



CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

EVALUATION REPORT
STUDY FIELD of FOOD STUDIES
at Vytautas Magnus University

Expert panel:

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5. Mr. Dominykas Budrys, *students' representative*.

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Study Field Data*

Title of the study programme	<i>Food Quality and Safety</i>	<i>Quality and Safety of Plant Food Raw Materials</i>
State code	6121IX005	6211IX005
Type of studies	University cycle studies	University cycle studies
Cycle of studies	First cycle	Second cycle
Mode of study and duration (in years)	Full-time studies (4 years) Part-time studies (6 years)	Full-time studies (2 years) Part-time studies (3 years)
Credit volume	240	120
Qualification degree and (or) professional qualification	Bachelor of Agricultural Sciences	Master of Agricultural Sciences
Language of instruction	Lithuanian	Lithuanian
Minimum education required	Secondary education	Bachelor's degree
Registration date of the study programme	20 January 2012	20 January 2012

** if there are joint / two-fields / interdisciplinary study programmes in the study field, please designate it in the foot-note*

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I. INTRODUCTION

1.1. BACKGROUND OF THE EVALUATION PROCESS

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

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

The evaluation process consists of the main following stages: 1) *self-evaluation and self-evaluation report 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 [Order No. V-149](#). The site visit to the HEI was conducted by the panel on 7 December, 2021. Due to the coronavirus pandemic, the Review Visit was organised online using video-conferencing tool (Zoom).

Associate professor Henrik Siegmundt, *Expert panel's Chair Person; Head of studies MSc in Food Science and Technology, Department of Food Science, Faculty of Science, University of Copenhagen, Denmark;*

Prof. dr. Anet Režek Jambrak, *Full professor in Food engineering (Biotechnical sciences), Head of the Laboratory for Sustainable Development, Faculty of Food Technology and Biotechnology, University of Zagreb, Croatia;*

Dr. Ilias Vlachos, *Research Professor in Supply Chain Management at Excelia Business School, France;*

Ms. Dalia Jočytė, *Representative of Social Partners; Plant manager at "Svyturys Brewery" & "Aldaris", Lithuania;*

Mr. Dominykas Budrys, *Student's Representative; Medicine Studies at the Faculty of Medicine, Vilnius University, Lithuania.*

1.3. GENERAL INFORMATION

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

No.	Name of the document
1.	Course descriptions of the first cycle study programme <i>Food Quality and Safety</i> : “General Ecology and Environmental Protection”, “Research Methodology of Raw Materials and Food”, “Food Chemistry”, “Food Safety and Quality Management Systems”, Engineering of Processing and Storage of Food raw Materials and Products”.
2.	Course descriptions of the second cycle study programme <i>Quality and Safety of Plant Food Raw Materials</i> : “Agroecosystems and Quality of Crop Production”, “Chemistry of Plant Food Raw Materials”, “Quality and Safety Management of Plant Food Raw Materials”, “Methods for Assessing the Quality of Plant Food Raw Materials”, “Microbiological Contamination of Plant Food Raw Material and Toxins”, “Human Ecology and Environmental Epidemiology”, Enhancing of Plant Genetic Diversity by Biotechnology Methods”.
3.	Comparative Expert Assessment of R&D Activities / 2018, Panel A: Agricultural Sciences.
4.	A more detailed plan for implementing studies in the English language with suggestions for how to prepare both teachers and students for this transition.
5.	Detailed implementation plan for Food Studies in English 2021-2027 (compiled following the VMU-AA strategy and its implementation plan for 2021-2027).
6.	A more detailed description of the areas of sustainability that are particularly strong in these studies (e.g. organic farming, etc.) and how these strengths can be utilized through the equipment of new laboratories.
7.	Protocol of the committee meeting (18 January 2021 No. 18) on the first cycle study programme <i>Food Quality and Safety</i> .
8.	Protocol of the committee meeting (11 November 2021 No. 19) on the first cycle study programme <i>Food Quality and Safety</i> and on the second cycle study programme <i>Quality and Safety of Plant Food Raw Materials</i> .

1.4. BACKGROUND OF THE STUDY FIELD/STUDY FIELD POSITION/STATUS AND SIGNIFICANCE IN THE HEI

Vytautas Magnus University (hereafter – VMU, the University) was established in 1922 and re-established in 1989. The University provides degree studies of all three cycles – bachelor, master and PhD studies which cover a broad spectrum of fields ranging from humanities, social sciences and arts to the fundamental sciences, environmental sciences, and biotechnologies.

The University's Liberal Arts education profile, with core emphasis on studying broadly themed courses, lets students themselves plan their studies by choosing general study courses and part of the study field courses.

VMU works with many universities and scientists around the globe, it is an international and multilingual institution that continuously develops international networks, participates in international scientific, academic, and social projects and encourages teacher and student mobility.

VMU is managed by two collegial bodies, the Council and the Senate, and the separate managerial body of the Rector. There are 15 academic divisions at VMU: Faculty of Arts, Faculty of Catholic Theology, Faculty of Economics and Management, Faculty of Humanities, Faculty of Informatics, Faculty of Law, Faculty of Natural Sciences, Faculty of Political Science and Diplomacy, Faculty of Social Sciences, Agriculture Academy, Education Academy, Music Academy, Innovative Studies Institute, Institute of Foreign Languages, Botanical Garden.

Agriculture Academy conducts and coordinates nationally- and internationally-competitive studies in Bioeconomics, Agricultural Sciences and other fields closely related to agriculture and rural development.

Vytautas Magnus University has two study programmes in the field of Food Studies: the first-cycle study programme *Food Quality and Safety* (state code – 6121IX005) (hereafter – the first cycle study programme) and the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* (state code – 6211IX005) (hereafter – the second cycle study programme). The study programmes that are currently carried out in Food studies field in both study cycles were registered in January 2012. During the period under evaluation, the study programmes of the Food Studies field were some of the most popular programmes of other study fields implemented by Vytautas Magnus University Agriculture Academy.

The main structural unit for the implementation of these programmes is the Faculty of Agronomy. Considering the specificity of the programmes of the whole study field and the performed scientific activity, it is supervised by the Institute of Agricultural and Food Sciences. Part of the study courses is taught by the teachers of the faculties of Agricultural Engineering, Forest Sciences and Ecology, Bioeconomy Development and Water and Land Management, Natural Sciences, and Informatics, as well as the Institute of Foreign Languages. First-cycle study programme *Food Quality and Safety* and second-cycle study programme *Quality and Safety of Plant Food Raw Materials* are directly related to the implementation of the mission of VMU and the Faculty of Agronomy – to create and to cultivate the intellectual potential of agriculture and food industry, sustainable use of natural resources, to strive for a full-fledged living environment for the people of Lithuania.

The staff of the Faculty's Institutes report directly to the Directors of the Institutes, and the latter – to the Dean of the Faculty. Issues of study organization, quality and other issues are resolved by the Dean's Office and the Study Programme Committee. The scientific and study activities and organizational work of the Faculty are coordinated by the Faculty's Council. The programmes of the Food Studies field have not yet passed the evaluation procedure.

The description of Food Studies field studies in the group of study fields of Agricultural Sciences is not currently approved, therefore the special requirements for the programmes of this study field are not regulated yet. The first and second cycle study programmes are performed in compliance with the *Description of Study Cycles* (Order No. V-1012 of the Minister of Education and Science of the Republic of Lithuania, 2015) and the *Description of General Requirements for the Provision of Studies* (Order No. V-1168 of the Minister of Education and Science of the Republic of Lithuania, 2016).

II. GENERAL ASSESSMENT

Food studies study field and first cycle at Vytautas Magnus University is given **positive** evaluation.

Study field and cycle assessment in points by evaluation areas

No.	Evaluation Area	Evaluation of an Area in points*
1.	Intended and achieved learning outcomes and curriculum	3
2.	Links between science (art) and studies	3
3.	Student admission and support	3
4.	Teaching and learning, student performance and graduate employment	3
5.	Teaching staff	3
6.	Learning facilities and resources	4
7.	Study quality management and public information	3
	Total:	22

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

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

3 (good) - the area is being developed systematically, without any fundamental shortcomings.

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

5 (excellent) - the area is evaluated exceptionally well in the national context and internationally.

Food studies study field and second cycle at Vytautas Magnus University is given **positive** evaluation.

