

VYTAUTAS MAGNUS UNIVERSITY



Field of Study:
FOOD STUDIES (I06)

Study cycles: First and Second

SELF EVALUATION REPORT

May, 2021

Study Field Data

No	Title of the study programme	State code	Type of studies	Cycle of studies	Mode of study and duration (in years)	Credit volume	Qualification degree and (or) professional qualification	Language of instruction	Minimum education required	Registration date of the study programme	Study programme termination date (if applicable)	Study programme location
1.	Food Quality and Safety	6121IX005	University studies	First	Full-time (4 years), part-time (6 years)	240	Bachelor of Agricultural Sciences	Lithuanian	Secondary	20/01/2012	-	VMU AA
2.	Quality and Safety of Plant Food Raw Materials	6211IX005	University studies	Second	Full-time (2 years), part-time (3 years)	120	Master of Agricultural Sciences	Lithuanian	Bachelor's degree	20/01/2012	-	VMU AA

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INTRODUCTION

Vytautas Magnus University (hereinafter VMU or the University) was established in 1922 and re-established in 1989. It is a classical university based on the common beliefs and values of freedom, openness, and dialogue, and orientated towards humanistic culture. 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, ensures that the studies offered at VMU are comprehensive, they are not restricted to specialized, pre-defined courses. VMU's liberal study policy lets students themselves plan their studies by choosing general study courses and part of the study field courses, they also have the possibility to move from one study programme to another and change the form of studies. Alongside a bachelor's diploma of their major specialty, VMU graduates can also get a certificate of minor studies and later apply for master's degree programme of another study field.

VMU works with many universities and scientists around the globe, implementing projects, enhancing student and staff exchanges, and improving the study and research system. It is an international and multilingual institution that continuously develops international networks and intercultural dialogues, participates in international scientific, academic, and social projects, 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. The Council is a collegial management body which affirms the University's vision, mission and the strategy, financial and other strategic issues; the Senate is a collegial body managing the academic affairs of the University. The University is headed by the Rector, and the Rector's advisory institution is the Rector's Council.

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 is a division of Vytautas Magnus University. It currently has 5 faculties – Faculty of Agronomy, Bioeconomy Development, Forest Sciences and Ecology, Agricultural Engineering, Water and Land Management. The academic infrastructure units are the following: Open Access, Experimental and Practical Training Centres, Library, Career Center, etc. Since October 2012, former departments of faculties were merged into 14 institutes with the main purpose being: research, science-based studies, experimental development, training of researchers, dissemination of knowledge (read more)¹.

Agriculture Academy conducts and coordinates nationally- and internationally-competitive studies in Bioeconomics, Agricultural Sciences and other fields closely related to agriculture and rural development, including technological and engineering studies, and research, experimental, social, cultural development work, provides the services of professional development, expert, consulting, science commercialization and technology transfer, publishes academic and other literature².

Vytautas Magnus University has two study programmes in the field of Food: the first-cycle study programme "Food Quality and Safety" and the second-cycle study programme "Quality and Safety of Plant Food Raw Materials". The origins of these study programmes date back to the period of restoration of Lithuania's independence in 1990s. With the fundamentally changing economic situation and the needs of the labour market and the education system, the content and the directions of the study programmes have changed. Study programmes that are currently carried out in Food studies in both study cycles were registered in January 2012. During the period under evaluation, the

¹Access through the internet: <https://zua.vdu.lt/apie/vakar-ir-siandien/> (in LT)

²Access through the internet: https://www.vdu.lt/wp-content/uploads/2019/01/Statutas_2018_VDU.pdf (in LT)

study programmes of the field were some of the most popular programmes of other study fields implemented by Vytautas Magnus University Agriculture Academy: some of the largest entry competitions took place.

The main structural unit for the implementation of these programmes is the Faculty of Agronomy, which consists of the Institutes of Agricultural and Food Sciences, Biology and Plant Biotechnology and Agroecosystems and Soil Sciences, and the Scientific Laboratories of Plant Raw Materials Quality, Agrobiotechnology and Agrobiology. 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 (hereinafter – AF) – 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 (hereinafter the Committee). The scientific and study activities and organizational work of the Faculty are coordinated by the Faculty's Council.

Directions of research and experimental development (R&D) activities in the Faculty of Agronomy – “Development of high value-added, safe and innovative food raw materials and products”, “Sustainable food chain from field to table”, “Microbiological research of food raw materials and products”, “Sustainability of agroecosystems and intensification through precision agriculture and ecological measures”, “Healthy soils and plants”, “Crop, weed and soil ecology”, “Agrosystem research and biodiversity enhancement ” – are interdisciplinary related to food studies.

The programmes of the Food study field have not yet passed the evaluation procedure. Therefore, this self-evaluation will not contain the recommendations of the previous external evaluation and implementation of these recommendations.

ANALYSIS OF FIELD AND CYCLE OF STUDIES

1. STUDY AIMS, OUTCOMES AND CONTENT

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 Higher education institutions (hereinafter – HEIs) operating in exile conditions)

The Food and Agriculture Organization of the United Nations predicts that the world population will reach 9.7 billion by 2050³. In order to meet the demand for food and biofuels, agriculture in 2050 will have to produce almost 50 percent more food, feed and raw materials for biofuels compared to the production volumes of 2012¹. The importance of the sector is also reflected in the results of the analysis of macroeconomic indicators of the Lithuanian economy, which show that in agriculture, which also includes the food sub-sector, gross value added consistently grew and increased by 14.5 percent in 2014–2019⁴.

The compliance of the study programmes *Food Quality and Safety* (first-cycle) and *Quality and Safety of Plant Food Raw Materials* (second-cycle) to the needs of society and the labour market is based on the European Union (EU) Growth Strategy “European Green Deal”, the United Nations (UN) Sustainable Development Agenda 2030, EU’s “Farm to Fork Strategy”, EU’s Biodiversity Strategy, EU’s Bioeconomy Strategy, EU’s Research and Innovation Programme “Horizon 2020”, Lithuanian Progress Strategy “Lithuania 2030”, Lithuanian Smart Specialization Strategy, labour market trends and graduates’ employability.

The EU’s Communication “European Green Deal”⁵ sets out the guidelines for Europe’s development until 2050. With a new strategy for sustainable and inclusive growth to boost the economy, to improve human health and quality of life, Europe would become the first climate-neutral continent. Building a healthier and more sustainable EU food system is at the heart of the “European Green Deal”. The outcomes of the first-cycle study programme, such as “to be able to analyse and to critically evaluate the factors influencing raw materials and food management processes, ensuring sustainable production, respect for human health and the environment” or “be able to apply quality management systems to control and evaluate the quality and safety of food raw materials and products at all stages of primary production and food handling” or the results of the second-cycle study programme “to be able to assess problems of quality and safety of plant food raw materials and products in the handling, storage and processing of raw materials related to the impact on the environment, human health and public welfare” or “to be able to identify the factors necessary for the optimization of innovative food raw materials and production processes, to make complex process improvement decisions and to assess their consequences for the society and the environment”, etc. are directly in line with the guidelines of the “European Green Deal”, the provisions of the EU’s “Farm to Fork Strategy”, etc.

The importance of food systems is also reflected in the goals of the United Nations Sustainable Development Agenda 2030⁶ and the Lithuanian Progress Strategy “Lithuania 2030”⁷, which envisage ensuring flexible agricultural practices that increase production and protect ecosystems; sustainable food production systems; an adequate supply of safe food; sustainable economic growth. However, fundamental changes to current food systems, transforming them into more sustainable ones and

³Access through the internet: <http://www.fao.org/3/i6583e/i6583e.pdf> (in EN)

⁴Access through the internet: <https://www.laei.lt/?mt=leidiniai&straipsnis=1817&metai=2020>. (in LT)

⁵Access through the internet: COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. The European Green Deal COM/2019/640 final. <https://eur-lex.europa.eu/legal-content/LT/TXT/?uri=COM:2019:640:FIN>. (in EN)

⁶Access through the internet: Resolution of United Nations General Assembly, accepted on 25th September 2015. <https://orangeprojects.lt/uploads/documents/files/Darnaus%20vystymosi%20darbotvarkė%20iki%202030.pdf>. (in EN)

⁷Access through the internet: Lietuvos pažangos strategija „Lietuva 2030“. <https://www.docdroid.net/OHqeBsc/lietuva2030.pdf>. (in LT)

“recognizing the inextricable link between healthy people, a healthy society and a healthy planet”, are set out in the EU’s “Farm to Fork Strategy”⁸, which also seeks to implement the United Nations’ Sustainable Development Principles.

European Commission’s is taking action to develop a circular and sustainable EU bioeconomy, with a strategy⁹ that places particular emphasis on food security, the sustainable use of natural resources, reducing dependence on fossil (non-renewable) resources, increasing EU competitiveness and creating jobs, especially in rural and peripheral regions to develop sustainable and socially responsible production methods and circular business models throughout the food management chain. Research and innovation are key to a smooth and rapid transition to sustainable and inclusive healthy food systems, covering the stages from primary production to consumption⁵. European Commission will launch an additional call for proposals on “European Green Deal” priorities under “Horizon 2020” (EUR 1 billion) and under “Horizon Europe” (EUR 10 billion) for research and innovation in the fields of food, bioeconomy, natural resources, agriculture, fisheries, aquaculture and the environment, as well as the use of digital technologies and natural process-based solutions in the field of agri-food⁵. At the national level, the Lithuanian Smart Specialization Strategy “Agro-Innovation and Food Technologies” recognizes one of the priority areas of research, experimental development and innovation (R&D&I), with the topics for the implementation being sustainable agrobiological resources and safe food and waste-free processing of bio-raw materials into valuable components¹⁰.

The assessed field of study meets the needs of the Lithuanian and European labour market. Providing the population with safe and high-quality food, the transition to more sustainable food chains, digitalisation, structural change, the emergence of new business models and other challenges that the food sector is facing lead to creative, innovative approaches, responsible decision-making and implementation of the need for specialists. By creating and maintaining highly-skilled jobs in the regions, people of the regions are encouraged to pursue higher education. In Lithuania, the creation of businesses with a highly qualified workforce in regional areas is especially encouraged, which allows attracting more educated people (including young people) who can contribute to the creation of rural well-being.

According to the research conducted by the Lithuanian Regional Research Institute on the prognostic need for agricultural specialists in 2025–2028 and taking into account labour market development trends, labour productivity growth, changes in the ratio of skilled and unskilled labour force as well as the peculiarities of the specialist training process, the need for preparing the first-cycle specialists in the field of Food studies for the aforementioned period is 40, and for the second-cycle – 24 (only the need for agricultural sector, without the need for food industry)¹¹.

The study field programmes are unique because of their interdisciplinarity, covering agronomy and engineering study fields, and trained specialists who acquire competencies important at all stages of the food chain, from growing, preparing, and processing quality raw materials to safe delivery to the consumer. Therefore, employers are interested in ensuring the employment of graduates of these study programmes in their companies. Statistical data show that during the period under evaluation of the study field on average over 75% of graduates with the bachelor’s degree work in qualified

⁸Access through the internet: EU “Farm to Fork Strategy”. <https://ec.europa.eu/transparency/regdoc/rep/1/2020/LT/COM-2020-381-F1-LT-MAIN-PART-1.PDF> (in EN)

⁹ Access through the internet: Access through the internet: COMMUNICATION FROM THE EUROPEAN COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. Sustainable European bioeconomy. Strengthening the links between the economy, the society and the environment. COM/2018/673 final. <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2018:0673:FIN:LT:PDF> (in LT)

¹⁰Access through the internet: <https://strata.gov.lt/lt/sumani-specializacija/prioritetai/agroinovacijos-ir-maisto-technologijos>. (in LT)

¹¹Access through the internet: https://zum.lrv.lt/uploads/zum/documents/files/PATIKSLINTA%20%C5%BDem%C4%97s%20%C5%ABkio%20ir%20kaimo%20pl%C4%97tros%20specialist%C5%B3%20poreikio%20tyrimo%20Ataskaita%20-%2020201109-galut-R_Dapkus-VDU_%C5%BD%C5%AAA.pdf (in LT)

positions or continue their studies in the second-cycle. Moreover, more than 90% of graduates with the master's degree work in highly qualified positions or doing their PhD's.

The goals of similar study programmes conducted in other universities and universities of applied sciences differ from the goals of the study programmes of VMU AA. The first- and the second-cycle study programmes of Lithuanian University of Health Sciences in the field of Food studies on food (bio-) technologies, nutrition, food quality control systems, production planning, organization and management; the study programmes implemented at Kaunas Technological University and Kaunas, Klaipėda, Vilnius, Utena universities of applied sciences belong to other fields of study, i.e. Food technology study field in Technology science study field group.

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. The study programme covers the stages of the food management chain from the cultivation, preparation, and processing of quality raw materials to the safe presentation of the product to the consumer. Upon completion of the study programme, graduates are able to explain the impact of primary production and food handling processes on the quality and safety of food raw materials and products, the environment and human beings; is able to describe the chemical composition of food raw materials and products, the properties of food components and their interaction and understands the impact of food quality and nutrition on the quality of human life; is able to describe the processes of production, processing, spoilage and decomposition of food raw materials and products, to select appropriate methods of their control, to explain the impact of these processes on the quality and safety of raw materials and products; is able to analyse and critically evaluate the factors influencing the processes of raw materials and food management, ensuring sustainable production, preserving human health and the environment; is able to select appropriate raw materials, equipment, tools, processes and methods for handling food raw materials and products; is able to apply quality management systems to control and to evaluate the quality and safety of food raw materials and products at all stages of primary production and food handling (Annex 2, Table 1).

Graduates of the study programme *Food Quality and Safety* 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. Graduates of this study programme are able to identify the problems of quality and safety of plant food raw materials reflecting the needs of society and to explain the solutions based on scientific principles; to define the factors determining the quality and safety of food raw materials, to describe the methods of food raw material quality evaluation and food quality management systems; is able to apply the latest scientific knowledge in the development of innovative raw materials and products, applying the principles of sustainable production, assessing the impact of their production process on the society and the environment; is able to assess the quality and safety problems of plant food raw materials and products in relation to the impact on the environment, human health and public welfare; is able to identify and to apply food quality management systems, comply with environmental and ethical requirements in primary production and food management chain; is able to identify the factors necessary for the optimization of innovative food raw materials

and production processes, to make complex process improvement decisions and to assess their consequences for the society and the environment (Annex 2, Table 2).

After obtaining master's degree in agricultural sciences, graduates of the study programme *Quality and Safety of Plant Food Raw Materials* 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.

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

Vytautas Magnus University is a fosterer of humanistic culture, not limited to narrow, strictly specialized studies, seeks to be an intellectual and civic centre of society, to preserve and to nurture its values, to actively participate in the life of world universities¹².

In the strategic action plan of Vytautas Magnus University for 2021–2027¹³, one of the strategic goals is to seek leadership in the training of agricultural professionals and in the formation of agriculture, forestry, water management and rural development policies. To achieve this goal, the following tasks have been formulated:

- 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;
- To expand expert and consulting services based on the achievements of modern science for both agricultural entities and state institutions;
- 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.

Specialists of both first- and second-cycle Food studies are important for the implementation of these tasks, as well as the goals and results of the programmes of this study field are in line with the mission of VMU AA “...to create and disseminate scientific knowledge, sincerely striving for safe and healthy food and full-fledged living environment for every citizen of Lithuania”¹⁴, reflects the competencies of food science specialists that are currently needed to transform food systems, to reduce their environmental footprint and their impact on the climate, ensuring the provision of affordable, safe and high-quality food to the public. This is directly related to the implementation of the “European Green Deal” and the “Farm to Fork Strategy”, as well as VMU's strategic goals and VMU AA's mission.

The implementation of sustainability principles requires knowledge, and the European Commission will promote effective Agricultural Knowledge and Innovation Systems (AKIS) covering all actors in the food production chain. The results of the first- and the second-cycle study programmes envisage that graduates will be able to “communicate and cooperate in solving food management tasks, to provide clear and reasoned information and to communicate with specialists in various fields of science” The impact of specialists in this field on publicizing research results, consulting business and government institutions, providing expert services is also related to the tasks of VMU strategy implementation, expanding expert and consulting services based on the achievements of modern science for both agricultural entities and public institutions”. Therefore, the implementation of the study programmes in the field of Food studies and training of specialists for the country's economy is timely, corresponding to the mission of VMU.

¹²Access through the internet: VDU vizija ir misija. <https://www.vdu.lt/lt/apie-vdu-kaune/vdu-vakar-ir-siandien/vdu-misija-ir-vizija> (in LT)

¹³Access through the internet: <https://www.vdu.lt/wp-content/uploads/2020/11/VDU-Strateginis-veiklos-planas-2021-2027-1.pdf> (in LT)

¹⁴Access through the internet: <https://zua.vdu.lt/apie/misija-ir-vizija/> (in LT)

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

The composition of the first- and the second-cycle study programmes is in conformance with general requirements of studies¹⁵. This conformity is presented in Tables 1 and 2.

Table 1. Programme's *Food Quality and Safety* compliance to general requirements for *bachelor programmes*

Criteria	Legal requirements	In 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 2. Programme's *Quality and Safety of Plant Food Raw Materials* compliance to general requirements for *master programmes*

Criteria	Legal requirements	In Programme
Scope of the programme in ECTS	90 or 120 ECTS	120 ECTS
ECTS for the study field	No less than 60 ECTS	91-109 ECTS
ECTS for studies specified by University or optional studies	No more than 30 ECTS	11-23 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%

The study programmes of field of Food studies meet the requirements of the Descriptor of Study Cycles¹⁶ in terms of programme goals and learning outcomes that are specific for the first/second-cycle studies. This conformity will be illustrated in the next section (1.4, Tables 1-2 of Annex 2). When formulating the results and forming the content of the field study programmes, the draft description of the Food study field was also considered.

In May 2020, the committees of the study programme, while evaluating the study courses of both cycle programmes, assessed and adopted a resolution to improve the structure of the programmes, the compliance of the content of the courses with the study cycle and the academic requirements, as well as the adequacy of the scope of courses for study results.

The full-time and part-time study plans of the first- and second-cycle study programmes are presented in Tables 1-4 of Annex 1. The structure of the study programmes complies with the General Requirements for Study Execution¹⁷.

The first cycle study programme *Food Quality and Safety* consists of: 1. General university study courses; 2. Courses of the study field; 3. Courses of other study fields. The volume of the programme is 240 ECTS, of which 139 ECTS (or 57.9 % of the programme) are study courses required to achieve the results of the Food study field; 57 ECTS (23.75%) are study courses required

¹⁵ Access through the internet: <https://www.e-tar.lt/portal/lt/legalAct/739065a0ce9911e69e09f35d37acd719/asr> (in LT)

¹⁶ Access through the internet: https://www.skvc.lt/uploads/lawacts/docs/346_6b83703b532be84be32dd512a348eae6.pdf (in EN).

¹⁷ Access through the internet: <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/a4caf862ced511e6a476d5908abd2210> (in LT)

to achieve the results of other fields and 44 ECTS (18.3%) are optional general university A and B group study courses, of which 12 ECTS are allocated to English¹⁸ and 36 – to optional courses from other groups of *Artes liberales* study fields: arts, humanities, physical, biomedical and technological sciences, foreign languages.

The second cycle study programme *Quality and Safety of Plant Food Raw Materials* consists of: 1. Study courses of the field; 2. Other study courses. The volume of the programme is 120 ECTS, of which the volume of the study field courses required to achieve the results of the Food study field can vary from 91 to 109 ECTS (or 75.8-90.8% of the programme), depending on the study courses chosen by the student in the 3rd semester; the volume of study courses required to achieve the results of the optional courses and courses from the other fields can vary from 11 ECTS to 23 ECTS (9.17-19.17% of the programme), depending on the study courses chosen by the student in the 3rd semester (full-time studies).

The qualification requirements of the staff implementing the programmes are assessed in Chapter 5 and by providing the compliance between the research and the courses taught (Annex 4).

Learning outcomes are the basis for the scope of the courses, and the allocation of ECTS depends on the nature and complexity of learning outcomes. When learning outcomes are more complex, a higher number of students working hours is planned in the course, and more credits are assigned for such a course comparing to the one that covers learning outcome of a lower complexity. Student workload encompasses a standard, usual number of hours necessary to complete the activities that have been planned in the course. Student workload includes their time in classes, laboratories, internship placements, making individual or group assignments, preparation for evaluation, etc. 1 ECTS corresponds to 26,67 hours of usual student work time.

The calculation of student workload and ECTS allocation is systematically revised.

In the generic case, the methodological work is regulated by the General Requirements for Study Execution¹⁹, which state that “...for the first-cycle studies the volume of contact work must be at least 20%, and for the second-cycle studies the volume of contact work must be at least 10%”. In 2020, the volume of contact work for the first-cycle study programme has been reorganized according to the Order No. 352 by VMU Rector “Regarding the calculation of the pedagogical workload of teachers”, issued on 08.07.2020: 3 ECTS – 30 contact hours, 4 ECTS – 45 hours, 5 ECTS – 60 hours, 6 ECTS and 7 ECTS – 75 hours. For the second-cycle study programme 4 ECTS and 5 ECTS are equal to 45 contact hours, 6 ECTS – 60 hours, 7 ECTS – 75 hours and 8 ECTS – 90 hours. For example, the course of the first-cycle study programme “Instrumental analysis of food products”, the volume of which is 4 credits, provides 45 contact hours and 62 hours of independent work, which is fully sufficient to achieve the intended learning outcomes of the course. The course of the second-cycle study programme “Chemical safety of plant raw materials”, the volume of which is 6 credits, provides 60 contact hours and 100 hours of independent work, which is fully sufficient to achieve the intended learning outcomes of the course.

Student workload includes the standard, routine number of hours required to complete a planned activity in a course. Student workload includes time spent in classrooms, laboratories, internships, time performing individual or group tasks, preparing for evaluation, and etc.

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

The learning outcomes of the field of study programmes are formulated according to the aim of study programme and include all components of the aim.

¹⁸Access through the internet: <https://www.vdu.lt/wp-content/uploads/2020/12/Studiju-reguliaminas-SEN-069-final.pdf> (in LT)

¹⁹Access through the internet: <https://www.e-tar.lt/portal/lt/legalAct/739065a0ce9911e69e09f35d37acd719/kfwOKicljljg> (in LT)

The outcomes of the study course shall be compatible with the outcomes of the study programme: a) The outcome of the study course shall cover the same or a narrower object comparing to the outcome of the programme; b) The outcome of the study course shall define the ability of the same or minor (but not greater) complexity as the outcome of the study programme.

Study topics shall be formed on the basis of learning outcomes - they shall include the objects that are included in the learning outcomes.

Study methods shall be compatible with learning outcomes as well as evaluation methods shall be compatible with study methods.

The links between the study programmes and the results of study courses, study methods and methods of assessment of student achievements are analysed during the attestation of course descriptions (Protocols No. 16 and No. 16a of 16th April 2020).

The links between the aims of the first-and second-cycle study programmes, the expected learning outcomes of the Programme and the study courses are presented in Tables 1 and 2 of Annex 2. For example, in the group of special skills of the first-cycle study programme *Food Quality and Safety* the study result “ability to apply quality management systems in controlling and evaluating the quality and safety of food raw materials and products at all stages of primary production and food handling” is developed in the following study courses: “Food safety and quality management systems”, “Food microbiology and toxicology”, “Information technologies in the food sector”, “Food production”, “Engineering of processing and storage of food raw materials and products”, “Instrumental food analysis”, “Sensory analysis of food products”, “Food quality assessment”, “Coursework (innovative product development)”, “Professional internship”. As well for example in the group of special skills of the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* the study result “ability to assess the quality and safety problems of plant food raw materials and products in processing, storage and processing of raw materials related to the impact for the environment, human health and public welfare” is developed in the following courses: “Chemical safety of plant raw materials”, “Human ecology and environmental epidemiology”, “Consumer law and education”, “Educational public health promotion”.

