ECTS for the study field	No less than 120 ECTS	153 ECTS
ECTS for studies specified by university or optional studies	No more than 120 ECTS	63 ECTS
ECTS for internship	No less than 15 ECTS	15 ECTS
ECTS for final thesis (project)	No less than 15 ECTS	18 ECTS
Contact hours	No less than 20 % of learning	37%
Individual learning	No less than 30 % of learning	63%

Table No. 2 Study Programmes' ***Financial Engineering*** compliance to general requirements for *second cycle study programmes*

Criteria	Legal requirements	In the Programme
Scope of the programme in ECTS	90 or 120 ECTS	90 ECTS
ECTS for the study field	No less than 60 ECTS	60 ECTS
ECTS for studies specified by university or optional studies	No more than 30 ECTS	12 ECTS
ECTS for final thesis (project)	No less than 30 ECTS	30 ECTS
Contact hours	No less than 10 % of learning	18%
Individual learning	No less than 50 % of learning	82%

3.1.4. Evaluation of compatibility of aims, learning outcomes, teaching/learning and assessment methods of the field and cycle study programmes

According to the SER three levels have been planned to assess achievements in the subject, including the threshold, the typical and the excellent level. They have been formalised in specific subject assignments. In order to achieve the study results of a subject, the teaching staff uses in their lectures various methods of assessment to promote active involvement of students in developing their competences. Students are also taught to critically evaluate the solutions provided by teachers, their own and fellow students during public presentations and discussions.

The SER describes that diagnostic (conducted in order to find out student achievements and progress after completing a topic or a part of a course), formative (ongoing assessment during the study process), cumulative (conducted by summing up the evaluations of study results achieved in interim assessments) and summary (formally confirming student achievements having completed the study programme) assessments are used in the SPs. The learning outcomes and subject study results of the SPs are evaluated during the semester in interim assessments (colloquia, defences of laboratory work, work reports, group and individual works presented verbally or in writing). The cumulative score of the evaluation is reflected in the evaluation formula, the elements of which may vary depending on the study subject.

Furthermore, the SER lists different methods as engaging lectures, seminars, laboratory work, independent work, group work, homework, individual study of literature, consultations, case studies, problem questions, reflections, problem solving, report preparation, mind maps, concept maps, study trips to companies or guest lectures.

The Bachelor SP is offered in a full-time form only, in Lithuanian and English language.

The aim of the SP's, the anticipated learning outcomes, the structure and content of the SP and teaching/learning and assessment methods are fully consistent with each other.

3.1.5. Evaluation of the totality of the field and cycle study programme subjects/modules, which ensures consistent development of competences of students

The curricula of both SPs are structured to ensure a consistent progression from a simpler to a more complex level of knowledge to achieve the learning outcomes and acquire significant professional competencies.

In the **bachelor SP** only a few courses of the first semesters are clearly finance-related. Courses of the first five semesters are rather general and might prepare students for finance courses in later semesters. Some examples of courses of the first five semesters to illustrate that the finance relation is rather low:

- First semester: Information Technology, Linear Algebra, Business fundamentals, Philosophy, Engineering Principles;
- Second semester: Statistics, Management, Sociology (option);
- Third semester: Quantitative Modelling Methods, Fundamentals of Law, Regional Economics (option)
- Fourth semester: Business Law, Econometrics; Entrepreneurship
- Fifth semester: Economics of Human Resource; Marketing.

Overall, the curriculum could be even more focused on finance topics. The expert team acknowledges that some of these courses are necessary and helpful to adopt methods and to understand topics of later semesters, but recommends integrating more finance related topics in the SP (as Auditing, Management Accounting, Controlling, International Accounting) in the first three years and to deepen the finance knowledge of the bachelor students and topics like risk management should be in the last semesters.

In the meeting with students and graduates it was confirmed that some of the courses of the bachelor SP could be replaced by more finance related courses (namely: Philosophy). During the meeting graduates asked for the integration of new topics into the curriculum of the bachelor SP, such as ESG topics, green finance or cryptocurrencies.

Based on the study plan of the bachelor SP, the modules overall ensure a consistent development of competences.

The **master SP** offers three specialisations with different study plans:

- Financial Technologies (FinTech);

- Investment Management;
- Value Engineering.

According to the study plan in Annex 3 the following three specialisation modules are integrated into the FinTech specialisation: FinTech Evolution and Regulation, Programming for FinTech and Financial Big Data Analytics.

The second specialisation (Investment Management) also includes three models: Analysis of Investment Possibilities, Management of Financial Investment and Management of Investment Projects.

The third specialisation in Value Engineering includes the three modules Value Anatomy and Engineering, Value Creation Chain and Projects on Value Creation.

On the one hand, the opportunity to specialise in the master SP allows students to personalise their studies. As only 24 of the 90 ECTS of the SP are provided for these specialisation modules, the master SP still has a general approach, too.

Overall, the study subjects and modules in the master SP ensure the development of consistent competences of second-cycle students including a sufficient specialisation.

3.1.6. Evaluation of opportunities for students to personalise the structure of field study programmes according to their personal learning objectives and intended learning outcomes

The **bachelor SP** includes some electives in the field of finance. The students can choose Banking or Insurance finances as electives in 8th semester. To further personalise the structure of their studies, students can choose optional subjects (such as Sociology, Intercultural Communication, Regional Economics or Foreign Languages), but they are not finance-related. Although the study plan includes some specific finance topics, the expert panel recommends including some elective modules in direction of professional practice fields (i.e. specialisation in taxes, auditing, risk management etc.) in earlier semesters. It might also be considered to permit students to choose "specialisation modules" on a single course basis. This could allow students to further personalise their studies.

The **master SP** is implemented on a subject-based and modular basis. The study topics and modules ensure the development of consistent competences of the students. The master SP

consists of three specialisations: Financial Technologies, Investment Management, and Value Engineering. Therefore, the SP includes excellent opportunities to personalise their studies.