Study field and cycle assessment in points by evaluation areas

No.	Evaluation Area	Evaluation of an Area in points*
1.	Intended and achieved learning outcomes and curriculum	3
2.	Links between science (art) and studies	3
3.	Student admission and support	3
4.	Teaching and learning, student performance and graduate employment	3
5.	Teaching staff	3
6.	Learning facilities and resources	3
7.	Study quality management and public information	3
	Total:	21

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

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

3 (good) - the area is being developed systematically, without any fundamental shortcomings.

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

5 (excellent) - the area is evaluated exceptionally well in the national context and internationally.

III. STUDY FIELD ANALYSIS

3.1. INTENDED AND ACHIEVED LEARNING OUTCOMES AND CURRICULUM

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

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

(1) Factual situation

The aim of the first-cycle study programme *Food Quality and Safety* is to train specialists in the field of Food studies who are able to solve the problems of food raw materials and production and process management, quality control, increasing the competitiveness of food industry, implementing sustainable production principles, protecting the environment and human health, implementing the principles of the circular economy. Graduates of the first cycle study programme with a bachelor's degree in agricultural sciences may work and are working in quality evaluation and management institutions, consulting companies, public institutions and private business; food raw materials processing, food production companies; catering, recreation and other companies providing services (hotels, guest houses, tourism complexes and rural tourism homesteads) as well as to create their own business. Graduates may also continue their studies in master study programmes of agricultural sciences or related fields of study at Lithuanian and foreign universities.

The aim of the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* is to train highly qualified specialists in the field of Food studies who are able to independently manage sustainable food production systems, implement innovations and analyse their impact on the environment and human beings, to solve problems related to providing the public with quality, health-friendly food, planning and conducting research and putting the acquired knowledge into practice. After obtaining a master's degree in agricultural sciences, graduates of the second cycle study programme may work as managers of primary production and food management companies or be production process workers; consultants, project managers, experts in companies or institutions operating in the food sector; researchers in food science and study institutions and integrated science, study and business centres; teachers; senior and principal specialists in public administration institutions; to create their own business; to continue studies in doctoral studies.

(2) Expert judgement/indicator analysis

Based on the self-assessment report, and the site visit, it is the expert panel's opinion that the aims of both first and second cycle studies of Food Studies conform to the needs of the society and 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 strategic plan of VMU AA is to seek leadership in the training of agricultural professionals and in the formation of agriculture, forestry, water management and rural development policies. Three tasks have been highlighted:

1. To strengthen the role of the University in shaping the National Policy of Agriculture, Forestry and Water Management and Rural Development, as well as the training of specialists;
2. To expand expert and consulting services based on the achievements of modern science for both agricultural entities and state institutions;
3. To actively contribute to the “European Green Deal”, the digitization of agriculture, the circular economy and other initiatives and ideas based on research and its implementation in Lithuania.

Furthermore, VMU AA has the mission “...to create and disseminate scientific knowledge, sincerely striving for safe and healthy food and full-fledged living environment for every citizen of Lithuania”.

(2) Expert judgement/indicator analysis

The strategic plan appears logical with a strong focus on the Lithuanian society and workforce. As the European Green Deal is specifically mentioned, it may be beneficial for VMU to emphasize a stronger collaboration with foreign universities also related to the Food Studies field studies of first and second cycles. This could be performed by increasing the exchange of students as well as staff with other European universities.

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

(1) Factual situation

The ECTS contents of individual elements of the first cycle is summarised in table No. 1 below, and likewise the ECTS contents of individual elements of the second cycle is summarised in table No. 2 below.

Table No. 1. Programme’s *Food Quality and Safety* compliance to general requirements for first cycle study programmes

Criteria	Legal requirements	In the Programme
Scope of the programme in ECTS	180, 210 or 240 ECTS	240 ECTS
ECTS for the study field	No less than 120 ECTS	139 ECTS
ECTS for studies specified by University or optional studies	No more than 120 ECTS	101 ECTS
ECTS for internship	No less than 15 ECTS	15 ECTS
ECTS for final thesis (project)	No less than 15 ECTS	15 ECTS
Contact hours	No less than 20 % of learning	42.7 %
Individual learning	No less than 30 % of learning	57.3%

Table No. 2. Programme's *Quality and Safety of Plant Food Raw Materials* compliance to general requirements for *second cycle study programmes*

Criteria	Legal requirements	In the Programme
Scope of the programme in ECTS	90 or 120 ECTS	120 ECTS
ECTS for the study field	No less than 60 ECTS	91 ECTS
ECTS for studies specified by University or optional studies	No more than 30 ECTS	29 ECTS
ECTS for final thesis (project)	No less than 30 ECTS	30 ECTS
Contact hours	No less than 10 % of learning	25.9%
Individual learning	No less than 50 % of learning	74.1%

It can be seen that the first cycle and the second cycle study programmes of Food Studies meet the requirements of the Descriptor of Study Cycles in terms of programme goals and learning outcomes that are specific for the first/second cycle studies. In May 2020 the latest improvement of both first and second cycle programmes was decided, and is currently being implemented.

(2) Expert judgement/indicator analysis

As the first and second cycle study programmes of Food Studies field are complying with the legal requirements of HEI's in Lithuania, there are no formal recommendations. However, the numbers of exchange of students (both incoming and outgoing) are quite low. Although there may be several reasons for this low number of exchange students, the HEI could investigate if the placement of compulsory vs. elective courses is impeding this exchange. Increasing the number of elective/optional courses to the allowed maximum of 30 ECTS would enable one full semester of elective/optional courses, and this would greatly facilitate the possibility of travel abroad. For example the third semester of the second cycle study programme contains 18 elective ECTS + 6 ECTS research work + 6 ECTS of *Consumer Law and education*. If the third semester only contained elective courses and optional study courses that are easy to find on international universities, students would not have any logistical obstacles from going abroad. If such a change would increase the number of students going abroad in the second cycle, the next step could be to perform a similar change in the first cycle programme.

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 field of first and second cycle study programmes are formulated according to the aim of study programmes and include all components of the aim. Each individual course must comply with the overall goals of the cycle study programmes, and each individual course, therefore has a learning outcome matrix to demonstrate this compliance.

An example is shown below for the course *Food Chemistry* of the first cycle study programme *Food Quality and Safety*.

Table No. 3. Links among study programme outcomes, course outcomes, content, study and assessment methods

Study programme: Food Quality and Safety Programme outcomes	Course outcomes	Content (topics)	Study methods	Assessment methods
<p>1. Student is able to describe the chemical composition of food raw materials and products, the properties of food components and their interactions, and understands the impact of food quality and nutrition on the quality of human life.</p>	<p>1. The student defines the chemical composition of food raw materials, the main components of food raw materials and products and their interaction; explains the impact of food quality on human health and quality of life.</p>	<p>1. Importance of food chemistry in the study of qualitative and quantitative changes in food raw materials and products. 2. Moisture in food raw materials and products. 3. Carbohydrates in food raw materials and products: monosaccharides, disaccharides and polysaccharides. 4. Proteins, their functional properties, amino acids. Protein structure. 5. Lipids, structure of lipids. Fatty acids. Lipids groups. 6. Antioxidants. 7. Pigments. 8. Vitamins. 9. Minerals.</p>	<p>Explanation, illustration, solving of problem situations, discussions, analysis of research resources.</p>	<p>Testing or written survey, assessment of problem solving, observation of discussions.</p>
<p>2. Student is able to formulate a scientific hypothesis, to select innovative methods of quality assessment of food raw materials and products, to plan and to conduct research, to statistically evaluate, to analyse and to summarize research results required to ensure the quality and safety of food raw materials and products throughout</p>	<p>2. The student identifies the problems that arise during the processing of products, selects appropriate methods of analysis and control to determine the quality of food products and its changes; plans scientific experiments to evaluate the chemical composition of raw materials and products.</p>	<p>10. Major changes in carbohydrate, protein, lipids that occur during the processing of food raw materials and products.</p>	<p>Explanation, illustration, solving of problem situations, discussions, analysis of research resources. Preparation of team task and presentation of report.</p>	<p>Testing or written survey, assessment of problem solving, observation of discussions. Evaluation of team task report.</p>

the food management chain.				
3. Student is able to select appropriate raw materials, equipment, tools, processes and methods for handling food raw materials and products.	3. The student evaluates the quality of food raw materials, changes in the chemical composition of raw materials and products during their processing, selects the appropriate equipment, tools and technological processes for food handling.	Laboratory works: 1. Determination of moisture content in food raw materials and products. 2. Determination of saccharides. 3. Determination of nitrogen content. 4. Evaluation of fat freshness. 5. Determination of ascorbic acid content. 6. Determination of ash content. 7-8. Selection of methods for determination of the basic chemical composition of food raw materials/products, and explanation of results obtained.	Laboratory works, and preparation of a report.	Assessment of the performed laboratory tasks and a report.
4. Student is able to communicate and to collaborate in solving food management tasks, to present information in a clear, reasoned manner and to collaborate with specialists in various fields of science.		All topics. (Stated in 1 st row)	Solving of problem situations, discussions. Laboratory works, and preparation of a report.	Assessment of problem solving, observation of discussions. Assessment of the performed laboratory tasks and a report.
5. Student is able to think critically, to solve problems, to work independently and in a group, to make responsible decisions and to adapt to a changing environment as well as to understand the need for lifelong learning and career planning.		All topics. (Stated in 1 st row)	Solving of problem situations, discussions.	Assessment of problem solving, observation of discussions.

