

# CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

# EVALUATION REPORT STUDY FIELD of ENVIRONMENTAL SCIENCE

at Vilnius University

#### **Expert panel:**

- 1. Prof. Dr. (panel chairperson), Kalev Sepp, academic;
- 2. Prof. Dr. Linas Kliučininkas, academic;
- 3. Prof. Dr.habil.chem. Maris Klavins, academic;
- 4. Mr., Pedro Torralbo Munõz, students' representative;
- 5. Dr. Saulius Urbanas, representative of social partners.

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# Study Field Data

Title of the study programme	Environmental Science and Protection	Environmental Science and Management
State code	6121CX018	6211CX011
Type of studies	University studies	University studies
Cycle of studies	First cycle (major)	Second cycle
Mode of study and duration (in years)	Full-time 4-year studies	Full-time 2-year studies
Credit volume	240	120
Qualification degree and (or) professional qualification	Bachelor's degree in physical sciences	Master's degree in physical sciences
Language of instruction	Lithuanian	Lithuanian
Minimum education required	Secondary education	Bachelor's degree
Registration date of the study programme	1 September 2019	19 May 1997

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# I. INTRODUCTION

#### **1.1. BACKGROUND OF THE EVALUATION PROCESS**

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

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

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

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

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

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

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

#### **1.2. EXPERT PANEL**

The expert panel was assigned according to the Experts Selection Procedure (hereinafter referred to as the Procedure) as approved by the Director of Centre for Quality Assessment in Higher Education on 31 December 2019 <u>Order No. V-149</u>. The site visit to the HEI was conducted by the panel on 3rd November 2021.

#### Expert panel:

- 1. Prof. dr. (panel chairperson), Kalev Sepp, academic;
- 2. Prof. Dr. Linas Kliucininkas, academic;
- 3. Prof. dr.habil.chem. Maris Klavins, academic;
- 4. Mr., Pedro Torralbo Munõz, students' representative;
- 5. Dr. Saulius Urbanas, representative of social partners.

#### **1.3. GENERAL INFORMATION**

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

No.	Name of the document
1.	List of the participants
2.	The H-Index Environmental Sciences VU
3.	Final Thesis
4.	Material Resources Presentation
5.	Material Resources

# 1.4. BACKGROUND OF THE ENVIRONMENTAL SCIENCE STUDY FIELD POSITION AND SIGNIFICANCE IN THE HEI

Studies at Vilnius University (further – VU) in the field of environmental sciences are delivered at the Life Sciences Centre and the Faculty of Chemistry and Geosciences, both of which were established in 2016, after reorganising the then faculties of Natural Sciences and Chemistry. The study field under evaluation comprises the following SPs: Environmental Science and Protection (ESPB) study programme (first cycle) and Environmental Science and Management (ESMM) study programme (second cycle).

The strategic plan of Vilnius University for 2021-2025 aims to ensure that the University graduates in the field of environmental sciences are able to operate in a global environment. The study process is focussed on a more active, individual and interdisciplinary learning, which relies on research-based cognition of the environment.

# **II. GENERAL ASSESSMENT**

Environmental study field and first cycle at Vilnius University is given **positive** evaluation.

No.	Evaluation Area	Evaluation of an Area in points*
1.	Intended and achieved learning outcomes and curriculum	4
2.	Links between science (art) and studies	3
3.	Student admission and support	4
4.	Teaching and learning, student performance and graduate employment	4
5.	Teaching staff	4
6.	Learning facilities and resources	4
7.	Study quality management and public information	4
	Total:	27

Study field and cycle assessment in points by evaluation areas Bachelor

\*1 (unsatisfactory) - there are essential shortcomings that must be eliminated/the area does not meet the minimum requirements, there are fundamental shortcomings that prevent the implementation of the field studies.

2 (satisfactory) - meets the established minimum requirements, needs improvement/the area meets the minimum requirements, and there are fundamental shortcomings that need to be eliminated.

3 (good) - the field is being developed systematically, has distinctive features/the area is being developed systematically, without any fundamental shortcomings.

4 (very good) - the field is evaluated very well in the national and international context, without any deficiencies/the area is evaluated very well in the national context and internationally, without any shortcomings.;

5 (excellent) - the field is exceptionally good in the national and international context (environment)/ The area is evaluated exceptionally well in the national context and internationally.

Environmental Science study field and second cycle at Vilnius University is given **positive** evaluation.

No.	Evaluation Area	Evaluation of an Area in points*
1.	Intended and achieved learning outcomes and curriculum	4
2.	Links between science (art) and studies	3
3.	Student admission and support	3
4.	Teaching and learning, student performance and graduate employment	4
5.	Teaching staff	4
6.	Learning facilities and resources	4
7.	Study quality management and public information	4
	Total:	26

Study field and cycle assessment in points by evaluation areas Master

\*1 (unsatisfactory) - there are essential shortcomings that must be eliminated;

2 (satisfactory) - meets the established minimum requirements, needs improvement;

3 (good) - the field is being developed systematically, has distinctive features;

4 (very good) - the field is evaluated very well in the national and international context, without any deficiencies;

5 (excellent) - the field is exceptionally good in the national and international context/environment.

### **III. STUDY FIELD ANALYSIS**

#### **3.1. INTENDED AND ACHIEVED LEARNING OUTCOMES AND CURRICULUM**

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

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

#### (1) Factual situation

The University delivers one first-cycle and one second-cycle study programme in the field of environmental sciences. Until 2020, environmental science specialists at VU were trained only under the second-cycle study programme. The BSc and MSc programmes prepare graduates to operate in the global environment, understand and solve relevant environmental problems, define and implement environmental management tasks, cooperate in performing competitive and modern research, and develop and implement environmental science and protection innovations in Lithuania and abroad, including international organizations and various economic and social sectors. Study priorities are based on the principle that in the first cycle of studies students' knowledge and skills are developed by putting emphasis on environmental protection.

The aims and the intended learning outcomes of the field SPs are designed to correspond to the qualification levels of Lithuania. Study programme committees include representatives of social partners, who are active in expressing their views on the knowledge and skills needed for the labour market.