3.1.7. Evaluation of compliance of final theses with the field and cycle requirements

Regarding final theses the analysis of the expert team is limited as all fifteen-thesis provided to the expert team are mainly written in Lithuanian language and some were written in English. The topics of this sample of theses are in line with the study field and help students to analyse practical and theoretical topics. The quoted literature in the sample of theses provided is partly international (articles from international journals) and includes recent literature. In some theses in the sample only a few articles refer to international journals.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. The aims of the two SPs are clearly in line with the mission, objectives of activities and strategy of VILNIUS TECH.
2. The aims and learning outcomes and the teaching and learning assessment methods of the SPs correspond with the needs of society and the labour market.
3. The master SP includes excellent opportunities for students to personalise their studies.

(2) Weaknesses:

1. Rather low focus on finance topics in the bachelor SP and limited opportunity for students in the bachelor SP to personalise their studies in the field of finance.

3.2. LINKS BETWEEN SCIENCE (ART) AND STUDIES

Links between science (art) and study activities shall be assessed in accordance with the following indicators:

3.2.1. Evaluation of the sufficiency of the science (applied science, art) activities implemented by the HEI for the field of research (art) related to the field of study

The level of performed research activities and their visibility through the publication in high-ranked journals shall be considered as excellent both for the first as well as the second cycle of the study programmes financial engineering (Finance study field). The number of papers listed in the WoK database is gradually increasing (34 IF papers in 2018 up to 63 IF papers in 2021) – see Table 3.2 of SER (p. 24) – this high number of research outputs was verified during the site-visit - the total number of research outputs could be considered competitive even from the international benchmarks comparison. The current research is focused on “Research on

Financial Engineering in the Context of Responsible Investment"; "Research on Financial Engineering for Sustainable Development".

For the future the expert team recommends focusing even more on internationalisation of the research activities and to keep the current volume of research outputs.

3.2.2. Evaluation of the link between the content of studies and the latest developments in science, art and technology

Teachers of the 1st and 2nd cycle programmes are active researchers in their field (see part 3.2.1) – they carry out research in research areas and topics corresponding to the finance department, linking them with the taught subjects and the latest scientific achievements. As a major methods are applied for a 1st cycle study program: case studies, participation in solving practical tasks, frontal survey, colloquium, computerised assessment tasks, complex project evaluation, defence of the prepared written work, public presentation; for a 2nd cycle study program: case study presentations, activity in participation in discussion and argumentation, frontal and individual questionnaires, colloquium, course projects, preparation of a scientific paper, analysis of satiation and cases.

Modules are gradually updated based on the current state-of-the art scientific outputs as well as on the current practices.

3.2.3. Evaluation of conditions for students to get involved in scientific (applied science, art) activities consistent with their study cycle

There is a good possibility for students to get involved in scientific activities of VILNIUS TECH. Students are involved in research activities by preparing final theses, integrated projects, internships and participating in scientific conferences.

Within the 1st cycle study program students participate in two complex projects: Investment project and Complex project of financial engineering. Within the 2nd cycle study program students have a module Methodology of scientific research where can examine the concept of science and research, research stages, principles of planning and organising research work, quantitative and qualitative research methods, data collection and processing methods, the principles of preparation of a research report, and learn to write scientific papers. Within

module Quantitative and expert solution methods examine research methods designed for both analysing complex socioeconomic processes and for evaluation of influence of values of criteria of different formats on a chosen characteristics of such processes, provide knowledge enabling students to make analysis of processes and entities of various social and economical sectors, to create mathematical models of such processes and to make quantitative evaluation of characteristics of the process being analysed. The incremental part of the 2nd cycle study program is also research activity practice.

Within the period 2018 – 2021 students passed 21 research internships in investment management specialisation and 35 research internships in financial technologies specialisation. The research internships were realised in the following organisations: UAB Citko, UAB PZU Lietuva gyvybes draudimas, UAB Eskimi, UAB Axis Transport, UAB Western Union Processing Lithuania, UAB Grant Thorton Baltic, UAB Nordgain, UAB Paysera LT, UAB Biovela Group, UAB Maneuver LT, UAB Nasdaq Vilnius Services, UAB Staticus group, UAB BnP Finance, Institute of Dynamic Management of VILNIUS TECH, Danske Bank A/S Lithuanian branch, UAB Kuehne-Nagel, UAB Tiekuva, Special Investigation Service of the Republic of Lithuania, AS SEB bankas, AB Telia Global Services, UAB Secure Nordic Payments Lithuania.

VILNIUS TECH also holds the annual Lithuanian Junior Researchers Conference "Science – the Future of Lithuania" – within this event junior researchers, doctoral students, master students and bachelor students share the results of their scientific activities. 1st and 2nd cycle students prepare for the conference and write their research publications under the guidance of their final thesis supervisors.

Based on the above-mentioned facts the expert panel evaluates the conditions for students to get involved in research activities as competitive on an international level and these activities are considered consistent with students' study cycles.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. The quantity of research outputs published in high-ranked IF journals is excellent from the national but also international level.
2. Sufficient involvement of students in research activities mostly through master theses and research conferences.
3. As a good competitive advantage, the expert team sees the interdisciplinarity of research (finance / technology).

(2) Weaknesses:

1. For the future the expert team recommends to focus more on internationalisation of the research activities while keeping the current volume of research outputs.

3.3. STUDENT ADMISSION AND SUPPORT

Student admission and support shall be evaluated according to the following indicators:

3.3.1. Evaluation of the suitability and publicity of student selection and admission criteria and process

Admission to VILNIUS TECH first cycle of studies is organised in two stages: a) Pre-admission for full time students for non-state-funded places and b) Centralised Admission to the First Cycle authorised by the Ministry of Education and Science of the Republic of Lithuania. Separate admission gives an opportunity for potential students to be enrolled if the number of centralised students is not fulfilled. Furthermore, according to SER, the Rector admits students to university study programmes: to the first semester of the first year – according to the suggestion of the Director of the Admission and Information Centre, to the second semester of the first year or to subsequent years – on the recommendation of the Dean", which can be considered quite innovative to respond to the needs of the students and an added value for the institution, especially study programme as it open up opportunities for candidates to be admitted at this specific study programme.

As for the second cycle of studies, there are applicable regulations approved by the Rector of VILNIUS TECH and requirements for the readiness of applicants for the second cycle of studies approved by the Vice-Rector for Studies, which according to SER, is based on the competitive score consisting of weighted average as per the evaluation in the bachelor diploma appendix and additional scores applicable for the second cycle admissions, which are transparent-published in the institution web-page.