(2) Expert judgement/indicator analysis

The learning outcomes of both first and second cycles are phrased in quite few points, but therefore the points are somewhat broad. This emphasizes the holistic approach to teaching, but makes it somewhat difficult to pinpoint exactly how the individual courses will contribute to this learning outcome. An example is the intended learning outcome under **Knowledge and application** for the second cycle study programme. One programme learning outcome is: **Student is able to define the determinants of quality and safety of food raw material, to describe and to select food raw material quality assessment methods as well as food quality management systems.** This learning outcome is then fulfilled by five different courses, 1) Agroecosystems and quality of crop production, 2) Chemistry of plant food raw materials, 3) Methods of quality assessment of plant food raw materials, 4) Biodegradation of organic compounds, and 5) Enhancing plant genetic diversity by biotechnological methods.

This is just an example, but in general it requires a quite strong communication and interaction between the person(s) responsible for the course(s) and the study programme leader to ensure that e.g. this particular learning outcome is met by exactly these five courses. Without this communication, there is a risk that either the same information is provided in several courses or that specific information is not being taught because a person responsible for a course assumes that a different course will provide this specific information

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 study courses in the first cycle study programme are arranged consistently and cover the stages of the food management chain from the cultivation, preparation, and processing of quality raw materials to the safe presentation of the production to the consumer.

The study courses in the second-cycle study programme are presented in a consistent manner and include, applying interdisciplinary knowledge, the management of sustainable food production systems, the implementation of innovations, and the provision of high-quality, health-friendly food to society.

It is possible to follow both first and second cycle studies as full-time studies. Likewise, it is also to follow both first and second cycle study programmes as part-time studies. The progression of courses is designed to enable a development of the individual student.

(2) Expert judgement/indicator analysis

As mentioned under 3.1.3 section, it may be beneficial to assess whether the relatively low international exchange of students, is partly caused by logistical obstacles, both for students going abroad, and for ensuring that incoming international students have e.g. a semester with similarly clustered courses.

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

As stated in SER VMU provides first and second cycle students of Food Studies field with possibilities to study according to an individual study schedule in order to meet specific learning needs. If a student has a motivated reason to use an individual study plan, the Dean of the faculty of Agronomy evaluates and approves the validity of the application.

Students' individual learning needs are also assured by the possibility to take freely elective courses from the *Artes liberales* studies in VMU, e.g. foreign language courses.

(2) Expert judgement/indicator analysis

Expert panel found that the possibility of individual study plans is present. Additionally, it did not appear from the site visits with the students that a lot of students are requesting these individual study plans, so there are no further expert panel recommendations.

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

(1) Factual situation

Students of the first-cycle study programme *Food Quality and Safety* prepare the Bachelor Thesis according to the Methodological Instructions for the Preparation of the Bachelor Thesis of the study programme "Food Quality and Safety".

Students of the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* prepare the Master Thesis according to the Methodological Instructions for the Preparation of the Master Thesis of the study programme "Quality and Safety of Plant Food Raw Materials".

The topics of theses for both first and second cycle studies of Food Studies field are related to ongoing activities of research and experimental development. During the period 2017-2020, the content of the final theses of the first cycle study programme is related to the development of food raw materials and products (55%), sustainable food chain from field to table (about 30%), microbiological research of food raw materials and products (3%), food quality research in the market (7%), human nutrition (5%). The content of the final theses of the second-cycle study programme is related to the problems of quality and safety of plant food raw materials and their solution based on scientific principles (20%), determinants of the quality and safety of food raw materials (40%), development of high value-added and innovative food raw materials and products (40%).

Social partners were involved in 5 first cycle theses (2017-2020), and in relation to an international project "Effect of farming systems on the accumulation of biologically active and anticancer compounds of potato tubers with coloured flesh" (2018-2020), 6 first cycle theses and 3 second cycle theses were prepared.

(2) Expert judgement/indicator analysis

Expert panel found that the content of the final theses of the first and second cycle study programmes fully corresponds to the studies of the Food Studies field. Based on the self-assessment report, and the site visit, it is clear that VMU fulfils the formal requirements for compliance of the final theses. However it was also mentioned in the report as well as during the site visit interviews with both students and social partners that an increased collaboration with social partners could be beneficial, e.g. by involving the social partners more directly in performing the research activities of the theses. Additionally, an increased involvement of students in active university research projects would be desired.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

- 1. The Food Studies field studies of first and second cycle comply with the requirements of the government and the mission and strategy of the university.*
- 2. The Food Studies field studies of first and second cycle fulfil the needs of the potential employers of candidates from the programmes.*

(2) Weaknesses:

1. *Social partners are too limited in their involvement in first and second cycle students' final theses.*

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 first and second cycle studies in the Food Studies field in VMU are related to the fields of agronomy (A001) and veterinary medicine (A002). In the Self-evaluation report it is mentioned that according to the total weighted sum of points of the formal evaluation of Agricultural (A) research papers in 2017-2019, based on the annual evaluation of research and experimental development of higher education institutions, VMU was ranked first for the last three years.

Plans for scientific applied research activities in the science field, are provided and their financial viability is presented. Improved infrastructure (ESF funding was received for the renovation of the 6th building, work is expected to be completed in autumn 2022) will allow researchers to become more effectively involved in the implementation of R&D&I priority "Sustainable agrobiological resources and safer food".

The lecturers-researchers are carrying out the research in the field of Food studies and integrate science and the latest research results into studies. In the first and second-cycle study programmes of Food Studies field, the teachers are implementing research results in the teaching area. The information is provided on the research and applied science activities, which are carried out by the VMU, are directly related to the field studies carried out. It is integrated in the studies. During the period under evaluation, the ideas of some of the national and international projects implemented by the teachers of the field were used to link the content of the study programmes with the latest scientific achievements. To improve the first-cycle study programme, after the projects "Search for non-traditional plant raw materials for the development of novel foods" (2017-2019), "Enrichment of food products with functional components" (2017-2018), "Use of waste generated during the juice production process in food enrichment of products with functional components" (2017) a new study course "Coursework (innovative product development)" has been introduced. This is correlated to implementation of the research projects. In collaboration with external partners and stakeholders, teachers of the first and second cycle study programmes have connected teaching and research. There is a different perspective of teaching and research on the topic of sustainability. It is very narrow and not considering a broader perspective.

The economic and social impact of R&D activities in the agricultural sciences was assessed with 3 points (good), which shows that the research is important for society and the relationship with the social partners and society is in line with the recognized academic activities. Research and Experimental Development (R&D) activities of the Institutes of Agricultural and Food Sciences, Agroecosystems and Soil Sciences and Biology and Plant Biotechnology, Faculty of Agronomy.

(2) Expert judgement/indicator analysis

There are sufficient science activities implemented in the field of research related to the first and second cycle Food Studies field studies. VMU gave information that they are providing research activities that are directly related to the field studies carried out and explained that they are integrated in the studies. There is cooperation of the VMU with external partners. Teachers and leaders of VMU have plans for scientific activities in the science field related to the Food Studies study field. They explained and discussed the link between the curriculum and the latest developments in science, with the content of the first and second cycle study programmes. The conditions for students to get involved in scientific activities exist and are consistent with their study cycle. First-cycle and second-cycle students are invited to participate in international scientific conferences and to present their research. For ERASMUS+ opportunities, about 200 VMU students take the advantage of this opportunity per year before the pandemic. About 40 VMU students use this opportunity per year before the pandemic, for academic exchange projects.

