SKVC

STUDIJŲ KOKYBĖS VERTINIMO CENTRAS
CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

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STATISTICS FIELD OF STUDY

Vilnius Tech

EXTERNAL EVALUATION REPORT

Expert panel:

1. Panel chair: Dr. Antoni Meseguer Artola ………………………... (signature)
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I. INTRODUCTION

1.1. OUTLINE OF THE EVALUATION PROCESS

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

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

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

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

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

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

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

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

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

1.2. REVIEW PANEL

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

The composition of the review panel was as follows:

1. Panel chair: Dr. Antoni Meseguer Artola;
2. Academic member: Habil. dr. Seifedine Kadry;
3. Student representative: Miglė Gervytė.

1.3. SITE VISIT

The site visit was organised on 9th January 2025 onsite.

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

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

There was a need for translation during the meeting with Senior management and administrative staff of the faculty and team responsible for preparation of the SER.

1.4. BACKGROUND OF THE REVIEW

Overview of the HEI

VILNIUS TECH is a state higher education institution operating as a public institution. The university comprises 10 faculties and offers study programs in 29 fields within the following groups: Engineering and Technology, Architecture and Design, Business and Management, Creative and Social Sciences, Fundamental Sciences, and Specialized Institutes. The university was founded in 1956 as the Vilnius Evening Studies Division of the Evening Studies Faculty of Kaunas Polytechnic Institute (KPI). It became an autonomous higher education institution in 1969, known as the Vilnius Civil Engineering Institute (VISI). The university operated under this name until 1990, when it gained autonomy and was renamed Vilnius Technical University (VTU)

Overview of the study field

The study field of statistics at Vilnius Gediminas Technical University (VILNIUS TECH) is positioned within the broader context of the university's commitment to excellence in technical and engineering education. The Department of Mathematical Statistics, part of the Faculty of Fundamental Sciences, implements the two programmes evaluated in this report: Data Analysis Technologies (first-cycle) and Data Science and Statistics (second-cycle). These programs are continuously improved to align with Lithuania's strategic documents, higher education quality requirements, labour market needs, and student interests. VILNIUS TECH's strategic objectives include fostering socially responsible, creative, and forward-thinking individuals who contribute to technological progress and societal welfare. The university engages in various partnerships and projects to enhance the quality and relevance of its study programs, ensuring that they meet contemporary academic and industry standards. This integration of the study field within the university's broader mission underscores its significance in contributing to VILNIUS TECH's goal of becoming a leader in technical and engineering education and research in the Baltic States.

Previous external evaluations

The study programs in the field of statistics at Vilnius Gediminas Technical University (VILNIUS TECH) have undergone several external evaluations to ensure their quality and relevance. The first-cycle studies in statistics began in 2011, while the second-cycle studies were introduced in 1997. These programs are evaluated based on the Methodology of External Evaluation of Study Fields approved by the Director of the Centre for Quality Assessment in Higher Education (SKVC). The evaluation process includes self-evaluation, site visits by expert panels, and the production of external evaluation reports. The outcomes of these evaluations determine the accreditation status of the study field, with possible accreditation periods of 7 years, 3 years, or non-accreditation based on the evaluation scores. These evaluations help VILNIUS TECH continuously improve its study programs and maintain high standards in higher education.

The previous external evaluation of the two programs was conducted in the year 2022 by the following team of evaluators:

1. Prof. dr. **Claudia Kirch** (panel chairperson) Professor at Institute for Mathematical Stochastics, Faculty of Mathematics, Otto-von-Güricke-Universität Magdeburg (OVGU Magdeburg) Germany;
2. Prof. dr. **Ričardas Krikštolaitis**, Professor at Faculty or Informatics, Dep. of Mathematics and Statistics, Vytautas Magnus University, Lithuania;
3. Prof. dr. **Pedro Francisco Delicado Useros**, Professor at Faculty of Mathematics and Statistics, Polytechnic University of Catalunya, Spain;

4. Dr. **Gabija Girdžiūtė**, Actuary at ERGO Life Insurance SE, member of Lithuanian Actuary Society, Lithuania;
5. PhD. **Monika Briedienė**, doctoral student at Faculty of Informatics, Vytautas Magnus University

In accordance with the requirements of the Centre for Quality Assessment in Higher Education (SKVC), the following dimensions were evaluated: Intended and achieved learning outcomes and curriculum, Links between science (art) and studies, Student admission and support, Teaching and learning, student performance, and graduate employment, Teaching staff, Learning facilities and resources, and Study quality management and public information.

The results of this evaluation were as follows. First-Cycle Studies received a positive evaluation with a total score of 21 points out of 35. All areas received a rating of Good or Very Good, except for two: Links between Science and Studies and Teaching Staff. These were rated as Satisfactory. The second-Cycle Studies also received a positive evaluation, with a total score of 22 points out of 35. Similarly, almost all dimensions were rated as Good or Very Good. Only one, Links between Science and Studies, received a rating of Satisfactory. In consequence, the two programs were accredited for three years and should be reevaluated in 2023/2024.

The outcomes of the evaluation highlighted several strengths and areas for improvement. The programmes provide graduates with up-to-date knowledge in statistical technologies, preparing them well for both local and international job markets. Employers and alumni had positive opinions about the theoretical and practical training provided. The programmes had been updated to include relevant subjects like Python programming and Big Data Analytics. However, student participation in scientific events, projects, and academic mobility was low. Students received effective academic, financial, social, and psychological support, and teachers were approachable and responsive. The transition to online teaching during the pandemic was successful, and it was recommended to continue offering some classes online. The programmes had to involve more teachers to reduce the current concentration of teaching duties and to increase research activities and publications. The library and IT resources were generally good, but there were issues with outdated computer facilities and unstable Wi-Fi. Overall, the learning facilities and resources were excellent, ensuring an effective learning process.

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: This document has been prepared by VILNIUS TECH.
- Legal Acts: Study Field Descriptor, Methodology of External Evaluation of Study Fields, and Description of the general requirements for the provision of studies.
- Previous evaluation report: The two programs were evaluated three years ago as part of the assessment of the Statistics study field in Lithuania.
- Training: Various documents were provided with information and guidelines on how to carry out both the evaluation in general and the visit in particular.
- Additional documents requested from the university:
    a. List of social/business partners related to the two programs;
    b. CVs of the new recruited faculty members;
    c. Copies of the best, average, weak thesis from each cycle;
    d. Syllabi of courses;
    e. Document describe the actions taken based on the students' survey and feedback.

Additional sources of information used by the review panel:

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

https://vilniustech.lt/

II. STUDY PROGRAMMES IN THE FIELD

First cycle/LTQF 6

Title of the study programme	**Data Analysis Technologies**
State code	6121AX009
Type of study (college/university)	university studies
Mode of study (full time/part time) and nominal duration (in years)	full-time (4)
Workload in ECTS	240
Award (degree and/or professional qualification)	bachelor of Mathematical Sciences
Language of instruction	Lithuanian
Admission requirements	secondary education
First registration date	2011 06 22
Comments (including remarks on joint or interdisciplinary nature of the programme, mode of provision)	

Second cycle/LTQF 7

Title of the study programme	**Data Science and Statistics**
State code	6211AX009
Type of study (college/university)	university studies
Mode of study (full time/part time) and nominal duration (in years)	full-time (2)
Workload in ECTS	120
Award (degree and/or professional qualification)	master of Mathematical Sciences
Language of instruction	Lithuanian
Admission requirements	bachelor's degree
First registration date	1997 02 01
Comments (including remarks on joint or interdisciplinary nature of the programme, mode of provision)	

III. ASSESSMENT IN POINTS BY CYCLE AND EVALUATION AREAS

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

No.	Evaluation Area	Evaluation points[1*]
1.	Study aims, learning outcomes and curriculum	3
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	3
5.	Teaching staff	3
6.	Learning facilities and resources	4
7.	Quality assurance and public information	4
	Total:	24

The **second cycle** of the statistics field of study is given a **positive** evaluation.