The uniqueness of the Environmental Science and Protection SP delivered by the University lies in its focus on the integration of knowledge in geosciences and life sciences. The two cycles of studies in the field of environmental sciences ensure the training of competent specialists in the field.

Graduates of first-cycle and second-cycle study programmes in the field of environmental sciences are employed at state and municipal institutions, training and research institutions, environmental consulting companies, and non-governmental environmental organizations

#### (2) Expert judgement/indicator analysis

The design and development of the Environmental Science and Protection programme (BSc) and Environmental Science and Management (MSc) consider the needs of the society and the labour market.

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

(1) Factual situation

The SPs in the study field directly correspond to the mission and main goals of Vilnius University, which are to strengthen the role and impact of science in present and future society of Lithuania, to train highly qualified, socially responsible researchers and specialists with a focus on present and future challenges, including public leaders who are receptive to scientific innovations and constantly changing environmental challenges, and are capable of participating in scholarly and public life in Lithuania and on an international scale.

The environmental study programmes correspond to the latest strategic guidelines of VU that include strengthening interdisciplinary learning, creating interdisciplinary research and study environment, focusing on sustainable development goals, preventing climate change, and promoting academic activities in the fields of research that are significant in terms of environmental protection.

The strategic plan of Vilnius University for 2021-2025 aims to ensure that the University graduates in the field of environmental sciences are able to operate in a global environment. The study process is focussed on a more active, individual and interdisciplinary learning, which relies on research-based cognition of the environment.

# (2) Expert judgement/indicator analysis

The SPs in the study field directly correspond to the mission, main goals and to the latest strategic guidelines (2021-2025) of Vilnius University.

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

#### (1) Factual situation

The study programmes in the field of environmental sciences are designed and currently run in accordance with the Description of the Lithuanian Qualifications Framework, the Description of General Requirements for the Provision of Studies and the Description of the Study Field of Environmental Sciences approved by the Minister of Education, Science and Sports of the Republic of Lithuania.

The first- and second-cycle studies meet the requirements applicable to a respective study cycle in terms of their formal structure and qualitative uniqueness of the competences that they develop.

First-cycle study program correspond following criteria: outcomes correspond to qualification level 6; one year of full-time studies in the programme contain 60 study credits; study program contains 240 study credits; no fewer than 15 study credits allocated to the final thesis (20 ECTS); at least 15 credits allocated to practical training; one study credit corresponds to 25-30 hours of a student's work hours, including both contact and self-study hours (26.7) and the scope of the programme is sufficient to achieve learning outcomes.

Second cycle study program correspond following criteria: outcomes correspond to qualification level 7; one year of full-time studies in the programme contain 60 study credits; no fewer than 60 study credits allocated to the field studies that contribute to the achievement

of the learning outcomes specified in the field description (120 ECTS); no fewer than 30 study credits allocated to the final thesis (30 ECTS); one study credit corresponds to 25-30 hours of a student's work hours, and the scope of the programme is sufficient to achieve learning outcomes.

### (2) Expert judgement/indicator analysis

The design and development of study programme(s) are in accordance with legal requirements.

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

### (1) Factual situation

The learning outcomes of the study programmes are formulated according to the aim of study programme and include all components of the aim. In both SPs, cohesion between various competences is ensured in the early stages of designing the SP's plan. The descriptions of all course units (modules) indicate which learning outcomes a particular course unit (module) allows to achieve.

The list of learning outcomes and study programme itself is periodically updated and upgraded in accordance with environmental challenges. Once per year, the SPC reviews the SP plan and the matrix of competences and reassesses whether all learning outcomes of the SP are sufficiently and evenly covered and how appropriate are the selected methods of teaching-andlearning and assessment.

#### (2) Expert judgement/indicator analysis

The aims and learning outcomes have been defined clearly, systematically, periodically updated, and their assessment methods are appropriate for achieving the learning outcomes.

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

#### (1) Factual situation

The first-cycle *Environmental Science and Protection* study programme is of an interdisciplinary nature and provides knowledge of physical sciences and life sciences, including management and practical skills to integrate this knowledge in solving applied and fundamental tasks in the area of environmental science and protection. The study plan of the field SP sets out the course units arranged in line with the principle of purposeful and focussed development of competences. The first two years of studies focus on the course units in the field providing with fundamental knowledge. Starting with the fourth semester, students begin to gradually engage in independent research activities.

The third and fourth year of studies mainly involve interdisciplinary course units that integrate knowledge of geosciences, life sciences, and social sciences and develop interdisciplinary

competences that are especially important in the field of environmental protection. The professional practice in the 8th semester is dedicated to the practical application of these competences in various institutions, companies and organizations.

The second-cycle Master's programme in *Environmental Science and Management* focuses on the assessment of the causes and consequences of environmental processes, environmental pollution and its control, environmental risk assessment of chemical compounds, modelling and analysis of environmental pollution processes, analysis of causes and forecasts of environmental trends, integrated understanding of sustainable development priorities, environmental impact assessment, etc. The content of the varied course units is consistently integrated into the entire framework of studies under the programme so that with each semester students acquire new scientific knowledge and develop new skills which require successful learning under all previous course units, and thus develop their general and subjectspecific competences even further.

According to recommendations of previous evaluation the wording of some intended outcomes has been clarified, the aim of the Bachelor's study programme in Environmental Science and Protection is enhanced. Several courses are replaced and added to the Environmental Science and Management Master program according to previous recommendations: for example, the course unit Isotope Methods in Environmental Hydrogeology has been replaced by the course unit Environmental Pollution Research, whereas Environmental Economics has been replaced with the course unit Sustainable Development, and Environmental Science has been replaced with Environmental Research Methods respectively. Students have been provided with the opportunity to study according to an individual study plan.

#### (2) Expert judgement/indicator analysis

The programmes are logically grounded and ensure the achievement of programme aims and outcomes. In both study programs "Environmental Science" and "Environmental Science and Management" the arrangement of study courses are coherent and ensure consistent development of students competences related to the main aim of programme to prepare high-level environmental specialists.

Several courses are replaced and added to the Environmental Science and Management Master program according to previous recommendations.