Students can prepare high-level final theses and publish their research results in scientific journals.

Expert panel recommends to increase the scope of R&D project activities, to encourage teachers participating in the programmes to submit applications and to participate more actively in research projects.

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

(1) Factual situation

Topics of the research carried out by the teachers are closely related to the courses they teach. Teachers of the first and second-cycle study programmes are actively involved in national and international R&D activities. Expert panel found that there is medium active cooperation with social partners, commissioned research and other activities that are carried out. There is place for improvement. The funds of R&D projects and contracts have been reported and staff have claimed that the projects are performed in the field of agricultural science in 2017-2019. Currently, there are 9 teachers in the field of Food Studies who allocate part of their full-time research work, and the total number of research staff in the 2020-2021 academic year was 2.95. The VMU has set research, experimental development and innovation R&D&I priority to "Sustainable agrobiological resources and safer food". Their consideration and thinking about sustainability is in agrobiological crop production, organic production etc. Thinking is that it will enable researchers to research and develop safer, natural food raw materials, food ingredients and products, food additives, innovative food packaging, storage technologies, etc. In SER a lot of information is also for future doctoral studies.

In SER is stated that suggestion of previous expert panel was to encourage lecturers (teachers) and students to increase their internationalization by applying for the international exchange programs. There should be more efforts to include more software programmes into education for virtual training, and to connect research with small and medium size enterprises (SME).

(2) Expert judgement/indicator analysis

VMU has semi-modern infrastructure and there are opportunities for complex research in the field of first and second cycle study programmes of Food Studies. Future is to study the English language. There is also a plan to implement international teaching materials into education programmes of the study. Therefore, this allows applying and integrating the latest

research experience into the educational process of students. Research-based studies are developed at the University in terms of research for final theses, research applied in laboratory work, exercises and practices, teachers use research results in studies, students are not seeking research opportunities, as majority of them are employed during their studies in second cycle of Food Studies field.

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

The methods and numbers of student involvement in scientific applied research activities are provided (percentage of students participating in scientific applied research activities as part of all students studying in the field and cycle programmes). Organization of scientific events allows motivated students of both cycles to become more actively involved in scientific activities. 4 first-cycle and 4 second-cycle students presented their research results at the international scientific conference. During the site visit the lecturers expressed that students actively participate in scientific activities.

(2) Expert judgement/indicator analysis

Expert panel found that there is an open path for improvement in line to find more efficient funding for research, to invite and integrate more students into the research project activities, also to expand the cooperation partners in performing the applied science activities. The numbers of first and second cycle students' involvement in scientific activities are rather low. Also, the number of outgoing and incoming teachers and students are low and could be higher. There is planning to apply for ERASMUS+ programs and to participate in the exchange. There is future motivation to encourage a greater number of students to participate in various exchange programmes.

Expert panel recommends to develop students' scientific competences more actively through practical scientific activities, hands-on training in teaching, organizing the exchange of scientific ideas, and improving scientific communication skills. Also expert panel recommends to intensify research and experimental development activities in the field of Food Studies by strengthening cooperation with social partners.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

- 1. There are sufficient science activities implemented in the field of research related to the Food Studies study field.*
- 2. Teachers and leaders of VMU have plans for scientific activities in the science field related to the Food Studies study field.*
- 3. There is a plan to implement international teaching materials into education programmes of the study.*

(2) Weaknesses:

- 1. The numbers of student involvement in scientific activities are rather low.*
- 2. There is low research and experimental development activities in the field between VMU and cooperation with social partners.*
- 3. There is a different perspective of teaching and research on the topic of sustainability. It is very narrow and not considering a broader perspective.*

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

The general admission for the first cycle studies is carried out by the Lithuanian Association of Higher Education Institutions for General Admission (LAMA BPO). Those who successfully graduated from secondary school in Lithuania, can be invited to study. Minimal score that has to be met to participate in the competition for study places is defined each year by the government. Last year, for first cycle studies, it was 5.4/10. Later, a certain number of students with best scores are invited to study in a field they chose. In 2020, VMU admitted 24 students for first-cycle studies of Food Studies field (20 to state funded and 4 to non state funded places). Average score of students in state funded and non state funded places was 6,96 and 6,72 respectively. As it was stated by the University representatives during the meeting with the expert panel and in their self evaluation report, the number of applicants (and consequently the number of students admitted) is lower than desired.

Admission for the second cycle studies is carried out using an internal e-system of the University. As long as the second cycle studies of Food studies field are not conducted in English, most of the information about admission to master degree programme of Food studies field is presented in Lithuanian. Candidates must have a university bachelor's degree or a professional bachelor's degree (the latter must have completed additional studies). Applicants are selected by the score they have.

The score for candidates with a university bachelor degree is made using formula $K = 0.8 A + 0.2 B$ where:

- A is the weighted average of the grades for all courses from the bachelor's diploma supplement;
- B is the grade for the Final bachelor thesis;
- K is the score.

For candidates having completed studies at a college/university of applied sciences and additional studies, the score is made using a formula $K = 0.4A + 0.4B + 0.2C$ where:

- A is the weighted average of the grades for all courses from the professional bachelor's diploma supplement;
- B is the weighted average of grades of additional related study courses;
- C is the grade for the Final professional bachelor thesis.

In 2020, VMU admitted 16 second cycle students (8 to state funded and 8 to non state funded places). Average score of second cycle students in state funded and non state funded places was 8,5 and 6,78 respectively.

(2) Expert judgement/indicator analysis

The webpage of LAMA BPO is available in Lithuanian language as well as English. Admission criteria to the first and second cycle studies in Food Studies field are clearly stated and updated each year by the University regarding latest changes in legislation. All information about admission rules and criteria to the first and second cycle studies can be found in the University webpage. The processes of student admission both to first and second cycle studies are clear and transparent, with clearly defined rules stated which are accessible in publicly available documents.

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

Since 2017, VMU has been provided with the right to carry out recognition procedures for higher education gained outside Lithuania. These procedures apply both to first and second cycle studies. The procedure is conducted centrally in the International Cooperation Department in accordance with resolutions and regulations of Lithuanian Republic, following information provided by the Centre for Quality Assessment in Higher Education, as well as general or individual (in the absence of general) recommendations and in consultation with the responsible staff from the Centre for Quality Assessment in Higher Education.

In SER it' stated that during the reporting period of the first and second cycle studies in the field of Food Studies, there were no cases of recognition of competencies acquired through non-formal or informal learning.

(2) Expert judgement/indicator analysis

The university as an institution has much more experience in this field than the Agriculture Academy, which joined VMU during a national restructuring effort. As there are plans for implementing an international first cycle study programme in Food Studies field, this experience and mechanism provided by the University will be of much help. Currently, there is an opportunity to recognise foreign qualifications but this option has not been utilized within the field of Food Studies (during the evaluated period, there have been no cases of recognition of competencies).

3.3.3. Evaluation of conditions for ensuring academic mobility of students

(1) Factual situation

All VMU students are provided with possibilities to use Erasmus+ opportunities. Information about student mobility possibilities is announced by various channels: VMU International Cooperation Department and the Faculty/Academy international coordinator provide students with information about studies and placement abroad, VMU Erasmus days are organised, Erasmus+ competitions are posted on VMU website, intranet, social media, etc.

Students from the Food Studies study field, from both first and second cycle studies, during the site visit emphasized that international experience is extremely important for them. However, very few of them actually travel abroad, and likewise no incoming exchange students have been part of the Food Studies study field in recent time. In 2017-2018 study year, 4% of the first-cycle students took the opportunity to leave for partial (≥ 15 credit) studies or practice; in 2018-2019 – 0.6%. In 2019-2020, the trips were suspended due to the onset of the Covid-19 pandemic. During the period under evaluation, only 3.7% of the second-cycle students went for part-time-studies abroad. Low mobility of students in the field of Food Studies is recognised as a problem by the administration of University and Faculty.

(2) Expert judgement/indicator analysis

University should promote academic mobility more among the first and second cycle Food Studies students. It is especially important considering the pursuit of a first-cycle study programme in Food Studies field that would be conducted in English and available for international students. University should also reach for international credibility in Food Studies while attracting incoming students via various mobility programs for first and second cycle studies in the field of Food Studies.

