CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

EVALUATION REPORT

STUDY FIELD of FOOD STUDIES

at Lithuanian University of Health Sciences

Expert panel:

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2. **Prof. dr. Anet Režek Jambrak,** *academic;*
3. **Dr. Ilias Vlachos ,** *academic;*
4. **Ms. Dalia Jočytė,** *representative of social partners;*
5. **Mr. Dominykas Budrys,** *students' representative.*

Evaluation coordinator – *Ms. Evelina Keturakytė*

Report language – English

Vilnius
2022

Study Field Data*

Title of the study programme	***Food Sciences***	***Food Sciences***
State code	6121IX003	6211IX001
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 (3.5 years) Part-time studies (5 years)	Full-time studies (2 years) Part-time studies (3 years)
Credit volume	210	120
Qualification degree and (or) professional qualification	Bachelor of Agricultural Sciences	Master of Agricultural Sciences
Language of instruction	Lithuanian	Lithuanian / English (full time studies) Lithuanian (part-time studies)
Minimum education required	For entrants to the full-time first cycle studies in Food Sciences: no lower than high school education or its equivalent diploma	Bachelors of the study fields in biomedical sciences; Bachelors of the study fields in technology sciences, food technology and biotechnology sciences; the individuals holding a bachelor 's degree may participate in the competition for master's studies, if they have completed the additional studies approved by LSMU in the chosen field of study (the inclusion of subjects studied in another higher education institution is decided by the faculty admission committee).
Registration date of the study programme	30 April 2013	30 May 2016

** 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 *6 December, 2021.* Due to the coronavirus pandemic, the Review Visit was organised online using video-conferencing tool (Zoom).

Associate professor Henrik Siegumfeldt, *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.	Explanation about the changes occurred during the self-evaluation period.
2.	Documents about providing feedback "Quality Thermometer".
3.	Study results of students (Year of 2017-2020).
4.	Reports on students' employment rates (after 6 months; after 12 months, after 18 months).
5.	Results of QR questionnaire, example of QR questionnaire.
6.	Results of the analysis of the quality of teaching Food Sciences subjects.
7.	Follow-up survey of graduates after 3 years (year of graduation – 2018)
8.	Study subject "Production and Hygiene of Plant Food Raw Materials and Products": plans of lectures and laboratory work in years of 2018/2019 and 2019/2020.
9.	Protocol of the Food Sciences committee meeting (31 August 2021 No. 114) on the QR code questionnaire data analysis.

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

The Lithuanian University of Health Sciences (hereafter – LSMU, the University) is the largest higher education institution for health science specialists in Lithuania. LSMU was established in 2010 by merging Kaunas University of Medicine and the Lithuanian Veterinary Academy. LSMU Medical Academy hosts 5 faculties: Medicine, Pharmacy, Dentistry, Nursing and Public Health. LSMU Veterinary Academy has 2 faculties: Veterinary Medicine and Animal Sciences. In total, LSMU offers 123 integrated studies, first, second, third cycle and residency study programmes, and there are 7775 students at LSMU.

Currently, the LSMU Faculty of Veterinary Medicine (hereafter – VMF) prepares Veterinary Medicine, Veterinary Food Safety (first and second cycle) and Food Sciences (first and second cycle) specialists.

The close ties of LSMU Medicine and Veterinary Medicine Academies are greatly beneficial, and it facilitates the performance of *Food Sciences* studies at a professional level, employing highly qualified specialists and teaching staff members from both academies.

The first cycle *Food Sciences* study programme (state code - 6121IX003) (hereafter – the first cycle study programme) (programme covers 210 ECTS credits) has been implemented since 2013 (in full-time mode its duration is 3.5 years, in part-time mode - 5 years). From 2017 the

programme belongs to the study field of Food studies programmes in the group of study fields of Agricultural Sciences.

The second cycle *Food Sciences* study programme (state code - 6211IX001) (hereafter – the second cycle study programme) (programme covers 120 ECTS credits) has been implemented since 2017 (duration of full-time mode studies is 2 years, part-time mode – 3 years). The programme belongs to the study field of Food studies programmes in the group of study fields of Agricultural Sciences, and from 2018, the programme in Food Sciences has been launched in English as a full-time mode of study.

In addition, LSMU provides additional Food Sciences studies that are intended for the improvement of qualification and professional and general abilities of college graduates with a higher college education. Upon the completion of additional studies, college graduates can continue their studies in the second cycle study programme of Food Sciences.

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 *Food Sciences* 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 Lithuanian University of Health Sciences *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	4
6.	Learning facilities and resources	4
7.	Study quality management and public information	3
	Total:	23

*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 Lithuanian University of Health Sciences 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	4
5.	Teaching staff	4
6.	Learning facilities and resources	3
7.	Study quality management and public information	3
	Total:	23

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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 first cycle *Food Sciences* study programme (programme covers 210 ECTS credits) has been implemented since 2013 (in full-time mode its duration is 3.5 years, in part-time mode – 5 years). According to the institution, the aim of the first cycle *Food Sciences* study programme (full-time and part-time) is to prepare qualified, receptive to production and scientific innovations food production chain specialists who understand the importance of healthy nutrition, and who are able to make independent decisions and implement them in collective work in a changing market.

According to the institution, the relevance of the first cycle *Food Sciences* study programme is that the trained professionals of this study field are in demand in the labour market, and the uniqueness of the *Food Sciences* study programme is that it is the only study programme in the field of Food Studies which prepares the specialists who know not only the technologies of food raw materials and products, but also are able to apply the concept of healthy nutrition in the developing new formulas of agricultural raw materials and products in a sustainable and environmentally friendly manner.

The second cycle *Food Sciences* study programme (programme covers 120 ECTS credits) has been implemented since 2017 (duration of full-time mode studies is 2 years, part-time mode – 3 years). From 2018, the second cycle study programme in *Food Sciences* has been launched in English as a full-time mode of study.

According to the institution, the aim of the second cycle *Food Sciences* study programme (full-time and part-time) is to prepare the qualified specialists who are able to implement scientific innovations in food preparation units, develop new food products that meet the needs of contemporary consumers and healthy nutrition principles, to manage human resources, work and adapt to the rapidly changing market conditions. According to the institution, the relevance of the Master's programme in *Food Sciences* is based on a demand for the specialists with in-depth knowledge of (bio)technological process development, modelling and management, of efficient and sustainable processing and use of agricultural raw materials for the development of high quality agricultural raw materials and products in order to ensure the long-term development of a competitive agriculture and food industry by promoting a wider range of economic activities and the production of value-added products in an environmentally friendly and nurturing manner.