During the meeting representatives of social partners and alumni recommended to increase importance of subjects related to practical work and environmental law in both programs. In addition, very few BSc theses are related to research projects. Also, students underlined the importance to have more practice and to get more interaction in potential employee authorities.

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

(1) Factual situation

Students have various opportunities to personalise their studies to foster general and subject specific competences in line with their interests: an individual study plan; to participate in academic exchange; 15 study credits are allocated for general university studies units and each programme has a certain amount of credits allocated for optional course units.

The second-cycle Environmental Science and Management study programme offers students the opportunity to implement their preferences through optional course units of the field and by choosing or offering topics for their term papers and final theses. Optional course units (3 out of 6) are from the fields of life sciences and social sciences; total of 15 credits are allocated for optional course units and each programme has a certain amount of credits allocated for optional course units.

# (2) Expert judgement/indicator analysis

Students have various opportunities to personalise their studies according to their personal learning objectives and intended learning outcomes.

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

# (1) Factual situation

The principles of writing the final theses in the study field, including the formation of a defence commission and thesis defence as such, are established in the Regulations for the Preparation, Defence and Storage of Research Papers of Students Studying at Vilnius University, approved by the Senate. The Procedure for Administering Research Papers approved by the Vice-Rector for Studies of Vilnius University.

The compliance of the final theses with the field studies is ensured in several ways: the topics of the final theses are offered by scientists and experts in the field; the evaluation criteria for final theses are directly related to the field studies; each student has a supervisor who grants a permission to defend their thesis, thus confirming that the final thesis meets the set requirements.

The topics of the final theses of the BSc and MSc study programmes are in accordance with the purpose of the study programmes.

# (2) Expert judgement/indicator analysis

Preparation and defence of final theses corresponds well to VU Study Regulations on the Preparation, Defence and Storage of Research Papers.

Social partners could be more involved in preparation and defence of final theses in both study programmes. Very few themes of final bachelor theses are related to ongoing research projects.

# Strengths and weaknesses of this evaluation area:

# (1) Strengths:

- The design and development of study programme(s) take into account the expectations of students and other stakeholders, national strategies, legislation and trends in the particular area as well as labour market needs. Social partners are involved to Study Committee (2 members), also a number of social partner representatives contribute to thesis subjects and to students as supporters;
- 2. The objectives of study programme(s), modules (including courses) and their learning outcomes are concrete and coherent. The teaching content and methods and assessment criteria and methods support students in achieving their learning outcomes and developing their key competencies. The study programmes support the development of creativity and entrepreneurship and other general competencies

#### (2) Weaknesses:

- 1. Communication to alumni and social partners could be improved: information about interesting and joint research projects, involvement to a preparation and defence of thesis, discussion on curricula improvements;
- 2. More students should be involved in research activities. Themes of final thesis of the bachelor program should be more related to research projects;
- 3. Greater involvement of the social partners in the process of preparing and defending the final theses is one of the priority issues.

# **3.2. LINKS BETWEEN SCIENCE (ART) AND STUDIES**

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

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

#### (1) Factual situation

The research activities related to the study field under evaluation encompass ecology and environmental science (the main field), as well as biology, chemistry, geology and geography. Based on the expert evaluation results from 2018 the main field of research was evaluated as strong, but with limited international recognition. It was noted that ecological research is of high standard, however cooperation with international research networks is limited. The research outcomes in the fields of biology, chemistry, ecology and geography are relevant, however evaluation results among individual areas differ significantly. The affiliation of Šiauliai university to Vilnius University provides opportunities for more active inter-disciplinary research.

#### (2) Expert judgement/indicator analysis

Traditionally, the research in the field of ecology at VU is well developed, however research activities in some of the areas of environmental science should be strengthened. The research activities are closely related to the field of study.

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

### (1) Factual situation

The research activities of the academic staff implementing the study programmes correspond to the delivered subjects (modules). The latest developments in science are integrated into the appropriate courses. Number of teachers have prepared educational means integrating outcomes of their own research. An important component of both study programmes is field studies, thus, the research in practice is demonstrated via field works. Students are acquainted with up-to-date research methods and get practical laboratory skills. The topics of final theses offered by the lectures are closely related to their research activities. However, the supervision of final theses is not equally distributed among the responsible teachers. Information provided in the Appendix No5 revealed that the same teacher supervised five final MSc theses (2019).

### (2) Expert judgement/indicator analysis

The research activities of the academic staff implementing the study programmes correspond to the delivered subjects (modules).

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

# (1) Factual situation

Research at the Life Sciences Centre and Faculty of Chemistry and Geoscience at VU represent a wide spectrum of topics in ecology and environmental science. The inter-disciplinary research provides a good background for students' involvement into the research activities. The interview with the first cycle students indicated that students do not recognise their involvement in research (or most probably did not consider being involved). The second cycle students are involved in scientific activities via the formal education system (preparation of final thesis). The research activities are supported by national student conferences organised by Vilnius University and Vilnius Gediminas Technical University. The Study Programme Committee encourages students to participate within international conferences and co-author the scientific publication. The Self Evaluation Report (SER) provides information on research activities is not provided. Information on how students are motivated to join research, as well as how students get information on ongoing research is not presented.

(2) Expert judgement/indicator analysis

Preconditions for in-formal students' involvement in science are not clearly presented. The information actions acquainting students with the on-going research should be organised.

### Strengths and weaknesses of this evaluation area:

# (1) Strengths:

- 1. The inter-disciplinary research provides a good background for students' involvement into the research activities;
- 2. The research activities of the academic staff implementing the study programmes correspond to the delivered subjects (modules).

# (2) Weaknesses:

- 1. Preconditions for in-formal students' involvement in research are not clare;
- 2. The information actions acquainting students with the on-going research should be organised.

# **3.3. STUDENT ADMISSION AND SUPPORT**

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

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

# (1) Factual situation

Admission to the first cycle (or integrated) is calculated based on the mark of the Matura, which comes from the admissions procedure approved by LAMA BPO (Lithuanian Higher Institutions Association for Organising Joint Admission), which is the institution authorized by the Ministry of Education, Science and Sports of the Republic of Lithuania, and the admissions procedure of VU.