No.	Evaluation Area	Evaluation points[2*]
1.	Study aims, learning outcomes and curriculum	3
2.	Links between scientific (or artistic) research and higher education	3
3.	Student admission and support	3
4.	Teaching and learning, student assessment, and graduate employment	3
5.	Teaching staff	3
6.	Learning facilities and resources	4
7.	Quality assurance and public information	4
	Total:	23

[1*]

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

IV. STUDY FIELD ANALYSIS

AREA 1: STUDY AIMS, LEARNING OUTCOMES AND CURRICULUM

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

FACTUAL SITUATION

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

The DAT program is designed to train analysts proficient in modern analytical and forecasting methods, technologies, and analytical software tools. The DSS program, a master's degree focusing on data analysis, addresses specific challenges that arise when dealing with large volumes of data, such as increased processing time and unstructured data. These challenges necessitate new data analysis methods, leading to the development of the interdisciplinary field of Data Science. Links between subjects and learning outcomes included in Annex 2 show in detail how the programmes are organized to reach these academic goals.

Modern businesses, academic institutions, and even politicians rely heavily on data analysis. Important economic sectors, such as those related to technology, health, online services and economy generate vast amounts of data that need to be transformed and analysed to generate knowledge and value to the institutions and, in general, to the society. In today's job market, Data Analysts, Data Scientists, and Statisticians are highly sought after. Job postings for these roles are frequent, and business representatives confirm the high demand in Lithuania.

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

Among the most relevant aims of VILNIUS TECH are to train qualified, civically responsible and creative professionals, able to address the challenges of the economic and social environment, contributing to the country's progress. But also with an international vision, where graduate students can also compete in foreign job markets. The University's strategy outlines its vision for 2030: to be a prestigious and international European technical university, distinguished by the quality of its studies and research, and its significant impact on individuals, the community, and the society.

The DAT and DSS programme aims to train data analysts with solid knowledge of mathematical statistics and computer science, capable of analysing statistical data and applying data analysis models. The main objective is to training specialists in big data analysis, familiar with modern business analytics software tools, and able to apply statistical analysis, modelling, and forecasting methods. Learning outcomes, detailed in Annex 1, focus on these academic and research dimensions. Additionally, learning outcomes related to social and personal skills are also developed.

ANALYSIS AND CONCLUSION (regarding 1.1.)

Taking into account the factual situation, described in 1.1.1, both programmes aims and learning outcomes are aligned with the needs of the society and the labour market. They train qualified specialists in large-scale data management, in leading-edge analytical methodologies and also in modern programming languages. Its academic profile is highly demanded in the job market, and their professional activity plays a key role in society, which is based in technology and data.

The goals and learning outcomes of the DAT and DSS programmes develop the academic skills and the research skills of the students, consequently to the key goals outlined in the University's strategy. They train specialists in a central economic sector, which play an important role in the country's

development. The programmes also take care of the social and personal dimension of the students, as it is demanded by VILNIUS TECH: they will become professionals with the ability to work in interdisciplinary and international teams, to communicate with their environment and to critically analyse the information, being socially responsible. Hence, both programmes clearly contribute to fulfilling the university's mission and strategy.

The fact that the programmes built on the guidelines given by the "General Principles for the Development and Implementation of Study Programmes at Vilnius Gediminas Technical University", which establishes the requirements for first-cycle, second-cycle, and integrated study programmes, as well as the principles for their development and implementation, ensures that the learning outcomes align with the University's mission.

During the visit, it was confirmed that, moreover, these programs are important for the university's leadership in their new strategic plan, as they are closely linked to the jobs of the future. They provide support to these two programs, regardless of the number of students.

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 programmes are developed in accordance with the "Description of Study Levels" and with various legal acts, including the Law on Science and Studies, the Statute of VILNIUS TECH University, and the Description of the Lithuanian Qualifications Framework. The programmes belong to levels 6 and 7, where complex activities with a diverse range of tasks and contents are required. These activities require broad theoretical knowledge, based on new fundamental and applied research, or knowledge necessary for implementing various innovations.

The DAT and DSS programmes are designed based on the documents "Description of the Group of Study Fields of Mathematical Sciences" and "Description of the Study Field of Statistics". These documents regulate the specific requirements for the group of study fields of Mathematical and Statistical Sciences, and describe the general and specific learning outcomes on which the DAT and DSS programmes are built.

With respect to the development, improvement and quality control of the programmes, the "General Requirements for the Implementation of Studies" are also considered. The work environment demands adaptability to constant and often unpredictable changes driven by advances in knowledge and technology. The programmes broadly follow the general proposed structure, the implementation of studies, the study management, and the teaching staff organization.

The DAT programme starts with general university education and the fundamentals of studies, while the DSS programme is designed to deepen and broaden the student's existing knowledge of statistics and data analysis. The main logical links between the study subjects in the DAT and DSS programmes are described by the links between the aims, the learning outcomes of the study programme, and the learning outcomes of the study subjects (Annex 1 and Annex 2).

The level of compliance of the study programmes with the general requirements established in the previous mentioned documents is presented in Tables 1.1 and 1.2.

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

According to the Self Evaluation Report (SER), the learning outcomes associated to the aims of both the DAT and DSS programmes are strongly interrelated (Annex 1). They are associated to different subjects (Annex 2) and the coverage is comprehensive, exhaustive, and proportionally distributed, according to the five categories: knowledge skills, research skills, special skills, social skills, and personal skills.

In the study plan for DAT and DSS programmes, the courses are grouped by semesters, and for each course, the following information is provided: the number of credits, the course block, the evaluation method, and the name of the teachers that have been associated to the course in the past three years.

Annex 4 of the SER provides more detailed information about the study methods and the assessment methods associated to each course. The assessment of students is based on a cumulative assessment system, which ends in a final in-person exam. The evaluation process is both formative and evaluative, and seeks to encourage students to learn and achieve training outcomes. There is a great variety of study methods, but most courses use lectures, practical classes (problem-solving), and homework. A special mention should be made of courses aimed at the preparation of final theses and research projects (second cycle). They are based on independent work (under supervision) and on public discussion or defence. More discussion is provided in section 2.2.5.

1.1.3. Curriculum ensures consistent development of student competences

The DAT programme organizes the recommended sequence of courses to be consistent with the development of students' competences. First, fundamental subjects are programmed, to provide basic knowledge on statistics, mathematics, and programming according to the level required for a first cycle. Then, more specialised courses are offered, to provide advanced knowledge in data science but also in other related topics (for example, in economics and finance). Curriculum also includes courses related to the individual development of students (for example, ethics and public communication) and an internship, to be aligned with the University's mission of developing a civically responsible, creative and competitive professional, with advanced practical skills. The final thesis puts together all knowledge and skills acquired during the studies.

The curriculum of the DSS programme is designed very similarly, but focusing on specialisation in data analysis and oriented to applied and research work. This orientation is developed from the first semester. Master's students have elective courses to define its specialisation and research work subjects to begin addressing tasks related to their thesis topic. The courses are based on contemporary realities and modern topics, to develop a comprehensive and coherent competency career.

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

VILNIUS TECH university provides the organizational and formal framework for its students to personalise their curriculum. In this framework, students can design and follow "individual study plans," which must be approved by the Dean. This applies specially to those students following part-time studies. Distance learning is an option that can be selected by students willing to combine work and study. This modality includes synchronous and asynchronous classes, and some in-person sessions are mandatory (for example, final examinations).

Although the university offers this flexible environment, it is not a highly sought-after option by students in the DAT and DSS programs (especially in the case of the first cycle). The individualization and personalization of their curriculum focus on the selection of elective courses, whether offered within the program itself (alternative subjects) or included in other programs (free elective). In the DAT program, the offering is limited, and out of 240 credits, it accounts for only 10%. The professional internships, which are mandatory, allow students to further individualize their curriculum (15 credits).

In the DSS program, the proportion is slightly larger: 18 credits out of 120. Additionally, in the second-cycle program, there are mandatory courses where students can individualize their learning process, tailoring it to their own interests: Master's Research Work (9 credits) and Final Master's Thesis (30 credits).

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

The requirements for the development of the Final Theses are given by the University through the document "Description of the Procedure of Preparation and Defence of Final Theses". It formally states, for example, that themes and supervisors are approved by the faculty dean and that the defence of the thesis is in the presence of a Degree Awarding Commission (DAC). The chairman of the commission must be an external professional, without a contractual relationship with the university.

Students select the topic to develop in their final thesis from a (closed) list of topics primarily proposed by the program's faculty. Although social partners also can suggest topics for this list, the participation rate is still very low: 2 Master's degree students and 3 Bachelor's degree students.

The final thesis carries a weight of 15 credits at the DAT programme, and 30 at DSS, complying with the established legal requirements.