(2) Expert judgement/indicator analysis

The aims of both first and second cycle study programmes of *Food Sciences* are clearly targeted to meet the needs of the society, by providing candidates that are specialists within the field of Food Studies. In Lithuania, the sector of food and beverage production is the largest industry in terms of the number of employees, annual turnover and share of the

country's gross domestic product (GDP). As the demand for the graduates of *Food Sciences* studies remains stably high, the relevance of these programmes to the society is obvious. According to surveys among social partners, more than 90 % of the respondents expressed a positive opinion and asserted that the first and second cycle *Food Sciences* study programmes graduates meet the needs of the society and the labour market. In conclusion, the institution fulfils the requirements of indicator No. 3.1.1.

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 vision of LSMU is to be a leading health science university in Europe for the prosperity of the society. The mission of LSMU is to create, gather, systematize, and disseminate the scientific knowledge, the latest achievements in science and studies, to teach and develop a creative, honest, proactive, educated, healthy, independent, and entrepreneurial personality, to foster democracy and prosperity, to develop a healthy and educated society. The unique role of LSMU in this educational process is the pursuit of a healthy society, which guarantees the social and economic progress of the country, the civilizational identity of Lithuania, and the creation, maintenance, and development of national and world cultural traditions. Ensuring animal health and welfare is an integral part of this goal.

(2) Expert judgement/indicator analysis

The aims and intended learning outcomes of the first and second cycle study programmes in *Food Sciences* are in line with the mission, operational goals, and strategy of LSMU. An example is the aim of the first cycle Food Sciences study programme, which is to prepare qualified, receptive to production and scientific innovations food production chain specialists who understand the importance of healthy nutrition, and who are able to make independent decisions and implement them in collective work in a changing market.

The LSMU strategic plan appears logical with a strong focus on the Lithuanian society and work-force. As it is specifically stated that LSMU wishes to be a leading Health Science University in Europe, it may be beneficial for LSMU to emphasize a stronger collaboration with foreign universities also related to the first and second cycle study programmes of Food Studies field. This could be performed by increasing the exchange of students going out, as well as coming in.

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 Sciences* 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	210 ECTS
ECTS for the study field	No less than 120 ECTS	196 ECTS

ECTS for studies specified by University or optional studies	No more than 120 ECTS	14 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	20 %
Individual learning	No less than 30 % of learning	30 %

Table No. 2. Programme's *Food Sciences* 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	60 ECTS
ECTS for studies specified by University or optional studies	No more than 30 ECTS	12 ECTS
ECTS for final thesis (project)	No less than 30 ECTS	38 ECTS
Contact hours	No less than 10 % of learning	10 %
Individual learning	No less than 50 % of learning	50 %

The intended learning outcomes of the first cycle study programme comply with the sixth level of the Lithuanian Qualifications Framework and the sixth level of the European Qualifications Framework for Lifelong Learning and the first cycle of the Qualifications Framework for the European Higher Education Area.

The intended learning outcomes of the second cycle study programme comply with the seventh level of the Lithuanian Qualifications Framework and the seventh level of the European Qualifications Framework for Lifelong Learning and the second cycle of the Qualifications Framework for the European Higher Education Area.

(2) Expert judgement/indicator analysis

As LSMU is complying with the legal requirements of HEI´s in Lithuania, there are no expert panel recommendations.

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 credits of first and second cycle *Food Sciences* study programmes are formed with an aim to achieve the learning outcomes, and the correlation of study aims, outcomes and study programme subjects was presented in Annex 1.1 of the self-evaluation report. The academic requirements of the studies and the ability of the study programmes to achieve the learning outcomes is assessed by analyzing the subject descriptions provided by the lecturers. The links between the intended learning outcomes of the study programmes, the study subjects and assessment methods were summarized in Annex 1.5. An example is the course *Food chemistry* summarized below:

Intended Learning outcomes of study programme	**Study subject and learning outcomes according to a subject**	**Subject learning methods**	**Assessment methods of subject learning outcomes**
To know the composition, properties and biochemical processes of food raw materials and products. Will be able to solve problems independently, choosing the most appropriate methods, and critically evaluate the results of work. To select and apply methods for research of food raw materials and products and evaluate the obtained results. To analyze and evaluate the quality and safety indicators of food raw materials and products and assess their compliance with the requirements	**Food Chemistry** – will be able to analyze food raw materials and products as complex systems and predict their physical, chemical and functional properties, assess the biological and nutritional value of food. After getting acquainted with biochemical processes in nutrients, the students will be able to further use the acquired knowledge for the assimilation of other disciplines and apply them in their practical work, apply theoretical knowledge to solve specific analytical problems, interpret results, draw conclusions about raw materials and food quality, biochemical changes and prevalence in food products and will be able to predict their changes during technological processes, determine the nutritional value, evaluate the different methods of chemical analysis, formulate tasks and conclusions, select the right chemicals and solutions, work safely with chemicals, choose the indicators, will know hot to take the samples of raw materials, food products and other materials used in the technological process properly, prepare them for laboratory tests, store them at the appropriate temperature and environment, will be able to select the adequate testing method (spectrophotometric, chromatographic, physical), perform the classical analytical procedures, analyze and evaluate the obtained data	Laboratory work, individual work, teamwork, error analysis, case analysis, problem solving	Essay, colloquium, defense of laboratory work

(2) Expert judgement/indicator analysis

The learning outcomes are phrased in a few but quite broad points. This emphasizes a holistic approach to teaching, but makes it somewhat difficult to pinpoint exactly how the individual courses will contribute to an intended learning outcome. An example is the intended learning outcome 1.3 for the first cycle (SER Annex 1.1: **To be able to solve problems independently, choosing the most appropriate methods and critically evaluate the**

results of work. This learning outcome is then fulfilled by four different study subjects, including philosophy and industrial practice. It probably requires a quite strong interaction between the course responsibles and the programme study leader to ensure that this learning outcome is met by exactly these four courses without too much redundant information between the courses.

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

A matrix demonstrating the evaluation of the totality of the first and second cycle study programme subjects/modules, which ensures consistent development of competences of students was presented in Annex 1.6 of the self-assessment report. In this annex, the links between i) the aim of the study programme, ii) the description of the study programme learning outcomes (for both first and second cycle), iii) the individual intended learning outcomes are linked to the study subjects where these learning outcomes are met.