In the case of second cycle studies in the field, the criteria depend on other variables such as the previous studies of students. This fundamental information is available on the University website, including the websites of the CAUs conducting the studies in the field.

The university organizes an important number of events to make possible students aware of what Vilnius University can offer in terms of studies, student support and services. As an example, events such as the "Student for One Day" or similar events organized by the VU Student Representative Office create possibilities where prospective students can see how the Vilnius University can help them in their future studies.

# (2) Expert judgement/indicator analysis

Regarding the admission criteria and process, it can be confirmed that the process works properly, students are satisfied in most of the aspects that concerns what the university offers them.

From the visit, it could be seen that many of the students that have chosen Vilnius university have done it because of its reputation at the state level. Therefore, even though the university is popular over the country, it could be interesting for the university, and the coordinators of environmental fields, to organize recruiting activities such as visiting high schools around the country explaining what VU can offer to potential students in terms of study opportunities and financial and personal support. Another good example of the activities organized by the university is the "Student for one Day" is considered a positive activity for the recruitment plan.

For these reasons, it can be confirmed that, in general terms, VU meets the essential requirements regarding the suitability and publicity as well as the admission criteria and processes applied.

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

# (1) Factual situation

The university follows the different official procedures when academic recognition is needed such as the Lisbon Recognition Convention, the Description of the Procedure for Recognition of Education and Qualifications Concerning Higher Education and Acquired Under Educational Programmes of Foreign States. In the case of foreign students, the evaluation is done individually whereby learning outcomes and competences are reviewed.

Particularly for foreign qualifications, learning outcomes of partial, prior, and other types of studies, VU evaluates every foreign student based on the similarities of the learning outcomes of the foreign student qualifications. Moreover, admitted students can request for recognition of their studies. In that case, VU will decide the level of recognition based on the student self-education report and his or her outcomes and competences acquired during his/her previous studies.

#### (2) Expert judgement/indicator analysis

During the period under evaluation only 3 students from the ESPB SP applied for recognition of one subject that they have previously passed. From the point of view of the procedure that students have to follow in order to apply for recognition and after the interview with the different groups of interest, it can be confirmed that everything is sufficiently clear from the point of view of the students. Particularly, the main rules regarding the recognition such as maximum number of subjects, which can be recognized.

Consequently, it can be confirmed that the VU accurately applies the suitable recognition processes in order to guarantee the quality of the studies and learning outcomes of its students.

### 3.3.3. Evaluation of conditions for ensuring academic mobility of students.

### (1) Factual situation

From a mobility point of view, students have the possibility to spend a semester or a year abroad in more than 30 different universities. Moreover, VU is participating in two main projects that also promote mobility of students and professors, the ARQUS and the COIMBRA network. These new collaborations prove how important the internationalization of their students is for the university as well as their teaching and administrative staff. The next step is to guarantee that these possibilities are used by students, teaching and administrative staff. Based on the SER, it seems that first-cycle students are the ones that mostly take advantage of mobility opportunities.

#### (2) Expert judgement/indicator analysis

Without any doubt, mobility at every level is an essential element for VU to become better and improve the competences of their students and professors, projects such as ARQUS network or the COIMBRA demonstrate it. Moreover, these networks have a favourable impact at many levels at the university. These projects clearly connect professors and students from many countries. Moreover, this connection not only enriches the students' experiences at the university but also it allows professors to improve their teaching and professional skills.

It is highly recommended to keep working in this direction, however it should be noted that all the gained experience by teachers should be shared with other professors to impregnate as many professors as possible.

In terms of mobility, it has been detected that many students do not participate in mobility programs mainly because of economical and personal reasons. The mobility coordinators should clearly work in this direction. The organization of meetings between students and the mobility coordinator, whereby the coordinator could search the main reasons why students do not take advantage of the mobility programs could be a good idea. Particularly, it could help to find new ideas to motivate students from a personal and an economical point of view. This is particularly important at the bachelor level since first cycle students last 4 years and the students might not be working yet.

Nonetheless, the VU is clearly taking the chance to improve their staff and students' mobility, which is considered very positive. Concretely, the ARQUS project seems to be a great opportunity for the VU to work in this direction. Particular attention should be paid to the results of the project, not only from the mobility point of view but also how the project has impacted professor and student competences.

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

(1) Factual situation

The university offers support at the social level with economical help, particularly for students with excellent outcomes or students with financial needs. Also, the university has different services such as The University Health and Sports Centre, the mentoring program, The University has a Counselling and Training Centre or The University's Culture Centre. Focusing on the environmental field, the LSC study department has 4 employees to support the students enrolled in environmental studies.

# (2) Expert judgement/indicator analysis

From the interview with the different groups of interest, it has been found that students and professors are significantly content regarding the support given by their university. Particularly students and alumni have manifested its approval through the different meetings.

# 3.3.5 Evaluation of the sufficiency of study information and student counselling

# (1) Factual situation

From the support point of view, the university has different services such as the Student Services and Career Department or the mentoring program, where different activities are carried out with the aim of improving student interdisciplinary competences as well as job search skills. Moreover, the VU has a student representative office where students can resort in case they have interests in some activities or comment on specific problems that could arise during the course.

As students are accepted, they are welcome to participate in the first week of the course in the integration week, during which students have the possibility to know more about their studies, methods and learning outcomes. Moreover, information about studies and general information is provided by different channels such as e-mail, phone, website, or social network.

Besides the continuous counselling provided by the different departments and the teaching staff, students have the possibility to participate in the Career days, where students meet with alumni and potential employers.

# (2) Expert judgement/indicator analysis

Regarding the information that the university informs students about the study program courses, cultural possibilities, economical possibilities, or career counselling, it can be confirmed that students have different sources of information where to find and improve their university experience.

From the visit, it has been detected that generally students find the information through websites or social media. Considering that many of the alumni have found jobs rapidly, it can be confirmed that students are well prepared and that the learning outcomes meet the needs of the job market. However, from the point of view of the advice that students could receive, it is not that apparent to see that this continuous process is happening. Nevertheless, students can acquire a lot of information regarding their future careers through different channels and opportunities that the university offers them.