Information about final thesis of the two programmes has been provided in Annex 3 of the Self Evaluation Report (SER). In general, students achieve excellent grades, which almost never drop below 9. This clearly demonstrates that the acquisition of knowledge during their training in each of the programmes is appropriate. And it also confirms that a well-designed curriculum has been created, allowing them to achieve the learning objectives with excellence and develop the most of the competencies accordingly.

ANALYSIS AND CONCLUSION (regarding 1.2.)

The general description of contents in the DAT and DSS programmes are aligned with the type and level of studies, although there must be some confusion with the name of some subjects (which are identical). To better distinguish the depth at which the content is addressed, depending on whether it is at the level of a first cycle or a second cycle, it would be advisable to make a greater effort, both in the naming of the subjects and in the definition of the skills. In many cases, the phrasing is very similar and can lead to misunderstanding.

The level of compliance of the study programmes with the general requirements of legal acts (Tables 1.1 and 1.2.) is very good for the DAT programme and, for the DSS programme, almost all requirements are satisfactory. There is an important issue that has to be addressed: the proportion of teachers holding the rank of professor is clearly lower than the required 20%.

Taking into account the typology of courses in the programmes, the study methods and the assessment methods are adequate. The diversity of methods associated to each course combine adequately, facilitating the students' learning process and providing a suitable assessment (both, formative and evaluative).

The subjects in the curriculum of both programmes are arranged to develop students' skills consistently. They are formally well-designed. Nevertheless, although they correspond to different levels of depth (first cycle vs. second cycle), there are some significant coincidences (for example in some subject names, or in some learning outcomes) that should be examined.

According to the information gathered during the visit, in sessions with students and alumni, it is evident that upon completing the first cycle, there is no pressing need to continue to a second cycle. With the first cycle, students can directly access a job market characterized by high demand for professionals in data analysis. Clearly distinguishing the second cycle from the first cycle,

showcasing its full potential and specialization opportunities, should be an important goal in the coming years. This differentiation could play a key role in improving enrolment in the second cycle (which is currently very low).

Highlighting key topics such as data visualization or machine learning more prominently in the second cycle can help with this differentiation. Currently, these topics are covered within various courses but do not have a clear reference in the study plan. Conducting an international comparison with other similar second-cycle programs could also be beneficial.

Although efforts are being made to keep the curriculum of the training programs up-to-date, especially in the case of the second cycle, by encouraging the research activities of the teachers and integrating these activities in the curriculum and also the latest advancements in academic literature, there is room for improvement. During the visit, students, and alumni indicated that there should be more training related to programming languages (Python) and cutting-edge methodologies in the field of artificial intelligence.

The social partners requested during the visit more regular communication with the academic heads of the programmes in order to help with the updating and renewal of the syllabuses, in line with the needs of the economic and social environment. They have first-hand information. For example, they mentioned that competencies related to communication, teamwork, and entrepreneurial skills should be incorporated. They are in high demand in the job market.

The opportunities for personalization in both programs have room for improvement. This potential for improvement is closely linked to the growth of the programs as well as the increase in specialized faculty. Although first-cycle students have the option to take courses in other programs, with the only limitation being the number of credits (only 6), they cannot freely choose courses offered within their own program. The low number of students in the program makes it economically unfeasible to develop teaching in elective courses with few students. Therefore, they must collectively decide which elective course to follow as a group. The same thing applies to the second cycle.

Despite the efforts made, the number of thesis topics proposed by social partners is still minimal. This effort must continue to be emphasized so that the involvement of social partners will allow the programs to be more closely aligned with the social and economic reality of the surrounding environment.

With the aim of facilitating the personalization of curricula according to each student's interests, the possibility of having an open list of topics for the final thesis should be considered. At present, it is the professors, and to a lesser extent the social partners, who define the list of topics. It would be appropriate to formally propose to the students themselves that they indicate their interests and develop a final thesis fully aligned with their personal learning process.

Although the grades obtained in the final thesis projects implicitly show that students have satisfactorily acquired the main competencies of the curriculum, there is a significant gap in terms of language skills. Foreign language competencies are explicitly included in the first cycle (especially English), but the number of theses written in this language is virtually negligible. And the situation in the second cycle is very similar. In the case of the second cycle, this issue can be addressed starting from the next offering of the program in English.

The number of final theses submitted in the last 3 years is not stable and shows a clear decreasing trend. In the DAT program, 8 theses were submitted in 2022, 15 in 2023, and again 8 in 2024. In the DSS program, 7 theses were submitted in 2022, 8 in 2023, and only 4 in 2024. It is necessary to analyse whether these results are due to a decrease in enrolment numbers or to an issue with the academic performance of the students.

AREA 1: CONCLUSIONS

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

COMMENDATIONS

1. The contents of the DAT and DSS programs are well-aligned with the type and level of studies.
2. The DAT program shows very good compliance with general legal requirements, and the DSS program is mostly satisfactory in this regard.
3. The diversity of study and assessment methods is adequate, facilitating the students' learning process and providing suitable assessments.
4. The subjects in both programs are well-designed to develop students' skills consistently.
5. Both programmes prepare students well for the job market, which has a high demand for professionals in data analysis.
6. There are ongoing efforts to keep the curriculum up-to-date, especially in the second cycle, by integrating teachers' research activities and the latest advancements in academic literature.
7. The grades obtained in final thesis projects indicate that students have satisfactorily acquired the main competencies of the curriculum.

RECOMMENDATIONS

To address shortcomings

1. There are significant overlaps between the first and second cycles in terms of subject names and learning outcomes, which should be examined and addressed. Identical subject names across different cycles can lead to misunderstandings.
2. The DSS program has a lower proportion of professors than the required 20%, which needs to be improved.
3. The second cycle needs to be more clearly distinguished from the first cycle to showcase its full potential and specialization opportunities, which could help improve enrolment.
4. The programs have limited opportunities for personalization, especially in elective courses, due to low enrolment numbers.
5. The number of theses submitted has decreased over the past three years, indicating a need to analyse whether this is due to a decrease in enrolment or issues with academic performance.

For further improvement

1. There is a need for more regular communication with social partners to update and renew syllabuses according to market needs. Skills like communication, teamwork, and entrepreneurship should be incorporated.

2. There is a significant gap in foreign language skills, with few theses written in English. This issue should be addressed, particularly in the second cycle.
3. The number of thesis topics proposed by social partners is minimal. An open list of topics for final theses, with students' involvement, could better align with their interests.
4. More training related to programming languages (like Python) and cutting-edge methodologies in artificial intelligence is needed.

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

Vilnius Gediminas Technical University (VILNIUS TECH) is recognized as one of the leading state universities in Lithuania, ranked 851-900 in the QS World University Rankings 2025. The university emphasizes the importance of active participation in scientific activities to enhance teachers' professional qualifications.

The Department of Mathematical Statistics has been involved in significant research, publishing 40 articles from 2021-2024, with 30 journals indexed by WoS IF. Faculty members have presented at various international conferences on telecom fraud detection, decision-making methods, and statistical quality control.

During the same period, the department participated in some research projects focused on AI-based platforms and civil engineering. A few faculty members also engaged in Erasmus+ study visits in Denmark and Estonia to enhance educational methods.

Currently, two teachers are pursuing doctoral studies. In addition to participate in scientific seminars, faculty members hold positions in various organizing committees related to survey statistics and mathematical societies.

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

The DAT programme aims to train data analysts with a strong foundation in mathematical statistics and computer science, equipping them to analyse statistical data and apply data analysis models in various fields. Conversely, the DSS programme focuses on training specialists in big data analysis, emphasizing knowledge of statistical analysis, modelling, and forecasting, along with proficiency in modern business analytics software to address problems in scientific research and practice.

The curriculum of both cycles, DAT and DSS, was designed to match the aims of the two programs. The graduate of the DAT program will have a strong foundation in mathematics and statistics, but also in using preferred software and technology to handle data. The graduate from DSS will have a good knowledge of data science.

The topics of the thesis in DAT and DSS are linked to the latest developments in science and technology to some extent.

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

Students at VILNIUS TECH are encouraged to engage in research through their Final Thesis (FT) and various course projects, with opportunities to present findings at scientific conferences. Since 2019, a contest for scientific topics has been organized for second and third-year first-cycle students, where winners receive an incentive scholarship and collaborate with supervisors on research throughout the year.