The implementation of the study programmes encourages the creativity and innovation of teachers by using a wide variety of active teaching/learning methods: presentation of reports, case analysis, problem solving, demonstration, project preparation and presentation, information analysis and generalization, video review, etc.

The study topics of the courses taught are coordinated with the results of the study programme and are sufficiently detailed to achieve the results. Aims, content, results, links with the results of the study programme, teaching and learning methods used, criteria, methods, and structure of assessment of achievements are presented in the course descriptions. Descriptions of study courses are prepared taking into account the requirements of VMU, which are presented in the description of the study Regulations²⁰ and the procedure for attestation of study courses²¹.

The compatibility of the topics of the courses taught with the learning outcomes and the intended methods for achieving them are assessed by the reviewers of the course descriptions and the Study Programme Committee. The detailed content of study courses is described in the course programmes. Study courses use the forms of assessment provided for in the VMU Study Regulations²²: defences of individual and group works, laboratory works and course projects, reports of colloquia, passing an exam, etc. These are interim and/or final assessments. Interim reports include colloquia and reports on laboratory work, tests, homework, and other tasks. The studies of each course are completed by an examination, and the study programme is finalised by the assessment of the

²⁰Access through the internet: <https://www.vdu.lt/wp-content/uploads/2020/12/Studiju-reguliaminas-SEN-069-final.pdf> (in LT)

²¹Access through the internet: https://www.vdu.lt/wp-content/uploads/2019/12/VDU_dalyku_atestavimo_aprasas_2019-11-20_redakcija.pdf (in LT)

²²Access through the internet: https://www.vdu.lt/wp-content/uploads/2019/12/Studiju-reguliaminas_po-Senato-2019.pdf (in LT)

graduate's competence through his Final thesis. The form of the Final work report is its presentation at the Institute of Agricultural and Food Sciences and public defence at the meeting of the Final theses' evaluation commission.

The compliance of the results of the first-cycle programme *Food Quality and Safety* with the study results, study and assessment methods of the courses is revealed in Table 3 of Annex 2, providing an example from the description of the study course "Instrumental food analysis". For example, the result of the study programme "ability to apply quality management systems in controlling and evaluating the quality and safety of food raw materials and products at all stages of primary production and food management" is achieved through the result of a study course "is able to explain the importance of the application of instrumental and sensory research methods in solving practical problems" during lectures, where methods of written survey, case study assessment, discussion and test observation, and report presentation observation are used to assess the learning outcomes. First-cycle students analyse scientific texts in more than one course during the preparation for seminars, discussions, case studies or individual or team assignments, e.g. in the study course "Functional food", before creating a product of increased biological value, students must perform an analysis of the scientific study or, for example, in the study course "Biologically active substances" students have to analyse the latest research results.

The compliance of the results of the second-cycle programme *Quality and Safety of Plant Food Raw Materials* with the study results, study and assessment methods of the courses is revealed in Table 4 of Annex 2, providing an example from the description of the study course "Chemical safety of plant raw materials". For example, the result of the study programme "ability to assess the problems of quality and safety of plant food raw materials and products in processing, storage and processing of raw materials related to the impact for the environment, human health and public welfare" is achieved through the result of a study course "to be able to integrate interdisciplinary knowledge, evaluate the results of chemical safety research of plant food raw materials" during lectures, which apply narrative, interpretation, case study, discussion study methods. Case analysis and discussion observation assessment methods are applied to evaluate study achievements.

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

The content of the first-cycle study programme for full-time studies is spread over 4 study years (8 semesters), and for part-time studies – 6 study years (12 semesters). During the implementation of studies, the volume of courses studied in a full-time form is 60 ECTS per year (varies from 29 to 31 ECTS per semester), and in part-time studies – 39-41 ECTS (19-21 ECTS per semester). 15 ECTS are awarded for "Professional internship" and "Final thesis". Table 1 of Annex 1 presents the plan of first-cycle full-time studies, and Table 2 shows the volume of part-time studies, which includes the assignment of study courses according to the expected study results, credits, semester, contact hours and independent work hours, the teacher and the form of the final assessment of each study course.

The study courses in the 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.

Artes liberales and optional studies take place in the first-fourth semesters. In the third and fourth semesters, students study the courses of "Agricultural systems", "Plant food raw materials", "Sustainable food systems", "Animal food raw materials", "Food chemistry", "Sensory food analysis", which form the ability to select suitable raw materials, equipment, tools, processes and techniques for handling food raw materials and products. In the fifth-seventh semesters, the specialty courses are studied ("Food production", "Food microbiology and toxicology", "Biologically active nutrients", "Instrumental food analysis", "Food safety and quality management systems", "Coursework (Innovative product development)", etc.). Students are provided with deeper knowledge and the ability to analyse, to critically evaluate, to apply quality management systems to control and evaluate the

quality and safety of food raw materials and products at all stages of primary production and food handling.

At the end of the 4th semester, students are invited to choose a research topic. During the meeting with the students, the teachers of the study programme inform about the possible research topics, as well as listen to the students' suggestions. According to the nature of the research work (field or laboratory experiment), a preliminary research and a related final work are formed, which is finally specified in the seventh semester (for full-time students) or 11th semester (for part-time students).

In the sixth semester, after students have listened to more than half of the specialty courses, a professional internship carried out, the volume of which is 15 ECTS. Therefore, it is assessed as timely. It is performed in companies, institutions, or organizations whose activities are related to the results of the Programme. This ensures that students' knowledge and skills are directly in line with the aims and the results of the study programme. Part-time students can also perform professional internship tasks in their workplace, as their activities are in line with the goals and the results of the study programme. At the end of the internship, the student prepares a report and defends it.

In the eighth semester, 15 ECTS are allocated to the Bachelor Thesis. It is an independent research paper in which the student must demonstrate the ability to select and to apply the most appropriate raw material quality research methods, raw material cultivation technologies and processing methods, justify the topic, formulate the aim and objectives of the work using fundamental and applied research results and methods to analyse the topic from food, safety and quality management of raw materials, improvement, storage and processing of food raw materials, development of new products and other topicalities of food studies, identify problems and provide reasonable solutions, make generalizations and conclusions.

The content of the second-cycle study programme for full-time studies is spread over 2 study years (4 semesters), and for part-time studies – 3 study years (6 semesters). During the implementation of studies, the volume of courses studied per year is 60 ECTS (per semester – 29-31 ECTS), and in part-time studies – 36-48 ECTS (per semester – 18-30 ECTS). 30 ECTS are awarded for the “Final thesis”. Table 3 of Annex 1 presents the plan of second-cycle full-time studies, and Table 4 in shows the volume of part-time studies, which includes the assignment of study courses to the study field according to the expected study results, credits, semester, contact hours and independent work hours, the teacher and the form of the final assessment of each study course. Class schedules are drawn up each semester, and students are invited to the University each semester for contact work for intensive course studies. Sessions in the fourth (full-time studies) or the sixth semester (part-time studies) are not organized, because of the writing of Master Thesis and work with the supervisor.

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. In the first semester, students attend the courses “Chemistry of plant food raw materials”, “Quality and safety management of plant food raw materials”, “Quality of agroecosystems and crop production” (in the third semester of part-time studies), “Career management modelling” (in the fourth semester of part-time studies), “Research planning and analysis”, that provide prerequisites for planning theoretical and/or experimental studies, to choose experimental and measurement equipment. Second-cycle students are introduced to the topics of research work in the first semester. During the meeting with the students, the Committee supervising the study programme informs about possible research topics, listens to the students' suggestions. According to the nature of the research work (field or laboratory experiment), a preliminary research and a related final work are formed. Both are finalized in the third (full-time studies) or the sixth semester (part-time studies).

In the second semester, students attend “Chemical safety of plant raw materials”, “Microbiological contamination and toxins of plant food raw materials” (in the third semester of part-time studies), “Methods for assessing the quality of plant food raw materials”, “Human ecology and environmental epidemiology” (in the fourth semester of part-time studies), which form the ability to

study, to analyse and to evaluate plant food raw materials and product quality and safety issues, the impact on the environment, human health and public welfare, to apply food quality management systems in primary production and the food chain, to identify the factors necessary to optimize the production processes of innovative food raw materials and products and to assess their consequences for the society and the environment. This semester includes the course “Research work I”, in which students prepare research methodology, the methodology for analysing and evaluating the results, perform primary research and analysis of the results.

In the third semester, students have one compulsory course “Consumer law and education” (in the fifth semester of part-time studies), three optional courses of the study field or other study fields (in the third- fifth semesters per one/per each of full-time studies) and “Research work II” (in the fifth semester of part-time studies). During it, research is carried out according to the prepared methodology, the results are analysed and summarized, conclusions and presentation of the work are prepared. In the fourth semester, students summarize the results and prepare the final work, in which the students demonstrate their ability to analyse scientific literature, to link the quality and safety of plant food raw materials to research, to identify a scientific or practical problem and to develop a methodology to solve and hypothesize; to anticipate the aim and the tasks of the research, to analyse and to interpret the collected material, to make reasoned conclusions in comparison with the results of other researchers.

Brief descriptions of study courses of both study programmes of the study field are presented on the website of VMU study programs^{23,24}. Full descriptions of study subjects are provided in the Moodle environment.

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

VMU provides students with possibilities to study according to an individual study schedule in order to meet specific learning needs. The schedule is designed on the basis of the implemented study programme and individual study plans. An individual study schedule determines the distribution of the taken courses at a certain time, the number and time of consultations, the form and order of assessment, the beginning and end dates of the examination session. Studies according to the individual study schedule are regulated by the Description of the Procedure for Providing the Individual Study Schedule²⁵.

VMU also provides students with opportunities to take individual studies when creating their own individual study plans following *Artes liberales* principles in order to acquire additional knowledge and skills necessary to prepare for further academic and professional activities. Individual studies are regulated by Order on Organization of Individual studies²⁶ and VMU Study Regulations²⁷. Individual studies may be chosen by the first-cycle and integrated studies students from the second semester, but not later than the sixth study semester. Only the students who are motivated and prepared are selected for individual studies.

A student who has a motivated reason to use an individual study plan writes an application and coordinates with the Dean of the Faculty of Agronomy. The Dean evaluates the validity of the application, draws up and approves an individual study plan. Individual studies provide the opportunity to vary the timing of classes but make no exceptions to the quality of knowledge. When choosing additional study courses, students do not pay extra for exceeded study credits.

²³ Access through the internet: <https://zua.vdu.lt/studijos/studiju-programos/?lt/study/program/subject/297> (in LT)

²⁴ Access through the internet: <https://zua.vdu.lt/studijos/studiju-programos/?lt/study/program/subject/304> (in LT)

²⁵ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2015/01/VDU-individualaus-studiju-grafiko-teikimo-tvarkos-apra%C5%A1as.pdf> (in LT).

²⁶ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2012/04/ORDER-ON-INDIVIDUAL-STUDIES-ORGANIZATION.pdf> (in EN).

²⁷ Access through the internet: https://www.vdu.lt/wp-content/uploads/2019/12/Study_Regulations_2019.pdf (in EN).

Individual learning needs are also assured by the possibility to take freely elective minor studies that are one of the features of *Artes liberales* studies in VMU. Minor studies are organized in accordance with VMU Description of Procedure for Organization of Minor Studies²⁸. Minor study programmes consist of courses taught in the first-cycle or integrated study programmes of a particular study field. During the period under evaluation, students of the field study programmes did not choose part-time studies.

The possibility for the first-cycle students of the field study programme to choose the courses of groups A and B allows to personalize the studies more, to choose the courses useful for them, not necessarily related to the studied bachelor's programme as well as to improve foreign language skills and computer literacy. Moreover, the University is intercultural and multilingual that is why students have opportunities to choose different foreign languages. More than 30 different languages are available at the University.

In the first-cycle study programme, students were designated with 12 credits for foreign languages and 4 credits for specialty language studies for the study year of 2019-2020. From the study year of 2020-2021, 12 to 24 ECTS were designated for foreign languages. Due to the principle of *Artes liberales* applied by VMU, students can individualize their studies by choosing general university courses. In the first cycle full-time and part-time field study programmes, 14 ECTS are designated in the first and the second semesters, and 8 ECTS – in the third and the fourth semesters, of which the credits allocated to languages depend on the level of language proficiency.

In the 6th semester of the first-cycle full-time studies, and in the 8th semester of part-time studies of the field, it is possible to individualize the studies, for example, by choosing the topic of the coursework – innovative product development as well as the topic of the bachelor's thesis²⁹.

The second-cycle studies are individualized through 3 optional study courses (18 credits), research (18 credits) and the final thesis (30 credits)³⁰. The student can choose courses from the proposed list of courses of the field of study (4 courses) or from the list of courses of other fields (2 courses).

Students can independently choose the thesis supervisor, and, in consultation with him, choose the topic of the thesis, create a study and research programme, plan and conduct research.

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

Preparation and defence of final theses is regulated by VMU Study Regulations and General Order on the Final Theses Preparation and Defence³¹.

General Order on the Final Theses Preparation and Defence (hereinafter – Order) describes the general requirements for final theses preparation and defence of first and second study cycle, integrated and professional studies. Special requirements for preparation, formatting, and presentation for defence of final theses are set by faculties, the subdivisions of which (i.e. departments) prepare methodological guidelines.

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”³². 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 master's thesis of the

²⁸ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2017/06/Description-of-procedure-for-organisation-of-minor-studies-2017-06-07.pdf> (in EN).

²⁹ Access through the internet: <https://zua.vdu.lt/studijos/studiju-programos/?lt/study/program/subject/297> (in LT)

³⁰ Access through the internet: <https://zua.vdu.lt/studijos/studiju-programos/?lt/study/subject/9032/> (in LT)

³¹ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2020/05/GENERAL-ORDER-ON-THE-PREPARATION-AND-DEFENCE-OF-THE-FINAL-THESES.pdf> (in EN).

³² Access through the internet: https://zua.vdu.lt/wp-content/uploads/2021/05/Metodiniai-Agronomija_2021_pataisyta.pdf (in LT)

study programme “Quality and Safety of Plant Food Raw Materials”³³. In accordance with a specific study programme, they set the requirements for final theses, their preparation, defence, and special evaluation criteria.

The research fields and topics of the final theses are defined by the Study Programme Committees. Research directions according to which the topics of the theses can be formed and the list of teachers working on the specific topics is published on the website of the Faculty of Agronomy³⁴.

First- or second-cycle students must coordinate their chosen thesis topic with the supervisor. These topics are approved by the Director of the Institute of Agricultural and Food Sciences and the Dean of the Faculty of Agronomy no later than one month before the date of the public defence.

The Master Thesis is defended only in case of approbation of the research results at the annual student scientific conference “Young Scientist” organized at Vytautas Magnus University Agriculture Academy and a publication in a scientific journal or popular science journal. Students who do not meet these requirements cannot defend their final theses³⁵.

The students of the first- and the second-cycle study programmes prepare their final theses independently, in consultation with the supervisor. The supervisor consults at specific consultation hours, set in advance. 9 contact hours are allocated for consultations for the preparation of the Bachelor Thesis and 30 hours – for the preparation of the Master Thesis.

Students can defend their final thesis after completing the compulsory study programme. Final theses are defended at the end of the last semester. If the final thesis is assessed negatively, the student may re-defend it no earlier than six months after the first defence.

The content of the final theses and their compliance with the field studies are analysed by the Meeting of the Institute of Agricultural and Food Sciences. The compliance of the final theses with the requirements of the study field and cycle is assessed by the Final Thesis Evaluation Commission (FTEC). The Head of the Study Programme Committee participates in the defence of the final theses.

The lists of first- and second-cycle theses of 2017-2020 (titles of theses, evaluation, and supervisors) are given in Annex 3.

Their topics are related to ongoing activities of research and experimental development (R&D).

During the period under evaluation, the content of the final theses of the first cycle field 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%).

According to the order of the social partners of the University, 5 bachelor theses were prepared during the period under evaluation, namely: “Study of the quality of Jerusalem artichoke (*Helianthus tuberosus* L.) blossoms”, “Berry quality and their use in the production of oat bars”; “The influence of vegetable additives on the quality of chickpea cookies”, “Enrichment of confectionery products with vegetable and berry additives”, “Research of the quality of natural sweets”. While implementing 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 bachelor theses and 3 master theses were prepared.

The content of the final theses of the study programmes fully corresponds to the studies of the field.

³³ Access through the internet: https://zua.vdu.lt/wp-content/uploads/2019/05/AF-tinklapiui_BD_II-pakopos-met.-nurodymai-1.pdf (in LT)

³⁴ Access through the internet: <https://zua.vdu.lt/fakultetai/agronomijos-fakultetas/mokslas/> (in LT)

³⁵ Access through the internet: <https://zua.vdu.lt/wp-content/uploads/2021/01/Z%CC%8CU%CC%84A-2021-02-Kanclere-potvarkis.pdf> (in LT)

Please provide main results of the self-evaluation in the area of <i>Study aims, outcomes and content</i>	
Strengths	
The goals and learning outcomes of the field programmes are in line with the mission, the operational goals and the strategy of VMU as well as in line with the goals of the European Green Course, the provisions of the EU's "From Farm to Fork Strategy" and the EU Sustainable Development Guidelines.	
The learning outcomes of the study programmes of the field are relevant in training qualified specialists for the agricultural and food sectors, who are necessary for the implementation of more sustainable food management chains.	
The study programmes of the field are unique: interdisciplinary and, in terms of content, are the only ones in the country: highly qualified professionals are particularly encouraged to set up businesses in regional areas where they can contribute to rural prosperity.	
Areas for improvement	
More active involvement of social partners in the processes of preparation of students' final theses by inviting them as consultants.	
Higher number of final theses commissioned by the social partners: to link more theses' topics to the problem areas of companies where students do/have done an internship or where they are employed: factors determining the quality and safety of food raw materials; development of high value-added and innovative food raw materials and products, etc.	

2. LINKS BETWEEN SCIENCE (ART) AND STUDY ACTIVITIES

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

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 (Table 3).

Table 3. Results of formal evaluation of Agricultural (A) research papers of Lithuanian universities in 2017–2019 (by the total sum of points credited)

No.	Institution	Field of science (art)		No.	Institution	Field of science (art)		No.	Institution	Field of science (art)	
		A-2017				A-2018				A-2019	
		Σ AIV	T _i			Σ AIV	T _i			Σ AIV	T _i
1	VMU*	199.08	7.9	1	VDU	203.73	8.12	1	VDU	269.67	10.26
2	LUHS	132.41	2.69	2	LUHS	227.17	7.98	2	LUHS	147.21	2.84
3	LRCAF	454.79	3.51	3	LRCAF	448.94	3.02	3	LRCAF	510.83	3.40

ΣAIV – weighted sum of points credited of formal evaluation scientific (artistic) works;

T_i – points per full-time equivalent of researchers at the institution;

VMU*- LUES, ASU and VMU.

Studies in the Food study field in higher education institutions are related to the fields of agronomy (A001) and veterinary medicine (A002)³⁶.

According to the results of the comparative evaluation of research and experimental development activities in the last 5 years, the level of research at VMU in the field of agronomy of agricultural sciences was evaluated with 2 points (satisfactory), i.e. satisfactory at the national level. 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. The viability of agricultural science R&D activities was also assessed with 3 points (good), which shows that researchers will be able to intensify R&D activities and to increase the economic and social impact on society in the coming period.

So far, the field of veterinary medicine is not being developed at Vytautas Magnus University. Therefore, the level of research in this field has not been assessed.

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. R&D activities – “Development of high value-added, safe and innovative food raw materials and products”, “Sustainable food chain from field to table”, “Microbiological research of food raw materials and products”, “Sustainability of agroecosystems and intensification through precision agriculture and ecological measures”, “Healthy soils and plants”, “Crop, weed and soil ecology”, “Agrosystem research and biodiversity enhancement” – are interdisciplinary related to food studies.

The Research and Arts Unit of the Research and Innovation Department of Vytautas Magnus University monitors the efficiency of research and experimental development units (groups of scientists). The efficiency of research activities is assessed, and the funds are allocated according to the following indicators:

³⁶Access through the internet: <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/69729d50a8ca11e9aab6d8dd69c6da66/asr> (in LT)

- results of scientific production (based on the methodology of evaluation of scientific production of the University);
- results of other research activities – organization of scientific conferences, seminars, exhibitions, etc., project activities and evaluations of other achievements (prizes, winners of competitions, etc.) based on the methodology of calculation of other scientific activities at the University;
- contribution of the R&D unit to the study process;
- the equivalent of working time of researchers involved in the unit's R&D activities (full-time equivalent, FTE)³⁷.

Research activities at the Agricultural Academy are organized and coordinated in the institutes of the faculties. Analysis of scientific publications of the teachers of the Food study field participating in the implementation of the first- and second-cycle study programs revealed a positive qualitative and quantitative change in recent years (Table 4). Number of peer-reviewed scientific publications referenced in international databases with the *Clarivate Analytics Web of Science* citation index increased 1.7-fold in 2020 compared to 2017. During the four-year period, teachers published 51 articles in the journals referenced in *Clarivate Analytics Web of Science* databases with an international citation index, of which Q1 – 8, Q2 – 14, Q3 – 19 (Table 4).

Table 4. Scientific publications of the teachers implementing the first and the second-cycle study programs in Food study field in 2017-2020

Year	In journals, referenced in <i>Clarivate Analytics Web of Science</i> (CA WoS) databases with an international citation index (Impact Factor)					In journals, referenced in <i>Clarivate Analytics Web of Science</i> (CA WoS) databases without a citation index	In peer-reviewed journals, referenced in other databases
	Q1	Q2	Q3	Q4	Total		
2017	1	2	6	2	11	6	7
2018	0	2	4	6	12	5	9
2019	1	1	6	1	9	1	14
2020	6	9	3	1	19	0	8
Total	8	14	19	10	51	12	38

Topics of the research carried out by the teachers are closely related to the courses they teach. 3 most important scientific publications of the teachers of the study programme in 2017-2020 are presented in Annex 4.

Teachers of the study programme are actively involved in national and international R&D activities. There is an active cooperation with social partners, commissioned research and other activities are carried out. The volumes of R&D performed in the field of agricultural science in 2017-2019 are presented in Table 5.

Doctoral studies in the field of agronomy (A001) are implemented by the Lithuanian Research Centre for Agriculture and Forestry (LRCAF) with its partners; *joint international research projects are being carried out with teams of scientists from the Lithuanian University of Health Sciences (LUHS), Warsaw University of Life Sciences, Wrocław University of Environment and Life Sciences (Poland).*

In the future, it is planned to increase the scope of R&D project activities, to encourage teachers participating in the programs to submit applications and to participate more actively in research projects.

³⁷Access through the internet: The full-time equivalent of a researcher (FTE) is the number of hours worked per year by the researchers in the R&D unit divided by the number of working hours for the 12 months of that year set by the Minister of Social Security and Labour. <https://www.lmt.lt/lt/doclib/khyfof0wnftvsmbjfvhr5k8141bnnaxz> (in EN)

Table 5. The funds of R&D projects and contracts from the annual evaluation in 2017-2019

Funds	2017	2018	2018
TPP*/AF****	41.39/0	290.57/45.91	361.5/54.56
USU**	208.17/151.67	180.73/151.30	286.48/171.16

*TPP –funds received by the institution for participation in projects of international research programs (thousand EUR);

** USU – funds received by the institution for the execution of research and experimental (social, cultural) development and/or art orders of economic entities (thousand EUR);

****AF – funds assigned to the Faculty of Agronomy.

Teachers in the field of Food studies have already submitted the following project applications for expert evaluation in 2021: “Terra rehabilitation: from environmentally smart soil-crop-ecosystem management to sustainable food systems (Terrarehab) TOPIC ID: LC-GD-6-1-2020 (H2020-LC-GD-2020)” (Prof. Dr. E. Jarienė, Assoc. Prof. Dr. Dr. Ž. Tarasevičienė); “Studies on the variability of biologically active and anticancer compounds in organically and biodynamically grown and fermented fireweed (*Chamerion angustifolium* (L.) Holub) leaves” (Prof. Dr. E. Jarienė, Assoc. Prof. Dr. J. Kulaitienė, lect. N. Vaitkevičienė, Dr. M. Lasinskas).