# Strengths and weaknesses of this evaluation area:

### (1) Strengths:

- 1. The admission system is clear, transparent and understandable for students;
- 2. The commitment of the VU with mobility is strong as the ARQUS and COIMBRA networks showed it;
- 3. Reputation of the studies and the university at the national level is high;
- 4. The connection between the social partners and the university is very good and constructive;
- 5. Student's satisfaction is high regarding what the university offers them.

### (2) Weaknesses:

1. Low mobility of first-cycle students.

Aspects for improvement of the evaluated area:

1. Improve the connection between students and the faculty, particularly focused on the counselling of students.

### 3.4. TEACHING AND LEARNING, STUDENT PERFORMANCE AND GRADUATE EMPLOYMENT

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

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

# (1) Factual situation

Studies in the field are delivered in a full-time mode, and all the work is organised in the form of contact hours and self-study. Lectures and theoretical seminars are combined with various forms of individual and group work and student self-study. The following teaching-andlearning methods are applied: active lecture, seminar, laboratory and practical work, workshops, discussions, work with text, comparative analysis, brainstorming, essay, cases analysis and analysis of problematic situations, planning and organisation of various field and laboratory research, individual and group work, evaluation of practical activities, presentations, and projects.

Assessment strategies and assessment methods applied in the course units of both first and second cycle study programmes in environmental sciences correlate with the teaching and learning methods. VU provides detailed descriptions of applied teaching/learning methods and assessment methods in Annex 3 of the SER.

Vilnius University adheres to the following principles of student performance assessment: professionalism, transparency, fairness, objectivity, reliability, respect and goodwill. A final assessment of student performance is obligatory. The initial parts of continuous course units (modules) can be assessed by giving a pass or a fail. Examinations and pass/fail assessments can be conducted in writing or in writing and orally.

The university is aware of the new teaching trends such as active lecturing, seminars, laboratory, and practical work. Not only these types of methods are applied but also the philosophy of the university is changing towards student centred learning. This new paradigm requires an important commitment from professors and from students. From the professors' point of view, teaching training is needed in order to have qualified professors that can apply these new innovative teaching techniques.

VU claims to have changed the traditional motivating study environment in professor-student hierarchy, but guide lectors to improving the learning environment through their collaboration with students. VU encourage students' mobility as a part of motivation system, and provide an academic support - consultations on all issues related to studies (such as admission, choice of a study programme, financial support, suspension, termination of studies, individual study plan, change of study programme, and internship or informal activities).

### (2) Expert judgement/indicator analysis

Analysis of documentation and interviews confirm a well-defined, supportive and at the same time flexible teaching and learning process, considering demands and individual interests of students, and enabling them to achieve the intended learning outcomes. Students appreciate the unique content of the study programme in the Ecology domain (especially for MSc.), confirming positively the available relations with teachers and administration toward efforts achieving the intended learning outcomes. Two social partners participate in the Study Committee, also a number of social partner representatives contribute to thesis subjects and to individual students as supporters in the thesis preparation process. Teachers mentioned about a valuable contribution from alumni and social partners in development of learning means, but none of the interviewed alumni and social partners confirmed his/her involvement in providing suggestions or filling questionnaires from the university.

The interviews with students, alumni and social partners indicate a lack of communication. Students like to have more interaction with potential employees. Likewise, it is important to study theoretically, it is also relevant to apply this knowledge to practice either by using more practical and real assignments or by connecting the subject to reality by increasing the visit to study fields and companies. Alumni and social partners are keen in taking VU students to working practices in their organisations.

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

#### (1) Factual situation

The University has a Procedure for Adapting Studies to Individual Needs Arising from Disability that enables the tailoring of the study process to the needs of students and unclassified students with special needs and students from socially vulnerable groups. The students can contact the LSC study unit, which will communicate their special needs to the CAU employee responsible for student-related issues and provide recommendations about adapting the study process. Based on the recommendations, the responsible CAU employee will prepare a study individualisation plan and ensure that it is implemented.

Vilnius University approved a five-year Diversity and Equal Opportunities Strategy setting out the main actions for the period untill the year 2025. Vilnius University established special study scholarships for talented school graduates from socially vulnerable families, including the Belarusian students who are persecuted for political reasons.

### (2) Expert judgement/indicator analysis

Meetings with students, graduates and VMU staff confirmed a proper treatment of students from socially vulnerable groups and students with special needs. Facilities are adjusted according to demands of students with special needs. Teachers apply most appropriate learning methods (incl. distance learning) for the students with special needs. Laboratories are available 24/7 under defined registration procedures. In general, no problem has been spotted, or any evidence noticed about issues related to an access to study for socially vulnerable groups and students with special needs.

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

# (1) Factual situation

The University monitors the study progress of field students on several levels: the course unit (module) level, on the level of all students of a given year, and the level of a study programme.

The Student Services and Career Department monitors student drop-out levels and implements an action plan for drop-out prevention. After the end of the exam session period, data about the final semester results of student achievement is analysed. Students who fail one or more exams during the exam session and must retake an exam receive informational letters about various options of exam retaking and various forms of training and counselling on how to prepare for a retake.

On the level of a field study programme, the monitoring of student progress is done by the study programme committee. At least once per year the SPC also evaluates the progress made by the students based on the results of their exams and final thesis defence.

The procedure for providing feedback to students is set out in the Procedure for Student Performance Assessment approved by the VU Senate. Pursuant to Clause 3.3.4, each student has the right to get acquainted with their learning outcomes (assessment) in a particular course unit (module) and deficiencies of the assessed task (work), including related errors and remarks.

During the studies, the students are given feedback on their performance with the aim to ensure consistent and in-depth student learning. Most teaching staff provide both generalised and individual feedback to students by keeping it confidential and adhering to the principles of academic ethics. Student representatives are involved in SPC.