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

First and second cycle students in VMU have opportunities to be supported financially with social, motivational and patronage scholarships, possibility to postpone the payment of the tuition fee and/or the accommodation fee or allow this fee to be paid in a more extended period, for several times. From 2020 the state pays scholarships of 200 EUR to students of the first cycle study programme *Food Quality and Safety*. It is paid only to students without academic debts in state-funded places. Students (both first and second cycle) can live in University's dormitories. For some, the accommodation fee can be reduced. Upon the need, all students of VMU can receive free-of-charge counselling of a psychologist at VMU Psychology Clinics during individual meetings or online.

University offers help in modelling students' career plans. The University and the Agriculture Academy have cooperation agreements with different social partners, including commitments to inform about job positions.

(2) Expert judgement/indicator analysis

Based on the self-assessment report and the site visit, there is sufficient student support by various means. All students in VMU can access psychological support, student counselling, financial support. For those who need it, dormitories are available. There are various scholarships that students can get. All these measures apply for both first and second cycle students. Also, beginning from 2020, first cycle students of *Food Quality and Safety* in state funded places with no academic debts receive a state paid scholarship of 200 Eur.

3.3.5 Evaluation of the sufficiency of study information and student counselling

(1) Factual situation

Study information is presented to students in a convenient way and is easily accessible. Detailed study programmes of *Food Quality and Safety* (first cycle) and *Quality and Safety of Plant Food Raw Materials* (second-cycle) are accessible in the VMU website. Subject information is presented in the *Moodle* platform. Students get timely messages related to their studies via personalised emails, informational messages are sent in the studentas.vdu.lt account. General information and news are also posted at VMU website: <https://zua.vdu.lt/en/> and <https://zua.vdu.lt/>.

As it was stated during the site visit, first and second cycle students feel free to consult with their tutors and express their opinion as well as criticism. Student counselling is sufficient, each full time working VMU employee has 20 hours allocated for student counselling during the semester. First and second cycle student representatives take part in various VMU Agriculture Academy's committees and commit to important decisions (for example, each Study Program Committee has a student representative from the respective study programme).

(2) Expert judgement/indicator analysis

Based on the self-assessment report, and the site visit, study information and student counselling are sufficient for the first and second cycle Food Studies students.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

- 1. Sufficient social, psychological, and financial support is provided to the students of the Food Studies field. Psychological support is free of charge. Beginning from 2020, first cycle students of Food Quality and Safety in state funded places with no academic debts receive a state paid scholarship of 200 Eur.*
- 2. Appropriate academic support is provided to students in the Food Studies field by providing detailed information about their studies and other activities at the University.*

(2) Weaknesses:

- 1. Not enough students apply for the first and second cycle studies in Food Studies field.*
- 2. Not enough students of first and second cycle studies in Food Studies field travel abroad.*

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

The field study programmes of both cycles are implemented in a full-time and part-time study form. In each study course classical (lectures, laboratory works, exercises, seminars) and active (guest lecture, situation analysis, experiment, group discussion, preparation of reports, performance of individual tasks and their presentation) study methods are used. Independent learning in the first and second cycle study programmes consists of student's preparation for laboratory and practical work, seminars, preparation and performance of individual tasks, presentation of individual task outcome. The evaluation of completed works and projects is accompanied by constructive comments based on clear criteria.

Students are exposed to a wide variety of teaching and learning methods (interpretation, illustration, video review, summary of information, etc.) as well as assessment methods (evaluation of problem solutions, case analysis, performance of experiments, etc.). Graduates from first and second cycles of Food Studies field have opportunities to continue their studies at higher levels, graduates from first cycle to second cycle and graduate from second cycle to doctoral studies. Students are admitted to the next level on a competitive basis.

(2) Expert judgement/indicator analysis

Subjects of first and second cycle studies in Food Studies field are designed according to the scientifically and practically based pedagogical principle of Constructive alignment linking learning outcomes, teaching activities and assessment. Teaching and learning activities are chosen to promote active learning of first and second cycle students.

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

(1) Factual situation

It is stated in the SER that socially vulnerable groups (orphans, people with disabilities, students from large families and low-income families) and students with special needs are

given the opportunity to study according to an individual study schedule. Studies according to the individual study schedule are regulated by VMU Description of the Procedure for Providing the Individual Study Schedule. Socially vulnerable groups receive different discounts for tuition or dormitory fees, scholarships are provided for these students. VMU buildings and equipment in libraries and classrooms are constantly maintained and updated following the needs of students with disabilities. Students can settle in specially adapted dormitory rooms, if necessary, with an accompanying person. The study process is organized according to individual needs of students, individual counselling is provided when necessary.

(2) Expert judgement/indicator analysis

The conditions ensuring access to study in the first and second cycle studies of Food Studies field for socially vulnerable groups and students with special needs are fine.

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 assessment of students' knowledge and abilities is regulated by VMU Study Regulations. Monitoring of learning achievements are interrelated processes such as an analysis of student enrolment in studies and learning situation in study courses, an analysis of the reasons for the students' non-participation in interim and final examinations, an analysis of intermediate and final evaluation of students and implementation of preventive measures to manage student failure and improvement of organisation of studies. There are several processes in place for monitoring students' progress in their studies and to provide feedback to students, such as information system *Studis* and the distance learning system *Moodle*.

In the first and second cycle study programmes of Food Studies field, the achievements of learning outcomes are assessed by examinations and midterm tests. The results of intermediate work assessment are announced and discussed during lectures. MVU offers the use of study progress tools, where students mark the resources they have used, and the activities they have done. The teacher is given the opportunity to monitor the overall progress of students in the study course. VMU departments (including Department of Plant Biology and Food Sciences) perform monitoring of learning achievements regularly, results are used for timely analysis and discussions with the Vice-dean and the teachers.

(2) Expert judgement/indicator analysis

There are processes in place for monitoring the students' progress in their learning as well as their participation in teaching activities. Students receive feedback on results and achievements. From the interviews the expert panel learnt that first and second cycle students of Food Studies field and teaching staff have a close and trustful relationship, students feel confident and comfortable in addressing questions and getting feedback from teaching staff in a direct and informal manner.

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

(1) Factual situation

Data for monitoring the career of graduates are collected by the VMU Career Center regularly (via survey of Alumni): 12 months after graduation are showing graduates' success in finding employment. In Year of 2019 VMU signed an agreement with the Employment Service under the Ministry of Social Security and Labor of the Republic of Lithuania. Agreement ensures access to official statistical data about VMU graduates registered for a job. Data is collected

twice per year (12 months and 15 months after graduation). In SER and during the site visit no proof was found that data is collected and analysed on graduates' long term success in establishing themselves in the labor market and pursuing a career.

According to the latest surveys 77% and 65% of the first cycle graduates of Food Studies field in Year of 2019 and Year of 2020, respectively worked in qualified positions according to their specialty or continued their studies in the second-cycle.

The share of Year of 2019 and Year of 2020 graduates from the second cycle study programme of Food Studies field that found a relevant position in Lithuania was 100% and 83% respectively. 3% of graduates of Year of 2020 continue their studies in the third cycle.

Food Studies field Alumni survey conducted in Year of 2020 shows that 67% of first cycle graduates of and 69% of second cycle graduates rate the VMU contribution to their preparation for the labour market better and better. The majority of Alumni and social partners in the discussion with the expert panel stated that first and second cycle graduates gained sufficient competence and were prepared for the labour market. Some have shared the opinion that development of practical skills was not sufficient, they lacked knowledge and better understanding on legal requirement application in practice and soft skills were underdeveloped for labor market requirements. Social partners from the Public sector expressed the importance of this particular first and second cycle study programmes of Food Studies field for market needs. Social partners from industry have stated that graduates of VMU are most skilled in raw material and final product quality evaluation.

It is stated in SER that an area for improvement in Food Studies is active involvement of social partners in the study process, which would lead to gaining professional knowledge and acquiring more practical abilities and skills. In order to assure the internal quality new cooperation agreements were signed with 8 different social partners in Year of 2020–2021.

(2) Expert judgement/indicator analysis

Monitoring the career of graduates is done just post graduation e.g. after 12 and 15 months. Long term success of graduates' careers should be monitored for better understanding of the labor market and need of Food Studies field studies (first and second cycle) improvement. The competence of graduates corresponds to the expectations of the labour market in Lithuania, however more active involvement of social partners would be beneficial for improving practical abilities and skills. The employability of the graduates is evidenced to be sufficiently high.