It is planned to encourage the teachers of the programs to not only do pedagogical work, but to allocate part of their time to scientific activities as well. 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 2020-2021 academic year was 2.95.

It is planned to involve students more actively in research by submitting project applications and developing scientific competence through practical scientific activities, participating in scientific summer internships.

The research of the teachers in the field of Food studies is closely related to the implementation of the goals of the Green Deal and the transformations of the food chains in order to ensure their sustainability and to provide the society with quality and safe food.

R&D and study activities carried out by VMU Agriculture Academy are important for achieving the goals of smart specialization, especially for the development of the priority direction of R&D&I “Agro innovation and food technologies”. The existing infrastructure of the University and the available equipment limit the possibilities of providing research services, given the demand for service provision. 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”, as 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. It is planned to involve doctoral students and researchers in the research by increasing the number of doctoral students and researchers working in the topics of the priority R&D&I “Agro innovation and food technologies” by at least 25%, as well as by increasing the number of scientific publications in this field in the scientific journals of the first and second quartiles by 50%. The developed topics and technologies will enable foreign scientists, doctoral students and researchers to join for both short-term and long-term work in the new laboratories of “Pasteurization of Plant Raw Materials”, “Bio-Fermentation of Secondary Food Raw Materials” and “Agro-Bio Raw Materials Quality Research”. It is planned to invite 2-3 foreign scientists every year. The created infrastructure will allow to improve the qualification of researchers, to expand the range of knowledge and opportunities without lagging behind other European institutions with a similar profile; will allow postgraduate and doctoral students to gain good practice in conducting research that meets today’s needs; the opportunities offered by the provision of higher quality research services will form a positive attitude and common understanding of the society and the business sector; researchers will be able to offer research services based on modern R&D&I work.

The teachers participating in the implementation of the study programs share their experience in preparing young scientists, and Prof. Dr. A. Blinstrubienė and Prof. Habil Dr. R. Velička is a member of the Joint Doctoral Committee with LRCAF in the field of agronomy. Currently, 8 doctoral students are studying in the field of agronomy in the area of Agriculture, whose research topics are closely related with the field of Food studies. Scientific supervisors: Prof. Dr. E. Jarienė, Prof. Dr. A. Blinstrubienė, Prof. Dr. A. Marcinkevičienė, Assoc. Prof. Dr. J. Kulaitienė, Assoc. Prof. Dr. Ž. Tarasevičienė. During 2017–2020 8 doctoral dissertations in the field of agronomy in the area of agriculture were defended.

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

The experience of scientists, constant research and participation in international scientific events and research projects allows to assess the current scientific issues and to forecast scientific problems to be solved in the future as well as to prepare future specialists for the search and implementation of their solutions.

The themes of the ongoing projects correspond to the research directions of the institutes “Sustainable food chain from field to table” and “Development of high value-added, safe and innovative food raw materials and products”. In the period of 2017-2020, teachers working in the field of Food studies have implemented/are implementing 4 international and national research projects, won 5 R&D projects, have implemented 1 and are implementing 2 projects financed under the measures of the Lithuanian Rural Development Programme 2014-2020 as well as launched 3 EIP projects. This shows once again that all current research topics are relevant to today’s agriculture, and teachers deepen their knowledge, develop competencies in various fields and pass on the gained experience and new knowledge to students through project activities. 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 programs with the latest scientific achievements. In order 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. After the implementation of the projects “Cultivation of innovative vegetable plants in vertical systems using modern environmentally and resource-saving technologies” (2018-2021) and the European Innovation Partnership “Competitive economy” (2016-2019), a new study course “Sustainable food systems” was introduced.

In the second-cycle study programme of the analysed area implementation of the projects “Integrated impact of climate and environmental change on agroecosystem productivity, biodiversity and sustainability (KLIMAGRO)” (2017-2020), “Justification of multifunctional crops impact on environment, soil, plant productivity and profitability” (2017-2020), “In vivo studies of the effects of biological preparations on plants” (2017-2020), “Studies on the effects of carbon fertilizer prototypes on a model plant of type C4” (2017-2020), “Effect of farming systems on the accumulation of biologically active and anticancer compounds of potato tubers with coloured flesh” (2018-2020) and the experience gained by participating in expert project application evaluation councils ERA-NET SUSFOOD2 (Horizon 2020) was used to improve the results of the study programme and related courses “Quality of agroecosystem and crop production”, “Chemical safety of plant raw materials”, “Enhancing plant genetic diversity by biotechnological methods” and “Novel foods of plant origin”.

An international project “Effect of farming systems on the accumulation of biologically active and anticancer compounds of potato tubers with coloured flesh” was carried out in 2018-2020 with the main objective to investigate the influence of intensive, organic and biodynamic cultivation technologies on the accumulation of biologically active and anti-cancer compounds in potato stalks with coloured pulp.

Teachers in the field of Food studies lead the Eureka project “Lyophilized yogurt bites”, which is used to finance the development of innovative and health-friendly lyophilized yoghurt products.

Teachers participating in the implementation of study programs participate in research conducted by the global network of scientists (including Lithuanian) NCD-RisC, the main goal of which is to analyse the risk factors of chronic non-infectious diseases in various age groups in Lithuania.

Good practice in order to ensure the adequacy of the level of ongoing research activities with the direction of Food studies is also participation in expert project application evaluation councils, such as ERA-NET SUSFOOD2 (Horizon 2020).

Teachers in the field of Food studies actively participate in national or economic-entities-commissioned research projects: research work No. A-06-54 /17 “Enrichment of food products with functional components”, supervisor Assoc. Prof. Dr. Ž. Tarasevičienė (2017-2018); “Health and nutrition of Kaunas district children aged 7-19”, supervisor Prof. Dr. V. Dulskienė (2019-2022); “In vivo research on the effects of biological preparations on plants” (2017-2020); “In vivo research of factors determining plant resistance to abiotic factors”, supervisor Prof. Dr. Natalija Burbulis (2017-2020); “Studies on the effects of carbon fertilizer prototypes on a model plant of type C4” supervisor Prof. Dr. Natalija Burbulis (2017-2020); “Search for non-traditional plant raw materials for the development of novel foods” (2017-2019), supervisor Assoc. Prof. Dr. J. Kulaitienė (2017-2019); “Utilization of waste generated during the juice production process for enrichment of food products with functional components” (2017), supervisor Assoc. Prof. Dr. Živilė Tarasevičienė.

“Integrated impact of climate and environmental change on agroecosystem productivity, biodiversity and sustainability (KLIMAGRO), supervisor Prof. Habil. Dr. Rimantas Velička (2017-2020); “Substantiation of the impact of multifunctional crops on the environment, soil, plant productivity and profitability”, supervisor Prof. Habil. Dr. Rimantas Velička (2017-2020); “Biopotential and seed production of fibrous hemp varieties”, supervisor Assoc. Prof. Dr. Robert Kosteck (2018-2021); Research Council of Lithuania research project “Sustainable fodder crop productivity and extreme events of climate change: resilience, food quality and recommendations for risk management” (FORCROPS), executor Assoc. Prof. Dr. Robert Kosteck (2020-2021); “Cultivation of innovative garden plants in vertical systems, applying modern technologies that save the environment and resources”, supervisor Assoc. Prof. Dr. J. Kulaitienė (2018-2021); “Research on innovative combinations of plant protein raw materials with all essential amino acids”, supervisor Assoc. Prof. Dr. A. Paulauskienė (2020–2021); “Scientific substantiation of calculation of quantities of gas oils intended for use in the production of agricultural products per unit of measurement of agricultural production”, executors Assoc. Prof. Dr. K. Romanekas, Assoc. Prof. Dr. A. Žebrauskienė, Assoc. Prof. Dr. N. Uselis (2019-2020); “Dissemination of innovative engineering solutions and thermo-energy process management systems to increase the sustainability of juicy crop product storage technologies”, supervisor Assoc. Prof. Dr. E. Zvicevičius (2017-2020); research project 35BV-KK-18-1-06620-PR001 “Management of short supply chains of biologically valuable products and development of local markets”/ Executor of EIP activity group “INNOFOOD HUB” Assoc. Prof. Dr. A. Paulauskienė (2019-2021); “Evaluation and preparation of fibrous hemp products as organic carbon sinks in long-term products and soil for their application according to the IPCC methodology in GHG accounting”, supervisor and executor Assoc. Prof. Dr. E. Zvicevičius (2020-2022).

In collaboration with external partners and stakeholders, teachers of the study programs have implemented and are implementing a number of European Innovation Partnership projects (EIPAGRI). EIPAGRI project “Competitive farm” was implemented in 2016-2019 (executor: Assoc. Prof. Dr. Ž. Tarasevičienė).

Research results are integrated into the first- and second-cycle study courses. For example, the following research results of Bachelor students’: S. Šerelytė “Quality studies of sea buckthorn (*Hippophae rhamnoides* L.) berry processing products”, M. Daunaravičiūtė “Research of bread quality”, B. Jurkutė “Research of peanut butter quality”, G. Kiverytė “Quality research of different varieties of tomatoes and their sauces”, K. Matelytė “Enrichment of confectionery products with

vegetable and berry additives” in 2018–2019 in the course of the first-cycle study programme “Food Production” are presented as examples in solving problematic issues. Bachelor students’ G. Zagurskytė research “Evaluation of pork quality during storage” (2019) and V. Bernotaitė “Quality changes of frozen beef during storage” (2020) became the basis for the case analysis in the study course “Animal food raw materials”. Bachelor students’ U. Stankevičiūtė “Feta type cheese quality evaluation” (2019), A. Balnis “Milk quality changes during grazing and barn periods” (2019) and S. Alčauskė (Master student) “Use of rare berries in the production of dessert curd” (2020) became a part of the lecture of the study course “Animal food raw materials” and a task of laboratory work. In the second-cycle study programme, for example, Master student’s I. Stočkutė research “The influence of solid-phase fermentation on the quality in fireweed (*Chamaenerion angustifolium* L. Holub) leaves” (2018-2020) became the introductory part of the study “New foods of plant origin”; research conducted by Master students M. Batutienė “Possibilities of fungicide residue reduction in oranges” (2017-2020), K. Misevičiūtė “Research of buckwheat grain quality during storage”, D. Kadakausienė “Mineral composition of white mulberry (*Morus Alba* L.) leaves” (2017-2018), G. Augaitė “The influence of storage on the quality of potato tubers with different coloured pulp” (2018-2020) became the solution of problematic situations during the seminars of the study course “Chemical safety of plant raw materials”.

Competitions of research papers and study methodological tools were held at the Agricultural Academy, in which the researchers of the faculty constantly won prizes.

VMU Agriculture Academy organizes international and national conferences, seminars, and other events on the topics of sustainable food management chains. These events allow researchers to share their research experience with researchers from other countries, and students can participate with a report or get acquainted with the latest scientific achievements relevant to Food study programs:

- “New trends in food safety and quality (NIFSA) 2017”, “New trends in food safety and quality (NIFSA) 2019”.
- “AGROECO 2020” Links between soil carbon sequestration, food security and climate change. The role of the circular bioeconomy in mitigating climate change, “AGROECO 2018”.
- “Rural Development” (2017: Challenges of the bioeconomy, 2019: Research and innovation for the bioeconomy, 2021: Challenges of a sustainable bioeconomy and climate change).
- Annual conference “Human and nature safety”.

In order to ensure the unity of science and studies, it is very important that the courses taught by teachers correspond to the fields of research. Attestation of study programme courses in 2020 shows that the research areas of the all teacher’s overlap with the courses taught (Annex 4).

Research-based studies are developed at the University:

- All first- and second-cycle students prepare research final theses;
- elements of research are applied in laboratory work, exercises and practices;
- teachers use research results in studies;
- students seeking research continuity in the second-cycle of studies, according to their abilities, prepare and publish scientific articles.
- All second-cycle students prepare and publish scientific articles. For example, 1) Stočkutė, I.; Jarienė, E. The influence of soil agrochemical properties on the chemical composition of Jerusalem artichoke blossoms // *Žemės ūkio mokslai*. ISSN 1392-0200. 2019, t. 26, No. 3, p. 125–134 (<https://www.lmaleidykla.lt/ojs/index.php/zemesukiomokslai/article/view/4112/3005>); 2) Daunaravičiūtė, M.; Paulauskienė, A.; Tarasevičienė, Ž.; Silkartaitė, B.. The influence of vegetable additives on the quality of bread from spelt wheat (*Triticum spelta* L.) // *Žemės ūkio mokslai*. ISSN 1392-0200, 2020, t. 27, No. 2, p. 62–69 (<https://doi.org/10.6001/zemesukiomokslai.v27i2.4335>); 3) Kumpienė, A.; Paulauskienė, A.; Tarasevičienė, Ž.. The quality of fruit-, berry- and nut-based sweets // *Žemės ūkio mokslai*. ISSN 1392-0200, 2019, t. 26, No. 4, p. 165-172. (<https://doi.org/10.6001/zemesukiomokslai.v26i4.4198>).

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

Having acquired the ability to read and to analyse a scientific text, students publish the results of their research in scientific or popular science journals, e.g. Stankutė L., Paulauskienė A., Šileikienė D. The influence of extraction time on the quality of herbal teas // *Agricultural sciences*. 2019. 26. 3. p. 116-124; Stočkutė, I., Jarienė E. The influence of soil agrochemical properties on the chemical composition of Jerusalem artichoke blossoms // *Agricultural sciences*. 2019. 26. 3. p. 125–134.

First-cycle and second-cycle students are invited to participate in international scientific conferences and to present their research. Under the initiative of teachers and students of Food studies international scientific conferences “New trends in food safety and quality” (NIFSA-2017, NIFSA-2019) were organized in 2017 and 2019. At the first conference, oral or poster presentations were done by 5 first- and 3 second-cycle students, and at the second conference – by 4 first- and 4 second-cycle students in the field of Food studies. 4 first-cycle and 4 second-cycle students presented their research results at the international scientific conference “Agroecosystem sustainability: links between carbon sequestration in soils, food security and climate change (AgroEco2020)”.

The conference “Young scientist” is organized annually at the University. Master students of the study programme “Quality and Safety of Plant Food Raw Materials” made 13 presentations in 2018, 2 in 2019, 30 in 2020 and 11 in 2021. First-cycle students also take part in this conference. The best oral presentations in individual sections are evaluated and students are awarded with a memoir. For example, in 2018, in the section on Quality and Safety of Plant Food Raw Materials, 1st place was awarded to Laura Dmitrijeva, a first-cycle student, on the topic “Concentration of polyphenolic compounds in red wines”, and to Jovita Balandaitė, a second-cycle student, on the topic “The impact of non-chemical weed control methods on sugar beet quality and productivity indicators”; in 2020, in the section of Plant Food Raw Materials Quality and Safety (full-time studies), 1st place was awarded to the second-cycle student Darija Ivanauskaitė on the topic “The effects of essential oils on toxicogenic microscopic fungi”, 2nd – to the second-cycle student Ieva Stočkutė on the topic “The influence of solid phase fermentation on the quality of leaves of *Chamerion angustifolium* L.holub”, 3rd – to the second-cycle student Miglė Navašinskaitė on the topic “Color of berry juice dried by spraying”. In the section on Quality and Safety of Plant Food Raw Materials (part-time studies) in 2020, the 1st place was awarded to the second-cycle student Miglė Batutienė on the topic “Possibilities of fungicide residue reduction in oranges”, 2nd – to the second-cycle student Goda Domarkaitė on the topic “The influence of biostimulants on quality indicators of potato tubers with coloured pulp”, 3rd – to the second-cycle student Aistė Bunkevičiūtė on the topic “Physical properties of biscuits with added coffee grounds”.

Students of all study cycles are encouraged to get involved in research. For example, PhD students Dalytė Šumskienė and Brigita Medveckienė as well as Bachelor student of Food Quality and Safety Giedrė Matulkaitė were employed for the project “Innovative cultivation of vegetable plants in vertical systems using modern environment- and resource-saving technologies” (2019- 2022; supervisor Assoc. Prof. Dr. J. Kulaitienė); three students of the study programme Food Quality and Safety – Gytis Bubliauskas, Saulius Laimas and Akvilė Sapronaitė – were employed for the project “Effect of farming systems on the accumulation of biologically active and anticancer compounds of potato tubers with coloured flesh” (2018-2020; supervisor Prof. Dr. E. Jarienė). However, most second-cycle students work in their profession, so their opportunities for involvement in research are limited.

<p>Please provide main results of the self-evaluation in the area of <i>Links between science (art) and study activities</i></p>
<p>Strengths</p>
<p>Research conducted in the field of Agronomy relevant to the field of Food studies is carried out at the research base created at the Faculty (modern infrastructure, flexible relationship with economic entities): “Development of high value-added, safe and innovative food raw materials and products”, “Sustainable food chain from field to table”, “Microbiological testing of food raw materials and products”.</p> <p>Carrying out research and participation in project activities of teachers implementing the field study programmes, transfer of the latest scientific knowledge to students create preconditions for quality studies.</p> <p>Organization of scientific events allows motivated students of both cycles to become more actively involved in scientific activities, to present research results and their new ideas to the scientific community, to discuss and to prepare for further studies and professional activities.</p>
<p>Areas for improvement</p>
<p>To develop students’ scientific competences more actively through practical scientific activities, organizing the exchange of scientific ideas, improving scientific communication skills.</p> <p>To intensify research and experimental development activities in the field of Agronomy by strengthening cooperation with social partners.</p>

3. STUDENT ADMISSION AND SUPPORT

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

3.1.1. Evaluation of the suitability and publicity of student selection and admission criteria and process to the first-cycle study programme *Food Quality and Safety*

The general admission is carried out by the Lithuanian Association of Higher Education Institutions for General Admission ((LAMA BPO)³⁸ on behalf of the Minister of Education, Science and Sport of the Republic of Lithuania. Those who have completed secondary education in Lithuania and whose competitive score corresponds to the minimum competitive score (5.4) may be invited to study.

Over the last decade, demographic trends have intensively adjusted the flows of admission to higher education institutions and the number of students in Lithuania: the number of general school graduates is constantly decreasing, profiling of secondary education is being carried out, and studies abroad are becoming increasingly more popular.

The obstacles for some potential students to study have been the minimum competitive score that has been gradually increased since 2017 (3.6 in 2018, 5.4 from 2019); the number of compulsory examinations that has been increased, their targeted selection and minimum qualitative indicators for passing individual examinations that have been formed. Informative analysis in various sections about the applications and those accepted to study, the programmes chosen by the entrants, the scores, etc. during the period under evaluation is available on LAMA BPO website³⁹. The studies of the field programme, although important for regional development, have too few students. The biggest threats remain: low attractiveness and popularity of agricultural studies; motivated graduates usually choose to study at the University, but they commonly come from Lithuanian regions or remote areas, where the conditions for preparing to enter higher education institutions are less favourable than for graduates from major Lithuanian cities or regional centres.

There is a tendency for the number of students admitted to change. In 2017, the total number of applications (first and remaining priorities) and signatories with the University was the highest in the period under evaluation – 33 full-time students and 4 part-time students received state funding (Tables 6 and 7). In the following 2018 and 2019, there was a tendency for this number to decrease. This could be explained by the growing competitive struggle between universities and the general decrease in the number of entrants to Lithuanian universities. Uncertainty and ambiguity regarding the public debate on the university optimization process may have had a negative impact on this process.

Table 6. Number of applications to the full-time first-cycle study programme in the field of **Food studies** *Food Quality and Safety*

Year	Number of applications submitted		Number of contracts signed	
	First priority	Remaining priorities	State-funded places	Non-state-funded places
2017	22	134	33	-
2018	13	64	13	3
2019	26	53	12	-
2020	20	102	20	-

³⁸ Access through the internet: <https://bakalauras.lamabpo.lt/> (in LT)

³⁹ Access through the internet: <https://bakalauras.lamabpo.lt/bendro-priemimo-rezultatai/2017-m/#3> (in LT)

Table 7. Number of applications to the part-time the first-cycle study programme in the field of **Food studies** *Food Quality and Safety*

Year	Number of applications submitted		Number of contracts signed	
	First priority	Remaining priorities	State-funded places	Non-state-funded places
2017	4	31	4	-
2018	22	-	6	-
2019	-	-	1	-
2020	6	44	4	-

The importance of specialists trained by the AA for the agricultural sector is high. Therefore, since 2020 the state pays scholarships of EUR 200 to students of the Programme *Food Quality and Safety*. It is paid only to students in a state-funded places without academic debts. Students who are not state-funded may not receive this targeted scholarship. As a result, the number of applicants for full-time studies has significantly increased and the number of applicants for part-time studies as well as those who signed agreements with the University has slightly increased (Tables 6 and 7).

Fewer and fewer students choose part-time studies. Over the last three years, they have not been very attractive and the main reasons for that are the high cost of studies and the increase in the minimum competitive entry score for university studies. It is likely that such a small number of entrants may be also influenced by difficulties to combine work and studies.

Since the Ministry of Education, Science and Sport of the Republic of Lithuania set requirements for those intending to study in higher education institutions, the average competitive score of students admitted to full-time studies increased from 4.58 to 6.96, and that of part-time students – from 4.59 to 7.52, while of those admitted to non-state-funded places – from 5.11 to 6.72 points in 2017-2020 (Tables 8 and 9).

Table 8. The lowest, highest and the average competitive scores of students admitted to the full-time first-cycle study programme *Food Quality and Safety*

Year	Competitive scores to state-funded places			Competitive scores to non-state-funded places		
	Highest	Lowest	Average	Highest	Lowest	Average
2017	7,42	3,1	4,58	-	-	-
2018	7,34	3,9	6,20	5,54	4,68	5,11
2019	6.82	5.4	6.37	6.77	5.61	6.10
2020	8.65	5.54	6,96	7.37	6.09	6.72

Table 9. The lowest, highest and the average competitive scores of students admitted to the part-time first-cycle study programme *Food Quality and Safety*

Year	Competitive scores to state-funded places			Competitive scores to non-state-funded places		
	Highest	Lowest	Average	Highest	Lowest	Average
2017	5.38	3.96	4.59	-	-	-
2018	5.6	4.11	4.46	-	-	-
2019	-	-	-	-	-	-
2020	7.31	5.53	7.52	-	-	-

The ratio of students admitted to the first-cycle study programme *Food Quality and Safety* to those who successfully completed their full-time studies remained very similar throughout the period under evaluation, ranging from 0.81 to 0.92, and is considered to be normal in the field of Food studies (Table 10).

Table 10. Ratio of the number of students admitted to the first-cycle study programme *Food Quality and Safety* to those who successfully completed their studies

Year of admission	Year of graduation	Number of students admitted	Number of students who successfully completed their studies	Ratio
2014	2018	83	71	0.86
2015	2019	67	54	0.81
2016	2020	51	47	0.92

The indicators of the change in the number of full-time students show that: during the year 2017, 7 students were removed from the lists of students (3.21%), 15 students went on academic leave (6.88%), and 20 students repeated some study courses (9.9%); during the year 2018, 5 students were removed from the lists of students (2.6%), 14 students went on academic leave (7.4%), and 12 students repeated some study courses (6.3%); during the year 2019, 10 students were removed from the lists of students (9.6%), 2 students went on academic leave (1.9%), and 2 students repeated some study courses (1.9%); during the year 2020, 6 students were removed from the lists of students (9.5%), 2 students went on academic leave (3.1%), and 2 students repeated their study courses (3.1%) (Tables 11 and 12). Changes in the number of students are influenced by: “drop-out” of students due to lack of progress and other reasons, academic leave, repetition of the study courses, etc.