# (2) Expert judgement/indicator analysis

Students are systematically monitored by annual surveys, also by conversation with teachers and administration. Students confirmed it. Interviews proved that administrative arrangements for receiving students' feedback are in place, the most valuable feedback is performed by teachers. Therefore, the university should take advantage of innovative teaching networks such as ARQUS and COIMBRA network. It should be interesting that the professors involved in those networks could share their experiences and outcomes of these projects with other professors. These projects surely will consider new monitoring techniques that can help the entire teaching staff to become better educators.

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

# (1) Factual situation

Graduate career tracking is implemented through the Career Tracking Information System (CTIS) karjera.lt tools. The two types of surveys performed by: 1. Objective indicators from state information systems and government and departmental registers, 2. Subjective data of sociological surveys, reflecting subjective opinions of graduates on various career-related matters. Typically, graduates are requested to fill surveys after 12 months and after 3 years of graduation.

Successful alumni are invited to give lectures, thus conveying what is needed for a successful career in the relevant institutions According to VU, one year after graduation the following numbers of graduates of the second-cycle studies in the field of environmental sciences were employed on a contractual basis in Lithuania: 85.7% of graduates in 2017, 80.0% in 2018, and 78.6% in 2019 respectively.

# (2) Expert judgement/indicator analysis

In terms of employability, alumni find a job in a very reasonable period of time, which means that these studies are in line with the labour market needs. VU maintains good relations with graduates. They are invited to give lectures, provide suggestions for development of the study program, and share experience. Some of the graduates collaborate with teachers in research projects. However, graduates are not briefed on a regular basis about VU activities (defence of thesis, projects) and therefore do not contribute much back to university, sharing only limited capacities. University should look for more convenient communication channels to brief graduates and social partners about study program activities (projects, student's achievements, defence of thesis, etc.).

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

# (1) Factual situation

VU teaching staff and students must adhere to the Academic Ethics Code of Vilnius University that defines general academic ethics, including ethical teaching, study and scientific research. The Code defines cases of cheating, plagiarism, fabrication, bribery, and assisting another in dishonest academic activity. During the exam period, invigilators, delegated by the Students Representation, monitor the exams and help lecturers to ensure that exams are taken in good faith. Especially for the final thesis or research papers the university has an overlapping identification system (EOIS) to ensure originality. Cases of breach of the principles of academic integrity, tolerance, and non-discrimination are handled by the University in accordance with the Regulations of the Central Academic Ethics Commission of Vilnius University, including the Regulations of the Central Dispute Resolution Commission of Vilnius University and the Regulations of the Dispute Resolution Committee of Core Academic Units of Vilnius University and the Regulations of the Dispute Resolution Committee of Core Academic Units of Vilnius University and the Regulations of the Dispute Resolution Committee of Core Academic Units of Vilnius University and the Regulations of the Dispute Resolution Committee of Core Academic Units of Vilnius University and the Regulations of the Dispute Resolution Committee of Core Academic Units of Vilnius University.

#### (2) Expert judgement/indicator analysis

The policy measures to ensure academic integrity, tolerance and non-discrimination are well defined, clear, and fair. No indication has been discovered against the given information in SER about the preventive measures assuring academic integrity, tolerance and non-discrimination.

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

#### (1) Factual situation

The appeal lodging procedure is determined by the Regulations of the Dispute Resolution Commission of Core Academic Units. Persons who disagree with the examination procedure or evaluation can file a complaint with the Appeals Commission of a CAU within 5 days after the publication of examination results. During the period under evaluation, there were no cases of dishonest academic activity and appeals in the field studies.

#### (2) Expert judgement/indicator analysis

Procedures for appeals and complaints are well defined. Students, graduates and teachers confirmed fair and transparent assessments of examinations of appeals and complaints.

#### Strengths and weaknesses of this evaluation area:

# (1) Strengths:

- 1. Well-defined, supportive and at the same time flexible teaching and learning process, considering demands and individual interests of students, and successfully enabling them to achieve the intended learning outcomes;
- 2. High cohesion between the intended learning outcomes, teaching, learning and assessment methods;
- 3. The policy measures to ensure academic integrity, tolerance and non-discrimination are well defined, clear, and fair;
- 4. Good relationship with graduates and social partners. Graduates contribute to lectures, share knowledge. Social partners and alumni are keen on employing graduates or accepting them for internships;
- 5. Students support professors in applying innovative teaching techniques. The outcomes from projects such as the ARQUS network are shared to other teachers, and therefore have a positive impact in overall study process.

# (2) Weaknesses:

- 1. Communication to students about employment prospects after the studies should be improved. Despite organised Career Days, students are lacking information about social partners and possible employees after the studies;
- 2. University should look for more convenient communication channels to brief graduates and social partners about study program activities (projects, student's achievements, defence of thesis, etc.).

#### **3.5. TEACHING STAFF**

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

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

#### (1) Factual situation

The teaching staff of the study programs conforms to a high standard in terms of formal scientific competence and the course teachers more than fully meet the legal requirements with 100% holding a PhD or higher qualification. The annual lists of publications from the staff as well as H- indexes are impressive, amply demonstrating that the study program staff plays an active role on the international scene. Most (85%) of the teachers are employed as researchers. In the realisation of the study program participate 12 professors and 16 associated professors and the ratio: lecturers/students support development of intensive contacts and individualised approach. During the meeting with the program staff, we got evidence that also practitioners are participating in the realisation of the study program. Active participation in research is an additional positive point, if considering staff qualification needed for running of research in Master study program.

#### (2) Expert judgement/indicator analysis

The provided indicators of the program staff number, qualification and competence are convincing and demonstrate the high level of the teaching staff. Good qualification and involvement of active researchers in the study program is a quality guarantee of the study process and strengthens the whole of the educational programme.

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

#### (1) Factual situation

The teaching staff is participating in different mobility activities: learning visits, some teaching visits as well as active participation in scientific conferences and seminars. As an aspect increasing staff mobility can be considered support from the university to mobility of teaching staff. Program staff seems to be quite satisfied with the mobility possibilities. However, since 2017 only 5 international lecturers have delivered their lectures to students. According to SAR no sabbatical leaves are available for teaching staff.