Promotion of the study programmes is done at different levels by including all stakeholders at internal and external levels and admission criteria' are transparent. Additionally, the admission criteria are available in English language for both study programmes, which can contribute to attracting foreign students too.

The number of applications received for the first cycle programme in Financial Engineering remains stable compared to the previous years, however the number of admitted students is much lower than previous years. According to SER this is as a result of a demographic decline in the country, and as a result decrease in the number of graduates and applicants in general. On the other hand, the average of the competitive scores - highest scores and lower scores are increased, which therefore increase the quality of admitted students.

As regards to the 2nd cycle - number of admitted students has increased from 12 in 2020 to 18 in 2021, which remains stable compared to previous years 2018 and 2019.

3.3.2. Evaluation of the procedure of recognition of foreign qualifications, partial studies and prior non-formal and informal learning and its application

The Center for International Studies (CIS) is in charge of coordinating and administering the studies of students with foreign qualifications. The university has detailed procedures to follow which are made public on the institution webpage: Description of the Procedure of the Mobility of Studies and Internships under Erasmus+ Programme at VILNIUS TECH; Description of the Procedure of Crediting Study Results at VILNIUS TECH.

The university also has developed a procedure for recognition of the competences for non-formal and informal learning which are reachable to potential candidates through web-page. According to SER, "the amount of study credits that can be awarded for competences acquired non-formally and informally shall not exceed 70% of the scope of the study programme to be studied". No applicants are reported to have undergone these procedures.

The institution has worked on development of the procedures, which are in place to support students and candidates on recognition of their studies and work experience. These procedures are clear, transparent and accessible for the wider public.

3.3.3. Evaluation of conditions for ensuring academic mobility of students

According to SER, VILNIUS TECH students have opportunities for mobility at different universities at EU institutions and beyond for exchange and internships. The number of students departing for part-time studies (15 credits at the least) under the Erasmus+

exchange programme (in the first cycle study programme) from 2018/2019 to 2021/2022 reached 31, which represents a good percentage of total number.

Students are granted a 12-month Erasmus+ mobility limit, to conduct mobility at partner universities inside and outside the EU. Additionally, some other exchange opportunities are offered for the following institutions:

Studying in non-EU countries under bilateral agreements;

- Baltech scholarship to study at a university of consortium of universities;
- Efrei under a signed interinstitutional agreement.

Internships are also available at the following partners:

- Experience partners;
- Vulcanus in Japan;
- CERN (Switzerland);
- Baltic American Freedom Foundation (BAFF);
- IASTE;
- PRAXIS;
- Talentoteca;
- BLUEBOOK traineeship programme of the European Commission;
- Joachim Lenz Foundation (Germany);
- Josef Umdasch Foundation;
- Internship in Japanese companies.

However, the number of mobilities has dropped in the last two years, which is more likely to happen due to pandemics.
Consequently, the institution is undertaking measures and promoting such opportunities to increase the number of mobilities. Therefore, dissemination of the information is done through different channels and events.

As regards internationalisation, the incoming students in the 1st cycle, from 2018/2019 to 2021/2022 is 8, but none is registered in 2021/2022.

Whereas, in the second cycle for the same period in total is 13, and only in the academic year 2021/2022, there were registered 8 students, which represents an excellent level of internationalisation too.

In the meeting with students, they admitted to have been informed about the opportunities given by the university, and well informed by the teaching staff for the benefits from the exchange programmes. Most of the reasons were job opportunities and family reasons for not participating in international mobilities.

Therefore, the faculty should undertake measures to overcome this situation by maybe providing incentives for increasing the number of exchange students - incoming and outgoing.

3.3.4. Assessment of the suitability, adequacy and effectiveness of the academic, financial, social, psychological and personal support provided to the students of the field

VILNIUS TECH has established structures that cover different aspects that students might face: academic counselling, financial support and social aspects.

Academic Support Centre provides training for students on career choice related issues and events on career opportunities are organised by engaging alumni too. The Student Representative Office is a body that represents students' interest within the faculty and at the University level for the related issues such as: conditions of the dormitories, social activities. In the academic context, students are also involved in the Study Programme Committee, where they perform academic activities.

Financial support opportunities are given to excellent students, students with disabilities and those with low economic conditions.

Students confirmed to be engaged in decision-making, empowered and supported by the institution.

3.3.5 Evaluation of the sufficiency of study information and student counselling

VILNIUS TECH provides information and support to all students with special emphasis to the students of the first year – 1st cycle. They are provided with information from teachers, administration, library staff and teacher-tutors and senior student tutors are appointed to help them during the first year of studies.

Information is disseminated through web-page, university social media accounts: facebook, linkedin and Instagram and is uploaded also in the moodle. Furthermore, according to SER, lectures on "Introduction to Studies" are delivered with the purpose of facilitating newcomers in their first year of studies.

Same channels are used for the second cycle students, and consultations are organised with the purpose of helping students choose their master thesis in the first month of the academic year.

During the meeting with students, they were very satisfied with the support given by the university with regard to study information and student counselling.

The institution offers very good conditions for its students in both cycles of study programmes. They are well represented in decision-making and curriculum development, good infrastructure, well informed and transparency is in good level, as well as with opportunities for internships abroad and financial and academic support during their studies.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1.Detailed and transparent procedures for student admissions.
2.Number of agreements with Erasmus + programmes offered.
3.Well established structures for student support: academic counselling, financial support and social aspects.

(2) Weaknesses:

1. Number of incoming exchange students for the 1st cycle of studies.

3.4. TEACHING AND LEARNING, STUDENT PERFORMANCE AND GRADUATE EMPLOYMENT

Studying, student performance and graduate employment shall be evaluated according to the following indicators:

3.4.1. Evaluation of the teaching and learning process that enables to take into account the needs of the students and enable them to achieve the intended learning outcomes

The teaching and learning process is the process is planned and implemented according to legislation requirements and internal procedures.