Table 11. Change in the number of full-time students in the programme *Food Quality and Safety* (as of 1st October 2017, 2018, 2019 and 2020)

Study year	1 st year	2 nd year	3 rd year	4 th year	5 th year	6 th year	Total
2017/2018	34	52	62	74	-	-	218
2018/2019	11	32	55	56	-	-	153
2019/2020	13	8	34	50	-	-	105
2020/2021	16	8	9	29	-	-	62

Table 12. Change in the number of part-time students in the programme *Food Quality and Safety* (as of 1st October 2017, 2018, 2019 and 2020)

Study year	1 st year	2 nd year	3 rd year	4 th year	5 th year	6 th year	Total
2017/2018	5	6					11
2018/2019	6	4	3				14
2019/2020		5		3	-	-	8
2020/2021	4	1	3		3		11

3.1.2. Evaluation of the suitability and publicity of student selection and admission criteria and process to the second-cycle study programme *Quality and Safety of Plant Food Raw Materials*

Admission rules to the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* are published on the Vytautas Magnus University website⁴⁰. Persons with a university bachelor's degree or a professional bachelor's degree (the latter must have completed additional studies) may be admitted⁴¹:

⁴⁰ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2021/04/2021-m.-magistranturos-priemimo-taisykles.pdf> (in LT)

⁴¹ Access through the internet: <https://zua.vdu.lt/wp-content/uploads/2021/02/Augaliniu-maisto-zaliavu-kokybe-ir-sauga.pdf> (in LT)

- having completed the first-cycle (bachelor's) studies in Food studies or public health;
- having completed the first-cycle (bachelor's) studies in other study fields;
- having completed minor studies of the study programme "Food Quality and Safety";
- having completed studies at a university of applied sciences (professional bachelor) and additional studies of the study programme "Quality and Safety of Plant Food Raw Materials";
- having completed studies at a university of applied sciences (professional bachelor) but not additional studies are proposed to study additional levelling courses with a total volume of 35-50 credits.

Additional studies of *Quality and Safety of Plant Food Raw Materials* are organized by the Faculty of Agronomy. If necessary, studies are organized every year and last for 1 study year.

Admission to state-funded and non-state-funded master studies is carried out during the main admission stage. After the main admission, a second and additional admission stages are announced in the event of vacancies. Students are admitted on a competitive basis according to their competitive ranking based on competitive scores. In case of identical competitive scores, preference shall be given to the candidate who has submitted the scientific publication(s). The competitive score is calculated according to the formulas:

- for candidates having completed first-cycle bachelor studies:

$$K = 0.8 A + 0.2 B;$$

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.

- for candidates having completed studies at a university of applied sciences (professional bachelor) and additional studies:

$$K = 0.4A + 0.4B + 0.2C,$$

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.

During the period under evaluation, graduates of the Food study programme from the Lithuanian University of Health Sciences, Klaipėda, Šiauliai universities and Kaunas, Klaipėda, Vilnius, Utena universities of applied sciences (after additional studies) were admitted to the master studies of the field and accounted for about 40% of the total number of students.

There is a tendency for the number of students admitted to study to change. In 2017, the total number of applications submitted (first and remaining priorities) and the number of contracts signed with the University was the highest: there were 8 part-time students in state-funded places and 13 in non-state-funded places (Table 13). In 2018, 2019 and 2020 there was a noticeable decrease and the number of contracts signed ranged from 11 to 8. The declining number of students entering second-cycle studies can be explained by similar reasoning as of those entering first-cycle studies: in addition to the increasing cost of studies and raising the minimum competitive score, another probable reason is the common problem of compatibility between work and study.

Admission of students to the second-cycle study programme "Quality and Safety of Plant Food Raw Materials" in 2018 and 2019 was carried out only for full-time studies, and in 2017 and 2020 – only for part-time studies. It was organized according to the received state funding and the rotation with other second-cycle study programmes at the Faculty of Agronomy.

Table 13. Number of applications to the second-cycle study programme in the field of **Food studies** *Quality and Safety of Plant Food Raw Materials*

Year	Number of applications submitted		Number of contracts signed	
	First priority	Remaining priorities	State-funded places	Non-state-funded places
2017 (PT)*	24	23	8	13
2018 (FT)	24	8	11	3
2019 (FT)	22	20	6	5
2020 (PT)	16	18	8	8

*FT – full-time studies; PT – part-time studies.

Admission to the second-cycle studies is organized by the universities themselves. students are admitted on a competitive basis according to the minimum score. The average competitive scores of entrants to state-funded places during the period under evaluation ranged from 8.50 to 9.19, and to non-state-funded places they were significantly lower and ranged from 6.78 to 8.39 (Table 14).

Tvble 14. The lowest, the highest and the average competitive scores of students admitted to the second-cycle study programme *Quality and Safety of Plant Food Raw Materials*

Year	Competitive scores to state-funded places			Competitive scores to non-state-funded places		
	Highest	Lowest	Highest	Lowest	Highest	Lowest
2017 (PT)*	9.53	6.37	8.81	8.44	6.38	7.60
2018 (FT)	9.31	9.43	9.06	8.34	7.25	7.64
2019 (FT)	9.52	8.98	9.19	8.92	7.18	8.39
2020 (PT)	8.86	8.13	8.50	8.14	4.13	6.78

*FT – full-time studies; PT – part-time studies.

The ratio of the number of students admitted to the second-cycle study programme to those who successfully completed it was very similar throughout the evaluation period, ranging from 0.81 to 0.86 (Table 15). This ratio is influenced by students outgoing to/returning from academic leave, but it can be stated that it is sufficiently high.

Table 15. Ratio of the number of students admitted to the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* to those who successfully completed their studies

Year of admission	Year of graduation	Number of students admitted	Number of students who successfully completed their studies	Ratio
2016 (FT)	2018	16	13	0.81
2017 (PT)	2020	21	18	0.86
2018 (FT)	2020	14	12	0.86

*FT – full-time studies; PT – part-time studies.

The indicators of the change in the number of second-cycle students during the period under evaluation are insignificant: in 2017, 1 student was removed from the student lists (6.25%), 1 student went on academic leave (6.25%) and 1 student switched to part-time studies (6.25%); in 2018-2020, there were no delisted students (Table 16).

Table 16. Change in the number of students in the programme *Quality and Safety of Plant Food Raw Materials* (as of 1st October 2017, 2018, 2019 and 2020)

Study year	1 st year	2 nd year	3 rd year	Total
2017/2018	22 (PT**)	15 (FT**)	-	36
2018/2019	16 (FT)	21 (PT)	-	37
2019/2020	12 (FT)	13 (FT)	18 (PT)	43
2020/2021	16 (PT)	11 (FT)		27

**FT – full-time studies; PT – part-time studies.

This shows the attractiveness of the study forms of this study programme and the motivation of students to achieve the final result – to obtain master's degree.

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

In 2017 the Ministry of Education, Science and Sport of the Republic of Lithuania (LR) granted VMU the right to carry out academic recognition of education and qualifications related to higher education and acquired in the framework of education programmes of foreign states and international organizations. Recognition of foreign qualifications at VMU is done centrally in the International Cooperation Department in accordance with resolutions and regulations of LR, 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. Every year the rules for admission of foreign citizens to VMU are updated and approved, and they outline the assessment of foreign qualifications, its application, documentation, and evaluation. Each year, the University reports to the Centre for Quality Assessment in Higher Education about the decisions that are made on academic recognition.

Recognition of partial learning outcomes is regulated by VMU Description of the Procedure for Recognition of Learning Outcomes⁴². This procedure is performed in a decentralized way at the university, and it is organised by the faculty or the initial assessment is done by the International Cooperation Department. The learning achievements of a person who has studied at another Lithuanian or foreign higher education institution are recognised by converting the acquired evaluation into ECTS according to pre-agreed equivalents if there is no violation of the requirements of the contract or other document.

Recognition of partial studies can be carried out for current university students and newly enrolled. Current students participating in study exchange programmes agree on the study plan with VMU before leaving for a partner university. Learning outcomes acquired during part-time studies in accordance with the agreed study plan, should be recognised upon an academic certificate from the higher education institution where the student has been studying. If the student has been for a visit for several semesters, certificates must be obtained and credited after each semester. This ensures the recognition of partial studies after returning from another university.

Newly enrolled students, who have completed part of their studies at another university and apply for recognition, firstly are asked to submit their documents to the International Cooperation Department. The list of requested documents corresponds to the documents that newly enrolled students have to submit when entering the University. Only an academic certificate or other document certifying study courses of another institution should be attached additionally. After evaluating the available documents, the level and other information of the institution where the partial education was obtained, the documents are transmitted to the faculty responsible person for recognising learning outcomes. The faculty assesses the correspondence of the study course content and its volume.

⁴² Access through the internet: <https://www.vdu.lt/wp-content/uploads/2019/12/VDU-studij%C5%B3-rezultat%C5%B3-%C4%AFskaitymo-tvarka-1.pdf> (in LT).

Principles and processes of recognition of competences acquired in non-formal and informal way are regulated by VMU Study regulations; Description of the Procedure for Assessment and Recognition of Competences acquired through Non-Formal and Informal Education⁴³; VMU Description of Organization of Non-formal Adult Education⁴⁴. Individuals may apply for the assessment of competences acquired in work activities or voluntary work, internships, courses, seminars, projects, etc., while self-learning or at leisure time. Competences acquired by the candidate through non-formal and informal education can comply with the part of the appropriate study programme or separate courses. If during the assessment it is determined that student's informal and non-formal learning outcomes corresponds to the learning outcomes formulated in the study course of the study programme, the study course (-s) are recognised (VMU Study regulations).

During the reporting period of the study programmes in the field, there were no cases of recognition of competencies acquired through non-formal or informal learning.

3.3. Evaluation of conditions for ensuring academic mobility of students

All VMU students are provided with possibilities to use Erasmus+ opportunities:

1. To study for a semester or an academic year at one of 516 partner universities in the EU or EEA /candidate countries as well as go outside the EU to one of 99 partner institutions. About 200 VMU students take the advantage of this opportunity per year before the pandemic.
2. To participate in Erasmus + internship lasting from 2 to 12 months. Graduate students can also participate in this internship programme within 12 months after their graduation. About 150 VMU students and graduates take the advantage of this opportunity per year before the pandemic.

VMU students are also encouraged to participate in academic exchange programmes:

1. They can go for exchange with mobility grant or with scholarships from partner universities to one of 206 partner countries outside the EU/EEA for a semester or for academic year. About 40 VMU students use this opportunity per year before the pandemic.
2. Students can participate in the internship from 1 to 3 months with VMU mobility grant in companies/organizations outside the EU/ EEA. About 10 VMU students take the advantage of this opportunity per year before the pandemic.
3. Other possibilities are provided, for example, for internships lasting from 2 to 6 months in Lithuanian education schools or Lithuanian communities and Lithuanian centres abroad (about 15 VMU students and graduates take advantage of this opportunity per year), for part-time studies or internship receiving Mockunai name scholarship (1-3 students take advantage of this opportunity per year); etc.

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 www.vdu.lt, intranet (Outlook), social media, etc.

During the period under evaluation, there were no students who came to study full-time in the first-cycle study programme in the field of Food studies from abroad. In 2017-2018, 4% of the first-cycle students took the opportunity to leave for partial (≥ 15 credit) studies or practice during their studies; in 2018-2019 – 0.6%, and in 2019-2020, due to justifiable reasons (the onset of the Covid-19 pandemic), the trips were suspended, although there were those who wanted to leave. The relatively low student mobility is based on the fact that students who intend to take advantage of the opportunities of mobility projects participate in the selection in the prescribed manner, where the main criteria are learning outcomes, language skills, motivation and other. This motivates/obliges better learning, but also limits the opportunities for those with lower achievements to go on part-time studies or internships.

⁴³ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2019/12/Description-of-Procedure-non-formal-ENG.pdf> (in EN).

⁴⁴ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2019/09/Neformaliojo-svietimo-organizavimo-tvarkos-aprasas-2019-002.pdf> (in LT).

Mobility programs are open to full-time and part-time students. During the period under evaluation, only 3.7% of the second-cycle students went for part-time-studies abroad.

Students have to give up their studies abroad for the whole semester due to their obligations to the family, the employer, as well as the short duration of the second-cycle studies, lack of direct contacts and other reasons. These are thought to be the main reasons for low student mobility.

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

Academic student support covers several aspects: 1) easily accessible and timely information on: a) the studies, including information, which is useful to the students choosing their study courses according to their individual study needs and preferences; b) University's information (Rector's orders, rules, mobility opportunities, student support information, career possibilities, etc.) in order to keep in line with institutional issues and opportunities; c) extracurricular University's activities (events, meetings, seminars, leisure and entertainment, etc.) in order to provide opportunities for students' personal development; 2) regular teachers' consultations to clarify topics of study courses or assignments, evaluate students' learning progress, provide and gather feedback both for students and teachers, etc.

Information on the studies is provided during various communication channels and means. All VMU students have free access to the University's intranet system "Outlook" and Moodle (virtual learning environment for publishing information on courses, methodical material, etc.) for communication, cooperation and information exchange purposes. Besides, frequently used channels are the University website, University and Faculty Facebook, newsletters. The necessary information is provided in-time, allowing the students to plan their study schedules.

The Dean, Chancellors, their Department Head, and members of the Study Programme Committee periodically meet with the students and discuss current, important study and career opportunities related issues. The staff of the Faculty, Academy administration office is available daily for consulting students on various academic and study organization issues. Examination results are discussed with the students during specially appointed time; the students are informed about the time of the meeting during the examination.

According to the VMU Study Regulations, every teacher spends certain number of hours per semester consulting students on their homework, individual or group assignments and consulting students on their homework, individual or group assignments and other course-related issues. Consulting is performed face-to-face during officially announced hours, as well as using different on-line means, such as Skype, e-mail, discussion forums, other communication environments and tools that are convenient for teachers and students

Financial support for students is regulated by the Description of Procedures for Tax Exemption and Compensation⁴⁵; and the Description of Procedure for Compensation for Tuition Fees⁴⁶. Upon a reasoned request from a student, the University may 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. In such cases, the student writes a reasoned request to the Rector, explaining the reasons why the university should allow the student to pay under specific conditions. For the University students, attending scientific conferences, seminars or other events to represent the University, for collaborative or other purposes related to the University, VMU may reimburse the whole or part of the expenses in accordance with the Description of Procedures for Tax Exemption and Compensation.

Student social support is coordinated by VMU Student Affairs Department that manage students' accommodation at the University dormitories, administrate student social and motivational scholarships, accommodation fees and release from tuition in specific cases. Accommodation service

⁴⁵ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2015/01/Mokestini%C5%B3-lengvat%C5%B3-teikimo-ir-kompensacij%C5%B3-skyrimo-tvarkos-apra%C5%A1as.pdf> (in LT)

⁴⁶ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2018/09/KK-tvarkos-apra%C5%A1as.pdf> (in LT)

is provided for VMU students, and they have opportunities to settle in the University dormitories. For some students, based on their social status, the cost of accommodation is reduced. Social scholarships are provided for students regarding their social situation, motivational scholarships are provided regarding students' academic achievements. Moreover, VMU has established patronage scholarships to support student activities, the University has also set VMU honour scholarships, Rector's nominal scholarships, scholarships by various programmes, etc. Every year, the most advanced students are awarded with nominal scholarships: the scholarship of an agronomist Jonas Tallat-Kelpša was awarded to Lina Fabijonavičiūtė, a 4th year student of the first-cycle study programme "Food Quality and Safety" (in 2019 and 2020); the scholarship of the Lithuanian Foundation Kazimiera Varnaitė Masiokienė (awarded only to the students of the Faculty of Agronomy since 2017) was given to Miglė Navašinskaitė, a 3rd year student of the first-cycle study programme "Food Quality and Safety" in 2017, to a 3rd year student Vidmantė Rimkutė in 2018, to a 4th year student Gintarė Andriekutė in 2019 and to a 2nd year student Gabrielė Grybaitė in 2020; Vydūnas Youth Foundation Stasė Cukuraitė and Vaclovas Tallat - Kelpša one-time scholarship was awarded to a 3rd year student of the first-cycle study programme "Food Quality and Safety" Domantė Paulauskytė in 2018/2019, to a 2nd year student Giedrė Brazdeikytė in 2019/2020 and to a 3rd year student Gerda Tamošauskaitė in 2020/2021.

VMU Student Council also takes care for student social support. It represents the interests of students and enhance their cultural and social activities.

Upon the need, students can receive free-of-charge counselling of a psychologist at VMU Psychology Clinics in individual meetings or online.

Students are supported in modelling their career plans. VMU Career Centre of Student Affairs Department regularly organize seminars and provide consultations on career planning issues. Regularly, at least once a year, face-to-face meetings with the Faculty, Academy Alumni members are organized, where graduates introduce their work experience, relevance of acquired knowledge and skills. The University and the Faculty, Academy have cooperation agreements with different social partners, including commitments to inform about job positions. Announcements for open job positions are placed on the Faculty and Career Centre websites.

Other support opportunities: support for the activities of student organisations is provided through project competitions; students with special needs have all the conditions for studies; there are individual consultations given due to the studies choices. All the measures are intended to create favourable study conditions and reduce the number of drop-out students, ensuring the quality of studies.

3.5. Evaluation of the sufficiency of study information and student counselling

Information about various activities related to the study process is delivered by different means to the students. First year students of first study cycle receive the most important information in the special annual event "Introduction to Studies". It is organized according to relevant topics that are discussed on different days: Faculty Day, Knowledge and Foreign Language Day, Opportunity Day, Registration Day, Sports, Wellness and Arts Day. The introductory week includes faculty, academy and staff presentations, foreign language options, opportunities to study abroad, Student Council and academic clubs' presentations, information about the use of library resources, campus facilities, etc. During the event, students get to know the campus environment, faculty, academy and senior students. On the Faculty Day, first-year students are introduced with the chosen study programme in more detail. These measures enhance the motivation of new students and encourage them to reach high learning achievements.

Those admitted to the first-cycle studies in the field of food can also get acquainted with the study programme *Food Quality and Safety* on the VMU website⁴⁷, and those admitted to the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* on the VMU website⁴⁸. They also have an opportunity to get acquainted with full descriptions of study courses of the chosen study programme or an optional / alternative study courses via *Moodle* platform. Study course descriptions

⁴⁷ Access through the internet: <https://zua.vdu.lt/studijos/studiju-programos/?lt/study/program/show/297> (in LT)

⁴⁸ Access through the internet: <https://zua.vdu.lt/studijos/studiju-programos/?lt/study/program/show/304> (in LT)

includes the information of the aim and expected learning outcomes of the study course as well as their coherence with topics, study and assessment methods. The system of evaluation, basic and additional literature are also presented in the course descriptions.

In order to provide students with timely information about studies, they receive personalized emails. Students use a specially designed portal <https://studentas.vdu.lt/login.php?lang=EN> where they can receive informational messages. The University has a centralized Student Centre to support them by direct contacts or calling, emailing, or contacting through social media. In Facebook social network a special account for VMU students has been created, which publishes relevant information for students. General information and news are also posted at VMU website: <http://vdu.lt>. VMU Student Affairs Department provides counselling, dealing with student issues related to accommodation, scholarships, benefits, career counselling, etc.

Each VMU employee working full time during the semester has 20 hours allocated for student counselling. Consultations are held twice a week for two academic hours and can also be given remotely. Whether the counselling provided to students in the course of studies is sufficient is ascertained by assessing the students' learning outcomes. If the student's progress does not satisfy, additional counselling is suggested, a list of additional learning literature and additional independent assignments are provided. For example, in the study course of the second-cycle study programme "New food products of plant origin", at the request of students, case analysis methods are additionally presented to improve the skills of preparing project applications and their expert evaluation.

Please provide main results of the self-evaluation in the area of <i>Student admission and support</i>	
Strengths	
Sufficient and effective social, psychological, and financial support is provided to the students of the field.	
Appropriate academic support is provided to students in the field by providing detailed information about their studies and other activities at the University.	
Students of the field receive the detailed information on topical issues through various communication channels: Introductory Week, <i>Moodle</i> environment, personal registered e-mail box, Student Portal, one-stop-shop, etc.	
Areas for improvement	
<p>In order to ensure a stable number of entrants, it has been planned to implement several actions:</p> <ul style="list-style-type: none"> - To improve the marketing of the study programmes of the field by disseminating information about the studies of the field through popular information dissemination tools, inviting graduates to share their success stories. - To communicate more actively with candidates and students, to motivate them to choose food studies: to organize more educational events at the Academy, such as "Smart Student Academy", creative workshops, Facebook virtual project of the Faculty of Agronomy "Agro Tuesday", project of video questions and answers, etc. - To intensify cooperation with students of related study programmes from the universities of applied sciences, giving them more flexible opportunities to prepare for master studies: to conduct lectures in a mixed-distance way, combining classroom classes and distance learning, to provide study materials employing information and communication technologies, etc. - Together with the patrons and the social partners to seek opportunities through incentive scholarships, improving the quality of traineeships and increasing employability. It would motivate more those intending to choose this field of studies. - To increase the number of students benefiting from the EU support for student mobility by raising awareness of the opportunities and benefits of mobility and demonstrating the good experiences of other students. 	

4. STUDYING, STUDENT PERFORMANCE AND GRADUATE EMPLOYMENT

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

The field study programmes of both cycles are implemented in a full-time and part-time study form. The relationship between the classroom and independent student work, the nature of real and virtual/remote communication between students and teachers depend on the study form. In each study course, in addition to classical study forms (lectures, laboratory works, exercises, seminars), active, inclusive (guest lecture, situation analysis, experiment, group discussion, preparation of reports, performance of individual tasks and their presentation) study methods are used. Teaching and evaluation methods chosen by teachers are closely related and coordinated with study results. For example, study methods often used in lectures are interpretation, illustration, video review, summary of information, etc., and evaluation methods – testing or written survey; study methods used in seminars are analysis of problematic examples and questions, performance and generalization of tasks, case analysis, etc., and evaluation method used in seminars is evaluation of problem solutions; study methods used in laboratory works are performance of experiments, observation, preparation and presentation of reports, etc., and evaluation methods used – evaluation of the performance of experiments, evaluation of reports, oral examination; study methods used in exercises are interpretation and solution of tasks, etc., and evaluation methods used – assessment of completed practical tasks; study methods used in an internship are formulation of practical tasks, analysis of professional activity, preparation and presentation of reports, etc., and evaluation methods used – evaluation of professional internship reports and presentation.

The study programmes analysed are based on the competencies and study results, therefore a lot of attention is paid to independent learning. At the beginning of the semester, each teacher introduces students to independent work tasks and consults them during the semester. Independent learning in the first- and second-cycle study programmes consists of students' preparation for laboratory and practical work, seminars, performance of individual tasks, preparation, and their presentation. In order to achieve the results, consistent work during the semester is encouraged and monitored. Students receive timely and appropriate feedback on their work. The evaluation of completed works and projects is accompanied by constructive comments based on clear criteria.

For students of the first- and second-cycle study programmes, the assessments are also organized remotely in accordance with the Description of the Procedure for Organizing Distance Studies⁴⁹. This became especially relevant during the quarantine period due to Covid-19 pandemic, which started on 16th March 2020. The studies became distance learning in 1-2 weeks, including the exams and other types of evaluation. It is much more difficult to provide skills and competencies remotely in Food studies due to the use of complex laboratory equipment, but the experience and qualifications of the teachers allowed smooth organization of studies during the quarantine. Technical, academic, and informational assistance was provided to teachers and students during the intensive transition to distance learning. Through distance learning, both students and teachers gained good practice, i.e. improved their IT skills, increased student motivation and increased lecture attendance.

The accumulative system for the assessment of learning achievements is applied in the University. Students' learning achievements are assessed in midterms, another intermediate work and examination or defence of students' projects. The final mark integrates the intermediate work assessment and examination marks. The examination mark makes 30-60% of the final mark. The structure of the accumulative system is presented in the description of each study course.

For example, the structure of the cumulative score for the assessment of the study achievement of the course of the first-cycle study programme "Sustainable food systems" and the weight of its components are: colloquium – 20%, independent, individual work (case study) – 10%, exercises –

⁴⁹ Access through the internet: www.vdu.lt/wp-content/uploads/2020/02/Nuotoliniu_studiju_tvarka.pdf (in LT)

20%, exam – 50. The structure of the cumulative score and the weight of its components for the evaluation of the study achievement of the course of the second-cycle study programme “Chemical safety of plant raw materials” are: seminars – 25%, exercises – 10%, laboratory works – 10%, colloquium – 15%, exam – 40%.