First and second-year Statistics students are invited to participate in key conferences, including the Lithuanian Mathematical Society's annual conference and the "BNU Workshop on Survey Statistics." Notable presentations from 2022 and 2024 highlight student contributions in these events.

Final thesis topics are prioritized based on research project problems proposed by teachers, and business-driven issues from social partners and student proposals. Social partners actively suggest topics each year, and students often suggest their own thesis subjects after internships, developing these ideas with their supervisors.

ANALYSIS AND CONCLUSION (regarding 2.1.)

Compared to the last program evaluation, the panel noticed more faculty members' involvement in research activities, but the number is still low, especially in the very dynamic and demanding field of applied statistics and data science. The publication topics related to the field of study to some extent, but there are many related research topics barely or not yet addressed, like big data analytics, ML, and Deep Learning, etc. The participation in local or international research projects is minimal and insufficient. The faculty exchange number, trough Erasmus+, is low.

The panel concluded that the curriculum of DAT and DSS are linked to the latest developments in the field. However, some changes may improve the link and make the program meet international standards using the curriculum recommendations proposed by IEEE and ACM. For example, for DAT, the ethics or data ethics must be a required course. Adding a second course on programming might improve students' skills in developing models related to machine learning. Additionally, an added course or part of the course on visualization and communication of the knowledge obtained from the data will enhance the student's skills in presenting their products. For DSS, the programming course must be a required course, the machine learning course is missing in the curriculum, and the data science life cycle topics are not covered.

The panel determines that students have a significant opportunity to participate in scientific activities connected to their study programs. However, the participation rate is low and not systematic. For DSS thesis, it is recommended that a publication in the form of a book chapter, conference paper, or journal paper be derived. No international participation was noticed except for participation in Estonia.

AREA 2: CONCLUSIONS

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

COMMENDATIONS

RECOMMENDATIONS

To address shortcomings

1. Develop a strategy to improve the research activities by including some incentives.
2. Allocate the thesis in both cycles to faculty members more actively in research.
3. Develop a plan to support faculty members to participate actively in research projects.

For further improvement

1. Increase the exchange of the faculty members through Erasmus+;
2. Develop a systematic strategy to revise the programs according to regional and international benchmarks;
3. The internship course in DAT might be moved to an earlier semester.

AREA 3: STUDENT ADMISSION AND SUPPORT

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

FACTUAL SITUATION

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

VILNIUS TECH offers one first-cycle study program, Data Analysis Technologies (DAT), and one second-cycle study program, Data Science and Statistics (DSS). The admission process for both levels is approved by the Rector of VILNIUS TECH and follows national procedures set by the General Admission Organization, as well as VILNIUS TECH regulations.

According to SER, the number of students admitted to the first-cycle DAT program in 2021–2023 was 8, 14, and 15, respectively. The average competition score of applicants remained stable at approximately 6.5, with only a 0.1 variation between years. The number of applicants has been increasing, rising from 79 in 2021 to 115 in 2023. The DAT program is promoted through various initiatives, including events, participation in annual fairs, presentations at secondary schools and gymnasiums by faculty and students, and additional mathematics lessons for school leavers led by an associate professor.

For the second-cycle DSS program, the SER indicates that 8, 10, and 6 students were admitted between 2021 and 2023, with an average competition score ranging from 9.77 to 10.38. The number of applicants followed a similar trend, increasing from 27 in 2021 to 40 in 2022, before decreasing slightly to 30 in 2023. VILNIUS TECH promotes the DSS program among first-cycle students and organizes various events and fairs to attract applicants.

During site visits, it was noted that dropout rates are around 20%, while the SER indicates that the graduation rate varies between 36% and 88%. The main reasons for student dropouts include changing academic interests, difficulties with subjects involving statistics and mathematics, or personal factors such as health issues or significant life changes.

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

Information about the recognition process for foreign qualifications and partial studies is provided in "The Description of the Procedure for the Crediting of Learning Outcomes at VILNIUS TECH" and "The Description of the Procedure for Erasmus+ Mobility of Studies and Internships at VILNIUS TECH." The recognition of informally acquired achievements is detailed in "The Description of the Procedure for Assessment and Recognition of Competences Acquired through Non-Formal and Informal Education." These procedures are clearly defined, and all relevant information is easily accessible on the VILNIUS TECH website.

ANALYSIS AND CONCLUSION (regarding 3.1.)

According to SER and site visits, the admission process, regulations, and procedures for recognizing foreign qualifications, partial studies, and prior non-formal and informal learning are clear and easily accessible.

For first-cycle studies, the number of applicants and admitted students has been increasing, while the average competition score has remained stable. This indicates a growing interest in the program without lowering admission standards.

In contrast, second-cycle study trends show a decline, highlighting the need for additional attention in this area. The decision to implement the DSS program in English in the next academic year is commendable, as it may help attract a larger pool of potential students. However, a more extensive

marketing campaign is recommended to reach both international and Lithuanian applicants. Social partners have noted areas for improvement and expressed willingness to be involved in the process, which could further enhance the DSS program's visibility and appeal.

Dropout rates have been observed to fluctuate significantly from year to year. Since the number of students in earlier admission years (those that already have graduates) was smaller, even a few students could have noticeably impacted the percentage. While relatively high dropout rates in exact sciences are generally common, VILNIUS TECH should consider offering more comprehensive pre-admission guidance to help students better understand what to expect when applying to programs in the field of Statistics. Nevertheless, it is commendable that teachers are actively supporting students by providing assistance and individual consultations for those struggling with certain aspects of their studies.

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

According to SER and site visits, VILNIUS TECH students are informed about academic mobility opportunities through various channels, including Integrative Study Week, university events, the VILNIUS TECH website, notice boards, and the International Relations Office. However, participation in these mobility programs remains low, with only two students of Statistics study field taking part, as stated in the SER.

During site visits, some students said that they hesitated to study abroad for a full semester, having concerns about missing coursework at VILNIUS TECH due to the continuous nature of subjects in their study program. Others mentioned cultural, language, or personal restrictions as additional barriers. It was also noted that, starting from the autumn semester of 2024, DAT students had the opportunity to participate in Blended Intensive Programs (BIP) as an alternative mobility option that some of them used and are planning to use in the future.

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

VILNIUS TECH provides students with a wide range of useful information, covering topics such as library and resource usage, sports and extracurricular activities, dormitory living, psychological counseling, financial support, and assistance for students with disabilities. Students have access to various scholarships, given both for academic excellence and social needs, funded by VILNIUS TECH, social partners, and the State Studies Foundation.

It is also noticed that Student Representation plays an active role in improving student life by advocating for students in the Study Committee, organizing activities, and encouraging students to provide feedback. During site visits, several instances were mentioned where curriculum changes to study subjects were implemented based on student feedback, demonstrating the impact of student involvement.

3.2.3. Higher education information and student counselling are sufficient

First-year first-cycle students enrolled in the program receive support from a student mentor, senior student tutor, and a teacher-mentor. The teacher-mentor provides essential academic guidance, the senior student tutor assists with learning, and the student mentor helps new students integrate into the VILNIUS TECH student community.

In their courses, teachers introduce students to the curriculum and provide information about the upcoming study topics. Additionally, students have the opportunity to attend weekly consultations with their teachers. The Moodle platform is actively used, ensuring that all learning materials are easily accessible to students.

ANALYSIS AND CONCLUSION (regarding 3.2.)

Regarding academic mobility, VILNIUS TECH provides comprehensive information about available opportunities, and students are aware of where to find relevant details and whom to consult. However, the university could go beyond merely informing students by actively encouraging participation, emphasizing the benefits of academic mobility, and addressing students' concerns. The introduction of alternative mobility options, such as Blended Intensive Programs (BIP), is commendable and should be continued. Additionally, exploring further opportunities for students who may feel uncertain about leaving Lithuania for an extended period is recommended.

For second-cycle studies, the implementation of the DSS program in English may facilitate student participation in international study experiences. This could also foster mobility at home, allowing students to engage with peers from different cultural backgrounds, enhance their communication skills in English, and gain international exposure without having to study abroad.

Regarding academic, financial, social, psychological, and personal support, as well as higher education information and counseling, VILNIUS TECH offers comprehensive support services. Students highly appreciate teachers' assistance during their studies, with multiple students noting that professors provide extensive consultations when needed to clarify material from lectures and seminars. The relatively small student groups offer an advantage, enabling both group and individualized instruction when necessary.