(2) Expert judgement/indicator analysis

Based on the self-assessment report, it is clear that LSMU ensures the consistent development of student competences for both first- and second cycle students, and also for both full-time and part-time students.

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

In each semester, elective subjects can be chosen by students, alongside the compulsory subjects. Based on preference, students can choose to study foreign languages, elective subjects from the list of elective subjects provided, choose the place of practice of personal preference and the topic of the final thesis, and thus individualize their studies. The elective subjects are listed in SER Annex 1.4, and for the second cycle it could be e.g. *Physical activity and Health* or *Genetic resources*.

The information about elective subjects is outlined in the study programmes, and this arrangement of study subjects in the study plans of the first and second cycle of *Food Sciences* study programmes enables the students to acquire unique qualifications, but still ensuring the overall quality of the first and second cycle studies.

(2) Expert judgement/indicator analysis

The possibility of individual study plans are present.

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

(1) Factual situation

The institutes involved in teaching the basic subjects of *Food Sciences* submit a list of preliminary topics for final theses, but the final thesis topics can also be suggested by students themselves. The relevance of the topics to the field of Food Studies is evaluated by discussing the topics at the meeting of a certain department that proposed the topic. At the end of the meeting, the list of final thesis topics is approved and released publicly by the Dean's Office.

The subjects of the theses are summarized in SER Annex 1.7, and they conform with the expected learning outcomes.

The final theses of the first and second cycle *Food Sciences* study programmes are, for some students, prepared in cooperation with the social partners of higher education institution. The percentage of the final theses, prepared in cooperation with the social partners for the last years, was 3.4 % for the first cycle studies, and 19.7 % for the second cycle studies.

Furthermore, there is a strong integration of students into on-going activities of scientific projects /research by the initiative of scientific supervisors of the final theses.

(2) Expert judgement/indicator analysis

Based on the self-assessment report, and the site visit, it is clear that LSMU fulfils the formal requirements for compliance of the final theses. The inclusion of students in on-going research is a positive feature, but it could be possible to increase the collaboration with social partners regarding thesis work, for both first and second cycle studies.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. *The first and second cycle studies of Food Studies fields comply with the requirements of the government and the mission, vision and strategy of the university.*
2. *There are relevant and unique learning outcomes of the first and second cycle study programmes of* Food Studies field *that fulfil the needs of the potential employers of candidates.*

(2) Weaknesses:

1. *It is not entirely clear how individual study subjects that contribute to the same intended learning outcome are coordinated.*
2. *Social partners are not involved enough in students' final theses of both the first and second cycle study programmes.*

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

From the Self-evaluation report it is mentioned that the strategic research area of LSMU in the field of Agricultural Sciences is „Safer, Enriched Food". Results of the last 3 years of the annual evaluation of HEIs' R&D activities and results of the last benchmarking of R&D activities of LSMU are given and presented in the MOSTA report (SER Annex 2.1). Budget Funds for Research, Experimental Development within the field of science related to the field of studies are presented and analysed. The links between science and studies are given in implementation of research activities in first and second cycle *Food Sciences* study programmes. There are not exact examples of this in teaching programme. Examples are given as: The lectures of the subjects taught are annually supplemented with the latest scientific information, basically – the integration of science into studies is an integral part of the first and second study cycles of *Food Sciences* study programmes. The prepared final theses of the first and second cycle of *Food Sciences* study programmes when the thesis supervisors were integrating their students into the activities of scientific projects.

The MOSTA (current name STRATA) experts noted that the scientific activities and research in Food Sciences were the most active. The experts also confirmed that LSMU maintains the close relations with non-academic, industrial, public, and governmental organizations, and the most active cooperation is in the field of food science.

The lecturers-researchers are carrying out the research in this field and integrate science and the latest research results into studies. The Food Study field is organised as a first and second cycle of *Food Sciences* studies. Results of the last 3 years of the annual evaluation of LSMU, research and study are carried out in accordance with the Procedure for Allocating State Budget Funds for Research, Experimental Development and Artistic Activities to Higher Education and Research Institutions, the 2017 results of the formal evaluation of scientific works submitted for evaluation by the institutions of science and studies in the field of Agricultural Sciences are published by Lithuanian Science Council (LMT) and include 29 publications, 14 of which are directly related to the field of Food Studies.

The TOP 10 scientific works carried out by the Lithuanian researchers and the results of the formal evaluation in the field of Agricultural Sciences at LSMU were published during the period of 2008-2017 and in total included 19 publications, 8 of which were directly related to the field of Food Studies. The 2018 outcomes of the formal evaluation of scientific works submitted for the evaluation by the institutions of science and studies in the field of Agricultural Sciences at LSMU were published by LMT and included 60 publications, 31 of which were directly related to the field of Food Studies.

(2) Expert judgement/indicator analysis

In comment of the evaluation of the sufficiency of the science (applied science, art) activities implemented by the HEI for the field of research related to the field of study, LSMU hosts the specialised laboratories for physicochemical and microbiological research and technological experiments, which employ the qualified specialists and groups of scientists.

LSMU has semi-modern infrastructure and there are opportunities for complex research in the field of Food Studies. The connection of the implementation of science and teaching study filed should be improved, in terms of more collaboration with international universities and research centres. Also, there is need to increase incoming and outgoing mobility of teachers. Future plan is to study the English language. There is also a plan to implement ISEKI (ISEKI-Food Association – an independent European non-profit organisation) teaching materials into first and second cycle study programmes of Food Studies field.

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

(1) Factual situation

There are sufficient science activities implemented in the field of research related to the first and second cycle study programmes in the field of Food Studies. LSMU 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 LSMU with external partners. Teachers and leaders of LSMU have plans for scientific activities in the science field related to the Food Studies study field. During the site visit, they explained and discussed the link between the curriculum and the latest developments in science, with the content of the first and second cycle programmes.

(2) Expert judgement/indicator analysis

The link between the content of studies and the latest developments in science, art and technology exists but there should be factual implementation of the newest research and development results in teaching study programme. 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. Also, it's recommended to encourage lecturers (teachers) and students to increase their internationalisation by applying for the international exchange programs. 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).