Study programmes flexibly apply study forms and methods, teaching/learning methods that encourage students to get maximally involved in the learning process and to become active participants in the study process. It very much depends on the experience of the teacher. Achievement evaluation methods cannot disappoint the student, but in all cases the student must understand the objectivity of the assessment.

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

Socially vulnerable groups 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 Schedule⁵⁰.

Socially vulnerable groups (orphans, people with disabilities, students from large families and low-income families) receive different discounts for tuition or dormitory fees, scholarships are provided for these students⁵¹.

Following the needs of students with disabilities, the University's buildings and equipment are constantly maintained and updated, students are allowed to park their cars near the buildings, access to buildings is maintained; the necessary equipment is established for the disabled in libraries, classrooms are set with suitable furniture, 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, data on students with disabilities are integrated into database systems, thus facilitating the learning process for students with disabilities. Disability education campaigns are organized at the University. During the period under evaluation, there were no students with special needs in the field study programmes.

Faculty of Agronomy (Studentų St. 11, Academy) and other university buildings (Faculty of Bioeconomic Development, Universiteto St. 10, Academy; Faculty of Agricultural Engineering, Studentų St. 15, Academy; Center for Animal Breeding, Breeding and Dissemination, Studentų St. 10 a, Academy; Open access Joint Research Centre of Agriculture and Forestry, Studentų St. 15a, Academy), where contact classes of the study programme courses are held, are fully adapted for students with special needs.

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

The monitoring of student learning progress is regulated by VMU Study Regulations and the Description of Procedure for Student Learning Achievement Monitoring and Assistance⁵². Monitoring of learning achievements and delivery of assistance covers interrelated processes, which include the following: 1. An analysis of student enrolment in studies and learning situation in study courses. 2. An analysis of the reasons for the students' non-participation in interim and final examinations. 3. An analysis of intermediate and final evaluation of students. 4. Implementation of preventive measures to manage student failure and improvement of organisation of studies.

⁵⁰Access through the internet: <https://www.vdu.lt/wp-content/uploads/2015/01/VDU-individualaus-studiju-grafiko-teikimo-tvarkos-apra%C5%A1as.pdf> (in LT)

⁵¹Access through the internet: www.vdu.lt/wp-content/uploads/2015/01/Mokestini%C5%B3-lengvat%C5%B3-teikimo-ir-kompensacij%C5%B3-skyrimo-tvarkos-apra%C5%A1as.pdf (in LT)

⁵²Access through the internet: <https://www.vdu.lt/wp-content/uploads/2015/01/Student%C5%B3-studijavimo-pasiekim%C5%B3-steb%C4%97senos-ir-pagalbos-teikimo-tvarka-.pdf> (in LT)

The University departments perform monitoring of learning achievements regularly, and students themselves are invited to make self-monitoring of their progress in studies and follow the processes of studies: to register for studies, to amend their study plans, to observe evaluations of their own learning and make improvements, to get acquainted with results of surveys for quality improvements, etc. Students logged in to the student portal Studis.vdu.lt can see the results of their interim evaluation as well as the final evaluations of the courses.

Monitoring of students' study progress is carried out through the study information system Studis, as well as through the distance learning system Moodle (course teachers regularly fill in the course progress bar), and monitoring results are used for timely analysis and elimination of reasons (discussions concerning the reasons with the Vice-dean and the teacher).

4.4. Evaluation of the feedback provided to students in the course of the studies to promote self-assessment and subsequent planning of study progress

Examinations and midterm tests (except for practical courses of art area study programmes) are proceeded in written form; their tasks are the same or of equal value for all examinees. According to the item 147 of VMU Study Regulations, the results of intermediate work assessment are announced and discussed during lectures within the period of 2 weeks but not later than before the beginning of the examination session. We offer the use of study progress tools in the study course. These tools allow students to mark the resources they have read, the links they have looked at, and the activities they have done. For the student marking the performed activities, a visual image of his progress in the study course (progress bar) is created. The teacher is given the opportunity to monitor the overall progress of students in the study course and, after assessing the possible threats, to encourage non-advancing students with separate messages and reminders. It is prompt enough and allows the student to change the situation.

After the written examination, the final results are announced on the University intranet within the period of three working days and afterwards they are discussed in the student group

Appropriate academic and social support is provided to students, and there are very good conditions for participating in mobility programs, but participation in mobility programs is not active enough, especially in part-time studies.

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

Collaboration with VMU alumni takes place mainly through alumni clubs and individual departments of the University. Graduates periodically get newsletters with current information.

The University has an active VMU Alumni Club whose main aim is to unite VMU alumni and maintain close relations with the University. Every year members of the club attend the University events organized to develop students' professional and employability skills as well as get acquainted with career opportunities. Alumni Club members also organize club meetings, various events (lectures, discussions, informal meetings, field trips, excursions to various companies employing university alumni, etc.), actively participate as consultants and experts in study programme committees, study quality assessment groups. Each year, with the help of the University, the club organizes Alumni Day in order to bring together VMU alumni.

VMU Academy of Agriculture has their alumni club, whose main activities are: representation of VMU Academy of Agriculture to students and members of agrobusiness; promotion of partnership between VMU Academy of Agriculture and alumni by establishing new regional and professional departments; participation in student events; assisting students in planning their careers and employment.

VMU Academy of Education also has its own Alumni Club, which maintains links with alumni and the Academy. Some departments have their own alumni clubs as well.

In order to ensure the quality of studies and provide career planning service that meet the needs of the students, the University monitors the employment and career of VMU graduates. The main sources of information are: VMU alumni survey, statistics provided by the Employment Service and statistics provided by the Government Strategic Analysis Centre.

Each year VMU Career Centre performs an online survey for alumni, one year after their graduation. The focus of attention is their current work situation. Those graduates, who are not working, are asked if they have work experience and if they are looking for a job. All graduates (employed and unemployed) are requested to give their opinion on how much they are satisfied with their current career situation and what has been most useful while preparing for their career at the University. Alumni are also asked to evaluate VMU's contribution to their preparation for labour market. Summarized survey results are published in the University website www.vdu.lt and on the Career Centre website⁵³. A more comprehensive analysis of the survey data is available on the University intranet: Outlook Public Folders → Career Monitoring.

On the basis of the cooperation agreement with the Employment Service, signed on the 6th of November in 2019, VMU will get statistical information about VMU graduates registered for a job search. Information will be provided twice per year, i. e. 12 months and 15 months after their graduation.

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On August 2019, VMU performed 12-month post-graduation survey of students who graduated in 2018, but the responsibility was very low – only 5.65%. Therefore, at the initiative of the Study Programme Committee, the employment and career monitoring of graduates was additionally performed by contacting each graduate by phone or e-mail. Graduates were asked about their future careers: whether they continue their studies at a higher level, or whether they work in qualified jobs according to their profession, naming positions. About 80 percent of respondents answered. The responses were systematized, summarized, and presented as a percentage of the number of respondents. The data show that in 2018 75% of the graduates of the first-cycle study programme worked in highly qualified positions according to their specialty or continued their studies in the second-cycle. These ratios were 77% and 65% in 2019 and 2020, respectively. The onset of the Covid-19 pandemic on March 2020 led to lower employment of graduates.

70% of students who graduated from second-cycle study programme in 2018 worked in highly qualified positions, 20% continue their studies in the third-cycle. 100% of graduates of 2019 did highly-skilled jobs, and that ratio was 83% in 2020. 3% of graduated of 2020 continue their studies in the third-cycle. These figures show that higher levels of study and accumulated work experience have a positive impact on graduates' professional achievements.

A survey of graduates of both cycles of Food studies (EXIT) completed in 2020 showed that 66.67% of first-cycle graduates rate the University's contribution to their preparation for the labour market more well and well. This ratio is 69.23% for second-cycle graduates.

The most useful things for the graduates of first-cycle study programme *Food Quality and Safety* in preparing for the labour market in 2019 and 2020 are presented in Table 17.

According to the data of the survey (EXIT) of students graduating from master study programme *Quality and Safety of Plant Food Raw Materials* in 2020, 73.08% (N=19) of students indicated that in preparation for professional activity the knowledge and skills acquired during organized activities (lectures, seminars, laboratories, etc.) were the most useful. The knowledge and skills acquired during independent tasks were useful as well (61.54%; N = 16).

⁵³ Access through the internet: <http://karjera.vdu.lt/apie-mus/apklausu-rezultatai/> (in LT)

Table 17. Data of the survey of students graduating from the first-cycle full-time study programme (EXIT) (N = 40 and N = 39) in 2019 and 2020 on what was the most useful in preparing for the labour market

What was most useful in preparation for professional activities	2019 (N= 40)	2020 (N= 39)
Knowledge and skills acquired during study sessions (lectures, seminars, laboratory works, etc.)	82.5 % (33)	71.79 % (28)
Knowledge and skills acquired during independent tasks	40% (16)	33.33% (13)
Knowledge and skills acquired during study practice	55% (22)	56.41% (22)
Experience gained during international studies or internships (e.g. Erasmus studies, Erasmus internships, exchange studies, etc.)	17.5% (7)	12.82% (5)
Knowledge and skills acquired through other, such as complementary or other types of practice	10% (4)	5.13% (2)
Teacher assistance	15% (6)	2.56% (1)
Other	0%	0%

The graduates of the programme successfully find employment in the fields of activity related to the goals of the programme, but the compliance of the competencies of the programme graduates with the changing Lithuanian and foreign labour market needs to be constantly improved. According to the graduates, it is recommended to more actively involve social partners, leading Lithuanian and foreign researchers in the lectures of the programme courses, to encourage students to more actively prepare final theses on the topics proposed by social partners, to participate in national and international research projects.

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

The principles of integrity are defined in the VMU Statute⁵⁴, the Code of Ethics of VMU⁵⁵, the Plagiarism prevention procedures of VMU⁵⁶, VMU Study Regulations. Non-discrimination measures are regulated by the Code of Ethics of VMU.

In the case of dishonest student behaviour, observed during the final examination or other assessment, teachers discontinue the student's performance and inform about this the Dean of the Faculty/ Academy Chancellor and the Department of Studies in written form. The final evaluation "0" (zero) is written in the learning outcome record book. The faculty dean or Chancellor of the academy starts the investigation regarding students' unfair behaviour.

VMU procedure for plagiarism prevention identify types of plagiarism, methods of determining the plagiarism and consideration procedures, as well as recommendations for teachers and students on how to prevent plagiarism in written works. Both teachers and students have the right to appeal to the University's Academic Ethics Commission, which makes final decisions on academic integrity.

Cases of violation of the principles of academic honesty, tolerance, and non-discrimination in the analysed field of study have not been examined in the last 3 years. The **OXSICO** system is used to assess the text overlap of the final theses of the study field. All written theses are checked with this programme.

⁵⁴ Access through the internet: https://www.vdu.lt/wp-content/uploads/2019/01/Statutas_2018_VDU.pdf (in LT).

⁵⁵ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2017/12/Akademine-etika-2017.pdf> (in LT)

⁵⁶ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2012/04/Plagiarism-prevention-VMU.pdf> (in EN)

4.7. 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

Procedures for appeals and complaints of the study process are regulated by VMU Description of procedure for appeal investigation⁵⁷, the plagiarism prevention procedures of VMU and VMU Study Regulations.

Students have the right to make appeals regarding the assessment of learning achievements or assessment procedures when they disagree with the teacher's assessment and / or identify the violation of assessment procedures. Students should have arguments when submitting their appeals. The appeal commission is assigned, and it analyses the information related to the appeal as well as makes the decision within 5 days of the appeal receipt.

In the first- and second-cycle study programmes of the field of Food studies, there were no appeals and complaints and exclusions from examinations due to dishonesty during the period of 2018-2020.

Please provide main results of the self-evaluation in the area of <i>Studying, student performance and graduate employment</i>	
Strengths	
Various teaching and learning as well as assessment methods are applied in the study programmes, methods are compatible with each other, and they are consistent with the learning outcomes.	
Students use the opportunities provided by the distance learning environment <i>Moodle</i> , the study progress monitoring system, the possibilities of feedback and further study progress planning.	
The employment of graduates of study programmes is sufficiently high: the majority of graduates (over 75% of the first-cycle and more than 90% of the second-cycle) work in highly qualified jobs or continue their studies.	
Areas for improvement	
To more actively involve social partners in the study process: to invite them to teach certain topics in study courses or a specific study course. Students would be provided with professional knowledge and acquire more practical abilities and skills.	
To encourage teachers to continuously improve the skills required for distance learning by ensuring the application of innovative study and assessment methods in the study process: video conferencing, preparation of subjects for distance or mixed-distance studies, adaptation of study subjects for virtual mobility	

⁵⁷ Access through the internet: <https://www.vdu.lt/wp-content/uploads/2021/04/Apeliaciju%CC%A8-teikimo-nuostatai-2020-03-24.pdf> (in LT)

5. TEACHING STAFF

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

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. Teachers teaching courses in other fields (physics, chemistry, informatics, public health, ecology and environmental science, biology) – Assoc. Prof. Dr. D. Rimkuvienė, Assoc. Prof. Dr. M. Gumbytė, Prof. Dr. E. Sendžikienė, Assoc. Prof. Dr. A. Dautartė, Prof. Dr. V. Dulskienė and others – accounted for 33.3% of all teachers working in this programme. 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 (Prof. Dr. V. Paulauskas, Prof. Dr. V. Dulskienė, Assoc. Prof. Dr. A. Raupelienė). They accounted for 17.6% of all teachers working in this programme. The list of teachers of the courses of the field, their pedagogical name and (or) degree, pedagogical work experience, scientific interests, practical work experience in the field of the taught course, taught courses as well as their current workload at VMU are presented in Annex 4.

During the period under evaluation Prof. Dr. Honorata Danilchenko had participated very actively in the implementation of the courses of the study programmes in the field of Food studies. On 25th June 2020, she was awarded the Associate Emeritus Diploma of Vytautas Magnus University; for active international cooperation with foreign scientists she was also awarded honorary badges from Warsaw University of Life Sciences and Wrocław University of Environmental and Life Sciences. In addition, she was awarded the title of Honorary Professor at the University of Life Sciences in Lublin. Many years of active pedagogical and scientific work have made a significant contribution: know-how has been transferred to the prepared team of researchers. In 2017-2020 she actively participated in international cooperation, established contacts with researchers from foreign universities that made a significant contribution to the preparation and implementation of research projects, writing of publications. Since autumn 2020 Prof. Dr. Honorata Danilchenko had terminated her employment with Vytautas Magnus University.

During the period under evaluation, academician Prof. Dr. P. Viškelis had actively participated in the implementation of the study programme of the field. He was the chairman of the evaluation of the Final Thesis Commission, participated in the meetings of the Study Programme Committee for the improvement of the implementation of the programmes in the field. He had shared his extensive experience with the first-cycle students in teaching the study course “Instrumental food analysis”. Since autumn 2020 Prof. Dr. P. Viškelis had terminated his employment with Vytautas Magnus University.

Same teachers teach in full-time and part-time studies. Some courses of the study programme 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.

The composition of teaching staff in the study programmes of the field meets the requirements of legal acts (Table 18).

In the first-cycle study programme, the ratio of the teaching staff of the 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. The share of staff teaching and working in the field of Food studies for at least 0.5 full-time and for at least 3 years is 95%; the share of teachers-practitioners is 26.1%. Experience of pedagogical work of teaching staff of the field ranges from 3 to 34 years. 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.

Table 18. Compliance of the teaching staff within a field study programme with legal acts⁵⁸

Requirements for the Composition of Teaching Staff in the First-Cycle Study Programme	In the Programme
At least 50% of the volume of the courses of the first-cycle study field must be taught by researchers.	100 %
Requirements for the Composition of Teaching Staff in the Second-Cycle Study Programme	In the Programme
At least 80% of the second-cycle study programme teaching staff must have a scientific degree.	100 %
At least 20% of the volume of courses in the field must be taught by professors.	50 %

The Faculty of Agronomy prepares doctoral students who after graduation can successfully replace retiring teachers. The University provides favourable conditions for doctoral students not only to study, deepen theoretical and methodological knowledge in a specific field of science in various seminars and doctoral schools, conduct independent research, but also to participate in international research projects, internships abroad, conferences, lectures and seminars at Vytautas Magnus University and partner universities. Dr. Dovilė Levickienė, who successfully defended her dissertation during the period under evaluation in 2018, replaced the teacher of the study field Prof. Dr. E. Jarienė (study course “Food quality assessment”) and Assoc. Prof. Dr. A. Paulauskienė (part of the study course “Food production”). After the Emeritus Prof. Dr. H. Danilchenko ended her teaching career in autumn 2020, she was replaced by Assoc. Prof. Dr. J. Kulaitienė (first-cycle study course “Food safety and quality management systems” and second-cycle study course “Quality and safety management of plant food raw materials”). After the end of the teaching career of Assoc. Prof. Dr. S. Mikulionienė in autumn 2020 she was replaced by Assoc. Prof. Dr. J. Černiauskienė (first-cycle).

More information on the teaching staff working in the study programmes of the analysed study field is provided in VMU science management system CRIS (publications, projects, languages, Scopus author ID, ORCID, etc.)⁵⁹.

The working time structure of teaching staff is planned for the academic year. The scope of work depends on the position held, the study courses taught and the number of students. In the academic year 2017-2018, the average contact workload of teachers of Food study programmes was 759 hours (625 hours for professors, 749 hours for associate professors, 831 hours for lecturers and 835 hours for assistants). In the academic year 2018-2019, the average pedagogical workload of teachers of study programmes in the field of Food studies was 743 contact hours (681 hours for professors, 763 hours for associate professors, 804 hours for lecturers and 723 hours for assistants). The other part of the full-time workload of the teaching staff of the study programmes of the study field consisted of the implementation of research and experimental development, publicity and popularization of scientific activities, as well as qualification improvement and organizational work.

From the academic year 2019-2020, only contact hours are counted at Vytautas Magnus University: for professors – 450 contact hours, for associate professors – 500 hours, for lecturers – 550 hours, for assistants – 650 hours. The structure of working time is fixed in the annual individual work tasks of teachers. Scientific, design, expert, organizational, professional development, and didactic working hours are registered in the annual research activity reports, that are monitored by the Department of Scientific Innovation. The results are discussed with the Director of the Institute of Agricultural and Food Sciences.

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

⁵⁸Access through the internet: Order on Approval of the Description of General Study Requirements. 30 December 201, No. V-1168. Vilnius.

<https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/a4caf862ced511e6a476d5908abd2210> (in LT)

⁵⁹Access through the internet: <https://www.vdu.lt/cris/browse?type=rpname&locale=lt> (in LT)

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 presented in the “Description of minimum qualification requirements for the positions of VMU teachers and researchers working in the fields of nature, technology and agricultural sciences”, approved by VMU Senate on 13.03.2019, under the Order No. 2-6⁶⁰. The teacher’s achievements in the field of professional development are evaluated every five years during the attestation.

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%.

The experience gained by researchers allows for successful participation in expert activities. They actively participate in the activities of the Technical Committees (TC) of the Lithuanian Standards Board. Prof. E. Jarienė is a member of TC15 “Grains. Cereal products. Bread. Feed” and an expert of the Agency for Science, Innovation and Technology; Assoc. Prof. Dr. Aurelija Paulauskienė is an expert in the unit of project experts of the Lithuanian Business Support Agency; Assoc. Prof. Dr. Darija Jodaugienė is an expert at the National Paying Agency under the Ministry of Agriculture of the Republic of Lithuania. Teachers are also included in the editorial boards of high-level scientific journals and scientific conferences: “Journal of Elementology” (Poland) – Prof. Dr. Elvyra Jarienė and Assoc. Prof. Dr. Živilė Tarasevičienė; “Herbalism” (Poland) – Prof. Dr. Elvyra Jarienė; “Agronomy Research” (Estonia, Lithuania, Latvia) – Prof. Dr. Aušra Blinstrubienė; “Вестник Мордовского университета” (Russia) – Prof. Dr. Natalia Burbulis; “Polish Journal of Agronomy” (Poland) and “Progress in Plant Protection” (Poland) – Prof. Habil. Dr. Zenonas Dabkevičius; “Bulletin of Geography. Physical Geography Series” (Poland) – Assoc. Prof. Dr. Rimantas Vaisvalavičius; Acad. Prof. Habil. Dr. Z. Dabkevičius is the Foreign Member of the Royal Swedish Academy of Agricultural Sciences and the Latvian Academy of Sciences.

Teachers and researchers in the field of Food studies represent the University: Prof. Dr. E. Jarienė, Assoc. Prof. Dr. Ž. Tarasevičienė, Assoc. Prof. Dr. Paulauskienė, Assoc. Prof. Dr. J. Kulaitienė, Lect. Dr. N. Vaitkevičienė, Lect. Dr. D. Levickienė are the members of EFSA; Prof. Dr. E. Jarienė, Assoc. Prof. Dr. Ž. Tarasevičienė, Assoc. Prof. Dr. A. Paulauskienė, Assoc. Prof. Dr. A. Blinstrubienė, Assoc. Prof. Dr. I. Čechovičienė are the members of ISEKI Food Association; Assoc. Prof. Dr. Ž. Tarasevičienė belongs to the European Network of Teachers of Organic Agriculture (ENOAT). Teachers of other study courses represent the University as well: Prof. Dr. V. Paulauskas is an expert in the evaluation of COST projects, a member of the Research Directorate of the European Commission; Member of the Technical Committees (TC) of the Lithuanian Standards Board LSD TC 36 and LSD TC 57; Prof. Dr. E. Sendžikienė is an expert at the Research Council of Lithuania; Lect. Dr. M. Gumbytė is an EU science expert; Prof. Dr. S. Mickevičius is the representative of the Republic of Lithuania at CERN Teachers and Students Forum, the representative of Vytautas Magnus University at CERN Baltic Group, a member of Lithuanian Physics Society and Lithuanian Medical Physics Society, member of Lithuanian Biophysics Society; Prof. Dr. V. Dulskienė is a member of the NCD-RisC (Chronic Non-Infectious Diseases Risk Factors) global network of scientists representing Lithuania, a member of the Lithuanian Medical Association, and a coordinator of the Kaunas Medical Association branch.

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)

Each VMU teacher has opportunities to use Erasmus+ programme 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 accept teaching mobility possibilities in a year before the pandemic.

⁶⁰Access through the internet: https://www.vdu.lt/wp-content/uploads/2019/04/G-T-Z_kvailifikaciniai-reikalavimai-2019-04-05.pdf (in LT)

- To go for Erasmus+ training visits to any institution or organisation (including other higher education institutions) in the EU as well as EEA/candidate countries or to any partnership university outside the UE. About 180 VMU staff members participate in staff mobility for training in a year before the pandemic.

Information on teaching visits (selection, organization, and other procedures) for those going on Erasmus + teaching and learning visits is public and available on VMU website⁶¹.

The number of teachers of study programmes of the analysed study field who participated in mobility is presented in Table 19. The conditions for mobility at the University are favourable, therefore there were a large number of academic exchanges in 2017-2020. Teachers of the first-cycle study programme in the field of Food studies visited partner universities 14 times during the three study years, and teachers of the second-cycle study programme – 13 times. The largest number of visits was in the autumn semester of the academic year 2019-2020. In the spring semester, mobility was halted by the pandemic that began in March 2020. 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 programme.