Furthermore, the active involvement of student representatives is recognized as a positive factor in improving both the study program and various aspects of student life. Their efforts contribute to enhancing the overall student experience and ensuring that student voices are heard in decision-making processes.

AREA 3: CONCLUSIONS

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

COMMENDATIONS

1. Increasing numbers of applicants and students admitted to first-cycle study program.
2. Comprehensive student support services and active student representation
3. Opportunity to use alternative academic mobility programs such as Blended Intensive Programs

RECOMMENDATIONS

To address shortcomings

1. Develop a strategy to increase applicants and admissions for second-cycle studies by enhancing the marketing campaign, including stronger collaboration with social partners.

For further improvement

1. Help more students gain international experience by encouraging participation in full-semester mobility programs and expanding alternative options, such as Blended Intensive Programs (BIP) and other short-term mobility opportunities.
2. VILNIUS TECH should consider providing better pre-admission guidance to help students better understand the program before applying.

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

Both academic programs, DAT and DSS, at VILNIUS TECH offer full-time studies with autumn and spring semesters. A semester includes theoretical courses and examinations, with study methods tailored to ensure comprehensive learning. The program employs various teaching strategies like lectures, group work, and problem-based learning, supported by platforms like Moodle and MS Teams for distance learning.

Attendance requirements mandate students to attend a significant portion of lectures and practical classes. Assessments use a cumulative approach, combining mid-term and final grades, with criteria specified in official university resolutions. Students receive assignments such as coursework and public presentations, with teacher feedback provided through Moodle.

Internships and practical training are integrated into the curriculum, with professional practice introduced in later semesters. First-cycle (Bachelor's) students gain foundational knowledge and skills, enabling them to pursue second-cycle (Master's) studies or professional opportunities. Master's programs emphasize research and applied knowledge, often integrating work-based projects. Lifelong learning is encouraged, with options to advance to doctoral studies for continued academic and professional growth.

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

VILNIUS TECH supports socially vulnerable groups, including individuals with low income, poor health, disabilities, or other challenges. Flexible tuition payment schedules are available, and students with severe disabilities may qualify for partial or full tuition exemption.

Through the "Assurance of Study Accessibility for Students with Disabilities" project, eligible students with disabilities can receive a targeted benefit of €152 to enhance study accessibility, such as hiring interpreters, purchasing equipment, or arranging transportation. The university also provides specialized equipment, furniture, and training for staff and teachers to better support students with special needs.

The campus is fully accessible, with ramps, elevators, adapted restrooms, and specialized entrances for individuals with mobility impairments. Students with significant disabilities are exempt from registration fees and can access psychological support, emotional counselling, and short-term assistance. Training is also provided to teachers to recognize and address mental and learning disabilities effectively.

ANALYSIS AND CONCLUSION (regarding 4.1.)

Both programs, DAT and DSS, at VILNIUS TECH employ diverse teaching methods, utilizing Moodle's advanced features and providing well-equipped lecture halls. Master's students valued the flexibility of remote learning, particularly for theoretical courses. Study plan customization is possible but limited by small class sizes, requiring group-based elective selection. The University meets formal requirements, but the process for identifying and initiating student support is not clearly defined. Issues related to support and individualization are addressed on a broader University scale. Students were satisfied with the consultation and feedback from their instructors.

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

VILNIUS TECH uses an electronic interim assessment system to track students' academic progress throughout the semester. Teachers input grades for interim assessments, and students must pass these to qualify for final exams. The system calculates final grades automatically based on predefined formulas. Faculty and program leaders monitor progress and provide support if needed.

The University has implemented a "Plan for Monitoring and Improving Student Achievement" to identify struggling students and offer necessary assistance. Detailed information about study programs, courses, competencies, and assessment schedules is available to students via the internal system, **mano.vilniustech.lt**.

The first-cycle study program at VILNIUS TECH was renamed *Data Analysis Technologies (DAT)* to align with evolving trends in statistics and data analysis. Since its 2018 launch, the program has filled all state-funded places, with a stable admission rate except in 2021. Despite these successes, student dropouts remain a challenge, often attributed to unmet expectations or personal reasons. To reduce dropouts, especially among first- and second-year students, the university implements orientation programs, assigns mentors, and emphasizes attendance. Starting in 2024-2025, full-time students must attend over 50% of lectures and 60% of seminars, with attendance tracked via Moodle. Teachers and mentors also monitor student activity and performance through the system, identifying issues early. Student performance is evaluated through a weighted average, incorporating exam grades and credit volumes, influencing scholarships and academic standings. Successful students meet program requirements, avoid academic debts, and achieve strong performance levels.

The monitoring of VILNIUS TECH's Master's programs closely resembles that of Bachelor's programs, focusing on similar key indicators. Enrolment in Master's programs has remained stable, but the DSS program was discontinued in 2024 due to low interest. Master's student dropouts typically occur in the first semester, often due to personal reasons or career changes. However, graduates of the DSS program generally express satisfaction with the knowledge gained, indicating that Master's students enter with clearer goals and expectations compared to Bachelor's students.

Master's students are highly motivated, and academic challenges are rare. Their progress is measured through a weighted average, reflecting their preparedness for advanced studies. Program adjustments are reviewed annually by the Study Committee, incorporating feedback from students, graduates, employers, and observed trends in statistics and economic needs. Starting in 2024, program updates will be implemented annually in September to align with evolving academic and professional requirements.

4.2.2. Graduate employability and career are monitored

VILNIUS TECH monitors graduate employment and career progress through faculty communication with employers and surveys conducted by the Study Programme Committee. Feedback from graduates of the *Data Analysis Technologies (DAT)* and *Data Science and Statistics (DSS)* programs indicates a high demand for their specialization, with 80% of respondents rating it highly sought after. Most graduates find employment during or shortly after their studies, with over 80% working in their

field. Internships play a crucial role in securing jobs, with 40% receiving job offers from internship companies, although 12% expressed dissatisfaction due to mismatched roles or tasks.

Graduates generally feel well-prepared for professional activities, though many pursue further qualifications through courses or additional studies. They suggested improvements to strengthen programming skills (especially Python), expand topics like neural networks and AI, and include practical assignments similar to workplace tasks. In response, a neural networks course was added to the Bachelor's program, and Python usage has been increased in practical classes. A *Big Data Processing* course was introduced in the Master's program.

Strengths of the programs include qualified young faculty, small class sizes, and personalized attention. Weaknesses noted were unclear thesis formatting requirements and a need for more experienced teachers. These issues are being addressed through updated guidelines and new faculty recruitment. Overall, graduates appreciate their education and feel well-prepared for careers in IT and data analysis.

VILNIUS TECH regularly monitors student employment and graduate careers through multiple channels, including surveys, data from institutional systems like EMIS, LinkedIn, and the Employment Service. These sources provide insights into graduate qualifications, career dynamics, and job placement statistics within 12 months of graduation.

Graduates of the *Data Analysis Technologies (DAT)* and *Data Science and Statistics (DSS)* programs are well-prepared for the job market, often securing roles as database administrators, software developers, or data analysts. These professions are projected to experience high demand through 2026. Despite not always being in the highest salary brackets, these roles are crucial and in demand.

Graduates develop analytical thinking, independence, and technical skills, including proficiency in English for literature and software. Employment surveys indicate that most DAT and DSS graduates find work in their fields, with no significant employability issues. While salaries for mathematics and statistics graduates are lower than for computer science graduates, their intellectual work remains essential and valuable. Overall, VILNIUS TECH prepares students effectively for professional success.

The *Data Analysis Technologies (DAT)* program collaborates with key Lithuanian companies, including the State Data Agency, UAB Scope Baltija, and the Lithuanian National Audit Office. Social partners actively contribute by evaluating theses, offering internships, providing employer feedback, and suggesting program improvements. Internships play a crucial role, enabling students to apply and expand their knowledge, develop professional skills, and often secure job opportunities post-internship.

Social partners value the knowledge acquired by graduates but recognize the need for further job-specific learning after graduation. Employers assess graduates' fields of study and core subject knowledge when hiring, with Bachelor's graduates typically taking roles aligned with their specialization.

The program integrates employer feedback by emphasizing programming tasks, professional presentation of work, and public presentation skills. Suggestions from social partners are regularly reviewed and implemented by the Study Programme Committee to enhance the program's relevance and effectiveness.