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

(1) Factual situation

Cooperation and mutual respect between the student and academic staff is one of key student oriented teaching methods. VMU Code of Ethics states academic integrity, tolerance and non-discrimination policies. Both teachers and students have the right to appeal to the VMU Academic Ethics Commission. The reports on violation of VMU Code of Ethics are investigated, analysed and the decisions on academic integrity are taken by the Academic Ethics Commission. VMU procedures for plagiarism prevention are implemented, as well as recommendations for teachers and students on how to prevent plagiarism in written works. All written theses are assessed for plagiarism by using the OXSICO system. In the last three years, there have been no cases of expulsion of the first and second cycle students of Food Studies field from the VMU due to dishonest treatment and ethical violations.

(2) Expert judgement/indicator analysis

Policies to ensure academic integrity, tolerance and non-discrimination are in place and are formulated.

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

VMU Description and Study Regulation states appeal and complaint rules and procedures. Brief instruction is available for students on appeal procedures on the VMU webpage. Cases should be submitted in written form via Student Portal *studentas.vdu.lt* not later than 5 days after announcement of exam or other evaluation result to dean of faculty. However, the previously mentioned web page for appeal submission currently is under construction. Commission is formed for evaluation of appeal. In any case the appeal must be examined in 5 work days at the most after the appeal's submission. There have been no appeals or complaints from the students of the first and second cycle of Food Studies field during the period of Year 2018–2020.

(2) Expert judgement/indicator analysis

The procedures for the submission and examination of appeals and complaints regarding the study processes are in place and transparent. VMU web page for appeal submission currently is under construction e.g. submission path listed in instruction for students isn't available.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

- 1. Various teaching and learning as well as assessment methods are applied in the first and second cycle study programmes of Food Studies field. Subjects are designed according to the scientifically and practically based pedagogical principle of Constructive alignment linking learning outcomes, teaching activities and assessment.*
- 2. The employability of the graduates is evidenced to be sufficiently high.*

(2) Weaknesses:

- 1. No data is collected and analysed on graduates' long term success in establishing themselves in the labor market and pursuing a career.*
- 2. During the meeting with expert panel alumni shared the opinion that development of practical skills was not sufficient, knowledge application in practice and soft skills were underdeveloped for labor market requirements.*

3.5. TEACHING STAFF

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

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

(1) Factual situation

From the Self-evaluation report (SER), there is list and evidence that the academic staff of the Food Studies field studies is suitable to ensure the achievement of the learning outcomes of the first cycle and second cycle study programmes within a given study field. The study

courses of the first-cycle study programme *Food Quality and Safety* are taught by 18 teachers, and the study courses of other fields are taught by 9. The courses of the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* were taught by 14 teachers. Courses in other fields (ecology and environmental science, public health, economics) were taught by 3 teachers. Same teachers teach in full-time and part-time studies.

The composition of teaching staff in the first and second cycle study programmes of the Food Studies field meets the requirements of legal acts. The current ratio between the number of teaching staff of the field subjects and the number of students studying is provided. In the first-cycle study programme, the ratio of the teaching staff of the Food Studies field and the number of students, indicating the number of students per teacher, was 1:12.72 in 2017; 1:9.28 in 2018; 1:3.50 in 2019. The ratio of the teaching staff and the number of students in the second-cycle study programme was 1:2.57 in 2017; 1:2.64 in 2018; 1:1.79 in 2019. Some teachers teach in full-time and part-time studies. Some courses of the first and second cycle study programmes are taught by two or more teachers, which allows to present the often-interdisciplinary issues discussed in the study course in more detail, to pay more attention to student consultations, to use more diverse teaching/learning methods. In the first-cycle study programme, the share of teachers with the knowledge of English of at least B2 level is 73.1% of all teachers who teach in the programme, and in the second-cycle study programme – 82.35%.

In the self-evaluation report, a list of permanent teaching staff of the field subjects at the VMU (at least half-time position and at least 3 years at the VMU) is given. The list is provided, and is indicating the pedagogical and scientific degree, the pedagogical work experience, the research interests (listing 3 major works over the last 5 years), the practical work experience in the subject field, the subjects taught, and the current workload at the VMU. During the period under evaluation, the dynamics of teaching staff of the courses was: 22.05 positions in 2017-2018 study year; 22.15 positions in 2018-2019 study year; 23.19 positions in 2019-2020 study year. A slight increase in the number of full-time positions is related to a higher concentration of specialty courses taught in senior years.

(2) Expert judgement/indicator analysis

From the site visit, it was informed that the ratio between teaching/research load is not fixed, and it is possible to fine tune as a joint agreement for each employee. There are an adequate number of qualified and competent (scientific, didactic, professional) teaching staff within both cycles in the field study programmes, to achieve the learning outcomes. Teaching staff who deliver Food Studies study field subjects and work at least part-time, are indicated and commented on. The sufficiency of the qualification of teachers and researchers (pedagogical work at a university higher education institution, scientific, didactic, and professional competencies) to achieve the position and the learning outcomes is determined during recruitment and during attestations. Mandatory minimum qualification requirements for the positions of teachers and researchers and submission for attestation are approved by VMU. The teacher's achievements in the field of professional development are evaluated every five years during the attestation.

3.5.2. Evaluation of conditions for ensuring teaching staffs' academic mobility (not applicable to studies carried out by HEIs operating under the conditions of exile)

(1) Factual situation

The conditions for ensuring the academic mobility of Food Studies field subject teaching staff are described. Each VMU teacher has opportunities to use Erasmus+ programme possibilities.

Information on teaching visits (selection, organization, and other procedures) for those going on Erasmus + teaching and learning visits is public and available on VMU website.

The academic mobility of the lecturers of first and second cycle study programmes of Food Studies field has remained stable during the last 3 years, every year the 2-8 study field teachers go to mobility. The number of outgoing and incoming field subject teaching staff and their share of all field subject teaching staff over the last 3 years are provided and analyzed. The share of teachers of the field of study who participated in academic mobility during the period under evaluation was 75% of all teachers of the study programme (First-cycle, 14 teachers from 2017-2020; second-cycle 13 teachers from 2017-2020). During the period under evaluation, 51 foreign teachers came from Poland, Belgium, Germany, Switzerland, Portugal, Italy, Turkey, Russia, Brazil, Indonesia, Egypt, Nigeria, Uzbekistan, and Kazakhstan. Teachers of Food Studies field accounted for 70% of all incoming teachers.

The benefits of teacher mobility include personal professional development, as well as contributing to the birth of project ideas, familiarity with new research, its methodology and equipment.

(2) Expert judgement/indicator analysis

Expert panel gives some suggestions for improvement: to organize more frequent surveys of social partners and encourage more active feedback by involving the social partners in the improvement of the study process. It is necessary that there is feedback from social partners, about what skills do they expect from students (future employees), and navigate trainings in that way. It is necessary to assure, hand on training for students and case study in the lecture processes. It is necessary that students learn on specific cases and have problem solved education.

Expert panel recommends to encourage lecturers (teachers) to increase their internationalization by applying for the international exchange programs.

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

(1) Factual situation

Teaching staff of the Food Studies study field are provided with conditions for the professional development of competences, which are evaluated periodically. At VMU, teacher professional development is organized under 8 groups of competences: higher education didactics competences, digital competences, research competences, management competences, foreign language competences, intercultural competences, course-related competences, and personal competences (regulated by the Description of Procedure for Professional Development at VMU, 2018).

The benefits of teacher mobility include personal professional development, as well as contributes to the birth of project ideas, familiarity with new research, its methodology and equipment. Second, it provides programme teachers with opportunities to become acquainted with new teaching methods and implement them in their lectures. Two topics received particular attention from teachers in 2019: “Active learning methods and student involvement in studies” and “Feedback to students: how can we help them learn better?”. Trainings were organized several times a year, using the University’s internal resources – University teachers were invited to conduct the training, shared useful recommendations, their expert insights, and their experience in these areas. At the end of each training, participants provide feedback on the training that has taken place, allowing for the adjustment of the training content, and revealing other training areas relevant to the academic staff. Training topics are also selected

considering the teachers' suggestions for future training presented in the University Teachers' Survey.

Teachers are invited to participate in training courses for professional development in above mentioned different groups of competences. Teachers also choose professional development possibilities outside the University based on their teaching and research interests. If other institution-provided possibilities are cost-related, the University teachers can apply for support from their department, research clusters, Erasmus+ program possibilities or use other potential opportunities.