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

Students have the opportunity to prepare high-level final theses and publish their research results in internationally indexed and peer-reviewed scientific journals. The percentage of the final theses prepared while integrating students into the research activities was of the first cycle studies: in 2017-2018 – 7.1%, in 2018-2019 – 9.4%, in 2019-2020 – 17.2%; of the second cycle studies: in 2018-2019, of full-time studies – 40%, and in 2019-2020, of part-time studies – 50%. During the site visit the lecturers expressed that there is their active participation in scientific activities. Therefore, this allows applying and integrating the latest research experience into the educational process of students. The conditions for students to get involved in scientific activities exist and are consistent with their study cycle. The students are involved in research during the preparation of bachelor's and master's theses, during laboratory work, and during the Food Sciences group activities of the LSMU Students' Scientific Society (SMD). Thirteen (13) students participated in publishing of papers in Clarivate analytics journals with IF, Q3 and 11 students participated in publishing of papers in Clarivate analytics journals with IF, Q1 in the periods of 2017-2018, 2018-2019, 2019-2020 academic years.

(2) Expert judgement/indicator analysis

The conditions for students to get involved in scientific (applied science, art) activities consistent with their study cycle are sufficient. There is future motivation to encourage a greater number of students to participate in various exchange programs. The numbers of student involvement in scientific activities are rather low. There is need to assure, hands on training for students and case study discussions and lecturing in the lecture processes. 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). There should be more opportunities to perform student thesis in collaboration with social partners.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. *The lecturers-researchers are carrying out the research in Food Studies field and integrate science and the latest research results into first and second cycle studies.*
2. *There are efforts from teachers to attract students into science activities implemented in the field of research related to the Food Studies field.*
3. *Students have the opportunity to prepare high-level final theses and publish their research results in scientific journals.*

(2) Weaknesses:

1. *There are not many opportunities to perform student thesis in collaboration with social partners.*
2. *There is low motivation to encourage students to participate in various scientific exchange programs.*
3. *There is no sophisticated (hands on) teaching, in connection of research and science activities, and the inclusion of more complex software programs into education in Food Studies field as virtual training.*

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*

Students' admission is organized by the Association of Lithuanian Higher Education Institutions for General Admissions (LAMA BPO) and regulated according to the Law on Science and Studies of the Republic of Lithuania (LR MSĮ), the Order of Ministry of Education, Science and Sport of the Republic of Lithuania, the Resolutions of the Lithuanian University Rectors' Conference and the Rules of Students' Admission approved by the LSMU Senate in the current year. Competition is open to all entrants with a documented education of at least secondary education or its equivalent. Minimal score that has to be met to participate in the competition for study places is defined each year by the government. Later, a certain number of students with best scores are invited to study in a field they chose.

In period of three years (2017-2019), a total of 395 candidates tried to enrol themselves first cycle studies in *Food Sciences* in LSMU, 58 of them named this as their 1st preference. In the same period of time (2017-2019), LSMU accepted 68 first cycle students (46 to full-time and 22 to part-time studies). 100% of state-funded places were filled by full-time first-year students and 90.9% – by part-time study mode first-year students. Average score of the accepted candidates varied from 5,38 (in 2017) to 7,79 (in 2019).

Admission to second cycle studies in *Food Sciences* is conducted according to internal admission rules of LSMU. The competition for second cycle studies in *Food Sciences* is open to the individuals who have successfully completed first cycle university studies in the field of Engineering, Technology Sciences, Health Sciences or Agricultural Sciences. The competition sum score is calculated from:

- the weighted grade average of the subjects listed in the Diploma Appendix/Supplement;
- the grade of final thesis;
- the arithmetic average of evaluations given by the members of motivational interview committee and the evaluation of research activities.

Candidates who have a professional bachelor's degree in one of aforementioned fields must complete additional studies approved by LSMU. After successfully completing the additional studies, the competitive score is calculated by additionally adding the weighted average of the grades of subjects studied and included in the study certificate.

Between 2017 and 2019, 53 candidates were accepted to study in the second cycle studies of *Food Sciences*. More than a half of students chose part-time second cycle studies. The

competitive score for admission to second cycle studies in *Food Sciences* is calculated on a ten-point scale. The highest average score was in 2017 (8.15), the lowest one - in 2018 (7.35).

Admission rules for both first and second cycle studies in *Food Sciences* are publicly available in the webpage of the University.

(2) Expert judgement/indicator analysis

Webpage of LAMA BPO is conveniently available in Lithuanian language as well as English. Admission criteria are clearly stated and updated each year by the University regarding latest changes in legislation. All information regarding admission to both first and second cycle studies of Food Studies field can be found on the University's webpage. Whole process is clear and transparent.

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

Recognition of foreign qualifications is performed in compliance with legal acts of the Republic of Lithuania and with the procedure stated by SKVC. The University consults with SKVC in cases where no general recommendations have been prepared for the recognition of such qualifications. An entrant may apply to SKVC for the recognition of education acquired in foreign institutions and for the assessment of the subject equivalents.

Credit assessment of partial studies is performed in compliance with the LSMU Study Regulations.

In LSMU, there is an internal procedure for the academic recognition of the foreign qualifications and the decision-making quality assurance system, approved by the LSMU Senate.

In the period between 2018 and 2020, a total of 17 applications for the assessment and recognition of foreign qualifications were submitted (all for second cycle studies in *Food Sciences*). 7 applications had positive conclusion, 10 – negative.

(2) Expert judgement/indicator analysis

The University relies mostly on state legislation, SKVC consulting and its own internal procedures when recognising foreign education. This applies for both first and second cycle studies in Food Studies field. Overall process is clear and transparent.

3.3.3. Evaluation of conditions for ensuring academic mobility of students

(1) Factual situation

According to SER, University claims to provide equal opportunities for all students to participate in academic mobility programmes, mostly Erasmus and Erasmus+. Inside the University, there is Department of Academic Mobility which centrally administers the Erasmus + programme and regularly organizes selection of *Erasmus* + participants. The mobility of the exchange programme students in different academic years:

- 2017/2018 – 2 students went for internships;
- 2018/2019 – 2 students went to study and 2 – for internships;
- 2019/2020 – 4 students went to study and 2 - for internships.

Specifically for the first and second cycle *Food Sciences* study programmes, the signing of agreements with 9 foreign universities has been initiated.

Second cycle study programme in *Food Sciences* that is conducted in English, was started in 2018 in LSMU. In the 2018/2019 academic year, 3 students studied in this programme, and 4 students – in 2019/2020 academic year.

(2) Expert judgement/indicator analysis

Expert panel found inclusion of first and second cycle students in the field of Food Studies in academic mobility programmes. During the site visit first and second cycle students mentioned great advantages of international experience, some use this as an opportunity to conduct their research. So far, only one exchange student has come to LSMU to study Food Studies. Expert panel sees that there could be more incoming international exchange students to LSMU.