Table 19. ERASMUS + mobility of teachers of study programmes of the study field analysed

Study programme	Academic year		
	2017-2018	2018-2019	2017-2018
	Teaching and learning visits to partner countries		
First-cycle	2	4	8
Second-cycle	2	4	7

Teachers go on teaching and learning visits according to their course(s) taught or research direction (theme). During the period under evaluation, Prof. Dr. E. Jarienė, Assoc. Prof. Dr. Ž. Tarasevičienė, Assoc. Prof. Dr. J. Kulaitienė and Lect. Dr. N. Vaitkevičienė participated in the mobility the most actively – they visited other universities 2-3 times. Teaching visits were the most frequent (Prof. Dr. E. Jarienė, Assoc. Prof. Dr. Dr. J. Kulaitienė, Assoc. Prof. Dr. Dr. A. Paulauskienė, Assoc. Prof. Dr. Ž. Tarasevičienė). Teachers also had internship visits (Assoc. Prof. Dr. J. Černiauskienė, Lect. Dr. D. Levickienė, Assoc. Prof. Dr. J. Kulaitienė). Other teachers limited themselves to 1 visit (Assoc. Prof. Dr. A. Paulauskienė, Lect. Dr. D. Levickienė). The most popular countries and universities were: Polytechnic Institute of Beja (Portugal), Warsaw University of Life Sciences (Poland), University of Copenhagen (Denmark), Aksaray University (Turkey), Czech University of Agriculture (Czech Republic), Erlangen-Nuremberg University and Anhalt University of Applied Sciences (Germany), Swedish Institute (Sweden), University of Tartu (Estonia), University of Ghent (Belgium), Wroclaw University of Environmental and Life Sciences (Poland), University of Life Sciences in Lublin (Poland).

Such visits provide an opportunity to exchange ideas on future cooperation and the development of international academic relations in the fields of education and research. It is the integration of good practice into the study programme. For example, the experience gained during the internships of Assoc. Prof. Dr. J. Kulaitienė, Assoc. Prof. Dr. Ž. Tarsevičienė and Lect. Dr. D. Levickienė at the Department of Functional and Organic Food of the Warsaw University of Life Sciences was applied to improve the content of the first-cycle study programme: a new course “Coursework (innovative product development)” has been added in 2019.

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 accounted for 70% of all incoming teachers (Table 20).

⁶¹Access through the internet: <https://www.vdu.lt/lt/tarptautiniai-ryšiai/destytojams-personalui/> (in LT)

Table 20. Teaching and learning visits of incoming teachers of the field of Food studies from partner countries

Study programme	Academic year		
	2017-2018	2018-2019	2019-2020
Teaching and learning visits from partner countries			
First-cycle	10	4	17
Second-cycle	8	4	8

In 2018, Prof. Dr. Carlos Ribeiro (Polytechnic Institute of Beja, Portugal) shared his experience with the first-cycle students of Food studies, explaining “Production and drying of medicinal and aromatic plants in Portugal”, and the second-cycle students were shown a video “New ways to use *Arbutus unedo*” and summarized information on the possibilities of developing novel food.

In 2018, Prof. Dr. Shakhista Ishniyazova (Samarkand Agricultural Institute, Uzbekistan) told the first-cycle students in the field of Food studies about “Storage and processing of agricultural products in Uzbekistan: current trends, experience, problems and prospects”.

Every year, the Education Exchanges Support Foundation announces a competition for guest foreign teachers. In the spring semester of 2018 (19/02/2018 – 02/03/2018), Prof. Habil. Dr. Marek Gajewski (Warsaw University of Life Sciences, Poland) had a 10-day (30 contact hours) visit during which he taught part of the study course “Food safety and quality management systems” to first-cycle students in the field of Food studies. He introduced and applied the methods of analysis of problematic examples and questions on the topic “The influence of agrobiological factors on the quality, technological and nutritional properties of fruits and vegetables”. During the lecture, the postgraduate students explained part of the course “Methods of quality assessment of plant food raw materials” and during the seminars applied case analysis and debate methods on the topic “New physical, chemical and biological methods for the quality of plant products”. He taught part of the course “Methods for assessing the quality of plant food raw materials” to second-cycle students and applied during the lecture and the seminars the case analysis and debate methods on the topic of “New physical, chemical and biological methods for the quality of stored plant products”.

During the Covid-19 pandemic, virtual ERASMUS + teaching visits are possible, with the aim to give lectures remotely to students of partner foreign universities as well as to strengthen international connections. For example, Prof. Dr. E. Jarienė remotely visited the Warsaw University of Life Sciences (SGGW, Poland) in November 2020 – April 2021 under “Professor Visiting” exchange programme. She taught students of all three study cycles (60 contact hours).

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. For example, teachers of Food studies Assoc. Prof. Dr. Ž. Tarasevičienė, Assoc. Prof. Dr. A. Paulauskienė, Assoc. Prof. Dr. J. Černiauskienė, Lect. Dr. D. Levickienė participated in ERASMUS+ project TEFSI trainings in 2019. During the courses at the University of Copenhagen (Denmark), Warsaw University of Life Sciences (Poland), University of Zagreb (Croatia), Charles University in Prague (Czech Republic) the most innovative teaching and feedback organization methods were applied e.g. group work, case studies, etc.

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

At VMU, teacher professional development is organised 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).

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 organised by other Lithuanian institutions or international institutions. The University-provided possibilities for professional development are free of charge for VMU teachers. The training courses for competences of higher education didactics encompass such topics as active learning and student involvement into learning, learning achievement assessment and feedback for students, teaching, and learning in distance studies, etc. 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+ programme possibilities or use other potential opportunities.

Due to the relatively low funding of studies, there are limited opportunities to go on short-term or long-term internships to research institutions abroad with the University funding. However, practically every teacher can participate in the competitions organized by the Research Council of Lithuania every year for short-term scientific trips (conferences) and internships in foreign research institutions⁶².

In developing the didactic skills of the University teachers, a lot of attention has recently been paid to the training of teachers on more active involvement of students in studies, teaching and distance learning, providing feedback to students, as well as other relevant trainings.

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. These courses were attended by teachers of the study field evaluated (Lect. Dr. N. Vaitkevičienė, Lect. Dr. D. Levickienė, Assoc. Prof. Dr. J. Kulaitienė). In 2020, after evaluating the experience of previous years, both VMU teachers and external experts conducted trainings for teachers at the University by organizing trainings on the application of innovative teaching/learning methods, provision of effective feedback and assessment of study achievements, student involvement in studies and research, updating and improving the quality of study content.

In 2020 and 2021, teachers were more actively than before involved in the trainings conducted by VMU Innovative Studies Institute on the organization of distance learning, cooperation and assessment tools in distance learning, responsible use of technology, etc. For example, Assoc. Prof. Dr. Ž. Tarasevičienė participated in the course “Organization of study activities in the distance learning environment” on March 6, 2020 (6 hours). Trainings from VMU Institute of Foreign Languages for the development of teachers’ English skills also received a lot of teachers’ attention.

During the period under evaluation, teachers of the study programs in the field of Food studies Assoc. Prof. Dr. A. Paulauskienė, Assoc. Prof. Dr. Ž. Tarasevičienė, Lect. Dr. N. Vaitkevičienė, Lect. Dr. D. Levickienė participated in the course “Professional English” according to the B2-C1 language proficiency programme (60 academic hours in 2018); Assoc. Prof. Dr. J. Kulaitienė – in the courses “General English” according to the A+B1 language proficiency programme (60 academic hours in 2019); Assoc. Prof. Dr. A. Paulauskienė, Lect. Dr. N. Vaitkevičienė, Lect. Dr. D. Levickienė, Assoc. Prof. Dr. J. Kulaitienė participated in the training “Statistical data analysis with R” (32 hours in 2019) and in the courses “Study quality: quality strategies, student and teacher identity, innovations in educational technologies, didactic communication, conflicts, value education” (2018).

Assoc. Prof. Dr. A. Žebrauskienė participated in the trainings “Providing effective feedback and evaluation of achievements” (2020); “Why is assessment important for students?” (2020); distance learning “How to prepare for distance payments?” and “MS Teams tool for organizing video lectures and preparing videos” (2020). Assoc. Prof. Dr. J. Černiauskienė participated in Moodle training (2020); in the seminars “Getting your journal indexed and increasing its impact and

⁶²Access through the internet: <https://www.lmt.lt/en/competitive-research-funding/786> (in LT)

visibility” and “Discover the New Web of Science” (2020). Assoc. Prof. Dr. J. Kulaitienė participated in training “Organization of study activities in the distance learning environment” (2020). Lect. Dr. A. Ramaškevičienė attended the lecture by prof. J. C. Streibig (University of Copenhagen) “Preparation of scientific publications for important journals. Presentation of statistical evaluation indicators in publications” (2020).

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.

Improvement also takes place through active participation in project activities. Some examples of the possibility for teachers to improve in research, didactic or professional activities are: for example, Assoc. Prof. Dr. Ž. Tarasevičienė participated in the project “Increasing the accessibility of studies” (24 academic hours in 2019) for training of higher education staff; in the seminar “Quality assurance during changes” organized by the Centre for Quality Assessment in Higher Education (8 hours in 2018).

In 2018-2020, in the framework of the Erasmus+ project “Transformation of European food systems towards sustainability by transnational, innovative teaching”, the coordinator of which was Assoc. Prof. Dr. Ž. Tarasevičienė, and the executors of the activities – Assoc. Prof. Dr. A. Paulauskienė and Assoc. Prof. Dr. J. Černiauskienė, teachers could attend “3rd TEFSI Capacity Building Course” on 4-6 November, 2019. During the theoretical and practical classes, teachers from the University of Copenhagen (Denmark), the University of Kassel (Germany), the University of Life Sciences in Münster (Germany), the University of Gastronomy (Italy), ISARA – Lyon University (France), Warsaw University of Life Sciences (Poland) introduced the most innovative methods of teaching, involving students in studies, organizing feedback, assessment of study achievements. All teachers of the field of study participated in these courses.

Teachers improve their qualification by cooperating with economic entities (LitFood, JSC “AUGA group”, JSC “Kauno Grūdai”, “Griškabūdis” AC, Cooperative “AgroAves group”, LLC “ARVI partnership”, LLC “Grantukas”, LLC “Lietuvos cukrus”, LLC “Arvi and Co”, LLC “Grainmore”, LLC “Mantinga”, LLC “Naujasis Nevėžis”, LLC “Rūta”, LLC “SoTU SoTU”, LLC “Ustukių malūnas”, LLC “Du Medu”, LLC PI “Ekoagros”, Chamber of Agriculture of the Republic of Lithuania, etc.) in the preparation and implementation of European Innovation Partnership projects. For example, Assoc. Prof. Dr. A. Žebrauskienė participated in the seminar by A. M. Ozoli for vegetable and berry growers (2019); Tradecorp seminar “Main aspects of growing eco crops (oats, wheat, spelled flour, oilseed rape, beans, peas); climate change – critical moments and how to reduce their impact on the yield of these crops; quality or yield size? What to choose?” (Chamber of Agriculture of the Republic of Lithuania, 2020); Prof. Dr. E. Jarienė, Assoc. Prof. Dr. A. Paulauskienė participated in the seminar “Kosher certification – opportunities for exporters” (Litfood, 2020). During the course, the above-mentioned teachers strengthened their professional knowledge and skills by performing practical tasks, applying case analyses.

Please provide main results of the self-evaluation in the area of <i>Teaching staff</i>	
Strengths	
Competence of teachers carrying out the courses of the study programmes of the Food study field, as well as their practical work experience in the food sector create good conditions to ensure the achievement of the learning outcomes of the study field programmes.	
High mobility of the programme teachers in the field of Food studies under ERASMUS+ allows to link the studies more with the international experience. The share of teachers in the field of study who participated in academic mobility was 70% of all teachers in the field of study programmes.	
Conditions for improving the competencies of teachers by participating in the implementation of national and international research projects, scientific events, didactic skills development training are good.	
Areas for improvement	
Teachers of the study programmes of the field, in order to meet the needs of the students, must constantly learn and implement new study and assessment methods in the study subjects that are updated.	
Measures or ways to attract young teachers to choose pedagogical work: to motivate doctoral students to continue their scientific and pedagogical career at the University after studies, encouraging them to become more actively involved in international research project activities, to do internships abroad, to participate in conferences, to teach and to conduct seminars.	

6. LEARNING FACILITIES AND RESOURCES

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

Studies are provided effectively using VMU material resources that are organised in order to create appropriate conditions for student learning and teacher work aiming at study quality assurance⁶³.

There are 222 classrooms at the University which can be used for the study process according to teaching and learning needs. The size of the rooms varies from 5 up to 150 working places for students. Larger groups of students are able to have study courses in VMU Grand Hall possessing 725 seats. The schedule for lectures is designed taking into account the number of students in the course and the number of working places in the classroom. This allows assigning rooms of an optimal size to deliver study courses.

General study courses are mainly delivered in the central buildings of the University which are located closely each to other that is why it is convenient for students to change study rooms during breaks. Special courses are mainly delivered in the Faculty/Academy building where the administrative staff and teachers of special courses are working, and this allows administrative and teaching staff members become more accessible for students.

All the buildings are adjusted for disabled people: elevators and lifts for wheelchair of disabled people with mobility disabilities have been installed. Students with disabilities have access to parking near the University buildings; the entrance to the buildings is constantly maintained and renovated; libraries have equipment for the disabled to create working places for them, classrooms are with the necessary furniture. Students with disabilities have the opportunity to stay in dormitory rooms adapted for them, if necessary, with an accompanying person. The study process is organized according to the individual needs of students; disability education campaigns are organised; data on students with disabilities are integrated into the databases, thus allowing facilitate the entire study process for students with disabilities.

Studies are provided in the rooms with the necessary equipment, rooms are computerised and have internet connection as well as multimedia projecting equipment, audio, and video equipment. If needed, additional technical equipment can be supplied to properly organise specific study courses and enable appropriate application of different study methods to assure quality of student learning achievements. 46 computer rooms have been equipped for the study process, and the size of computer classes varies from 5 to 31 working places.

Conditions for studying in the programme are excellent – VMU AA academic campus is compact, academic buildings and dormitories are close to each other. Students are accommodated in dormitories according to the description of VMU dormitory accommodation procedure⁶⁴.

Auditoriums and laboratories. The Faculty of Agronomy has 33 auditoriums, training rooms and laboratories of various sizes. The total area of the auditoriums is 519.57 m². The average size of one auditorium is 74.22 m². The total number of student places in all classrooms is 370 – about 1.4 m² per student.

In 2017-2018, after the infrastructure improvement works of the project “Renovation of the study infrastructure, basic equipment and information infrastructure of the Lithuanian University of Agriculture for the improvement of study quality” (about EUR 79,000), windows were repaired in all auditoriums, renovations were performed, and furniture was replaced. Therefore, the premises for studies are sufficient, the technical and hygienic conditions of the premises are good.

The Faculty of Agronomy has two computer classes, that can accommodate 31 students at a time. Computer classrooms have a constant Internet connection, students can use general-purpose

⁶³Access through the internet: <http://vdu.lt/VMUinfrastructure> (in LT)

⁶⁴Access through the internet: <https://www.vdu.lt/wp-content/uploads/2017/08/Apgyvendinimo-bendraba%C4%8Diuose-tvarkos-apra%C5%A1as.pdf> (in LT)

Microsoft Office software and special-purpose programs such as SELECTION, SYSTAT 10, SIGMASTAT, SIGMAPLOT 8.0 as well as special-purpose statistical programme *STATISTICA* for statistical evaluation of research data (50 pcs.).

The Faculty of Agronomy has 3 specialized study and research laboratories for the field of study. Students have the opportunity to use them and the equipment in them for certain tasks provided in the descriptions of study courses or for preparing term papers (especially in the Laboratory of Food Raw Materials, Agronomic and Zootechnical Research) for the implementation of the study programme (mainly first-cycle). Equipment is used for classical methods of analysis of proteins, fats, minerals, fibre content: drying cabinets, precision and analytical scales, humidity and temperature measuring probes, automated muffle furnaces, automatic titrator, shakers, fully automatic Kjeldahl systems, flame photometer, fully automated Soxhlet system, ultracentrifugal mill, CO₂ – O₂ gas analyser, fume cupboards, drying cabinets, spectrophotometers. The latest laboratory equipment (spectrophotometer, distillation system, etc.) was upgraded in 2017 from EUR 20,000 allocated for this purpose.

Laboratory of Food Raw Materials Quality is intended for the implementation of the first-cycle study process, for the preparation of Bachelor and Master theses. The following equipment is used for laboratory work: spectrophotometer, alpha-amylase drop counting apparatus FN 1300, milk composition analyser LACTOSCAN, smart Ph-meter, refractometer, electronic scales, distiller DEMIWA-3-roi, press for oil pressing Opt46 6T, laboratory lyophilizer, Turoni Fruit penetrometer, illuminator with magnifying glass for grain quality evaluation, filtration system, smart weight and nutrition evaluation device, smart food scanner, refractometer, drying cabinet, automatic water heating bath, centrifuge, ultra-low temperature freezer, grain specific gravity meter, automated muffle furnace, ionometer for evaluation of the content of potassium, nitrate, pH value, titration equipment - systems for the determination of vitamin C, organic acids, salt content, acidity content, Clevenger type hydrodistiller for extraction of essential oils, IDK device for evaluation of gluten quality, egg ovoscope device. sheep plant. In 2017-2020, EUR 8,000 was allocated for the renewal of the equipment of this laboratory (milk composition analyser, egg ovoscope, determination of grain density, electrodes, electronic scales, penetrometer for assessing the texture of fruit, etc.).

In the Laboratory of Food Raw Materials Processing first-cycle study process is implemented and some bachelor's works are carried out. The laboratory has a multifunctional vegetable slicer, electric stove LYSVA-15, refractometer, juicer Stollar, convection oven Convothem Combi Steamer, microwave oven Menmaster, mixer, meat grinder, refrigerator, freezer. In 2018, over EUR 4,000 was allocated for the renewal of this laboratory equipment (smart food preparation device, smart food temperature monitoring device, smart food scanner, etc.).

19 laboratories have been allocated for the implementation of first- and second-cycle study programmes ("Soil Science and Soil Biology", "Microbiology", "Horticulture Laboratory", "Prof. Habil. Dr. Vlasdas Venskutonis Horticultural Laboratory", "Crop Production", "Plant Protection Methods", "Plant Biotechnologies" and others) with their total area of 1 441 m². Many of these classrooms specialize in visual aids and equipment. The relative number of workplaces is very high as the number of students declined. This shows that the availability of study facilities is sufficient, although students from other study programs also use the workplaces.

Laboratory– of *Plant Raw Material Quality* is located in the Open access Joint Research Centre of Agriculture and Forestry (JRC) (Vytautas Magnus University VIII building), which is an integral part of the scientific infrastructure of Nemunas Valley, Vytautas Magnus University Agriculture Academy (VMU AA) and the Lithuanian Research Centre for Agriculture and Forestry (LRCAF). These laboratories are designed both for the implementation of the study process and for research. Equipment used: texture analyser TA.XT plus Stable Micro Systems, colour analyser ColorFLEX, ultrasonic homogenizer, ball mill, sublimator ZYRBUS, infrared analyser, magnetic stirrer, stationary digital automatic polarimeter, fully automatic Kjeldahl system, ultracentrifugal mill, fume cupboards, drying cabinets, spectrophotometers, centrifuge, pH-meter, scales, water deionizers, for storage of plant raw materials – controlled atmosphere system, sensory research complex with FIZZ programme, spray dryer, e-nose HERACLES II, oil press system Comet D85 1G Monforts.

In the VIII building of VMU AA there are „Laboratory of Biological Waste and By-Products Usage“ and „Laboratory of Biochemical Research and Environmental Technology“ as well a “Center of Animal Husbandry Selections, Breeding Values and Dissemination”, housing 3 laboratories. In the “Chemical Research Laboratory” first- and second-cycle students perform some of their final works. This laboratory complex includes automatic Kjeldahl system, automatic Soxhlet system, feed analyser *SpektraAlyzer ZEUTER*; automatic dry weight scales; drying cabinets; texture analyser TA.XT plus; ultrasound scanner for muscle scanning MyLabOne VET; analytical balances; water bidistillers; ultrasonic bath, portable pH-meters; ultra-low temperature freezer. The equipment in the “Genetic Research Laboratory” (the only one of its kind in Lithuania; the only one to determine the origin of cattle, horses and sheep according to their DNA) is the following: ultrasonic baths; system for ultra-clean water production; cooling centrifuge; thermocycler Bibby Scientific PCR max Alpha; system with real-time data analysis software Bibby Scientific PCR max ECO48; capillary electrophoresis device QIAxel QIAGEN; spectrophotometer nano drop BioDrop Biochrom Harward Biosc. Equipment in the “Chromatography Laboratory” is gas chromatograph with mass spectrophotometer GCMS-QP2010 Ultra and flame ionization detectors; amino acid analyser UF Amino Station; system of high-performance liquid chromatography with two detectors ESC; analytical equipment – atomic absorption spectrometer.

The premises for studies meet the requirements of labour and hygiene standards. Most of the auditoriums have been renovated in the last five years. They are equipped with scientific-laboratory equipment, which is renewed with the funding of projects.

Students and teachers are provided by a virtual learning environment and collaboration system – Moodle. These tools allows teachers to choose different forms of organization of study courses, to organize practical activities in various ways, to share teaching and learning instruments. All the functions necessary for teamwork have been realised in Moodle: communication within the University, storage and dissemination of information, shared calendars, contact databases, link lists, user directory, authentication of other systems, authorized access to databases, synchronization with mobile devices, internet, e-mail, websites.

The University ensures good opportunities for distance learning. During the implementation of distance studies, the use of Adobe Connect video conferencing and BigBlueButton video conferencing tools have been created for the organisation of teachers’ work with students. In the spring of 2020, the pandemic called for an urgent transition to distance learning. VMU Office 365 Teams is often used as a tool for organising other distance activities.

Important VMU IT tools for presenting study information are the Student Portal and the Teacher Portal. The main principles of the Student Portal: centralized (based on integrated services) provision of information on the study process to students; possibility to integrate other information systems. The portal operates in a bilingual mode – In Lithuanian and English. Teacher Portal is an analogue to the Student Portal, and its main functionalities include monitoring of registration in study courses, electronic student achievement records, review of teaching quality assessment results. The system operates in a bilingual mode.

The University Library is an attractive information environment for studies and research, ensuring effective services for members of the University community, providing access to information resources necessary for studies, science, and professional qualification.

A modern physical infrastructure of Library departments⁶⁵ has been created in faculties and academies allowing provide conditions for effective response to the research and study needs of academic units. Members of the University community can visit all departments of the Library and use its all services, regardless of which faculty or academy they study or work in. The library has created a total of 770 working places for them, visitors can work with 237 Library or personal computers. Visitors also have an opportunity to access to individual and group work rooms,

⁶⁵Access through the internet: <https://biblioteka.vdu.lt/en/about/structure/departments/> (in EN)

workplaces for visitors with disabilities, discussion spaces and recreation areas. Opening hours for individual / group work can be booked in advance via the library website⁶⁶.

The library has self-taking / returning devices (RFID), which allow users to borrow / return publications themselves and extend the deadlines for returning publications.

All departments of the Library are equipped with 19 workplaces for users with special needs. The Library has special equipment: software JAWS 14 for Windows, Win Taker Voice 1.6, Super Nova Magnifier, electronic Braille device ESYS 40, tactile printer, stationary magnifier TOPAZ XL XD 24, keyboards for the visually impaired, alternative computer mice, height-adjustable tables, ergonomic chairs.

One of the most important tasks of the Library is to accumulate document collections and organize access to traditional and electronic information resources. The dominant type of information sources is electronic information resources, which is clearly revealed by the constantly growing indicators of their demand and usage. VMU community members can use purchased, licensed and library-created electronic information resources at any time of the day. The newest and most relevant information required for studies and research is available to members of VMU in subscribed databases⁶⁷, VMU Research Management System (CRIS⁶⁸) and VMU virtual library⁶⁹.

The university community has access to almost 624 thousand electronic resources (357 e-books, 31 thousand e-journals, 236 thousand conference presentations, audio recordings, study theses, and other documents). The community also uses 58 databases that can be accessed on the University premises and from remote computers (via EZproxy⁷⁰).

The aim of the Library is to create user-friendly conditions for access to information resources. The most necessary printed documents are freely available to users and stored according to research fields, the search for publications is facilitated by information notes and various virtual aids. All information about the available collections and access to them is available on the library website⁷¹, electronic catalogues, in the virtual library, in the institutional Research Management System.