#### (2) Expert judgement/indicator analysis

The international mobility of the teaching staff can be considered as acceptable; however, the number of foreign lecturers is low and this definitely is a field where more activities should take place in future. As a kind of problem can be considered limited possibilities of the staff to have sabbatical leaves.

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

#### (1) Factual situation

There are possibilities provided to increase professional and teaching qualifications and a number of the staff have used these possibilities. The present orientation of the study programs towards preparation of researchers will contribute towards the next generation of researchers. Considering the impacts of the global pandemics of Covid-19 on the study process it seems the program staff have managed the problems and challenges quite efficiently; different approaches have been used and the impact on the study process seems to be minimal. Vilnius University offers possibilities for lecturers to have their teaching competence development training. Also training to develop teaching skills in 16 different training programmes, for example, "Active learning methods", "Student group work", "Research paper supervision", "Communication skills", "Integration of communication technologies into the teaching process" are offered. Five training workshops about innovative teaching, learning, and evaluation methods were delivered by guest lecturers from foreign countries, however the information provided in the SAR is not much specific for the study program under evaluation. Students acknowledge the good diversity of teaching methods, including field studies, excursions, internships as well as interactive approaches used.

#### (2) Expert judgement/indicator analysis

At Vilnius University significant efforts are in place to support teaching competence development and the process seems to have supported evident progress in development of teaching skills and their efficient application.

#### Strengths and weaknesses of this evaluation area:

#### (1) Strengths:

- 1. The teaching staff of the study programs conforms to a high standard in terms of scientific competence, teaching experience. The staff research output is good;
- 2. Active teaching competence development is going on;
- 3. Teaching staff is active in different mobility programs;
- 4. Teaching staff is well motivated. Financial motivation system for teaching staff works well teachers' salary rates are revised each half year. In general, salary figures are increasing gradually during last two years.

#### (2) Weaknesses:

- 1. Number of foreign lecturers is low, and this definitely is a field where more activities should take place in future;
- 2. As a kind of problem can be considered limited possibilities of the staff to have sabbatical leaves.

#### **3.6. LEARNING FACILITIES AND RESOURCES**

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

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

#### (1) Factual situation

The facilities where the study program is running are recently renovated using EU funding and they have been used for developing of well-equipped laboratories. The equipment needed in teaching both in the class, laboratories and in the field is satisfactory (at least we did not hear any major complaints). The laboratories correspond with present day's standards. A good resource for the study program is in its good relations with other units of the VU LSC. This situation makes many analytical facilities available through the mechanism of mutual collaboration. The institute has a well-equipped library with a high number of study field related books. The access of students to information networks is excellent and this was reasonably widely used as was evident from BSc and MSc theses as well as from students' interviews. The availability of textbooks, learning materials (also including collections) and scientific literature can be considered as very good. Significant resources are invested to provide access to databases. As a very positive aspect can be considered adaptation of the study facilities for persons with special needs. The facilities cover needs of study programs at 2 different levels – Bachelor and Master study programs.

However, the SAR and interviews demonstrate one significant problem – absence of technical and service staff (technicians), carrying responsibilities about functioning of specialised, especially more sophisticated facilities.

#### (2) Expert judgement/indicator analysis

Resources, facilities, information resources available for learning and research process are adequate and suitable for running of study programs. As a kind of problem can be considered a lack of technical staff.

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

#### (1) Factual situation

The study program has very limited resources for improvement of facilities and their upgrading. It seems that only some very basic needs can be covered using their resources. The staff is applying to VU administration for support; however, this approach is episodical, it seems not well organised and definitely is not sustainable.

#### (2) Expert judgement/indicator analysis

It seems that the planning and upgrading of resources needed for running of studies and research could be organised in a more systematic and structured way.

#### Strengths and weaknesses of this evaluation area:

#### (1) Strengths:

- 1. Fresh, renovated auditoriums, laboratory facilities (as much as it is possible to judge by photos and SAR);
- 2. Well-developed adaptation of the study facilities for persons with special needs;
- 3. Resources, facilities, information resources available for learning and research process are adequate and suitable for running of study program.

### (2) Weaknesses:

- 1. Missing technical staff and minimal equipment maintenance as well as upgrading possibilities;
- 2. The planning and upgrading of resources needed for running of studies and research could organised in more systematic and structured way.

### **3.7. STUDY QUALITY MANAGEMENT AND PUBLIC INFORMATION**

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

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

#### (1) Factual situation

The quality and continuous improvement of the study programmes under evaluation is managed by the Study Programme Committee (SPC). The SPCs consist of teaching staff implementing the programmes, social partners and student representatives. The SPC is subordinate to the Centre Board (CB) and at least once per year reports progress of the study programmes to CB. One of the main aims of the Committee is to ensure coherence between the outcomes of the study programme, outcomes of the courses (modules), study methods and evaluation methods. The labour market needs and national socio-economic changes are reflected in the content of the study programmes. For example, in response to the suggestions from the social partners the course *Professional Practice* was included into the curriculum of the BSc study programme, the syllabus of the course *Basics of Environmental Science and Protection* was modified according to the suggestions of the students (BSc study programme), SPC initiated strengthening of the course *Statistical Methods and GIS* (MSc study programme).

#### (2) Expert judgement/indicator analysis

The management of the study quality of the evaluated study programmes is performed on a regular basis with the aim for continuous improvement of the study process. The existing subordinative system ensures an efficient management of the study programme.

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

# (1) Factual situation

The internal study quality assurance is performed via feedback from students, social partners and teaching staff. The surveys of student opinion are conducted at the end of each semester by VU Study Quality and Development Division. The surveys cover specific course units and students' satisfaction with the study process. The results of the surveys are available at the VU information system and can be accessed by the administration of faculties, centres and institutes, while responsible teachers have access to the survey results of the taught courses (modules). Student Union conducts independent surveys with the focus on target groups (by specialization, year of studies, etc.). The opinions of social partners are transferred to the SPC during the study visits and practical placement of students. Those social partners who contribute to the study process by delivering lectures and/or supervising final theses are well informed about the performance of the study programmes, however communication (information exchange) with other stakeholders should be improved. Teaching staff express their opinions and make suggestions for internal study quality assurance during regular meetings with administration and members of SPC.