During the teaching and learning process different finance software, case studies and situation analysis are used. Many study modules include integrated lectures by business practitioners. Some of the study modules are implemented by teams of lecturers which allows for students to get knowledge from various experiences and different learning styles. It offers study programmes which are oriented to students' practical skills development, and it was appreciated by different counterparts, including students, employers, and social partners. However, during the meeting with teaching staff, it was identified that it was difficult to clearly provide definitions and examples of case studies and situation analysis, which were used in the specific subjects.

Both in SER and during site-visit to HEI it was confirmed evidence, that study programmes enable students to acquire the knowledge and skills to succeed in a wide range of jobs that require a broad education and creative thinking, to use high-tech technologies, to be able to operate in a global marketplace, to develop the need to be interested in the scientific knowledge of the field of study, to be able to use it in a variety of contexts, to develop a broad erudition, creative and critical thinking, and to be able to enhance their professional competences through lifelong learning.

Both in SER and during the site-visit to HEI it was confirmed by evidence that in the beginning of each course (module) students are introduced with the teaching and learning process, the evaluation system and learning outcomes of the course (module). After each semester students have the opportunity to confidentially evaluate the course (teachers, teaching methods, evaluation principles and other material of the course). During the site visit, staff and students distinguished the following innovative teaching methods: inverted class method, study trips,

guest lectures, case study. By concluding, the teaching and learning process, used in the study process, enables students to achieve the intended learning outcomes.

3.4.2. Evaluation of conditions ensuring access to study for socially vulnerable groups and students with special needs

The HEI ensures conditions to study for socially vulnerable groups and students with special needs. Nor in SER, nor during the site visit to HEI was it identified that students from socially vulnerable groups and/or students with special needs are studying currently or have studied during the last few years. Overall, the opportunities for socially vulnerable and students with special needs are ensured throughout the study process and student support is working well as was stated in the previous section.

3.4.3. Evaluation of the systematic nature of the monitoring of student study progress and feedback to students to promote self-assessment and subsequent planning of study progress

HEI has developed and applied a systematic approach of the monitoring of the student study process. As it was identified both in SER and during site-visit to HEI study progress is monitored by the Study Field Committee. The students' survey results are also evaluated once per year in the Study Field Committee. The Unit for Studies monitors the progress of all students in the Study Management System. It also monitors students' turnover and records dropouts.

HEI has developed a process, which allows systematically to assure high quality of student study progress. HEI organises the collection of data on the progress of students' studies and analyses the progress information periodically (during meetings, after sessions and at the end of the academic year) at the level of the subject, departments, study programmes, faculties, and the entire university.

Finally, students fulfil different surveys. The following surveys have been carried out: student survey on the quality of teaching; student survey on the delivery of the study programme; survey of teaching staff on the quality of the study programme; survey of the administrative staff; survey of students on the choice of studies; survey of exchange students; survey of students voluntarily withdrawing from studies; alumni survey on the career prospects; survey of social partners/ employers. This allows students and graduates to reflect on the teaching

process and quality. Moreover, study programs' management, faculty and HEI management creates possibilities for receiving useful input for further improvement of study programs.

3.4.4. Evaluation of employability of graduates and graduate career tracking in the study field

Employability of graduates are analysed by data provided by Lithuanian State institutions: Lithuanian Employment Services and Government Strategic Analysis Centre. The data provided in SER shows that the level of graduates' employability is on a high level during the period 2019-2021 and reaching the highest rates (e.g. In 2018, 100 % of HEI Finance master program postgraduates were employed in companies, which belonged to the high-skilled employment category. Additionally, formal and informal meetings are held regularly, during which the heads of the programmes listen to the opinion of entrepreneurs or graduates about the acquired competencies, about the applicability of those competencies in the workplace. Finally, the graduate survey aims to learn about the career path of the graduates: assess the current career of the graduates and the contribution of studies to their integration in the labour market.

Although HEI claims that it has developed strong relations with social partners, the number of responses (n=14) received in the survey of social partners is not high. In addition, only a few social partners and employers, all of whom are HEI alumni, were present during the HEI visit in the meeting of social partners and employers.

By summarising, HEI is following and analysing graduates' employability based on various criteria, which allows them to assess whether the knowledge and competences in the Finance field acquired during the study years are valued by potential employers.

3.4.5. Evaluation of the implementation of policies to ensure academic integrity, tolerance and non-discrimination

The HEI implemented policies to ensure academic integrity, tolerance and non-discrimination. The Code of Academic Ethics of Vilnius Gediminas Technical University is key documents which describe the principles of ensuring academic integrity, tolerance and non-discrimination. Every student after entering HEI signs a Student Integrity Declaration, which is valid during the studies. Nor in SER, nor during the site-visit to HEI it was identified that there were cases of breaching academic integrity, non-tolerant behaviour or cases of discrimination currently or

have been identified during the last few years. This confirms that HEI ensures academic integrity, tolerance and non-discrimination.

3.4.6. Evaluation of the effectiveness of the application of procedures for the submission and examination of appeals and complaints regarding the study process within the field studies

The HEI has clearly described the procedure for assessing learning achievements. During the visit to HEI it was identified that students understand the process of providing appeals and complaints regarding the study process within the Finance field studies. Nor in SER, nor during the site visit to HEI were identified cases, that students have provided appeals and / or complaints during the last few years. This confirms that HEI is able to ensure the study process in such a way that appeals, complaints regarding the study process submission and the application of examination procedures are avoided.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. High level of employability of the finance study field compared with other study fields provided at HEI.
2. The use of various questionnaires and the provision of continuous and systematic feedback, which provides useful information for the improvement of study programs.

(2) Weaknesses:

1. Social partners' and employers' network is closely related with alumni and wider representation of social partners and employers from the finance sector on national and international level is limited.

3.5. TEACHING STAFF

Study field teaching staff shall be evaluated in accordance with the following indicators:

3.5.1. Evaluation of the adequacy of the number, qualification and competence (scientific, didactic, professional) of teaching staff within a field study programme(s) at the HEI in order to achieve the learning outcomes

Based on the documentation analysis (SER on pages 58-65, Table 6.1 and Table 6.2) and the on-site discussions during the visit, our evaluation reveals the following aspects in regard to the current criteria.