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

University provides its students with social scholarships (given according to the Resolution of the Government of the Republic of Lithuania) and incentive scholarships (for best academic results). University offers a possibility to get psychological support from experienced psychologists. Also, students can take part in sport, social and art activities available at the University. There is a possibility to get accommodation in the University's dormitories. This applies to first and second cycle students in all study fields. All information can be found on the University webpage.

(2) Expert judgement/indicator analysis

Expert panel found that the overall atmosphere in the University is good and there is enough support for the students in the field of Food Studies.

3.3.5 Evaluation of the sufficiency of study information and student counselling

(1) Factual situation

Main information about studies is presented during Freshmen Camp and Introductory Week, which are organized for all first year students in LSMU. Also, lecturer-tutor and student-tutor are assigned to each group of first year students. Detailed information about the aims and objectives of a subject to be studied is provided in the subject descriptions published on the LSMU SIS website, which is periodically updated.

During the site visit, first and second cycle students of Food Studies field expressed that they know whom to address if they face a particular problem. They feel free to express their opinion and criticism. Study information is clear and accessible online, although divided into different platforms (e.g., *FirstClass, Moodle,* LSMU SIS). Students found this distracting.

(2) Expert judgement/indicator analysis

According to the expert panel's opinion, there is sufficient counselling. Study information is available for the students online, but multitasking through different study platforms online may decrease efficiency of the study process and cause some easily preventable inconveniences both for students and tutors.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. *All LSMU students have equal opportunities to participate in international mobility programmes and projects.*
2. *Agreements with foreign universities signed specifically for the Food Studies study programmes (first and second cycle) will provide opportunities for students to gain international experience related to the Food Studies.*

(2) Weaknesses:

1. *Not enough foreign exchange students follow the first and second cycle study programmes of Food Studies field.*
2. *Not enough national students from first and second cycle studies in Food Studies field take active part in Erasmus + exchange programme.*

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

It is stated in SER that Veterinary Faculty implements the teaching/learning model, which is implemented in accordance with the basic principles of the European Higher Education Area. In the first and second cycle study programmes of *Food Sciences*, student-centred teaching/learning methods have been implemented. Lecturer is selecting teaching/learning methods from the LSMU Study Information System. The Innovative Education Department of the LSMU Study Center organizes trainings on teaching methods for academic staff. The descriptions of all first and second cycle subjects (mandatory and elective) and the procedures of assessment are available for the students in the LSMU Study Information System and Moodle platform. LSMU Study Regulations stipulates that students, based on their preference, can choose to study foreign languages, elective subjects from the list of elective subjects provided, choose the place of practice of personal preference and the topic of the final thesis, and thus individualize their studies. Students are exposed to a wide variety of teaching and learning methods as well as assessment methods. Different methods of active learning are applied during first and second cycle studies, such as project activities, case study, field visits, laboratory sessions, research work, internship. Graduates from first and second cycles 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 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 LSMU used the project funds of the European Union Structural Funds Investment Operational Programme for Y2014-2020 on creating accessibility to education for the students with special needs. The distribution of the funds has included targeted benefits paid to the disabled students, training for teaching staff in order to improve their competences to work with the disabled students, and purchasing the equipment and furniture for the installation of specialized workplaces (for instance electronic Braille writing systems, elevators for staircase, etc.). According to the provisions of LSMU the alternative measures of assessment are used and applied to the socially vulnerable students who can't be subject to the usual assessment procedures, which ensure the implementation of study programme aims and the achievement of learning outcomes. Seeking better integration into the academic community, students from vulnerable groups can be accommodated in the University dormitories. Socially vulnerable students can receive professional psychological help in Lithuanian and English languages.

(2) Expert judgement/indicator analysis

According information stated in SER focus is done on ensuring access to study for disabled students. The conditions ensuring access of disabled students to study is fine. Access to study of other socially vulnerable groups is not sufficient, as little to no evidence was found in SER.

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 based on criteria clearly formulated in the subject description, which are introduced to students before starting to study a certain subject. There are several processes in place for monitoring students' progress in their studies and to provide feedback to students. In the first and second cycle study programmes of Food Studies field, the achievements of learning outcomes are assessed by an examination or (and) by a student's independent work. Independent work is done in *Moodle*, where students can individually see the lecturer's comments and the assessment itself. Student progress at the end of the entire academic year is assessed by assigning a student to a certain level of achievement. During site visit LSMU has provided data on distribution of grades per module and cycle to the expert panel. The whole study programmes of first and second cycle are evaluated as the final thesis. Assessment of students' learning outcomes and monitoring of study progress is performed by discussing and considering the results in the departments, Veterinary Faculty Council, Rector's Office. It is listed in SER that students are provided with feedback on their achievements at the faculty and (or) at the individual lecturer-student interaction levels.

(2) Expert judgement/indicator analysis

There are good processes in place for monitoring the first and second cycle 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 students 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 LSMU Career Center regularly: surveys conducted 6 months and 12 months after graduation are showing graduates success in finding employment; survey conducted 3 years after graduation shows how graduates succeed in establishing themselves in the labor market; survey conducted 5 years after graduation shows how graduates succeed in pursuing a career. During the site visit LSMU has provided to expert panel additional report on first cycle alumni survey results conducted 18 months after graduation. Survey result shows that 70-75% of first cycle graduates were employed as low-skilled workers, 13-25% were employed as high-skilled workers.

Official statistical data on graduates employed in Lithuania are provided by the Government Strategic Analysis Center (STRATA) and the Employment Service under the Ministry of Social Security and Labor of the Republic of Lithuania. At least every 3 years data is also collected through Alumni and social partner's surveys. About 70-77% of the first cycle graduates of Food Studies field find relevant employment 12 months after their graduation in Lithuania. Approximately 20% of first cycle students decided to do their studies in second cycle study programmes, 20% of them combine studying and work. During the site visit LSMU has provided to expert panel additional report on first cycle alumni survey results conducted 3 years after graduation. Survey result shows that graduates were working in study field e.g. food industry, but none of respondent have establishing themselves in managing positions. The share of Y2019 graduates from the second cycle study programme of Food Studies field that found a relevant position in Lithuania is 80%. About 20% of the graduates from the second cycle continued their doctoral studies and work at LSMU.