Not all teaching staff and researchers of the both cycles of the study programme have reached at least a B2 level of English language. In the first-cycle study programme, the share of teachers with the knowledge of English of at least B2 level is 73.1% of all teachers who teach in the programme, and in the second-cycle study programme – 82.35%. From the interview, it was found that some teachers do not have specific knowledge of English language and that it is not feasible to, fast change to complete English taught lectures for some teachers.

The survey of teachers is conducted at the end of an academic year to identify their opinion and suggestion about the teaching, professional development, students' involvement into the studies and working conditions for teaching. Evaluation of conditions for ensuring teaching staffs' academic mobility is given. Each VMU teacher has opportunities to use Erasmus+ program possibilities: to go for Erasmus+ teaching visits to VMU partnership universities in the EU as well as EEA/candidate countries (516 partner institutions) or outside the EU (99 partner institutions). About 200 VMU teachers accepted teaching mobility possibilities in a year before the pandemic.

(2) Expert judgement/indicator analysis

Teachers are invited to participate in training courses for professional development in above mentioned different groups of competences. Professional development includes teacher participation in the University-provided courses as well as ones organized by other Lithuanian institutions or international institutions. At the end of each training, participants provide feedback on the training that has taken place, allowing for the adjustment of the training content, and revealing other training areas relevant to the academic staff. Training topics are also selected considering the teachers' suggestions for future training presented in the University Teachers' Survey.

There should be more efforts to include more software programs into education for virtual training, and to connect research with small and medium size enterprises (SME). To implement more teaching in the area of legislation and certification in the food processing industry.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

- 1. Academic staff of the Food Studies field studies are suitable to ensure the achievement of the learning outcomes of the first and second cycle study programmes within a Food Studies field.*
- 2. There is an adequate number of qualified and competent (scientific, didactic, professional) teaching staff within a Food Studies field first and second cycle study programmes, to achieve the learning outcomes.*
- 3. Professional development includes teacher participation in the University-provided courses.*

(2) Weaknesses:

- 1. Not all teaching staff and researchers have reached at least a B2 level of English language.*
- 2. It will be difficult to assure teaching at both study cycles in the English language.*

3. *It is important to educate teachers to implement more teaching in the area of legislation and certification in the food processing industry.*

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

VMU uses the university facilities for learning purposes, specifically there are 222 classrooms accommodating from 5 to 150 students while the VMU Grand Hall has 725 seats. There are 46 computer rooms sizing between 5 to 31 students. The Faculty of Agronomy has 33 auditoriums, training rooms and labs. Facilities and buildings support people with special needs. Facilities were recently renovated with the project “Renovation of the study infrastructure, basic equipment and information infrastructure of the Lithuanian University of Agriculture for the improvement of study quality”.

IT labs are equipped with the common software (MS office, Moodle etc) which allows students to have an effective learning experience when searching the library, writing essays etc. A Student Portal and a Teacher Portal integrates all required apps into the same platform. The library has a total of 770 working places for all university students, who have also the option to connect remotely from their home/dormitory via EZproxy. Research Management System allows access to rich databases such as Academic Search Complete, ASABE, SpringerLink, and SAGE Journals Online. Resources are also in English which allow internships and Erasmus exchanges.

Regarding lab equipment, there are 3 new labs funded by EU Structural Funds (2017): 1. Laboratory of Pasteurization of Vegetable Raw Materials. 2. Laboratory of Bio-fermentation of Secondary Food Raw Materials and 3. Laboratory of Agro-Bio Raw Material Quality Research. These labs, when fully equipped, will enhance the students' learning.

(2) Expert judgement/indicator analysis

The means and equipment used for the first and second cycle Food Studies field studies, including the software, is adequate for the current number of students and suitable to achieve the learning outcomes. The VMU uses the university common facilities and resources to provide first and second cycle students of Food Studies field an effective learning experience. The labs and equipment are functional and adequate. The resources for the first cycle are adequate while the resources for the second cycle can be improved to enhance the collaboration with industry partners and strengthen international collaborations.

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

(1) Factual situation

As mentioned above, there are 3 new labs that are estimated to be completed by the end of 2022. There are no specific plans (with targets/ and Key Performance Indicators-KPI) for research projects or industry (social) collaborations which could also bring additional income for VMU.

(2) Expert judgement/indicator analysis

The new labs will enhance the profile of VMU. However, there are no established long-term research collaborations to get additional funding and industry partnerships also take time to develop.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

- 1. Use of university resources for the first and second cycle study programmes of Food Studies field.*
- 2. Upgrade of lab facilities especially for the second cycle to enhance university-industry collaborations and international profile/collaborations.*
- 3. The (shared) library and IT equipment are adequate for both cycles' studies but they can be further improved.*

(2) Weaknesses:

- 1. No strong research/industry collaborations to attract more funding/use existing facilities.*
- 2. The budget for labs and equipment is dependant on university resources/budget, which is prioritised at higher level.*

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 management of first and second cycle study programmes of Food Studies field is described in the SER. The following levels of internal quality assurance of the studies and responsible management structures are distinguished: Academy Council, Chancellor of the Academy, Faculty Council, the Study Programme Committee (hereinafter – SPC), Dean of the Faculty and Director of the Institute. Each of them bears different responsibilities in Study programme quality assurance. The SPC is the major body for development and quality assurance of Study programmes. The SPC's main responsibilities include: coordination of the Study programme implementation, assurance of the Study programme quality, keeping contacts with stakeholders and assuring their involvement. The SPC performs internal quality assessment and renewal, it is responsible for preparation and implementation of the Study programme quality improvement plans. There are two SPC bodies, one for the first cycle study programme and one for the second cycle study programme. SPCs include members representing students, teachers and social partners. Responsibilities among the SPC members are clearly defined. Twice a year SPCs carry out quality monitoring and organize study programmes of Food Studies field improvements.

During the site visit VMU has provided Protocols of last SPC's meeting. Protocol No 18 of SPC's meeting held on 18th of January 2021 states that meeting agenda was to evaluate first cycle *Food Quality and Safety* study programme. As provided protocols are very brief expert panel had difficulty to evaluate were all parties' opinions heard and considered. Decision stated in Protocol No 18 is "Teachers of the Food Quality and Safety program should place more emphasis on the topics related to the study program objectives in the subject content". Decision made is rather generic and is not supported by any suggestion on actions to be taken.

Internal study quality assurance and continuous improvement are based on the surveys on the opinion of students, lecturers, and other participants of the study process, and on the use of the obtained data to improve the studies. There is a regular (conducted each semester) feedback collection system by carrying out electronic student surveys to define actions for quality improvement. Graduates survey is conducted at the end of studies and 12 months after graduation. The survey of teachers is conducted at the end of an academic year.

During interviews with first and second cycle students they could not provide full information, how they can contribute to study programmes quality assessment and study programmes improvement. Some examples of conducted surveys are listed in the SER (survey of teaching and learning evaluation of the study courses is conducted at the end of each semester by students; survey of first-year bachelor students regarding the reasons for the choice of studies and their expectations; survey of the graduates of studies about the studies, final theses, and the preparation for the labour market; survey of alumni on their adaptation in the labour market and career; survey of teachers is conducted at the end of an academic year; survey of social partners). Amount and frequency of student and teachers' surveys are sufficient. However, frequency of social partners surveys is not determined.

(2) Expert judgement/indicator analysis

The study management system including the quality assurance system is in place and working. The management system has a structure with clear responsibilities at different levels. The major body for development, quality assurance is The Study Program Committee in which teachers, students and social partners are members. The main channel for feedback collection is surveys. First and second cycle students are lacking knowledge on how they can contribute to study programme improvement.

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

(1) Factual situation

Feedback from stakeholders are systematically collected and analysed and taken into account. There is a regular (conducted each semester) feedback collection system by carrying out electronic student surveys to define actions for improvement. Graduates survey is conducted at the end of studies and 12 month after graduation. The survey of teachers is conducted at the end of an academic year. Social partners' representatives in the SPC suggest their remarks regarding the first and second cycle study programmes correspondence to labour market requirements. Social partners' feedback is also collected via surveys, during Career Days at VMU. Alumni suggestions are identified via surveys and during meetings organised by the Faculty Alumni association. It is listed in SER that the responsibility of post-graduates in survey was very low in 2018. Therefore in order to obtain feedback graduates were individually contacted by phone or e-mail, which seems to be not an efficient method to use.