Research Management System VMU CRIS is an open science infrastructure that has been in use since 2019. With its help, the University's study and research production is accumulated and its dissemination in the world is ensured. The interactive cross-links among scientific publications, their authors, departments, and ongoing projects help the user to fully get acquainted with the scientific production and activities of the University. Currently, VMU CRIS stores about 9 thousand full-text documents (books and articles of scientific journals published by the University, students' final theses) and over 60 thousand records of scientific publications with external interactive links to full-text documents. The archives of 33 electronic University scientific journals have been prepared in the VMU CRIS repository.

The information resources of the library are fully sufficient for studies in the field of Food studies (Table 21). Printed resources of the field of Food studies are accumulated in the library of the Agriculture Academy, a smaller number of publications on this topic is kept in other departments of the library. Students of the field of Food studies usually use the library of the Agriculture Academy.

⁶⁶ Access through the internet: <https://biblioteka.vdu.lt/en/for-studies/facilities-and-study-spaces/booking-a-workspace/> (in EN)

⁶⁷ Access through the internet: <https://biblioteka.vdu.lt/en/databases/> (in EN)

⁶⁸ Access through the internet: <https://www.vdu.lt/cris/> (in LT)

⁶⁹ Access through the internet: https://vb.vdu.lt/primo-explore/search?vid=VDU&lang=en_US (in EN)

⁷⁰ Access through the internet: <https://biblioteka.vdu.lt/studijoms/galimybes-ir-studiju-erdves/nuotoline-prieiga/> (in LT)

⁷¹ Access through the internet: <https://biblioteka.vdu.lt/en/> (in EN)

Table 21. Information resources for studies in the field of Food studies

Basic information	Traditional printed resources	Electronic resources
Total fund (units)	1,216,523 (of which in AA library – 378,916)	623,763.58 licensed DB. Publications of the University and its researchers in the VMU Science Management System (VMU CRIS), VMU Virtual Library
Resources for Food studies (units)	~ 10,629 (of which in AA library – 8,300)	3,304 (3,798 e-books; 115 e-journals; 292 ETD documents)
Documents in open funds (units)	293,550 (of which in AA library – 54,185)	Access to electronic resources on VMU computer network and from remote computers workplaces around the clock
Total use of documents	241,648 (of which in AA library – 51,187)	4,050,675 (over 4 million of searches). 1,419,880 (over 1,4 million of full-text document downloads)
The library acquired information resources (2019; in EUR):	152,027.33	529,786.11 (VMU and project funds)
Expenditure on studies in the field of Food studies (2019; in EUR)	1,867.00	2,904.00

VMU licensed databases recommended for studies *in the field of Food studies*:

Academic Search Complete (EBSCO). Multidisciplinary, including Food studies. Full-text.

ASABE (American Society of Agricultural and Biological Engineers) Technical Library. Agricultural engineering, biological systems, among the topics – Food studies. Full-text. E-book Central (Academic Complete). E-books. Multidisciplinary, including Food studies. Full-text. eBooks on ScienceDirect. E-books. Multidisciplinary, including Food studies. Full-text. EBSCO eBook Academic Collection. E-books. Multidisciplinary, including Food studies. Full-text.

InCites Benchmarking & Analytics (Clarivate Analytics). A tool for evaluating scientific results. InCites Journals and Highly Cited Data (Clarivate Analytics). A tool for evaluating scientific results. Emerald Management eJournals Collection. Multidisciplinary, including Food studies. Full-text. KUT publishing house e-books. Multidisciplinary, including Food studies. Full-text. Oxford Journals Collection. Multidisciplinary, including Food studies. Full-text. SAGE Journals Online. Multidisciplinary, including Food studies. Full-text. ScienceDirect. Multidisciplinary, including Food studies. Full-text. SpringerLink. Multidisciplinary, including Food studies. Full-text. SpringerLink Archive. Multidisciplinary, including Food studies. Full-text. Taylor & Francis. Multidisciplinary, including Food studies. Full-text. Wiley Online library. Multidisciplinary, including food science. Web of Science (Clarivate Analytics). A tool for evaluating scientific results. EndNote. Bibliographic reference management programme. RefWorks. Bibliographic reference management programme.

Specialized literature is also collected in the libraries of the Institutes of Agricultural and Food Sciences, Agroecosystems and Soil Sciences, Biology and Plant Biotechnology of the Faculty of Agronomy. Students preparing their work use the literature accumulated in the institutes during the implementation of projects obtained through communication and cooperation with foreign researchers.

Suitability and availability of resources for internship. The professional internship (PI) is performed in food raw material production and processing companies, state, and municipal institutions in Lithuania, ecological or biodynamic farms, or under the Erasmus+ programme in other European countries. For example, in 2018 a first-cycle student V. Šliažaitė improved her skills in conducting research using modern laboratory equipment at the Biochemical Research Laboratory of the Department of Functional and Organic Food, Warsaw University of Life Sciences. In total, there

are about 100 companies with adequate resources for internships. Contracts are signed with them: National Food and Veterinary Risk Assessment Institute (NFVRAI), State Food and Veterinary Service (SFVS), LLC “Kauno Grūdai”, Open access Joint Research Centre of Agriculture and Forestry, Plant Raw Materials Quality Laboratory, etc. This facilitates the internship and allows the student to choose the company according to his place of residence. The student, the University, and the company enter into a tripartite internship agreement. The internship is carried out in the 6th semester, after students have had more than half of the special education courses. It is therefore considered timely. Part-time students can also perform professional internship tasks in their workplace, as their activities are in line with the goals and the results of the study programme. These are food industry companies JSC “Pieno Žvaigždės”, LLC “Vesvela”, Jūratė Gulbinienė companies and others. First- and second-cycle students are given the opportunity to conduct research in social partner companies by expanding research opportunities and bringing research closer to solving specific problems in real conditions.

The relations between the University and external institutions (stakeholders) and the organization of student internships are coordinated by the Career Center established in 2005. A database has been created on the Centre’s website for employer advertisements, internships, and job searches. More than 50 percent of students do internships in institutions with which the University has signed cooperation agreements and in University’s patron companies.

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

Every year, VMU upgrades computers and acquires technical equipments, considering the plans for resources needed submitted by faculties and academies, which they prepare based on study needs. About 20% of computers are renewed every year. Almost all computers are connected to a common network and have an Internet connection, VMU computer network security systems are constantly updated.

VMU has a centralized system for monitoring and updating hardware and software, and only legal software is used in computer classrooms and other computerized workplaces. Every six months, the software is audited and updated or supplemented. The commercial software used in the study process is used with educational licenses and is available to students free of charge.

When planning the renewal of information resources relevant to studies, the necessary documents for study programs are coordinated with the library by the teachers responsible for study programmes and courses. Also, the analysis of the flow of scientific publications for studies is performed and the purchase of publications is recommended by teachers and responsible library employees – curators of the faculties. Faculty curators maintain regular contact with individual faculty by inviting them to participate in the development of collections of information resources.

An interactive document-ordering service has been installed on the library’s website, substantiating the need for the number, form and storage space of publications required for studies or research. Teachers receive feedback on the availability of publications commissioned, deadlines, storage location, and access conditions. Project applications are prepared for the modernization of the study process. In 2017, support from the EU Structural Funds was received for the renovation of the VI building, installation of new laboratories (EUR 1,563,694.00) and purchase of equipment (EUR 480,205.00). Renovation works have already begun: the premises are being emptied and preparations for internal and external repairs are being done. The laboratories being developed comply with the action plans of the priority direction of research and experimental development and innovation (smart specialization) “Agro Innovation and Food Technologies”. Three laboratories will be established: 1. *Laboratory of Pasteurization of Vegetable Raw Materials*. It is planned to purchase pilot fruit and vegetable washing equipment; juice pressure unit; raw material shredder; clarification capacity; pulp dryer; mill for grinding dried material; pilot pasteurization system; pilot bottling system; dishwashing system; sterilization cabinet; cold press mill and other equipment (EUR 74,874); 2. *Laboratory of Bio-fermentation of Secondary Food Raw Materials* with equipment to be purchased: industrial

fermenter; transfer tanks; collection capacity; decanter; composting equipment; refrigeration equipment; extractor; distiller; rotary evaporator; vacuum pump; laboratory furniture; freezer; refrigerators; laboratory fermenter/bioreactor and other equipment (EUR 395,558); 3. *Laboratory of Agro-Bio Raw Material Quality Research* with equipment to be purchased: 3D printer; scales; deionizer; premises' monitoring and other equipment (EUR 9,800). The planned acquisition of equipment is reasonably necessary and useful in the studies of the analysed field of study: students will be given the opportunity to deepen their knowledge, to develop skills in implementing innovations in the production process of food raw materials and products, to plan and to conduct research. The laboratories should be operational by the end of 2022.

The planning and updating of the resources needed for the study field, considering the changing needs of students and teachers, is carried out in accordance with the general principles of VMU budgeting.

Please provide main results of the self-evaluation in the area of
Learning facilities and resources

Strengths

The classrooms and laboratories used in the implementation of the field study programmes are newly equipped, the equipment in them is sufficient and suitable for achieving the learning outcomes of the programmes.

Information resources (publications, databases, etc.) are appropriate for the implementation of the study programme.

During the implementation of the project "Modernization of the agro-innovation research base" new laboratories with modern pilot equipment will be created for the field of study.

Areas for improvement

To increase funding from the Structural Funds or research projects for the refurbishment of laboratory equipment, enabling students to carry out their creative and final works.

Increase the use of their available infrastructure and modern research equipment through close links with the social partners.

7. STUDY QUALITY MANAGEMENT AND PUBLICITY

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

Studies are managed and decisions are made by the participation of the following parties: Academy Council (hereinafter the Council), Chancellor of the Academy, Faculty Council, the Study Programme Committee (hereinafter SPC), Dean of the Faculty, and Director of the Institute.

The Academy Council is responsible for approving fundamental updates of new and ongoing study programmes, such as changing the name of the programme, introducing/abolishing specializations.

The Faculty Council is responsible for ensuring the quality of the field of study: it considers the composition of the Study Programme Committee, plans for programme improvement, and makes decisions on the improvement.

The SPC's main responsibilities include coordination of the Programme's implementation regarding the curriculum related questions and assurance of the Programme quality. The SPC performs internal Programme quality assessment and renewal, it is responsible for preparation and implementation of the Programme quality improvement plans. The SPC assures correspondence of the Programme learning outcomes to labour market and society needs, it keeps contacts with stakeholders and assures their involvement into the Programme. The Committee carries out the attestation of study courses at least every three years according to the Description of Procedure for Study Course Attestation at VMU⁷².

The SPC makes decisions by common agreement, and they are documented as meeting minutes.

The Committee of the first-cycle study programme *Food Quality and Safety* consists of 7 members: 4 teachers, 1 student and 2 representatives of employers.

The Committee of the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* consists of 8 members: 5 teachers, 1 student and 2 representatives of employers. Committees are published on the websites of the faculties⁷³.

Responsibilities among the SPC members are shared as follows:

- The chairperson is in charge of coordination of Programme quality assurance and effective SPC work, (s)he organises annual Programme assessment and preparation of quality improvement plans as well as monitors implementation of these plans.

- Teachers belonging to the SPC are responsible for revision of the Programme learning outcomes and curriculum design so that to keep to the newest research, course-related, didactic requirements, and trends. They disseminate good examples of international experience, carry out Programme self-evaluation, give suggestions for the Programme improvement and follow decisions on improvement.

- The social partners' representatives participate in the revision of the Programme learning outcomes in line with labour market needs and give recommendations for renewal.

In case of discrepancies in the quality of studies (e.g. in case of repeated negative assessment by students), the Committee makes decisions and informs the Director of the Institutes and the Dean, who have the authority to change the teacher for well-grounded reasons, as well as to provide workplaces with the necessary resources and work safety measures.

The Chancellor of the Academy coordinates the quality of the implementation of the study process (approves the composition of the Study Programme Committee, the topics and the supervisors of the final theses, the commissions for the defence of the final theses etc.).

The Dean of the Faculty is responsible for ensuring the quality of the study process implementation. For example, he reviews and updates the implementation plans, deals with the

⁷²Access through the internet: https://www.vdu.lt/wp-content/uploads/2019/12/VDU_dalyku_atestavimo_aprasas_2019-11-20_redakcija.pdf (in LT)

⁷³Access through the internet: <https://zua.vdu.lt/fakultetai/agronomijos-fakultetas/studiju-programu-komitetai> (in LT)

organization and technical administration of the study space, is responsible for the dissemination of information, student registration, study documentation, and so on.

The Director of the Institute is responsible for the selection of teachers (together with the Study Programme Committee and the Dean) and the accounting of their workload, the implementation of research related to the study programme and the implementation of the programme.

The general resources of the University are used for the effective management and improvement of the study field, taking into account the need for their use.

Decisions regarding the quality of studies and their management are based on the Standards and Guidelines for Quality Assurance in the European Higher Education Area (2015), national and VMU legal acts. The main VMU documents regulate the following issues:

- VMU Statute (2018) determines general principles of quality assurance of studies and research.
- VMU Study Regulations (2021, new edition) describe the process and responsibility distribution in study quality assurance.
- Description of Procedure for Study Quality Assurance at VMU (2019, new edition) defines in more detail quality assurance processes when developing, implementing and improving studies.
- Description of Procedure of Feedback for Improvement of Quality of Studies at VMU (2019, new edition) regulates gathering information from different stakeholders and data application for evaluation and improvement of studies.
- Description of Procedure for Study Course Attestation at VMU (2019, new edition) determines assessment of study courses in accordance with programme aims, learning outcomes and study process needs. This description requires the assessment of courses to be performed every 3 years.

The above-mentioned documents are made public on the VMU website⁷⁴.

Given the growing need to provide the public with safe and high-quality food, the breakthrough of digitalisation, the transition of food chains to more sustainable ones and the emergence of new business models, the need for acquiring *new* knowledge becomes increasingly more important. Therefore, the learning outcomes of both the first- and second-cycle study programmes and the learning outcomes of study courses closely related to them are periodically updated. The committees of the programmes carry out regular quality monitoring of the first-cycle study programme *Food Quality and Safety* and the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* twice a year and organize their improvements.

Study courses are attested for the period of 3 years. Attestation takes place according to the Description of Procedure for Study Course Attestation at VMU⁷⁵. If necessary, the Committee may use the experts of the Study Quality Unit to assess the quality of the course description. At the time of attestation, the scientific activity of the teacher for 5 years is assessed. If the teaching quality of a course teacher is poorly assessed two semesters (in the Student Survey, the overall assessment of teaching in a semester is weak and worse), an extraordinary teacher attestation may be initiated⁷⁶.

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

Significant information for decision-making and quality assurance come from the results of periodic electronic surveys aimed at gathering information from different stakeholders:

- The survey of teaching and learning evaluation of the study courses is conducted at the end of each semester. The students are asked about teaching regarding a list of criteria (organisation of

⁷⁴ Access through the internet: <https://www.vdu.lt/en/about-vmu/important-documents/> in EN as well as <https://www.vdu.lt/lt/apie-vdu-kaune/svarbiausi-vdu-dokumentai/senato-dokumentai/> in LT

⁷⁵ Access through the internet https://www.vdu.lt/wp-content/uploads/2019/12/VDU_dalyku_atestavimo_aprasas_2019-11-20_redakcija.pdf (in LT)

⁷⁶ Access through the internet https://www.vdu.lt/wp-content/uploads/2019/12/VDU_kokybes_uztikrinimo_aprasas_2019-11-20_redakcija.pdf (in LT)

teaching, methods for student active participation, clarity of the course delivery, content illustration by examples, clarity of evaluation criteria, feedback on completed assignments, information delivery in distance environment, behaviour compliance with ethical requirements). Students are also inquired about their own involvement in learning, and they are requested about completed tasks, class attendance and general self-evaluation of their own work.

- The survey of first-year bachelor students regarding the reasons for the choice of studies and their expectations as well as opinions about studies is conducted at the beginning of the second semester of studies.

- The survey of the graduates of studies (EXIT) about the studies, final theses, and the preparation for the labour market are conducted at the end of the studies.

- The survey of alumni on their adaptation in the labour market and career is conducted 12 months after graduation.

- 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.

The survey results as well as other information about studies is the basis for annual analysis of studies performed by the SPC to identify strengths and weaknesses of studies. The main issues under annual analysis are as follows: compatibility between the Programme and newest research trends, correspondence between the Programme and labour market needs, demand of the Programme, suitability and sufficiency of the programme resources, teachers' competence, students' progress, students' and teachers' mobility as well as other issues. The results of the analysis are discussed with the Head of the Department and the Dean of the Faculty, they are also presented during the meetings with students.

This analysis is used to make annual Programme improvement plans and implement them in order to develop the identified areas for the improvement. Twice a year the SPC discusses the progress of quality improvement plans in its meetings to monitor the improvement actions. A two social partners participate in the activities of the Study Programme Committees – the Head of the Chemical Research Laboratory, Chief Researcher of the Lithuanian Research Centre for Agriculture and Forestry Dr. Alvyra Šlepetienė and Laboratory manager – chief. technologist of the cooperative “Agroaves group” dr. Skaidra Kordušienė, who are responsible for the improvement of the study goals, results and improvement of the content. During the discussions in 2020 it was decided to prepare more final theses according to the orders of the social partners (in companies, farmers' farms, etc.), to expand the topics of the final theses, that would have a lasting value.

Stakeholders are involved in ensuring the quality of studies in the analysed field by the following means:

- Teachers provide their comments and suggestions for the improvement of studies at the meetings of the Institute of Agricultural and Food Sciences, the Faculty of Agronomy, the Academy of Agriculture, and the Committee of the analysed field, as well as in the conducted surveys.

- Students give their assessments of Food studies field through the student representative in the SPC, via student surveys and in direct discussions with teachers.

- Social partners' representatives in the SPC suggest their remarks regarding the Programme correspondence to labour market requirements, relevance of student practical skills, etc. Information from social partners is also collected via surveys, during Career Days at the University and in special discussions, for example discussing student practice and research project issues, joint project possibilities, etc.

- Alumni suggestions are identified via surveys and during meetings organised by the Faculty Alumni association where the Programme alumni are active participants.

In order to assure the internal quality, it is strongly cooperated with companies. In 2020-2021, new cooperation agreements were signed with the National Food and Veterinary Risk Assessment Institute (NFVRAI), Lithuanian Association of Berry Growers, Processors and Traders (LABGPT),

State Food and Veterinary Service (SFVS), Lithuanian Biodynamic Agriculture and Processing Association “Biodinamika LT”, LLC “Rūta”, LLC “SoTU SoTU”.

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

Information about studies is gathered, analysed and evaluated in order to assure regular self-assessment and improvement. Annual analysis of studies allows identify shortcomings in time and take necessary actions for improvement. Teaching and learning quality assessment at the end of each course gives possibilities for teachers to monitor their teaching and respond to students’ suggestions when delivering the course next time, and this assessment invites students to think over their own learning and consider possibilities for improvement.

Quality assessment measures have been chosen to assure effective results. Annual Programme analysis involves the issues that should be assessed each year while a more comprehensive analysis of the Programme is done for external evaluation in more detailed to cover various issues of studies. All the internal surveys comprise the issues of primary significance so that not to overload respondents with questions of minor importance. Besides, all the surveys include open questions asking to give comments in boxes for free-text remarks, and these course-specific recommendations lead to improvement.

Results of internal assessment (surveys, stakeholder discussions, statistical data, etc.) are applied to improve quality of studies. It is aimed to identify the shortcomings in studies in a timely manner and to take urgent action for improvement. In 2018, the Committee of the first-cycle study programme *Food Quality and Safety*, in communication with the social partners, was proposed to improve the content of five courses of the first-cycle study programme by getting them closer to the aim of the Programme. The Committee decided to take the following actions to improve the quality of studies: the scope of engineering courses was reduced, a new course “Plant physiology” was added, the content of courses “Food safety and quality management systems”, “Physiology of human nutrition” was updated, the volume of final thesis was increased from 12 to 15 credits, and in 2019 it was decided to include a new course in “Coursework (innovative product development) in order to improve the competence of future specialists. Improvements have been implemented over one year.

In 2018, the results of the internal evaluation of the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* showed that it is necessary to replace unpopular electives with more relevant courses that are more-in-line with the aim and the learning outcomes of the study programme as well as to recommend more interesting group tasks in some courses. The Committee decided to take the following actions to improve the quality of studies: to eliminate the course “Environmental bioindication” from the content of the programme and to replace it with the course “Increasing plant genetic diversity by biotechnological methods”; in 2019 it was decided to introduce more diverse study methods in the teaching of the courses “Career management modelling”, “Quality of agroecosystem and crop production” – problem solving, case analysis, etc.

The results of teaching quality assessment are used for teaching quality improvement and teacher professional development. Teachers have online access to the survey results and get acquainted with the feedback for their study courses. The survey results are also obtained by the SPC chairperson, and the main trends of the teaching quality are discussed in the SPC meetings, decisions are made what improvements in teaching should be taken. For example, when taking into account the opinion of the first-cycle students expressed during the “Teaching and study assessment” survey, problematic situations with the teaching of the course “Engineering of processing and storage of food raw materials and products” were resolved (2019).

All decisions regarding studies (including issues on assessment and improvement) are publicized for stakeholders by different channels. The Chairperson of SPC publicize information for the teachers, social partners and other stakeholders (the Head of the Department, the Director of the Institute, the Dean of the Faculty, the Chancellor of the Academy, etc.). The Student representative in the SPC publicize the decisions to other students of the study programme.

When surveys are organised, in 3 months the summarized results of the feedback data analysis are presented to social stakeholders who have provided feedback as well as other representatives of the University's social stakeholders. The results are publicized on VMU website, emailed to students and teachers, stored in Outlook folders, delivered in social media, and shared by other channels.

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

The EXIT survey of final year students of the first-cycle study programme “Food Quality and Safety” and the second-cycle study programme “Quality and Safety of Plant Food Raw Materials” was conducted asking about studies, final theses and preparation for the labour market. The periodic survey is conducted at the end of each academic year, and the results of one year are discussed here. The survey was conducted by VMU Study Quality Unit on June 2020. All segments of student life and learning, recreation, and university's adaptation to learning, work and professional perspectives were assessed positively. An example of several answers regarding study-related issues for the final year students of the first-cycle study programme is presented in Table 22. 39 students participated in the survey.

Table 22. Examples of student answers in EXIT survey of the first-cycle study programme *Food Quality and Safety* (scale from 0 to 4 points)

Statements about studies	Average score
Study material and literature sources were available in the library and / or in a virtual environment.	3.44
The equipment of auditoriums, laboratories and other study premises was adequate.	3.44
The study load was adequate for me.	3.44
If necessary, I was able to consult with the teachers.	3.41
The content of the study courses corresponded to the purpose of the study programme.	3.05
I completed all study tasks	3,77
I allocated enough time for studies	3,62
I allocated enough time for studies.	3,38
In summary, the quality of the study programme is adequate.	3.00

In this survey, students also assessed the most important skills acquired (developed) during their studies (specialty knowledge and skills – 18.8%; communication and cooperation – 17.95%, ability to take responsibility -14,53 %, other skills have also been developed) and the quality of the internship 3.57 points. In the opinion of students, the content of study courses corresponded to the purpose of the study programme – 77%; lectures, seminars, laboratory works, and other study activities corresponded to the study expectations – 75%, the cooperation with the thesis supervisor was smooth – 79.49%; the Final thesis defence procedure was correct – 69.23.