Information on the opinion of employers regarding the professional preparation of graduates and acquired competencies after graduation is collected from social partners and different organisations as well as in direct contact with alumni. Alumni and social partners in the discussion with the expert panel emphasized that graduates gained sufficient competence and were well prepared for the labour market. Social partners from the Public sector expressed the need of young professionals taking open vacancies. One of the Alumni expressed the opinion that expectation of gaining knowledge in the beverage production sector was not met in the second study cycle, which was chosen by alumni particularly for the need of this knowledge. Both Alumni and Social partners noted that internships could be longer in order to get a better understanding of day to day operations in industry. Social partners expressed the need for improvement on the definition of internship goals (narrowing goals and adapting them to particular industry or particular internship topics).

(2) Expert judgement/indicator analysis

The competence and skills of first and second cycle graduates correspond to the expectations of the labor market in Lithuania. Majority of graduates find implement and pursue the career in Food Studies study field. Survey result show that after graduation majority of first cycle graduates are employed in low-skill positions, and have not established themselves in managing positions after 3 year of graduation. The mutually beneficial relations with social partners are close and sufficient to prepare graduates' for relevant positions in the labor market. 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. LSMU Code of Ethics states academic integrity, tolerance and non-discrimination policies. First and second cycle first-year students sign a pledge of academic integrity before beginning studies and senior students sign such a statement before each academic examination. The University assures tolerance and non-discrimination by implementing the Equal Opportunities and Diversity Policy. The reports of ethical violations, intolerance, and discrimination may be submitted by assessors, evaluators or any members of the academic community to the Dean. The students have the opportunity, by anonymous participation in study quality assessment surveys, to express their opinion on the violations of lecturers' ethics, including bullying, harassment, and discrimination, and including the grounds for discrimination. The reports on violation of LSMU Code of Ethics are investigated, analysed and the decisions are taken by the Committee. In the last three years, there have been no cases of expulsion of the first and second cycle students of Food Studies field studies from the LSMU 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 well 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

LSMU Study Regulations states appeal rules and procedures. Cases should be submitted in written form not later than 1-2 days after announcement of exam or other evaluation result to dean of faculty. Appeal commission is formed for evaluation of appeal. In any case the appeal must be examined in 14 work days at the most after the appeal's submission. The decisions of the appeal commission regarding the procedural violations of decision-making may be appealed to the Commission of Dispute Settlement. There have been no appeals or complaints from the students of the first and second cycle of Food Studies field studies in the last 3 years.

(2) Expert judgement/indicator analysis

The procedures for the submission and examination of appeals and complaints regarding the study environment and processes are in place, accessible as well as transparent.

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. *Career monitoring of first and second cycle graduates is conducted at good frequency and enables LSMU to analyse not just employability but career growth of graduates.*
3. *The employability of first and second cycle graduates is evidenced to be sufficiently high.*

(2) Weaknesses:

1. *Focus is done on improvements of access to study for disabled students. Access to study of other socially vulnerable groups is not sufficient.*
2. *Social partners expressed the need for improvement on the definition of internship goals for both cycles (narrowing goals and adapting them to industry or internship topics).*
3. *Majority of first cycle graduates have not established themselves in managing positions after 3 year of graduation.*

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 programmes within a given study field. The current ratio between the number of teaching staff of the field subjects and the number of students studying is provided. The ratio of the number of Food Studies field studies lecturers and the number of studying students in the first study cycle in the 2017–2018 academic year was 1.4; in 2018-2019 – 4.0; in 2019-2020 – 3 .6; and in the second study cycle – In the 2017-2018 academic year – 1.2; in 2018-2019 – 1.8; in 2019-2020 – 1.9. In the self-evaluation report, a list of permanent teaching staff of the field subjects at the LSMU (at least half-time position and at least 3 years at the LSMU) 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 LSMU.

Data proving the compliance of the teaching staff with the legal requirements is substantiated. At the documents "Conformance to legal acts" the list of teachers and competences are given in SER annex 5.1. In the First cycle, the total number of lecturers who taught in the first cycle of *Food Sciences* study programme in the academic 2017-2018, 2018-2019 and 2019-2020 years, respectively was 55, 65 and 70. The percentage of lecturers working at least part-time and at least 3 years from all lecturers teaching subjects in the study field programmes in 2017-2018, 2018-2019 and 2019-2020 respectively was 90.9%, 92.3% and 92.9%. The percentage of lecturers, in second cycle study field programme in 2017-2018, 2018-2019, and 2019-2020 respectively was 55; 65 and 70 lecturers, and this amounted for 100% of all study field subject lecturers working at least part-time and at least 3 years. In 2017-2020, the first cycle *Food Sciences* study programme engaged (average value) 26.3% of professors, 24.5% of associate professors, 35.2% of lecturers, 14.1% of lecturers not holding doctoral degree, i.e., more than 85% of lecturers implementing the first cycle studies hold a doctoral degree. In the second cycle *Food Sciences* study programme, in 2017-2020, there were (average value) 34.0% of professors, 20.2% of associate professors, 42.5% of lecturers holding a doctoral degree, 3.3% of lecturers not holding a doctoral degree.

The information about the teacher's English language skills are provided. All teaching staff and researchers have reached at least a B2 level of this foreign language. The second cycle study programme is taught in English as well.

Lecturers are employed by competition for a five-year term in compliance with the requirements of legal acts: the Labour Code of the Republic of Lithuania, the procedure for organising and attesting competitions for the LSMU lecturers and researchers, and the principles for selecting and evaluating the LSMU employees. The dynamics of teaching staff turnover in the field (how the replacement of retired teaching staff and the education of young teaching staff are ensured). Data proving the compliance of the teaching staff with the legal requirements is substantiated.

(2) Expert judgement/indicator analysis

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, in order to achieve the learning outcomes. Teaching staff who deliver study field subjects and work at least part-time, are indicated and commented on. From the site visit, expert panel 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.

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

Prospective teaching staff of the programme, all teaching staff and researchers have reached at least a B2 level of this foreign language at first and second cycle. Evaluation of conditions for ensuring teaching staffs' academic mobility is given in SER. All LSMU lecturers have equal opportunities to participate in the international mobility programs and projects (Erasmus +, etc.) and leave for teaching and/or learning at the European or other global higher education institutions, which have signed the interinstitutional agreements with LSMU, or at the independently chosen foreign institutions/enterprises for a period from 2 days up to 2 months. The conditions for ensuring the academic mobility of Food Studies field subject teaching staff are described. The academic mobility of the lecturers of Food Studies field study programmes (first and second cycle) has remained stable during the last 3 years, every year the 7-9 study field lecturers leave to teach and improve their competencies. LSMU maintains a long-term and reliable cooperation between academic units both in the Erasmus + program and in various international research projects. Also, the number of outgoing and incoming teachers and students are low and could be higher. There is a plan to apply for ERASMUS+ programs and to participate in the exchange.