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

VILNIUS TECH upholds academic integrity through its *Code of Academic Ethics*, which applies to students, non-degree students, and academic staff. Violations, such as plagiarism, cheating, and

data falsification, are addressed through clear procedures. Teachers must report dishonesty, prevent opportunities for cheating, and collaborate with administrators and student representatives. Penalties for dishonesty range from reprimands to expulsion for repeated offenses. Students sign a Declaration of Integrity upon admission, which remains valid throughout their studies.

A plagiarism detection system checks written works against various sources in multiple languages to ensure originality. The university also fosters respectful and non-discriminatory relationships among its academic community, addressing violations such as discrimination or abuse.

Specific measures in the *Data Analysis Technologies (DAT)* and *Data Science and Statistics (DSS)* programs help prevent academic dishonesty, with few serious integrity issues reported. New rules for the responsible use of artificial intelligence, including tools like ChatGPT, were introduced for 2024-2025. Additionally, the university ensures compliance with data protection laws and the EU's GDPR, safeguarding personal data.

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

VILNIUS TECH allows students to appeal assessment scores or violations of evaluation procedures for both positive and negative results. Appeals for final theses, artistic works, exams taken in committees, and assessments under aviation standards are limited to procedural violations. Students must submit appeals within 5 working days of the result being recorded, with a copy provided to the Student Representation for procedural violations.

An Appeals Committee, comprising three teachers (excluding the original evaluator), is formed to review the appeal, chaired by the department head if the appeal concerns an assessment score. During the evaluation period, no complaints or appeals were recorded for the study program.

ANALYSIS AND CONCLUSION (regarding 4.2.)

The SER provides information on systematic monitoring of student progress, and students report prompt and supportive responses from lecturers. Graduates have strong employment outcomes, reflecting high demand for well-trained data scientists and statisticians. Social partners and alumni highlight the importance of skills in data integration, management, and privacy, which are only partially addressed in the programs. However, the programs effectively prepare students for lifelong learning, enabling them to adapt to new professional demands. Practical skills, such as programming, are particularly valued. Policies for addressing academic dishonesty and procedures for appeals are in place and deemed effective, and the university promotes equality and diversity through its Gender Equality Plan. The meeting with the alumni and the social partner emphasized the addition of some topics or courses to the curriculum, like soft skills (presentation, communication, teamwork…), entrepreneurial skills, more programming topics, and data visualization tools.

AREA 4: CONCLUSIONS

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

		shortcomings to be eliminated		without any shortcomings	without any shortcomings
First cycle			3		
Second cycle			3		

COMMENDATIONS

1. Students expressed strong positivity about the teacher-student relationship and the prompt responsiveness of most teachers.
2. Providing individual feedback appears to be highly effective.

RECOMMENDATIONS

To address shortcomings

1. Consider reducing math courses and adding one more programming course in Python.
2. Add knowledge about entrepreneurship to the management course.
3. Add a course on data visualization using some tools like Power BI, Tableau, etc.

For further improvement

1. Improve the soft skills through different activities.
2. For the DSS programme, improve the collaborations with the industry.

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 Table 5.1 of the SER, a total of 23 teachers are involved in the first-cycle programme during the academic year 2023-2024: 2 professors, 12 associate professors, and 9 lecturers. Table 5.3 of the SER shows that 7 faculty members are teaching in the DSS programme in the past academic course: 5 associate professors and 2 lecturers. Despite the efforts to significantly increase the number of teaching staff associated with the programs, it has remained fairly stable over the past three years.

The quality of the teaching staff has been declining, if we take their accreditation level as a reference. In the DAT program, the number of professors has decreased from 3 to 2 in the last three years, and there has only been a small increase in the number of associate professors (one more). As for the DSS program, there are currently no professors (there was only one), and, as in the other program, there is one more associate professor. The turnover of faculty members in the programmes is minimal, and are a consequence of retirements or promotions.

Although the number of professors is generally not very high, the teacher/student ratio is very good: 0.50 in the first case and 0.47 in the second. This is due to the very low number of students, both in the DAT program (46 students) and especially in the DSS program (15 students). To correctly assess the adequacy of the number of teachers in relation to the program, the ratio that should be analysed (and it is not included in the SER) is the number of courses per teacher. In the first cycle, there are approximately 48 courses, and in the second cycle, around 17 courses. When considered separately, the ratio is approximately 2 courses per teacher in both cases, which could initially be considered an adequate distribution (during the last self-evaluation in 2021, experts recommended distributing the teaching load of the teachers so that no one is assigned more than 4–5 study subjects). In principle, this ratio allows for aligning each teacher's speciality with the topics of the courses they are assigned. Some teachers work part-time at the State Data Agency.

Tables 5.2 and 5.4 provide the age composition of the teachers. The majority are under 50 years old (70% in the DAT programme, and 100% in the DS programme). Of the teachers with the rank of professor across the two programs, only one is under 50 years old.

Annex 5 contains a table with information about the three most significant papers published in the last three years, and about other research contributions (participation in international conferences, research projects, etc.). As highlighted in the previous evaluation, most publications continue to appear in journals that are not specific to the field of statistics, nor even within a broader field such as mathematics. Instead, they are published in journals from other areas of knowledge, such as engineering, medicine, biology, or economics, which feature statistical applications. A large number of professors regularly participate in international conferences and publish their research in scientific journals. A significant portion of these journals are of the MDPI or Frontiers type. There are 9 teachers who report no publications. Participation in research projects is very low.

ANALYSIS AND CONCLUSION (regarding 5.1.)

The trend in the quality level of the teaching staff must be improved. The number of professors has decreased overall. This situation is particularly concerning in the case of the second cycle, where no professor is currently assigned. The level of specialization and expertise in a second cycle is necessarily higher than in a first cycle, and for this reason, teachers with the highest possible level of accreditation must lead these types of programs. Of the teachers with the rank of professor across the two programs, only one is under 50 years old. For this reason, special attention must be given

to improving the academic level of the teachers so that, gradually, the number of professors increases significantly.

Although the aggregate distribution of teachers per subject in each program can be considered adequate (approximately 2 courses per teacher), the asymmetries in teaching loads must be taken into account (not all teachers are assigned only 2 courses), as well as the fact that some professors are involved in both programmes. Three teachers are involved in more than 3 subjects, and there is one teacher with more than 5 subjects. Additionally, there are professors who also teach in other university programs. This point is important to ensure the 70%-30% distribution between teaching and research.

During the visit, it was indicated that dedicating 30% of the time to research is not enough to achieve the objectives in this area. A better distribution of the workload could help allocate more time for, for example, establishing collaborations with other departments and international institutions, or for supervising more doctoral theses (in the doctoral programs of other universities).

It is clear that the number of students in the programs affects their economic viability, and consequently the allocation of a larger number of teachers to the programs. In any case, sustainable solutions should be sought to address the asymmetries in the teaching loads of the professors. Last three years two new teachers have been included in the DAT programme, but more efforts should be made in this aspect. It has to be clarified the real situation of the three department staff members that are currently studying for their doctoral degrees, and that will be incorporated as full-time teachers in the department. There is no timeline planning, but the upcoming offering of the second cycle in English will represent an increase in workload that will need to be reviewed.

Although significant effort has been made to improve the research activity of the teachers, particularly regarding participation in international conferences and publication of articles, several aspects still need improvement: participation in international projects, publication in high-quality journals within the field of knowledge of the programs, and ensuring that no professors are without research activity.

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

FACTUAL SITUATION

5.2.1. Opportunities for academic mobility of teaching staff are ensured

The VILNIUS TECH University provides support and infrastructure to teachers for international mobility. It focuses on promoting participation in the Erasmus+ program. It focuses on promoting participation in the Erasmus+ programs, specifically aimed at developing teaching competencies.

Despite these opportunities, the SER does not report that, in the last three years, any teacher in the programmes has taken advantage of this support to undertake a consistent stay at another international academic institution. According to the information in Annex 5 in the SER, about two-thirds of the teachers have an English language proficiency of at least B2 level. This indicates that language cannot represent any type of barrier to mobility.

According to the information provided in the SER, mobility of the teaching staff is limited to participation in international conferences. It is only mentioned that within the framework of an Erasmus+ BIP, the participation of a teacher from the DAT program is planned, who will give some classes.

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

The university determines the requirements for the progression of teachers through the "System for the Development of Scientific Qualifications of Academic Staff." This system is very important, as it clearly outlines the teachers' priorities when it comes to developing their competencies, both from the perspective of teaching and research. This system aims to weigh the different key aspects that help systematically improve their research, subject-specific, and didactic competencies, and is an integral part of the attestation system. And this has a direct effect on salaries.