### (2) Expert judgement/indicator analysis

Alumni and social partners are involved in the internal study quality assurance process, however a communication on study programme performance should be improved.

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

# (1) Factual situation

The information on studies is managed by the VU Study Information System (VUSIS). The system allows registration of students, selection of the topics of final thesis, provides data on academic performance and other issues of academic process. The system allows teaching staff to monitor lists of students, enter the course description, and publish the results of evaluations and other. The VUSIS system serves as the interface for academic information flows between students and teaching staff.

#### (2) Expert judgement/indicator analysis

The collection, use and publication of information on studies is well organised. The processes are clear and transparent.

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

# (1) Factual situation

The Self-Assessment Report does not provide data on the opinion of the students.

The meeting with the students indicated a good evaluation of study quality at VU. In general, students were highly motivated and satisfied with the study process, however expressed an interest in more active involvement of social partners and integration of real life based exercises into the study curriculum.

### (2) Expert judgement/indicator analysis

Students are satisfied with the study process.

# Strengths and weaknesses of this evaluation area:

### (1) Strengths:

- 1. Existing study quality management system is well organised and ensures a smooth study process;
- 2. The stakeholders (social partners, students, teaching staff) are involved in the study quality management process;
- 3. A number of social partners and graduates contribute to the study process by offering topics for the final thesis, supervising thesis and providing support for practical placement of students.

### (2) Weaknesses:

- 1. Students expressed interest in more active involvement of social partners into the study process. The share of real life based exercises within the study curriculum should be increased;
- 2. Communication to alumni and social partners on study content and processes should be improved;
- 3. The public information dissemination activities/actions should be enhanced.

# **IV. RECOMMENDATIONS**

Evaluation Area	Recommendations for the Evaluation Area (study cycle)	
Intended and achieved learning outcomes and curriculum	It could be recommended till the next period of accreditation to consider possibilities of transformation of the BSc study program accordingly to Bologna principles.	
Links between science (art) and studies	Preconditions for in-formal students' involvement in science are not clear. The information actions acquainting students with the on- going research are limited. It is recommended to consider activities/actions for early involvement of students into the research.	
Student admission and support	Improve the connection between students and the faculty, particularly focused on the counselling of students.	
Teaching and learning, student performance and graduate employment	Communication to students about employment prospects after the studies should be improved. Despite organised Career Days, students are lacking information about social partners and possible employees after the studies.	
	Graduates and social partners should be better briefed about activities (milestones, results) in the study program.	
Teaching staff		
Learning facilities and resources	technical staff providing maintenance or use them as well as	
Study quality management and public information	Alumni and social partners are involved in the internal study quality assurance process, however communication on study programme performance (content and processes) should be extended.	

# **V. SUMMARY**

# Main positive and negative quality aspects of each evaluation area of the study field of environmental sciences at Vilnius University:

#### Main positive aspects:

- 1. The design and development of study programme(s) take into account the expectations of students and other stakeholders, national strategies, legislation and trends in the particular area as well as labour market needs;
- 2. The objectives of study programme(s), modules (including courses) and their learning outcomes are concrete and coherent. The teaching content and methods and assessment criteria and methods support students in achieving their learning outcomes and developing their key competencies;
- 3. The inter-disciplinary research provides a good background for students' involvement into the research activities;
- 4. The research activities of the academic staff implementing the study programmes correspond to the delivered subjects (modules).
- 5. The admission system is clear, transparent and understandable for students;
- 6. The connection between the social partners and the university is very good and constructive;
- 7. Student's satisfaction is high regarding what the university offers them;
- 8. Well-defined, supportive and at the same time flexible teaching and learning process, considering demands and individual interests of students, and successfully enabling them to achieve the intended learning outcomes;
- 9. The policy measures to ensure academic integrity, tolerance and non-discrimination are well defined, clear, and fair;
- 10. Good relationship with graduates and social partners. Graduates contribute to lectures, share knowledge. Social partners and alumni are keen on employing graduates or accepting them for internships;
- 11. Students support professors in applying innovative teaching techniques;
- 12. The teaching staff of the study programs conforms to a high standard in terms of scientific competence, teaching experience. The staff research output is good;
- 13. Teaching staff is active in different mobility programs;
- 14. Teaching staff is well motivated. Financial motivation system for teaching staff works well teachers' salary rates are revised each half year. In general, salary figures are increasing gradually during last two years;
- 15. Fresh, renovated auditoriums, laboratory facilities and well-developed adaptation of the study facilities for persons with special needs;
- 16. Existing study quality management system is well organised and ensures a smooth study process;

17. The stakeholders (social partners, students, teaching staff) are involved in the study quality management process;

#### Negative quality aspects:

- 1. Communication to alumni and social partners could be improved: information about interesting and joint research projects, involvement to a preparation and defence of thesis, discussion on curricula improvements;
- 2. More students should be involved in research activities. Themes of final thesis of the bachelor program should be more related to research projects;
- 3. Greater involvement of the social partners in the process of preparing and defending the final theses is one of the priority issues.
- 4. Preconditions for in-formal students' involvement in research are not clear. The information actions acquainting students with the on-going research should be organised;
- 5. Low mobility of first-cycle students;
- 6. Communication to students about employment prospects after the studies should be improved. Despite organised Career Days, students are lacking information about social partners and possible employees after the studies;
- 7. University should look for more convenient communication channels to brief graduates and social partners about study program activities (projects, student's achievements, defence of thesis, etc.).
- 8. Number of foreign lecturers is low, and this definitely is a field where more activities should take place in future;
- 9. As a kind of problem can be considered limited possibilities of the staff to have sabbatical leaves.
- 10. Missing technical staff and minimal equipment maintenance as well as upgrading possibilities;
- 11. The planning and upgrading of resources needed for running of studies and research could organised in more systematic and structured way;
- 12. Students expressed interest in more active involvement of social partners into the study process. The share of real life based exercises within the study curriculum should be increased;
- 13. Communication to alumni and social partners on study content and processes should be improved.

Expert panel chairperson signature:

Prof. dr. (panel chairperson), Kalev Sepp, academic;