(2) Expert judgement/indicator analysis

The number of outgoing and incoming Food Studies field (for first and second cycle) subject teaching staff and their share of all field subject teaching staff over the last 3 years are provided and analysed. During the last 3 years, a total of 3 lecturers from the advanced foreign universities came to teach within the second cycle study programme of Food Studies field at LSMU (in 2017-2018 – 2 lecturers (from Danish and Portuguese research and study institutions), in 2019-2020 – 1 lecturer from Germany research and study institution)).

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. Lecturers' competencies and teaching quality assurance are based on the unity of principles of science,

studies, and practical training, including lecturers' attestation every 5 years, improvement of lecturers' professional qualification and teaching competence, and students' assessment.

In SER, conditions to improve the competences of the teaching staff are given. To develop educational competence, LSMU operates the Innovative Education Division of the Study Centre (SC IES), which constantly monitors and improves educational competence in compliance with the procedure for assurance of educational competence of the LSMU lecturers. The improvement of lecturers' educational competence is funded by the Faculty. During their 5-year term, all lecturers must improve their educational qualification, at least 30 academic hours, participate in educational projects, prepare self-analyses, etc.

(2) Expert judgement/indicator analysis

According to expert judgement there are sufficient teachers and teachers have adequate skills. There is low number of lecturers (teachers) in increasing their international competences. It is important to educate teachers to implement more teaching in the area of legislation and certification in the food processing industry. There should be more frequent surveys of social partners and encourage more active feedback by involving the social partners in the improvement of the study process. Assure, hands on training for students and case study in the lecture processes. 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).

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. *The academic staff of the Food Studies field studies is suitable to ensure the achievement of the learning outcomes of the first and second cycle study programmes within Food Studies field.*
2. *There is an adequate number of qualified and competent (scientific, didactic, professional) teaching staff within Food Studies field first and second cycle study programmes, in order to achieve the learning outcomes.*
3. *Teaching staff of the Food Studies study field are provided with conditions for the professional development of competences, which are evaluated periodically.*

(2) Weaknesses:

1. *Lecturers and teachers of Food Studies field are not having enough application for internationalisation and the international exchange programs.*
2. *There are low teacher competences for implementation of 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

The LSMU uses the university facilities to ensure an effective learning process. Seven large auditoriums, 48 training labs, and 32 workshops are co-used with other departments; these facilities accommodate about 25 students each which are adequate for the LSMU class sizes.

Regarding IT resources, the PC equipment has typical MS Office software, Teams, and Moodle to accommodate students in their learning assignments, library searches etc. Students have access to rich library databases, like CABI, Medline, EBSCO, and more. Via virtual network, they can connect remotely i.e., via their home/ dormitory.

Regarding lab facilities, there is a diversity of equipment including Gas chromatography, liquid chromatography, spectrometers, UV evaluation camera, gene sequencing, PCR system, and more.

(2) Expert judgement/indicator analysis

The teaching and learning facilities in LSMU are sufficient since they are provided at the university level. The auditoriums, training labs, and IT labs are well equipped and they are functional. There are no restaurant facilities for students. The professors are knowledgeable of the equipment and help students in using them in their training. Library is rich, accessible remotely, although the university will move out of a cross-university agreement to establish its own contract with publishers which can impose a risk in accessing proprietary material.

Lab equipment is suitable for learning for first cycle studies of Food Studies field but it could be expanded for research projects and industry collaborations for second cycle studies of Food Studies field. However, there is no specific plan how this can happen since upgrading relies heavily on research funding, which is competitive and uncertain.

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

(1) Factual situation

There is no specific plan on upgrading the lab and IT equipment at LSMU since this is conducted at the university level. Budget from research projects is often allocated to purchase expensive lab equipment (and consumables) but this depends on being successful at competitive bids.

(2) Expert judgement/indicator analysis

Given the track record of the past research projects, the planning is dependent mostly on the university resources. However, LSMU should try to get funding for lab resources especially for second cycle to improve their research profile and industry-collaborations; scaling-up would allow them to improve their profile and gain more research income in a retrospective way.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. *Facilities are sufficient for both cycles and equipment with the required equipment to carry out their studies effectively.*
2. *Students have access to all required material for their studies; there is availability of scholarly databases, literature and statistical programmes.*
3. *University supports first and second cycle study programmes of Food Studies field in equipment budget.*

(2) Weaknesses:

1. *First and second cycle studies of Food Studies field are dependant on university resources.*
2. *Lack of strong research funding.*
3. *The University needs to develop a plan with quantitative goals and objectives; this will help the staff to put effort to improve in a specific direction.*

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. Description of quality assurance processes is listed in several chapters in SER, which makes it more difficult to follow and evaluate. The following levels of internal quality assurance of the studies and responsible management structures are distinguished: Study Quality Monitoring and Assurance Commission, Faculty Council, Study Programme Committees, Study Center. Each of them bears different responsibilities in Study programme quality assurance.

The Food Science Study Programme Committee (hereinafter - MM SK) for both study cycles is the major body for development and quality assurance of Study programmes. MM SK includes members representing first and second cycle students, teachers and social partners. Once a year MM SK prepares study plans taking into account the received suggestions and comments from lecturers, students and other participants of the study process.

Internal study quality assurance and continuous improvement are based on the survey 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 after finishing a particular course) feedback collection system by carrying out student surveys to define actions for improvement. Not less than once a semester MM SK discusses the course of studies with the representatives of Student Association and students studying in the first and second cycle study programmes of Food Studies field. Feedback on the quality of the studies is also provided by conducting student questionnaires in the virtual space – "Quality Thermometer". 22.92% of the students of Food Studies field study programmes (first and second cycle) participated in the overall evaluation of the subjects, which is a rather low participation rate. Several examples of conducted surveys are listed in the SER, also LSMU has provided to the expert panel additional documents on study courses evaluation survey results during site visit. Each semester MM SK compiles an action plan related to study programme implementation issues.

During interviews students could not provide full information, how they can contribute to Study programme quality assessment and Study programme improvement. One student presented personal examples of improvements that were made based on the criticism.