- The Academic year 2018-2019:

- 35 teaching staff members were involved (with at least 0.5 FTE) for the first cycle and ten (10) members of teaching staff for the second cycle, out of which 29 and 10, respectively, teach the subjects in the field;

- The Academic year 2019-2020:

- 37 teaching staff members were involved for the first cycle and ten (10) members of teaching staff for the second cycle, out of which 31 and 10, respectively, teach the subjects in the field;

- The Academic year 2020-2021:

- 37 teaching staff members were involved for the first cycle and nine (9) members of teaching staff for the second cycle, out of which 31 and 9, respectively, teach the subjects in the field;

- The Academic year 2021-2022:

- 34 teaching staff members were involved for the first cycle and nine members of teaching staff for the second cycle, out of which 29 and 9, respectively, teach the subjects in the field;

The teaching staff has a wide variety of competencies and backgrounds. For example teaching staff regarding practical experience, more than 25% prove to have at least 3 years of practical experience in the financial field, in enterprises such as UAB Saulės spektras, IVF agency ELITE-IVF, SE Institute of Insurance and Risk Management, SE Deposit and Investment Insurance, MB Aurora Australis, UAB Eternit Baltic, UAB Ifcon, MB Rinkos studija, Public Institution "Eventmanagement LT", Public Institution Omius, Motieka and Audzevičius, UAB Verslo projektavimo centras, the Bank of Lithuania, the Ministry of Transport and Communications of the Republic of Lithuania, Vilnius University, Mykolas Romeris University, the Military Academy of Generolas Žemaitis, Šiauliai University.

As for the teaching staff average age for the teaching age groups, data shows 48 years old for the 1st cycle, and 41-60 for the 2nd cycle. From the SER (p. 51), the expert team observes that in accordance with Chapter VI (clauses 28 and 29) of the Order No V-1168 of the Minister for Education and Science of the Republic of Lithuania of 30 December 2016, over 73% of the 1st cycle teaching staff and over 80% of master programme teaching staff have a PhD degree in science. At the same time, more than 20% of master programme teaching staff were professionals in the field of Finance.

In VILNIUS TECH, the teaching staff, the students and the social partners confirmed the practice of interaction of the students with specialists from the finance field during the semestrial courses. Which can be highly appreciated by the expert panel.

Considering all identified aspects from the written documentation along with the administrative staff, the professors, and the SER group members discussion, the expert team appreciates that the qualification requirements of teachers are aligned with the legal requirements in regard to a quantitative perspective of the number, qualification, and registered competences.

However, the expert panel observes that some of the teaching staff members reported no research work, international conferences abstracts, one or two works within the three significant works in the last five years section. Another aspect is the content of the research. So, the expert team observes that the keyword fintech, used in all discussions and in the content of the SER, appears only once among the reported titles of the most significant works and monographs. Regarding the book courses and textbooks enumerated on page 62 in SER, the expert panel observes that no specific subjects are covered within the finance field.

The expert team finds that in the last four academic years, the student/teacher ratio has been reasonable, and the level of communication between the different structures of faculty and the university is generally reasonable, also.

The expert team considers that regarding the research it is necessary to establish clear criteria for each category of teaching staff as for reaching the institutional level study objectives, and increasing the research interest focused on the subject of Finance. Assessing a qualitative perspective in regard to research and education, it is recommended to improve the scientific content of courses (by integrations of research results) and eliminate the gap between professors' and students' opinions about the involvement of students in research activities. Regarding the learning outcomes, it is necessary to maintain good correspondence between the scientific competence of academic staff and the student's research abilities.

3.5.2. Evaluation of conditions for ensuring teaching staffs' academic mobility

According to SER (p. 65) corroborated with the discussions held on-site of VILNIUS TECH, the expert team identified the existence of The Foreign Relations Directorate as a functional structure for the assurance of the teaching staff mobility procedures application. In VILNIUS

TECH there are opportunities for teaching staff to participate in an active manner in ERASMUS+ programme mobility for teaching in partner universities and foreign companies and organisations, and in other programmes as DAAD and BAFF (but not explained).

At the level of VILNIUS TECH all the information regarding teaching staff mobility is published at the address (https://vilniustech.lt/vilnius-tech-international/erasmus-staff-mobility/6118). Table 6.6 results show that the teaching staff from both cycles (Ist and IInd) was involved in academic exchanges in accordance with the actual context (more in 2018/2019 and less in 2020 – 2021) at the level of the finance field.

The expert team identifies a good application of procedures in the whole VILNIUS TECH activities, including teaching staff mobility, with good transparency among the academic community and with very good results in the plan of international mobility for teaching staff. Moreover, it is recommendable to maintain and raise the level of international mobility of teaching staff and continue the effort to extend the financial sources for this activity.

3.5.3. Evaluation of the conditions to improve the competences of the teaching staff

When talking about the process of teaching staff competence level improvement process, VILNIUS TECH disposes of an appropriate set of procedures (see the *Description of the Procedure of Qualification Improvement of VILNIUS TECH Staff* - p. 67 in SER, and *Research Staff and Other Researchers and for Setting Minimum Qualification Requirements* – p. 68 in SER) in accordance with Law on Higher Education and Research of the Republic of Lithuania, with the *Description of the Minimum Qualification Requirements for Research Staff of State Research and Higher Education Institutions* and other legal acts of Lithuania and the European Commission. Through these procedures it is established for professional development. The plan is built for five years, considering the institutional mission and objectives for each functional structure from VILNIUS TECH, including the department that integrates the teaching staff from both cycles of the finance programme study. This plan is to refer to every teacher with more than 0,25 FTE from VILNIUS TECH.

At the level of VILNIUS TECH there are special rules for financial support regarding the referenced two-month period of time specific for each internship. The process of competencies improvement refers to the scientific, didactic and professional competencies of teaching staff.

All the activities regarding the improvement of competencies are implemented in VILNIUS TECH by the Personnel Directorate and the Group of Educational Competences (GEC) of the Academic Affair Office.

In Table 6.7 is presented the minimum level of hour-lectures per year for employers with less and more than ten years of experience, separately for open-ended (40/20 academic hours/five years) and for fixed-term employment contract (8/4 academic hours/year).