In the field of didactic competences, the university actively participates in creating opportunities for the development of teachers. The training plan organized and delivered by the "Educational Competencies Group" plays a central role. To ensure the development of these didactic competencies, the university requires that teachers whose work experience at VILNIUS TECH is less than 10 years must improve their didactic qualifications by 40 academic hours during the term; if higher, by 20 academic hours. The development of educational competencies is linked to teacher certification procedures.

To ensure a good level of English (a key element, for example, to participate in exchange programs, international conferences, or in the development of a graduate program in English), the university also implements active measures. The university covers half of the fees for English courses taken at the university.

Regarding research, there is no active program that provides an organized framework to develop the teachers' competencies. The promotion of research is based on economic incentives related to progression within the academic career, within the attestation system.

ANALYSIS AND CONCLUSION (regarding 5.2.)

Although the university provides support and guidance for faculty mobility (especially in the area of teaching), none of the teachers in the programs have undertaken any research or teaching stays of a reasonable minimum duration during the evaluation period. Mobility is limited to participation in international conferences. To ensure the proper development of the teachers' competencies, it is important, in addition to providing funding and support for mobility, to encourage it. According to information obtained during the visit, the "System for the Development of Scientific Qualifications of Academic Staff" could place more emphasis on this aspect, so that the signal sent to the teachers as a whole would highlight its importance. At the moment, for example, publishing an article is given more value than undertaking a research stay. During the visit, the professors indicated that, considering these weights, they prefer to dedicate their time to publishing articles.

The guidelines for the academic development of the teaching staff are established in the "System for the Development of Scientific Qualifications of Academic Staff," which is an integral part of the attestation system. According to this system, the opportunities for the development of the teaching staff are well ensured by the university in the case of didactic competencies, through the Educational Competences Group and by requiring a specific upgrade of didactic qualifications.

Regarding research competencies, there is room for improvement. The SER does not include a well-organized and active system to ensure the achievement of competencies in this area. It relies primarily on salary incentives. A well-organized program of internal research seminars, promoting collaboration among professors, or the development of third-cycle studies in the University that stimulate and enhance research through the supervision of doctoral theses in the field of knowledge, could be key elements to actively ensure the development of these competencies. Similarly to the English courses, where the university covers half of the tuition fees, a support program could also be designed to provide funding for teacher training in research methodologies and the preparation of research project proposals.

During the visit, it was explained that the head of the department has recently changed and is much more active in matters related to promoting research, fostering interdisciplinarity, and collaboration between departments.

AREA 5: CONCLUSIONS

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

COMMENDATIONS

1. Significant efforts have been made to enhance the research activity of teachers, particularly in terms of participation in international conferences and publication of articles.
2. The aggregate distribution of teachers per subject in each program is considered adequate, with approximately two courses per teacher.
3. The DAT program has successfully included two new teachers in the last three years, showing progress in expanding the teaching staff.
4. The recent change in the head of the department has led to a more active promotion of research, interdisciplinarity, and collaboration between departments. There is a clear emphasis on establishing collaborations with other departments and international institutions, which is beneficial for the programs.
5. The university provides support and guidance for faculty mobility, particularly in the area of teaching.
6. The university ensures the development of didactic competencies through the Educational Competences Group and requires specific upgrades of didactic qualifications.

RECOMMENDATIONS

To address shortcomings

1. The overall quality of professors has decreased, particularly in the second cycle, where no professor is currently assigned. This is concerning given the higher level of specialization required for second-cycle programs.
2. There are imbalances in teaching loads, with some teachers handling more than three subjects and others involved in multiple programs. And the upcoming offering of the second cycle in English will increase the workload, which needs to be reviewed and managed. This affects the 70%-30% distribution between teaching and research, and a better distribution of workload is needed to allocate more time for research activities.
3. The situation of department staff members currently studying for their doctoral degrees needs clarification, including their timeline for becoming professors.
4. None of the teachers have undertaken research or teaching stays of a reasonable minimum duration during the evaluation period. Mobility is limited to participation in international conferences. Mobility must be encouraged. The current incentive system places more value on publishing articles than on undertaking research stays, which discourages teachers from engaging in mobility activities.

5. There is no well-organized and active system to ensure the achievement of research competencies. The current system relies primarily on salary incentives. There is a need for a well-organized program promoting collaboration among professors to enhance research competencies.
6. There is no support program for teacher training in research methodologies and the preparation of research project proposals, similar to the support provided for English courses.

For further improvement

1. There is a need for improvement in participation in international projects, publication in high-quality journals, and ensuring all professors are engaged in research activities.…
2. Most professors are over 50 years old, and there is a need to improve the academic level of teachers to increase the number of professors significantly.
3. Continue efforts to improve research activity, focusing on participation in international projects, publication in high-quality journals, and ensuring all professors are engaged in research.
4. Establish a well-organized and active system to ensure the achievement of research competencies. This could include, for example, the planning of internal research seminars, to promote collaboration among teachers, or the development of third-cycle studies, to enhance research through doctoral thesis supervision.

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

Both first-cycle and second-cycle study programs are conducted at the VILNIUS TECH Faculty of Fundamental Sciences (FMF). Classrooms are well-equipped for teaching, featuring teacher's computers, video projectors, and some interactive boards. Additionally, many classrooms are set up for hybrid learning, with the necessary technology in place. Students can also use their own laptops in class.

All VILNIUS TECH buildings have access to a university-wide Wi-Fi network, though some students mentioned occasional connection instability. For security, a two-factor authentication system is required to access the university's email and Moodle system. Both the Self-Evaluation Report (SER) and site visits confirm that VILNIUS TECH is fully accessible to students with disabilities, accommodating those with reduced mobility and other special needs.

The university utilizes the Moodle platform for learning materials and MS Teams for online learning. Students in the Statistics study programs frequently use open-source statistical software, such as R, Python, and LaTeX, along with licensed MATLAB/Simulink software. During site visits, students confirmed that they have full access to all necessary software and platforms, along with clear instructions on how to download, install, and use them.

Students can borrow books and other publications from the VILNIUS TECH Central Library (which is open 24/7) and the Reading Room of Technology and Management Sciences or access electronic resources via the university's library website. These libraries provide all necessary methodological resources for the study process, and students confirmed they can easily obtain the required books and materials for their courses.

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

The VILNIUS TECH Library updates its resources annually based on recommendations from teaching staff, ensuring that students always have access to the necessary learning materials. Subscriptions to international scientific publication databases are also renewed each year. In addition to learning resources, the infrastructure, including classrooms and computer labs, is regularly upgraded. In recent years, several new computer labs have been established to further support students' academic needs.

ANALYSIS AND CONCLUSION (regarding 6.1.)

VILNIUS TECH provides all the necessary learning facilities and resources, including well-equipped classrooms, methodological materials, specialized software, and full accessibility for students with disabilities. Additionally, the library and international database access are regularly updated, and the infrastructure, such as classrooms and computer labs, is continuously improved. The university also ensures access to essential digital platforms, such as Moodle and MS Teams, and continuously updates learning software based on student needs. Regular upgrades to resources, including new computer labs, further support an effective learning environment.

The only area for improvement mentioned by some students is the Wi-Fi stability in certain areas of FMF, which could be enhanced to ensure consistent connectivity throughout the faculty.

AREA 6: CONCLUSIONS

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

COMMENDATIONS

1. VILNIUS TECH ensures students have access to all necessary learning resources, including study materials and essential software for coursework.
2. Classrooms are well-equipped to support both in-person and online learning.
3. The university is fully accessible to students with disabilities.
4. Methodological resources are updated annually to align with academic needs and enhance the learning experience.

RECOMMENDATIONS

To address shortcomings

    None

For further improvement

1. Improve Wi-Fi stability to ensure reliable connectivity throughout all areas of the faculty.

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

VILNIUS TECH prioritizes study quality through its *Description of Internal Study Quality Assurance*, aligned with university statutes, European Higher Education standards, and Lithuanian regulations. This framework defines processes for study quality assurance, monitoring, evaluation, and community involvement, with the guidelines accessible online in Lithuanian and English.

The Faculty of Fundamental Sciences adheres to the university's quality system, focusing on program evaluation, teaching staff quality, resource availability, student support, and integration of scientific innovation. Decision-making involves the University Studies Committee, Rectorate, Senate, and faculty-level bodies such as the Study Programme Committee (SPC) and Faculty Studies Committee.