(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, however due to description listings in several SER chapters the expert panel had difficulty understanding interconnections and the full picture of all parties responsible for Study programme quality improvement. New survey tool "Quality Thermometer'' was implemented to increase engagement in feedback, which is underutilized so far and the goal of student activity increase has not been reached yet. The major body for development, quality assurance is The Food Science Study Program Committee for both cycles in which teachers, students and social partners are members. There are several channels for feedback to students that enhance quality, however awareness of existing tools and survey

participation rate are low. During interviews with students, students could not provide full information, how they can contribute to Study programme quality assessment and 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. Students have the possibility to give views anonymously on all subjects and teachers in the semester surveys (via conventional survey or "Quality Thermometer"). Students also have the possibilities to give views on the quality of studies, management, and the programmes via Student Association. The major body for development, quality assurance is the Food Science Study Programme Committee for both cycles in which teachers, students and social partners are members. At the end of a student internship, social partners describe and score students skills, competencies, understanding of technological processes and control systems, and ability to work in a team.

Students' internship scores are presented in SER, also were discussed briefly during the site visit with social partners. Average internship scores are high (percentage rated evaluated as 10 (excellent) ranges from 16% to 66%; percentage rated evaluated as 9 (very good) ranges from 33% to 52 percentage rated evaluated as 8 (good) ranges from 4% to 33%), however 75% of the internship supervisors state that students of the first and second cycle study programmes of *Food Sciences* are well-prepared in theory but note that there is a necessity for more practical skills. Social partners during interviews have mentioned that majority of students are lacking motivation and proactiveness during internship, which is negatively affecting outcomes of internship. Social partners are giving feedback on Study programmes by filling surveys at least each 3 years. Feedback on student competence can be given during participation in the defence and assessment of the first and second cycle students' final theses.

(2) Expert judgement/indicator analysis

Feedback of stakeholders is used effectively in the development of the quality of the study programmes of Food Studies field and the learning environments. Extremely good students' result evaluation of General Food Technology Internship and Manufacturing Internship do not correlate with social partners' opinions shared during the interview.

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

(1) Factual situation

Information about study programmes, admission requirements, subject descriptions, study programme learning outcomes, study results, mobility programmes, acquired Qualifications and study quality is available on the LSMU website. Information is also available to students through the student representatives involved in the activity of councils and commissions. According to SER in 2017-2019 LSMU presented the *Food Sciences* study programme in 23 Lithuanian schools and gymnasiums and colleges. Social networks are actively used for information dissemination.

(2) Expert judgement/indicator analysis

The LSMU 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. First and second cycle students of Food Studies field have the possibility to give views anonymously on all subjects and teachers in the semester surveys (via conventional survey, "Quality Thermometer" or during meetings organized by MM SK). Students also have the possibilities to give views on the quality of studies, management and the programmes via SA. The feedback is regularly collected and analysed in the MM SK in which students are members.

(2) Expert judgement/indicator analysis

There are procedures defined and working to collect and analyse student feedback at different levels at the university management.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. *An appropriate structure is in place for ensuring and improving the quality of studies 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 of Food Studies field quality improvement.*

(2) Weaknesses:

1. *Students' awareness of their contribution to first and second cycle study programmes of Food Studies field quality assessment and study programmes improvement is low.*
2. *Frequency of feedback collection from social partners seems to be scarce (every 3 years).*
3. *Extremely good students' result evaluation of General Food Technology Internship and Manufacturing Internship, which is part of Social partners' feedback, do not correlate with social partners' opinions shared during the interview.*
4. *Students' participation rate in first and second cycle study programmes of Food Studies field quality assessment is low.*

IV. RECOMMENDATIONS*

Evaluation Area	Recommendations for the Evaluation Area (study cycle)
Intended and achieved learning outcomes and curriculum	• Social partners could be more involved in students' final theses of both the first and second cycle.
Links between science (art) and studies	• Encourage first and second cycle students to participate in various scientific exchange programs, including *Erasmus+* exchange programme. • Improve the inclusion of more complex software programs into education for virtual training.
Student admission and support	• Increase the number of foreign exchange students that will follow the second cycle of *Food Sciences* study programme (or parts of it).
Teaching and learning, student performance and graduate employment	• Improve the definition of internship goals (narrowing goals and adapting them to particular industry or particular internship topics).
Teaching staff	• Increase the number of lecturers and teachers that participate in international exchange programs. • Encourage the teachers to implement more teaching in the area of legislation and certification in the food processing industry.
Learning facilities and resources	• Apply for more lab resources to improve both research profile and industry-collaborations in Food Studies field studies.
Study quality management and public information	• Increase the students' awareness of their contribution to first and second cycle study programmes of Food Studies field quality assessment and study programmes improvement, e.g. by encouraging them to participate in study programmes quality assessment. • The frequency of feedback collection from social partners could be increased.

*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 the Lithuanian University of Health Sciences 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 Sciences* first cycle and *Food Sciences* second cycle, at Lithuanian University of Health Sciences with all areas assessed as good or very good.

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

- The first and second cycle studies have relevant and unique learning outcomes, that fulfil the needs of the potential employers of candidates.
- The lecturers-researchers are carrying out the research in this field and integrate science and the latest research results into studies, and the students have the opportunity to prepare high-level final theses and publish their research results in scientific journals.
- All LSMU students have equal opportunities to participate in international mobility programmes and projects.
- Various teaching and learning as well as assessment methods are applied in the first and second cycle study programmes. Subjects are designed according to the scientifically and practically based pedagogical principle of Constructive alignment linking learning outcomes, teaching activities and assessment. The employability of the graduates is evidenced to be sufficiently high.
- The academic staff of the field studies is suitable to ensure the achievement of the learning outcomes of the programmes within a given study field. Teaching staff of the study field are provided with conditions for the professional development of competences, which are evaluated periodically.
- Facilities are adequate for learning purposes, the library give access to students for learning, assignments etc., and the university supports LSMU in equipment budget.
- 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 could be more involved in students' final theses of both the first and second cycle studies.
- There should be more opportunities to perform theses in collaboration with social partners.
- Not enough foreign exchange students follow the *Food Sciences* study programmes, and additionally, not enough national students take active part in Erasmus+ exchange programme.
- Social partners expressed the need for improvement on the definition of internship goals (narrowing goals and adapting them to particular industry or particular internship topics).
- Lecturers and teachers are not having enough application for internationalisation and the international exchange programs.
- A lack of strong research funding, meant that the funding of learning facilities are dependent on the overall university budget, which is prioritised at a higher level than the study field.

- Students' awareness of their contribution to Study programme quality assessment and Study programme improvement is low. The frequency of feedback collection from social partners seems to be scarce (every 3 years).

Expert panel signature:

Associate professor Henrik Siegumfeldt (panel chairperson)