Every six months the teaching staff has the possibility to choose a seminar from a list published at the level of VILNIUS TECH (https://vilniustech.lt/mokslui/edukologiniu-kompetenciju-tobulinimas/277819). As for a financial point of view, VILNIUS TECH supports 50% of the cost for an English language course every year.

Based on the discussion with the professors and administrative staff, all of these aspects regarding the conditions to improve the competencies of the teaching staff were confirmed.

The expert panel appreciates the very much favourable level of implementation for conditions to improve the teaching staff's competencies in VILNIUS TECH and teaching staff from both cycles of the finance study programme.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. Good qualification and professional competencies for academic staff.
2. Good level of communication between the different structures of faculty and the university.
3. A good level of teaching staff mobility, with appropriate procedures, rules and functional structures in the matter.
4. A good level of resources regarding the improvement of staff competencies.

(2) Weaknesses:

1. Not all teaching staff report three significant works in the last five years.
2. A weak representation of finance topics in the research work, handbook, textbook, etc.
3. A medium rate of integration for results of research in the content of subjects.

3.6. LEARNING FACILITIES AND RESOURCES

Study field learning facilities and resources should be evaluated according to the following criteria:

3.6.1. Evaluation of the suitability and adequacy of the physical, informational and financial resources of the field studies to ensure an effective learning process

According to SER (pp. 71-75) and the feedback from alumni, professors, students, administrative staff, and stakeholders corroborated with those we saw in the tour on-site, the expert team appreciates that the university's infrastructure is a modern one.

Both cycles of the Finance Study Programme are organised in the infrastructure of the Faculty of Business Management (FBM) which disposes of the following facilities and resources:

- total educational spaces of 4.927,1 m2, from which: 56 rooms relate to the teaching process (2357.4 m2), 15 classrooms, three computers classrooms, 44 rooms, and one streaming classroom;
- a total number of 859 workstations for students and two classrooms with interactive boards CleverBoard3 and SmartBoard;
- a computer room was allocated for the Bloomberg terminal with the financial support of social partners from the finances field;
- the Bloomberg terminal was implemented in November 2022;
- a modern network with broadband fibre-optic Internet connection integrating all ITC resources of FBM at the level of VILNIUS TECH;
- more than 200 software applications are used within VILNIUS TECH, out of which a part are for finance study programmes, such as Microsoft Office software, virtual learning environment Moodle, AutoCad, mathematical calculation software (MatLab, RStudio, SPSS statistics, GRETL etc.), process automation solution (UI Path system, UI Vision supplement to browser), data analysis packages (Orange, Weka), Anaconda; the UI Path Alliance learning platform for training provided by RPA programming solution equipment developers, design systems by Bentley enterprise, including planning, management and administration (MicroStation CONNECT, STAAD, Pro Connect, etc.), SAP S/4HANA Enterprise Management Software for Research and Teaching, accounting software STEKAS and Briox, tax software "SUFFLER", real-time investment demo platforms (Oanda, Metatrader, IQoption, etc.) for financial decision making, ArxGis Supply Chain Design for planning routes, user, passenger and other flows (SER, p. 72);
- modern library funds at the level of VILNIUS TECH and FBM with access to more than 520 000 print and electronic information resources on various topics: electronic journals – 25 921; electronic books – 479 542; printed publications – 97 327 titles (379

674 copies) (http://aleph.library.lt; https://www.VilniusTech.lt/biblioteka/, SER p. 72);

- the electronic services platform Library-University-Student (BUS (http://bus.vilniustech.lt)), where students (including Finance Study Programmes) can find active information in regard to the availability of more than 60 000 teacher-recommended publications inside and outside the library and also can find links to where the publications are stored, access the texts of electronic resources, view the covers and tables of contents of the publications, read a part of the publication in the Google Books system, get acquainted with the latest thematic literature of the course, and propose to the library to purchase a publication necessary for studies;
- a methodological room of departments from the FBM where there are several different scientific periodicals, monographs, coursebooks, and textbooks related to the areas of activity of the departments;
- about 30 electronic journals within the DB (available at the address https://vilniustech.lt/biblioteka/elistekliai/duomenu-bazes/286201?lang=1, e.g. Clarivate Analytics Web of Science, Scopus, EBSCO Publishing, Emerald Management e-Journals Collection, Oxford University Press Journals collection, Euromonitor International, Science Direct, Springer Link Journals, Taylor & Francis SHH Library and S&T Library, Wiley Online Library), and 8 DB e-books (ProQuest, Cambridge University Press eBooks collection, eBook EBSCO, eBooks on Science Direct, eBooks of Kaunas Technical University publisher "Technologija ", Springer Link eBooks, Taylor & Francis eBooks), and three archives (IOP Publishing Archive collection 1874–1999, Cambridge Journals Online collection 2003–2006, Springer Link Archive till 1996);

The expert team observes a special attention from the part of VILNIUS TECH for adaptation of the premises, facilities and equipment used for persons with special needs, regarding the access to the building and the use of educational resources.

Regarding the suitability and adequacy of the physical, informational and financial resources of the field studies as to ensure an effective learning process, the expert team appreciates as excellent these aspects and considers that both cycles of Finance Study Programmes organised by the FBM in VILNIUS TECH benefit all resources and facilities at European standards.

As a good practice of these matters, we emphasise the internal electronic platform Library-University-Student (BUS (http://bus.vilniustech.lt)), where students can see the teachers recommendations in regard to different subjects of student curricula.

3.6.2. Evaluation of the planning and upgrading of resources needed to carry out the field studies

In VILNIUS TECH, there is a plan for the modernization and process of upgrading resources needed for academic activity. This plan was confirmed in discussions by the Faculty Administration team and the finance study programmes, and by teaching staff. Some of the information included in this plan is collected via the intranet of VILNIUS TECH.

From the SER (pp. 71-75) results the special attention of management for modernization and maintaining an outstanding level of operation of the VILNIUS TECH's infrastructure, including the FBM's infrastructure. For example, during 2013-2015, 6 classrooms and all computer classes were repaired and upgraded; in FBM were installed in 2021 about 400 m2 of common-use premises (classrooms, rooms for students work groups, individual consultation rooms, etc.) and two computer classrooms with 30 workstations each (157.22 m2); about 350'000 Euros are spent annually on renovation and developing the IT resources; annually VILNIUS TECH plans to spend 120'000 Euros for IT licences, about 15'000 Euros for servers updating, and 30'000 Euros per year for upgrading computers from classrooms and upgrading equipment of streaming classroom (including projectors, computers of workstations of the teaching staff).