The SPC is central to monitoring and improving study programs. It initiates and approves new subjects, oversees program content and resources, identifies issues, and ensures alignment with student and business needs. The committee includes faculty, social partners, and student representatives to provide comprehensive feedback. It reports annually to the Dean and Faculty Council, ensuring transparency and accountability. Starting in 2024, program updates are implemented every autumn to align with renewed standards.

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

VILNIUS TECH ensures the active involvement of students, employers, alumni, teachers, and administrators in improving study quality. Students play a key role in the process, contributing to decision-making through representation on committees, councils, and meetings, as well as monitoring and improving study processes. Social stakeholders, including employers, participate in study program evaluation, thesis defence committees, and curriculum improvement, offering feedback and suggestions.

DAT has a close collaboration with Lithuanian academic institutions and companies such as UAB Scope Baltija, the National Audit Office, and UAB Accenture Lithuania. These partnerships provide internships, thesis topics, and support for students and supervisors. Regular tours and lectures are organized to connect students with industry professionals.

The Study Programme Committee (SPC), in coordination with social partners, evaluates program alignment with goals, surveys stakeholders, and recommends updates to study plans and courses. Since 2020, consolidated reports summarizing program evaluations have been introduced, accessible to students and faculty through the internal system, ensuring transparency and keeping all stakeholders informed of program improvements.

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

VILNIUS TECH ensures transparency and accessibility of study program aims and outcomes by publishing detailed information on its website, internal systems, and external platforms like AIKOS and LAMA BPO. Abridged versions of program aims and outcomes are included in graduate diploma supplements. Students actively promote their programs through initiatives such as "Ask_the Student," Open Doors events, and school visits.

The university's information systems, including **Alma Informatika** and **IS.VGTU**, streamline study program management, student data handling, and administrative processes. These systems manage tasks like study plan updates, student grades, elective course registrations, and diploma supplements. Key documents and decisions are stored in the Document Management System.

Since 2023, the PowerBI tool has been introduced for analysing study results, offering advanced insights for program improvement. Study Programme Committee (SPC) chairpersons are trained to use this innovative tool, enhancing the monitoring and evaluation of study programs.

7.1.4. Student feedback is collected and analysed

VILNIUS TECH conducts regular surveys to assess teaching quality, program implementation, student choices, internships, and graduate career opportunities. Survey results are analysed twice a year and discussed in Rectorate, faculty, and program committee meetings to inform decisions on study process improvements. Feedback is accessible to students via their **mano.vilniustech.lt** accounts, showing both general results and specific actions taken to enhance programs.

Surveys from 2020 to 2022 indicate that the *Data Analysis Technologies (DAT)* and *Data Science and Statistics (DSS)* programs are positively evaluated. Students appreciate the programs for their broad knowledge base, practical use of real-life examples, relevant course content, and effective teaching methods that encourage participation. They find the workload manageable and assessments fair, with strong connections to their future professions. Teachers and staff can filter survey data and track rankings for continuous improvement. Overall, the survey system promotes transparency and responsive program development.

ANALYSIS AND CONCLUSION (regarding 7.1.)

The management and decision-making structure for field studies is well-organized, with clearly defined periodic internal assessments and effective quality assurance measures. The allocation of human resources, facilities, and learning resources is thoughtfully planned to support the efficient management and ongoing development of field studies. From the meeting, stakeholders are not actively engaged in the evaluation and development processes, where the feedback provided is valuable and can contribute to meaningful improvements, if they took it into consideration. Student opinions on the quality of studies are systematically gathered through, ensuring their perspectives are incorporated into continuous quality improvement efforts.

AREA 7: CONCLUSIONS

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

Second cycle				4	

COMMENDATIONS

RECOMMENDATIONS

To address shortcomings

1. Involve actively the business or social partners in the evaluation and suggestions process.

For further improvement

V. SUMMARY

The review panel conducted a comprehensive evaluation of the Statistics field of study at Vilnius Gediminas Technical University (VILNIUS TECH), focusing on both the first-cycle (Data Analysis Technologies) and second-cycle (Data Science and Statistics) programmes. The evaluation covered various areas, including study aims, learning outcomes, curriculum, links between research and higher education, student admission and support, teaching and learning, teaching staff, learning facilities, and quality assurance.

The panel found that both programs are well-aligned with societal and labour market needs, preparing students for high-demand roles in data analysis and statistics. The programs' aims and learning outcomes are clearly defined and meet the requirements of the higher education standards in Lithuania. The curriculum is designed to ensure that students acquire the necessary knowledge and skills, with a strong emphasis on practical applications and modern analytical methods. However, the panel noted that opportunities for curriculum personalization are limited. Increasing the number of elective courses in the programme that can be chosen individually, and expanding the involvement of social partners and the students themselves in thesis topic selection, can also help to enhance personalization.

One significant issue identified by the panel is the overlap between the first-cycle and second-cycle programs. There are notable coincidences in subject names and learning outcomes, which can lead to misunderstandings and diminish the distinctiveness of each program. It is crucial to clearly differentiate the two programs to showcase their unique strengths and specialization opportunities. This differentiation is particularly important for the second-cycle program, which should offer advanced and specialized knowledge that builds on the foundation provided by the first-cycle program. Highlighting key topics such as data visualization, machine learning, and advanced programming skills more prominently in the second cycle can help achieve this differentiation.

The integration of research into the curriculum is evident, with faculty members actively involved in research activities. However, participation in international research projects is minimal, and there is a need to develop strategies to increase faculty involvement in research collaborations. Students have opportunities to engage in research, mainly through their final thesis and various course projects, but the participation rate is low. Encouraging more students to participate in research activities and providing additional support for their involvement could enhance the programs' research component.

The admission process for both programs is transparent and well-structured, with increasing interest in the first-cycle program. However, the second-cycle program faces declining admissions, highlighting the need for targeted marketing strategies and enhanced collaboration with social partners to attract more students. The university provides comprehensive support systems for students, including academic, financial, social, and psychological support, ensuring a conducive learning environment. The support services are well-received by students, who appreciate the assistance provided by teachers and the active involvement of student representatives in improving the study programs.

Teaching methods employed in both programs are diverse and include lectures, group work, and problem-based learning. The use of platforms like Moodle and MS Teams for distance learning is well-integrated into the teaching process. The assessment system is systematic, with a focus on academic integrity and continuous monitoring of student progress. Graduates of both programs have

high employability rates, with many securing jobs during or shortly after their studies. The programs effectively prepare students for professional activities, with a strong emphasis on practical skills and lifelong learning.

The teaching staff is adequate in number and qualification to achieve the learning outcomes (, but the proportion of professors is low, especially in the second-cycle program. Efforts should be made to improve the academic qualifications of teaching staff and increase the number of professors. Opportunities for professional development are available, but international mobility of teachers is very low. Encouraging and supporting faculty participation in international exchanges could enhance their professional development and bring new perspectives to the programs.

The learning facilities and resources at Vilnius Tech are well-equipped and sufficient to support an effective learning process. Classrooms are equipped for both in-person and online learning, and students have access to necessary software and library resources. The university continuously updates its resources and infrastructure to meet the evolving needs of the study programs. However, some students mentioned occasional instability in the Wi-Fi connection, which could be improved to ensure consistent connectivity throughout the faculty.

The internal quality assurance system at Vilnius Tech is robust and involves all stakeholders, ensuring continuous monitoring and improvement of study programs. The university maintains transparency by making information on programs and evaluations publicly available. Student feedback is systematically collected and analysed, and the results are used to inform decisions on study process improvements. The active involvement of students, employers, alumni, and social partners in the quality assurance process is commendable, although there is room for more regular communication with social partners to update and renew syllabuses according to market needs.

In conclusion, the review panel found that the Statistics field of study at Vilnius Tech has many strengths, including alignment with market needs, comprehensive support systems, high employability, well-equipped facilities, and an effective quality assurance system. However, there are areas for improvement, such as increasing research participation, enhancing curriculum personalization, improving international mobility for staff, addressing the declining admissions in the second-cycle program, and increasing the proportion of professors.

Finally, the evaluation panel thanks Vilnius Tech for their efforts in preparing a comprehensive self-evaluation report and organizing a site visit, which facilitated valuable discussions with all participants.

VI. EXAMPLES OF EXCELLENCE

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