Some examples of the main issues under annual analysis as well as decisions taken on first and second cycle study programmes improvement are listed in SER. Examples show that for first and second cycle study programmes improvements were done on content and scope of courses (in Y2018: five first cycle courses, one second cycle course replaced with new one; in Y2019: one new course introduced to first cycle study programme, two new course introduced to second cycle study programme). One example of first cycle study programme teaching quality improvement was listed in SER. Changes done to both cycles courses are beneficial to improvement of the competence of graduates.

(2) Expert judgement/indicator analysis

Feedback is used effectively in the development of the quality of the first and second cycle study programmes and the learning environments. However, Alumni feedback collection methods seem to be not efficient and participation rate in surveys could 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

It is stated in SER that survey results as well as decisions regarding first and second cycle studies of Food Studies field are publicised by the Chairperson of SPC for stakeholders by different channels: on VMU website, emailed to students and teachers, stored in Outlook folders, delivered in social media etc. The results of teaching quality assessment are also available to teaching staff online. Results are discussed in the SPC meetings. The Student representative in the SPC publicises the decisions to other students.

(2) Expert judgement/indicator analysis

The VMU website is informative and easily accessible. All necessary information for prospective national and international students is easily accessible in Lithuanian and in English. Information for enrolled students about the first and second cycle study programmes of Food Studies field and their different goals, opportunities, possibilities and choices etc. are easily accessible and sufficient for all students to be able to complete their studies successfully.

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

Feedback from students is systematically collected and analysed. Students have the possibility to give views anonymously on all subjects and teachers in the semester surveys. Y2020 survey results are presented in SER. Average survey results in both first and second cycle students on questions related to correspondence to the study expectations such as study material, auditoriums, communication with the teachers were positive (above 3 point on 4 point scale). Average survey score on questions about overall quality of the first and second cycle study programmes was 3. During the site visit expert panel could not get an answer why the overall first and second cycle study programmes for evaluation score is significantly lower than the rest of survey questions. Survey result shows need of improvement in areas of meeting study expectations, gain of adequate knowledge and skills and application of knowledge in practice.

It is stated in SER that based on survey results decisions on activities for Study programme quality improvement was made: to invite more teachers from food industry, foreign universities, to cooperate more closely with business enterprises, to use modern laboratory equipment for research. Also it is stated in SER that action plan should be implemented after the end of the Covid-19 pandemic. Expert panel opinion is that some of planned actions, for instance lectures taught by external teachers, can be implemented even during pandemic situation by using distance learning tools.

(2) Expert judgement/indicator analysis

There are procedures defined and working to collect and analyse student feedback at different levels at the university management. Y2020 survey result as well as feedback collected from Alumni and Social partners during site visit shows need of improvement in

certain areas: sufficient knowledge and better understanding of legal requirement application in practice, soft skills developed according labor market requirement.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

- 1. An appropriate structure is in place for ensuring and improving the quality of first and second cycle studies of Food Studies field with clearly defined responsibilities between particular parties.*
- 2. Feedback from all Stakeholders is collected on a regular basis and is used for first and second cycle study programmes quality improvement.*

(2) Weaknesses:

- 1. First and second cycle students' awareness of their contribution to Study programme quality assessment and Study programme improvement is low.*
- 2. Alumni feedback collection methods are not efficient and participation rate in surveys could be improved.*

IV. RECOMMENDATIONS*

Evaluation Area	Recommendations for the Evaluation Area (study cycle)
Intended and achieved learning outcomes and curriculum	<ul style="list-style-type: none"> ● The international mobility of students could be improved, perhaps partly by optimizing the logistic placement of courses. ● Social partners should be more involved in students' final theses.
Links between science (art) and studies	<ul style="list-style-type: none"> ● Increase student involvement in scientific research activities. ● Increase collaboration and cooperation with social partners. ● Clarify whether all aspects of sustainability are taught/researched, and if not emphasize the areas within sustainability that are focused on.
Student admission and support	<ul style="list-style-type: none"> ● Continue the strategy to attract higher number of national students. ● Encourage/enable students to travel abroad. ● Offer a selected "semester package" of unique courses in English to attract foreign students.
Teaching and learning, student performance and graduate employment	<ul style="list-style-type: none"> ● Implement a monitoring programme for graduates' long term success in establishing themselves in the labor market and pursuing a career. ● Include the social partners in discussion on how to develop various soft skills that are also desirable for the labour market.
Teaching staff	<ul style="list-style-type: none"> ● Increase the level of English language for all teaching staff and researchers to ensure the possibility of implementing the second cycle study programme in English. ● Encourage the teachers to implement more teaching in the area of legislation and certification in the food processing industry.
Learning facilities and resources	<ul style="list-style-type: none"> ● Increase the collaboration with social partners to use their existing facilities as well as to attract more funding. ● The learning resources for the second cycle can be improved to enhance the collaboration with industry partners and strengthen international collaborations.
Study quality management and public information	<ul style="list-style-type: none"> ● The awareness of students toward their contribution to Study programme quality assessment and Study programme improvement could be improved for both first and second cycle studies of Food Studies field. ● Improve the methods for Alumni feedback, in order to improve e.g. participation rate in surveys.

If the study field is going to be given negative evaluation (non-accreditation) instead of RECOMMENDATIONS main **arguments for negative evaluation** (non-accreditation) must be provided together with a **list of "must do" actions** in order to assure that students admitted before study field's non-accreditation will gain knowledge and skills at least on minimum level.

V. SUMMARY

The following is a summary of the findings of the expert panel based on the Self-Evaluation Report (SER) and the interviews with Vytautas Magnus University administration (senior management and faculty administration staff), staff responsible for the preparation of the SER, teaching staff and stakeholders (students, alumni, employers, social partners). The expert panel gives a positive evaluation to the implementation of the study field of Food Studies, *Food Quality and Safety* first cycle and *Quality and Safety of Plant Food Raw Materials* second cycle, at Vytautas Magnus University with all areas assessed as good or as very good.

The following are the key strengths of the Food Studies study field (first and second cycle) as assessed by the expert panel:

- The first and second cycle studies of Food Studies field comply with the requirements of the government and the university, and fulfil the needs of the potential employers of candidates from the first and second cycle study programmes.
- There are sufficient science activities implemented in the field of research related to the Food Studies field of study, and teachers and leaders of VMU, have plans for scientific activities related to the study field.
- There is sufficient social, psychological, and financial support to the students of the Food Studies field, and appropriate academic support is provided to them.
- Various teaching and learning as well as assessment methods are applied in the first and second cycle study programmes of Food Studies field, and the employability of the graduates is evidenced to be sufficiently high.
- Academic staff of the Food Studies field are suitable to ensure the achievement of the learning outcomes of the first and second cycle study programmes within a given study field, and there are an adequate number of qualified and competent (scientific, didactic, professional) teaching staff within the study field to achieve the learning outcomes.
- The library and IT equipment is adequate for first and second cycle students in Food Studies field, and the future update of lab facilities suggest that this will also be adequate.
- An appropriate structure is in place for ensuring and improving the quality of studies with clearly defined responsibilities between particular parties.

Despite the positive aspects of first and second cycle studies of Food Studies field, there are always areas in which it might be improved:

- Social partners are too limited in their involvement in first and second cycle students' final theses.
- There is low research and experimental development activities in the Food Studies field between VMU and cooperation with social partners.
- The internationalization of the Food Studies study field could be improved, both by national students going abroad and international students coming to VMU within the study field.
- No data is collected and analysed on graduates' long term success in establishing themselves in the labor market and pursuing a career.
- Alumni shared the opinion that development of practical skills was not sufficient, knowledge application in practice and soft skills were underdeveloped for labor market requirements.
- Not all teaching staff and researchers have reached at least a B2 level of English language, which will complicate the ambition to offer a second cycle study programme in English.

- The funding of learning facilities are dependent on the overall university budget, which is prioritised at a higher level than the study field. There could be a stronger collaboration with social partners to use their existing facilities, and perhaps use this collaboration to attract more funding. The learning resources for the second cycle can be improved to enhance the collaboration with industry partners and strengthen international collaborations.
- Students' awareness of their contribution to Study programme quality assessment and Study programme improvement is low and Alumni feedback collection methods seem to be not efficient and e.g. participation rate in surveys could be improved.

Expert panel signature:

Associate professor Henrik Siegumfeldt (panel chairperson)