The expert team appreciates that the infrastructure for the study programmes are very well maintained in VILNIUS TECH. The evidence on-site fully demonstrates these aspects. From the meeting with administrative staff, the expert team deduced that in VILNIUS TECH, there is an annual plan for maintenance and operation at an outstanding level for all infrastructure, including software licences and access to electronic resources. The students and professors' sides confirmed these aspects.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. An appropriate and modern academic infrastructure;
2. Good practice regarding the access and using of educational resources for students with special needs;
3. Good maintenance and good planification of upgrading for academic resources.
4. The use of an internal electronic platform Library-University-Student.

(2) Weaknesses:

1. An overdue update of ITC's resources in the fintech field (see the Bloomberg terminal implemented in November 2022).

3.7. STUDY QUALITY MANAGEMENT AND PUBLIC INFORMATION

Study quality management and publicity shall be evaluated according to the following indicators:

3.7.1. Evaluation of the effectiveness of the internal quality assurance system of the studies

The internal quality assurance system (IQAS) in VILNIUS TECH is based on the European Higher Education Quality Assurance Regulations and Guidelines (ESG) and is ensured by applying the system of internal quality assurance of studies, external evaluation and accreditation of studies, external evaluation and accreditation of the University and participation of academic community and social partners in the quality improvement processes.

The main internal quality assurance systems document from VILNIUS TECH is the Description of Internal Study Quality Assurance including the definition of quality concepts, the goal, the principles, and defines the University study quality maintenance, monitoring and evaluation processes. The SER (p. 78) presents the full list of quality documents, as set out below:

- *Regulations of Study Programme Committees* (Resolution No. 62-2.2, 19 February 2013);
- *Regulations of the Study Committee* (Resolution No. 6-2.5, 2 March 2005);
- *Regulations of Studies* (Resolution No. 118-2.1, 19 May 2020);
- *General Regulations of the Faculty* (Resolution No. 57-1.4, 29 May 2012);
- *Regulations of the Faculty Study Committee* (Resolution No. 6-2.6, 2 March 2005);
- *General Regulations of the Faculty Council* (Resolution No. 57-1.5, 29 May 2012);
- *General Regulations of the Department* (Resolution No. 57-1.6, of 29 May 2012);
- *Description of the Procedure for Crediting the Achieved Learning Outcomes* (29 September 2020, Resolution No. 120-3.5);
- *Description of the Procedure of Internships of Employees* (Resolution No. 90-2.5 of 28 June 2016);
- *Code of Academic Ethics* (wording of Senate Resolution No. 9-1 of 30 November 2021);
- *Description of the Procedure for Additional Studies* (No. 79-4.8, 24 February 2015);

- *Procedure for the Assessment of Students' Achievements and Organization of their Examination Procedure* (Resolution No. 115-3.2, 17 December 2019);
- *Description of the Procedure of Organizing Student Internships* (12 October 2020, Order No. 10.8-857);
- *Description of the Procedure of Hearing Student Appeals and Complaints* (2 December 2020, Order No. 10.8-1009);
- *Description of the Procedure of Early Examination of Students of Vilnius Gediminas Technical University Going Abroad Under Cultural Exchange and Work Programmes* (23 April 2012, Order No. 459);
- *Description of the Procedure of Organizing Remote Studies* (25 April 2019, No. 391);
- *Description of the Procedure of Part-Time Studies* (17 December 2019, wording of Order No. 10.8-1093).

SER (pp. 78-79) clearly presents the functions of Study Programme Committees and the contribution to the implementation of quality requirements at the level of both Finance Study Programme cycles. All data and information related to the programme implementation are stored in databases of VILNIUS TECH information system "Alma Informatic". The discussions with the self-evaluation report group and with the representatives of the management reveals that there are periodic analyses and meeting discussions on the subject of quality assurance. Moreover, the results are published within quality reports, including the Annual Report of the Rector. Our analysis of VILNIUS TECH's web page (English version) didn't identify public documents regarding the annual quality assurance report.

After the evaluation of the internal quality assurance system (IQAS), the expert team appreciates a very good level of implementation in VILNIUS TECH specific to the finance study field programmes. The discussion with the members of the self-evaluation group was very clear about the internal quality assurance system, about the application of quality procedures in education and research activities. However, from the discussions with the students during the visit on-site, it was partially confirmed the implication of students in research activities.

3.7.2. Evaluation of the effectiveness of the involvement of stakeholders (students and other stakeholders) in internal quality assurance

Within the VILNIUS TECH, the students' opinions are of utter importance for the process of quality improvement in all the studies syllabus, including both cycles of the Finance field

syllabus, through periodic student surveys, guest lectures and meetings. By their representative in all the organisational structures of department, faculty, and university, the students and social partners are involved at the level of the Faculty Study, the Study Programme Committees, the Faculty Council, and the Faculty Commission for Attestation and Competitions.

As a Finance Field specificity, we note the practice of inviting specialists from Lithuanian and foreign universities and companies. During their visits, the representatives from companies inform the students about internships and employment opportunities, and provide recommendations for improvement of the study programme. Also, during the Career Days business representatives provide recommendations and suggestions for improvement of Finance study syllabuses.

A very interesting practice for Finance study curriculum is the involvement of PhD. students to share from their experience to the master study programme. All of these interactions have a deep influence in regard to a new level of quality for this programme study.

The expert team positively appreciates the efforts of evaluating feedback from students, teaching staff, social partners, and alumni. From a theoretical perspective, there are clear procedures to involve students and social partners in the process of IQAS. A good practice for cooperating with social partners is their involvement in the committees of the final thesis defence.

3.7.3. Evaluation of the collection, use and publication of information on studies, their evaluation and improvement processes and outcomes

As it is presented in SER (pp. 81-82), there is information in regard with the goals of the programme and the expected study results which are published on the website and intranet of VILNIUS TECH, and even on public portal from the Open Information Consultation System (AIKOS) http://www.aikos.smm.lt/aikos/index.htm and the website of the Lithuanian Higher Institutions Association for Organizing General Admission (LAMA BPO) http://www.lamabpo.lt/.

The collection of data and information regarding studies in the matter is possible with the information system of VILNIUS TECH *IS.VILNIUS TECH* (information system). All the data is

collected for managing the data for each study programme, including data for the diploma supplement.

The feedback about the quality of study programs is possible to be gathered from students, based on the Description of the Procedure for Organising Surveys of Participants in the Study Process of VILNIUS TECH, which provides mandatory surveys, as follows: a survey of students on quality of teaching, a survey of students on the implementation of the study programme, a survey of teaching staff on the quality of the study programme; a survey of administrative staff; a survey of students about the choice of studies; a survey of incoming exchange students; a survey of students voluntarily dropping out; a survey of graduates about career opportunities; a survey of social partners/employers.

In accordance with the procedure assumed by VILNIUS TECH, the results of surveys are discussed at meetings of the Rectorate, in academic divisions of the University, Study Programme Committees, and in meetings with students (SER, p. 81).

Regarding the process of collection and use of information about the studies, their evaluation and improvement processes and outcomes, the expert team definitely and positively appreciates the practice applied in VILNIUS TECH.

3.7.4. Evaluation of the opinion of the field students (collected in the ways and by the means chosen by the SKVC or the HEI) about the quality of the studies at the HEI

In VILNIUS TECH, the Study Center, in cooperation with the VILNIUS TECH Student Representative Office, periodically organises on mano.vilniustech.lt a student's survey on the teaching quality and another students survey on the implementation of the study programme (SER, p. 82).

From SER (p. 83), the survey results are considered to be favourable for both finance study programmes regarding aim, course materials, relationships between teachers and students and quality of teaching module. Still, these results are not representative of all the students because of the reduced number of respondents.

The expert team evaluates that the procedure for collecting information regarding the quality of the studies in VILNIUS TECH could be a little more efficient.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. Well-implementation of QMS documents at the faculty (including departments) and the university level.
2. A good level of quality culture among the academic community.

(2) Weaknesses:

1. In relation to the students, the process of data collection for quality assurance is not so efficient, for both finance study programme cycles.

IV. EXAMPLES OF EXCELLENCE

As a good practice of excellence, the expert panel emphasises the internal electronic platform Library-University-Student (BUS (http://bus.vilniustech.lt)), where students can see the teachers' recommendations in regard to different subjects of student curricula.

V. RECOMMENDATIONS

Evaluation Area	Recommendations for the Evaluation Area (study cycle)
Intended and achieved learning outcomes and curriculum	1. Although the study plan includes some specific finance topics, it is recommended to include some elective modules in direction of professional practice fields. It might also be considered to permit students to choose "specialisation modules" on a single course level.
Links between science (art) and studies	1. The expert team recommends to focus more on the internationalisation of research activities and to keep the current level of research outputs published in high-ranked IF journals.
Student admission and support	1. Student exchange mobilities to be encouraged for both cycles of studies.
Teaching and learning, student performance and graduate employment	1. To develop a wider network of social partners and employers aiming to represent the whole sector of finance both on national and international level.
Teaching staff	1. The expert team recommends a better motivation of teaching staff for achieving the research-oriented toward finance topics, continuing with a better implementation for integrating the research results in education activities. 2. It is recommendable to maintain and raise the level of international mobility of teaching staff and continue the effort to extend the financial sources for this activity.
Learning facilities and resources	1. From a future perspective, it is recommendable to maintain the policy of investment and infrastructure maintenance for good operability in academic activities.
Study quality management and public information	1. It is recommended to raise the efficiency of the process for data collection regarding the feedback of students in the matter of quality assurance system.

	2. The publication of the annual report regarding the overview of quality assurance (including study field programmes) should be a systematic practice in VILNIUS TECH.

VI. SUMMARY

Main positive and negative quality aspects of each evaluation area of the finance study field at VILNIUS TECH University:

The aims of both SPs are clearly in line with the mission, objectives of activities and strategy of VILNIUS TECH. The aims and learning outcomes and the teaching and learning assessment methods of the SPs correspond with the needs of society and the labour market. The master SP includes excellent opportunities for students to personalise their studies.

The expert team sees room for improvement in the bachelor SP as there is a rather low focus on finance topics in SP and only limited opportunities for students to personalise their studies in the field of finance.

Regarding research the expert team acknowledges the quantity of research outputs published in high-ranked IF journals. Students are sufficiently involved in research activities, mostly through master theses and research conferences. The interdisciplinarity of research connecting finance and technology can be seen as a further strength. For the future expert team recommends to focus more on internationalisation of the research activities while keeping the current volume of research outputs.

Although a high number of agreements with Erasmus + programmes is offered, students' mobility (incoming and outgoing students) is rather low.

The expert team acknowledges the long developed and strong partnership with social partners and employers as well as the high level of employability of the finance study field compared with other study fields at VILNIUS TECH.

The academic staff has good qualifications and professional competencies.The teaching staff mobility is good, with appropriate procedures, rules and functional structures in the matter. Based on the information provided, not all teaching staff reported three significant works in the last five years. Finance topics could be represented stronger in research work, handbooks, textbooks, etc. and might also be better integrated in the content of the modules of the SPs.

The financial support for teaching mobility could be increased as the financial sources regarding the financial support for teaching mobility are rather limited (only ERASMUS, DAAD and BAFF).

VILNIUS TECH has an appropriate and modern academic infrastructure including educational resources for students with special needs.

The quality management system is well implemented both on a faculty (including departments) and the university level and the expert team acknowledges a good level of quality culture among the academic community. Nevertheless, the expert team sees some room for improvement for both finance SPs as the process of data collection for quality assurance in relation with the students is not so efficient.

The expert team wishes to thank the HEI, especially the staff responsible for the SER for their efforts in preparing the self-evaluation report and organising the site-visit. Furthermore, the expert team wishes to thank teachers, members of the administration, students, graduates and social partners for answering all of the questions. The discussions during our site visit were efficient and constructive.

Expert panel chairperson signature:

Prof. Dr. Karsten Lorenz **(signature)**