Summarized results of the EXIT survey of 2020 showed that the graduates of the first-cycle studies best assessed the availability of resources, the equipment of the auditoriums, laboratories and other study premises, the quality of the study internship, communication with the teachers and the supervisors of the final theses. Meanwhile, the compliance of lectures, seminars, laboratory works and other study activities with the students' study expectations and the acquired knowledge and skills of the specialty were identified as aspects of the study programme to be improved. Students gave a score of 3.0 to the generalized evaluation of the quality of the study programme (4-point scale). According to the students, more coursework should be included as well as there should be more diverse laboratory work related to animal husbandry. Some specialty courses, such as “Instrumental

and sensory analysis”, “Methodology of raw materials and food research”, are taught in the second year, when they are actually more needed in the third or the fourth year. In the autumn semester of 2020, the Study Programme Committee updated the content of study courses in response to the improvement of the study programme; the study plan was reorganized and a new course “Coursework (Innovative product development)” was added.

An example of several answers regarding study-related issues for the final year full-time and part-time students of the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* is presented in Table 23. 11 full-time and 15 part-time students of this programme participated in the EXIT periodic survey on June 2020.

In the EXIT survey, students also assessed the most important skills acquired (developed) during their studies (special knowledge and skills – 24.24% (full-time) and 20.83% (part-time); communication and cooperation – 27.27% (full-time) and 25.00% (part-time)). According to the students, the cooperation with the thesis supervisor was smooth – 90.91% (full-time) and 86.67% (part-time); the final thesis defence procedure was correct – 90.91% (full-time) and 80.00% (part-time).

Table 23. Examples of student answers in EXIT survey of the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* (scale from 0 to 4 points)

Statements about studies	Full-time	Part-time
	Average score	
If necessary, I was able to consult with the teachers.	4.00	3.93
The study load was adequate for me.	3.90	3.93
Study material and literature sources were available in the library and/or in a virtual environment.	3.55	3.87
The content of the study courses corresponded to the purpose of the study programme.	3.20	3.73
The equipment of auditoriums, laboratories and other study premises was adequate.	3.18	3.73
The University provided an opportunity for international mobility.	3.13	3.69
In summary, the quality of the study programme is adequate.	3.09	3.60
I would recommend others to study in this study programme.	3.00	3.60

The results of the EXIT survey of 2020 revealed that the graduates of the part-time second-cycle studies evaluate the quality of the study programme better. They gave a score of 3.6 points in the generalized evaluation of the study programme on a 4-point scale. Both full-time and part-time students rated the communication with the teachers and thesis supervisors, the availability of resources and the compliance of the study course content with the study programme with the highest score. According to the second-cycle students, the fields of the study programme that need to be improved are the following: application of knowledge in practice, more modern laboratory equipment and opportunities for international mobility, improving the content of some courses. In this context, the Study Programme Committee has developed an improvement plan, which should be successfully implemented after the end of the Covid-19 pandemic: to invite more teachers from food industry companies, foreign universities, to cooperate more closely with business enterprises, to use more modern laboratory equipment for research.

Please provide main results of the self-evaluation in the area of	
<i>Study quality management and publicity</i>	
Strengths	
An appropriate structure has been created for ensuring and improving the quality of studies: Study Programme Committee, Institute, Dean's Office of the Faculty, Faculty Council, Unit of Study Quality, students, lecturers, social partners are involved.	
A clear division of responsibilities in the Study Programme Committee and among the social stakeholders ensures the implementation, monitoring and improvement of the study programmes.	
Students evaluate the studies of the field positively: the availability of resources, the equipment of the auditoriums, laboratories and other study premises, the quality of the study internship, communication with the teachers and the supervisors of the final theses are best evaluated by students..	
Clear internal quality evaluation and improvement procedures create opportunities to effectively and timely influence the quality management of studies.	
Areas for improvement	
To discuss the problematic issues of the field study content more intensively with students in various formats and to discuss the implementation of solutions.	

Table 1. The study plan of the first-cycle study programme *Food Quality and Safety* (implemented from academic year 2020-2021 in a full-time study form)

Study courses		ECTS	Contact work hours	Independent work hours	Form of assessment	Teacher
1 semester	<i>General university study courses</i>					
	Group A and B courses	14				Depending on the course chosen
	<i>Study field courses</i>					
	General microbiology	4	45	62	Examination	Assoc. Prof. Dr. Aurimas Krasauskas
	<i>Study courses of another study field(-s)</i>					
	Mathematics and computer science	6	75	85	Examination	Assoc. Prof. Dr. Daiva Rimkuvienė
	Inorganic and analytical chemistry	6	75	85	Examination	Assoc. Prof. Dr. Milda Gumbytė
	Totally in the semester:	30				
2 semester	<i>General university study courses</i>					
	Group A and B courses	14				Depending on the course chosen
	<i>Study courses of another study field(-s)</i>					
	Professional language	4				
	Physical and colloid chemistry	4	45	62	Examination	Assoc. Prof. Dr. Milda Gumbytė Prof. Dr. Violeta Makarevičienė Prof. Dr. Eglė Sendžikienė
	<i>Study field courses</i>					
	Agricultural systems	8	90	122	Examination	Assoc. Prof. Dr. Darija Jodaugienė
	Totally in the semester:	30				

Study courses		ECTS	Contact work hours	Independent work hours	Form of assessment	Teacher
3 semester	<i>General university study courses</i>					
	Group A and B courses	8				Depending on the course chosen
	<i>Study field courses</i>					
	Plant food raw materials	6	75	85	Examination	Assoc. Prof. Dr. Audronė Žebrauskienė Assoc. Prof. Dr. Asta Ramaškevičienė Assoc. Prof. Dr. Robertas Kosteckas
	Sustainable food systems	4	45	62	Examination	Assoc. Prof. Dr. Živilė Tarasevičienė
	<i>Study courses of another study field(-s)</i>					
	General ecology and environmental protection	6	60	100	Examination	Assoc. Prof. Dr. Anželika Dautartė
	Physics	6	75	85	Examination	Prof. Dr. Saulius Mickevičius
	Totally in the semester:	30				
4 semester	<i>General university study courses</i>					
	Group A and B courses	8				Depending on the course chosen
	<i>Study field courses</i>					
	Animal food raw materials	5	60	73.35	Examination	Assoc. Prof. Dr. Judita Černiauskienė
	Food chemistry	5	60	73.35	Examination	Assoc. Prof. Dr. Aurelija Paulauskienė
	Functional food	4	45	62	Examination	Assoc. Prof. Dr. Elvyra Jarienė. Lect. Dr. Nijolė Vaitkevičienė
	Sensory analysis of food products	3	30	50	Examination	Assoc. Prof. Dr. Živilė Tarasevičienė
	<i>Study courses of another study field(-s)</i>					
	Plant physiology	5	60	73.35	Examination	Assoc. Prof. Dr. Regina Malinauskaitė
	Totally in the semester:	30				

Study courses		ECTS	Contact work hours	Independent work hours	Form of assessment	Teacher
5 semester	<i>Study field courses</i>					
	Production of food	12	135	183	Examination	Assoc. Prof. Dr. Aurelija Paulauskienė
	Food microbiology and toxicology	4	45	62	Examination	Assoc. Prof. Dr. Aurimas Krassauskas
	Research methodology of raw materials and food	5	45	88.35	Examination	Prof. Dr. Aušra Marcinkevičienė, Lect. Dr. Rita Čepulienė
	Biologically active nutrients	4	45	62	Examination	Assoc. Prof. Dr. Ž. Tarasevičienė
	Instrumental analysis of food products	4	45	62	Examination	Assoc. Prof. Dr. Živilė Tarasevičienė
	Totally in the semester:	29				
6 semester	<i>Study field courses</i>					
	Food safety and quality management systems	8	90	122	Examination	Assoc. Prof. Dr. Jurgita Kulaitienė
	Coursework (Innovative product development)	5	2	131.35	Examination	Dr. Nijolė Vaitkevičienė
	Information technology in the food sector	3	30	50	Examination	Assoc. Prof. Dr. Audrius Zajančauskas
	Professional internship	15	4.5	395.5	Report defence	Lect. Dr. Dovilė Levickienė
	Totally in the semester:	31				
7 semester	<i>Study field courses</i>					
	Gastronomic science	5	60	73.35	Examination	Assoc. Prof. Dr. Aurelija Paulauskienė
	Storage of food raw materials	8	90	122	Examination	Assoc. Prof. Dr. Judita Černiauskienė
	<i>Study courses of another study field(-s)</i>					
	Engineering of processing and storage of food raw materials and products	10	120	147	Examination	Assoc. Prof. Dr. Egidijus Zvicevičius
	Physiology of human nutrition	6	60	100	Examination	Prof. Dr. Virginija Dulskienė
	Totally in the semester:	29				

Study courses		ECTS	Contact work hours	Independent work hours	Form of assessment	Teacher
8 semester	<i>Study field courses</i>					
	Food quality assessment	6	75	85	Examination	Assoc. Prof. Dr. Jurgita Kulaitienė. Lect. Dr. Dovilė Levickienė
	Biotechnology of food raw materials	6	75	85	Examination	Prof. Dr. Aušra Blinstrubienė. Prof. Dr. Natalija Burbulis
	Final thesis	15	9	391	Final thesis defence	
	<i>Study courses of another study field(-s)</i>					
	Packaging materials and technologies	4	45	62	Examination	Lect. Dr. Indrė Bagdonienė Prof. Dr. Rolandas Bleizgys
	Totally in the semester:	31				
	Totally in the programme:	240				
	Totally for the practice:	15				
	Totally for the Final thesis:	15				
	Totally for the study field courses:	139				
	Totally for the study courses of another study field:	57				
	Totally for the general university study courses field:	44				

Table 2. The study plan of the first-cycle study programme *Food Quality and Safety* (implemented from academic year 2020-2021 in a part-time study form)

	Study courses	ECTS	Contact work hours	Independent work hours	The form of assessment	Teacher
<i>1 semester</i>	<i>General university study courses</i>					
	Group A and B courses	14				Depending on the course chosen
	<i>Study courses of another study field(-s)</i>					
	Mathematics and computer science	6	75	85	Examination	Assoc. Prof. Dr. Daiva Rimkuvienė
	Totally in the semester:	20				
<i>2 semester</i>	<i>General university study courses</i>					
	Group A and B courses	14				Depending on the course chosen
	<i>Study courses of another study field(-s)</i>					
	Professional language	4				
	<i>Study field courses</i>					
	Sensory analysis of food products	3	30	50	Examination	Assoc. Prof. Dr. Živilė Tarasevičienė
	Totally in the semester:	21				
<i>3 semester</i>	<i>General university study courses</i>					
	Group A and B courses	8				Depending on the course chosen
	<i>Study courses of another study field(-s)</i>					
	Inorganic and analytical chemistry	6	75	85	Examination	Assoc. Prof. Dr. Milda Gumbytė
	Physics	6	75	85	Examination	Prof. Dr. Saulius Mickevičius
	Totally in the semester:	20				
<i>4 semester</i>	<i>General university study courses</i>					
	Group A and B courses	8				Depending on the course chosen
	<i>Study field courses</i>					
	Plant food raw materials	6	75	85	Examination	Assoc. Prof. Dr. Audronė Žebrauskienė Assoc. Prof. Dr. Asta Ramaškevičienė

Study courses		ECTS	Contact work hours	Independent work hours	The form of assessment	Teacher
						Assoc. Prof. Dr. Robertas Kosteckas
	<i>Study courses of another study field(-s)</i>					
	Plant physiology	5	60	73.35	Examination	Assoc. Prof. Dr. Regina Malinauskaitė
	Totally in the semester:	19				
5 semester	<i>Study field courses</i>					
	Food chemistry	5	60	73.35	Examination	Assoc. Prof. Dr. Aurelija Paulauskienė
	Animal food raw materials	5	60	73.35	Examination	Assoc. Prof. Dr. Judita Černiauskienė
	<i>Study courses of another study field(-s)</i>					
	Physical and colloid chemistry	4	45	62	Examination	Assoc. Prof. Dr. Milda Gumbytė Prof. Dr. Violeta Makarevičienė Prof. Dr. Eglė Sendžikienė
	General ecology and environmental protection	6	60	100	Examination	Assoc. Prof. Dr. Anželika Dautartė
	Totally in the semester:	20				
6 semester	<i>Study field courses</i>					
	Functional food	4	45	62	Examination	Prof. Dr. Elvyra Jarienė Lect. Dr. Nijole Vaitkevičienė
	General microbiology	4	45	62	Examination	Assoc. Prof. Dr. Aurimas Krasauskas
	Agricultural systems	8	90	122	Examination	Assoc. Prof. Dr. Darija Jodaugienė
	Sustainable food systems	4	45	62	Examination	Assoc. Prof. Dr. Ž. Tarasevičienė
	Totally in the semester:	20				
	<i>Study field courses</i>					
7 semester	Production of food	12	135	183	Examination	Assoc. Prof. Dr. Aurelija Paulauskienė
	Biologically active nutrients	4	45	62	Examination	Assoc. Prof. Dr. Živilė Tarasevičienė
	Instrumental analysis of food products	4	45	62	Examination	Assoc. Prof. Dr. Živilė Tarasevičienė
	Totally in the semester:	20				
	<i>Study field courses</i>					

	Study courses	ECTS	Contact work hours	Independent work hours	The form of assessment	Teacher
8 semester	<i>Study field courses</i>					
	Coursework (Innovative product development)	5	2	131.35	Examination	Lect. Dr. Nijolė Vaitkevičienė
	Professional internship	15	4.5	395.5	Report defence	Lect. Dr. Dovilė Levickienė
	Totally in the semester:	20				
9 semester	<i>Study field courses</i>					
	Food safety and quality management systems	8	90	122	Examination	Assoc. Prof. Dr. Jurgita Kulaitienė
	Food microbiology and toxicology	4	45	62	Examination	Assoc. Prof. Dr. Aurimas Krasauskas
	Information technology in the food sector	3	30	50	Examination	Assoc. Prof. Dr. Audrius Zajančkauskas
	Research methodology of raw materials and food	5	45	88.35	Examination	Prof. Dr. Aušra Marcinkevičienė Lect. Dr. Rita Čepulienė
	Totally in the semester:	20				
10 semester	<i>Study courses of another study field(-s)</i>					
	Packaging materials and technologies	4	45	62	Examination	Lect. Dr. Indrė Bagdonienė Prof. Dr. Rolandas Bleizgys
	Engineering of processing and storage of food raw materials and products	10	120	147	Examination	Assoc. Prof. Dr. Egidijus Zvicevičius
	Physiology of human nutrition	6	60	100	Examination	Prof. Dr. Virginija Dulskienė
	Totally in the semester:	20				
11 semester	<i>Study field courses</i>					
	Food quality assessment	6	75	85	Examination	Assoc. Prof. Dr. Jurgita Kulaitienė Lect. Dr. Dovilė Levickienė
	Gastronomic science	5	60	73.35	Examination	Assoc. Prof. Dr. Aurelija Paulauskienė

Study courses		ECTS	Contact work hours	Independent work hours	The form of assessment	Teacher
	Storage of food raw materials	8	90	122	Examination	Assoc. Prof. Dr. Judita Černiauskienė
	Totally in the semester:	19				
<i>12semester</i>	<i>Study field courses</i>					
	Biotechnology of food raw materials	6	75	85	Examination	Prof. Dr. Aušra Blinstrubienė Prof. Dr. Natalija Burbulis
	Final thesis	15	9	391	Final thesis defence	
	Totally in the semester:	21				
	Totally in the programme:	240				
	Totally for the practice:	15				
	Totally for the Final thesis:	15				
	Totally for the study field courses:	139				
	Totally for the study courses of another study field:	57				
Totally for the general university study courses:		44				

Table 3. The study plan of the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* (full-time study form)

	Study courses	ECTS	Contact work hours	Independent work hours	The form of assessment	Teacher
<i>I semester</i>	<i>Study field courses</i>					
	Chemistry of plant food raw materials	6	60	100	Examination	Assoc. Prof. Dr. Aurelija Paulauskienė
	Quality and safety management of plant food raw materials	7	75	112	Examination	Assoc. Prof. Dr. Jurgita Kulaitienė
	Research planning and analysis	5	45	88.35	Examination	Prof. Dr. Aušra Marcinkevičienė
	Quality of agroecosystem and crop production	7	75	111	Examination	Prof. Habil. Dr. Rimantas Velička Prof. Habil. Dr. Zenonas Dabkevičius Assoc. Prof. Dr. Rimantas Vaisvalavičius Assoc. Prof. Dr. Rūta Dromantienė
	<i>Study courses of another study field(-s)</i>					
	Career management modelling	6	60	100	Examination	Assoc. Prof. Dr. Asta Raupelienė
	Totally in the semester:	31				
<i>II semester</i>	<i>Study field courses</i>					
	Chemical safety of plant raw materials	6	60	100	Examination	Prof. Dr. Elvyra Jarienė
	Methods for assessing the quality of plant food raw materials	6	60	100	Examination	Assoc. Prof. Dr. Živilė Tarasevičienė
	Microbiological contamination of plant food raw materials and toxins	6	60	100	Examination	Assoc. Prof. Dr. Aurimas Krassauskas
	Research work I	6	10	150	Research report	Supervisor of the Master thesis
	<i>Study courses of another study field(-s)</i>					
	Human ecology and environmental epidemiology	5	45	88.35	Examination	Prof. Dr. Virginija Dulskienė

	Study courses	ECTS	Contact work hours	Independent work hours	The form of assessment	Teacher
	Totally in the semester:	29				
III semester	<i>Study field courses</i>					
	Research work II	6	10	150	Research report	Supervisor of the Master thesis
	Consumer law and education	6	60	100	Examination	Assoc. Prof. Dr. Jurgita Kulaitienė
	<i>Elective courses of the study field or other fields* (the student must choose 3 study courses):</i>	18				
	<i>Study field courses*</i>					
	Enhancing plant genetic diversity by biotechnological methods	6	60	100	Examination	Prof. Dr. Natalija Burbulis Prof. Dr. Aušra Blinstrubienė
	Novel foods of plant origin	6	60	100	Examination	Prof. Dr. Elvyra Jarienė
	Food allergens	6	60	100	Examination	Prof. Dr. Elvyra Jarienė
	Educational public health promotion	6	60	100	Examination	Assoc. Prof. Dr. Jurgita Kulaitienė
	<i>Study courses of another study field(-s) *</i>					
	Biodegradation of organic compounds	6	60	100	Examination	Prof. Dr. Valdas Paulauskas
	Bioethics	6	60	100	Examination	Prof. Dr. Virginija Dulskienė
	Totally in the semester:	30				
IV semester	Final thesis	30	30	770	Final thesis defence	
	Totally in the semester:	30				
	Totally in the programme:	120				

	Study courses	ECTS	Contact work hours	Independent work hours	The form of assessment	Teacher
	Totally for the study field courses:	91				
	Totally for the study courses of another study field:	11				
	Totally for electives of the study field and/ or other fields:	18				

Table 4. The study plan of the second-cycle study programme *Quality and Safety of Plant Food Raw Materials* (part-time study form)

	Study courses	ECTS	Contact work hours	Independent work hours	The form of assessment	Teacher
<i>I semester</i>	<i>Study field courses</i>					
	Chemistry of plant food raw materials	6	60	100	Examination	Assoc. Prof. Dr. Aurelija Paulauskienė
	Quality and safety management of plant food raw materials	7	75	112	Examination	Assoc. Prof. Dr. Jurgita Kulaitienė
	Research planning and analysis	5	45	88.35	Examination	Prof. Dr. Aušra Marcinkevičienė
	Totally in the semester:	18				
<i>II semester</i>	<i>Study field courses</i>					
	Chemical safety of plant raw materials	6	60	100	Examination	Prof. Dr. Elvyra Jarienė
	Methods for assessing the quality of plant food raw materials	6	60	100	Examination	Assoc. Prof. Dr. Živilė Tarasevičienė
	Research work I	6	10	150	Research report	Supervisor of the Master thesis
	Totally in the semester:	18				
<i>III semester</i>	<i>Study field courses</i>					
	Quality of agroecosystem and crop production	7	75	111	Examination	Prof. Habil. Dr. Rimantas Velička Prof. Habil. Dr. Zenonas Dabkevičius Assoc. Prof. Dr. Rimantas Vaisvalavičius Assoc. Prof. Dr. Rūta Dromantienė
	Microbiological contamination of plant food raw materials and toxins	6	60	100	Examination	Assoc. Prof. Dr. Aurimas Krasauskas
	<i>Elective courses of the study field or other fields* (the student must choose 1 study course)</i>	6	60	100	Examination	
	Totally in the semester:	19				

	Study courses	ECTS	Contact work hours	Independent work hours	The form of assessment	Teacher
IV semester	<i>Study courses of another study field(-s)</i>					
	Human ecology and environmental epidemiology	5	45	88.35	Examination	Prof. Dr. Virginija Dulskienė
	Career management modelling	6	60	100	Examination	Assoc. Prof. Dr. Asta Raupelienė
	<i>Elective courses of the study field or other fields* (the student must choose 1 study course)</i>	6	60	100	Examination	
	Totally in the semester:	17				
V semester	<i>Study field courses</i>					
	Consumer law and education	6	60	100	Examination	Assoc. Prof. Dr. Jurgita Kulaitienė
	Research work II	6	10	150	Research report	Supervisor of the Master thesis
	<i>Elective courses of the study field or other fields* (the student must choose 1 study course)</i>	6	60	100	Examination	
	Totally in the semester:	18				
VI semester	Final thesis	30	30	770	Final thesis defence	
	Totally in the semester:	30				
	<i>Elective courses of the study field or other fields*:</i>					
	<i>Study field courses*</i>					
	Enhancing plant genetic diversity by biotechnological methods	6	60	100	Examination	Prof. Dr. Natalija Burbulis Prof. Dr. Aušra Blinstrubienė
	Educational public health promotion	6	60	100	Examination	Assoc. Prof. Dr. Jurgita Kulaitienė
	Novel foods of plant origin	6	60	100	Examination	Prof. Dr. Elvyra Jarienė

	Study courses	ECTS	Contact work hours	Independent work hours	The form of assessment	Teacher
	Food allergens	6	60	100	Examination	Prof. Dr. Elvyra Jarienė
	<i>Study courses of another study field(-s)*</i>					
	Biodegradation of organic compounds	6	60	100	Examination	Prof. Dr. Valdas Paulauskas
	Bioethics	6	60	100	Examination	Prof. Dr. Virginija Dulskienė
	Totally in the programme:	120				
	Totally for the study field courses:	91				
	Totally for the study courses of another study field:	11				
	Totally for electives of the study field and/ or other fields:	18				

Table 1. Coherence of the aims and the intended learning outcomes of the Food field study programme with the programme courses

The aim of the first-cycle study programme <i>Food Quality and Safety</i>		
The aim is to prepare specialists in the field of food studies who are able to solve the problems of food raw materials and production as well as process management, quality control, increase in the competitiveness of food industry, by implementing the principles of sustainable production, protecting the environment and human health.		
Description of learning outcomes of each study cycle	Intended learning outcomes of the Programme	Study courses of the Programme
Knowledge and its application	Student is able to explain the impact of primary production and food handling processes on the quality and safety of food raw materials and products, the environment, and the human.	General ecology and environmental protection Plant food raw materials Animal food raw materials Agricultural systems Sustainable food systems Packaging materials and technologies Inorganic and analytical chemistry Physical and colloid chemistry General microbiology Sensory analysis of food products Instrumental analysis of food products Food safety and quality management systems Professional language Final thesis
	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.	Inorganic and analytical chemistry Physical and colloid chemistry Physiology of human nutrition Plant physiology Food chemistry Functional food Biotechnology of food raw materials Food microbiology and toxicology Biologically active nutrients Coursework (Innovative product development)
	Student is able to describe the processes of production, processing, spoilage and decomposition of food raw materials and products, to select appropriate methods of their control as well as to explain the impact of these	Physics Mathematics and computer science Information technology in the food sector Plant food raw materials Animal food raw materials Storage of food raw materials Engineering of processing and storage of food raw materials and products

	processes on the quality and safety of raw materials and products.	Manufacture of food products Engineering of processing and storage of food raw materials and products Production of food Food quality assessment Gastronomic science Professional internship Food safety and quality management systems Research methodology of raw materials and food
Research skills	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 the food management chain.	Physics Mathematics and computer science Coursework (Innovative product development) Food safety and quality management systems Research methodology of raw materials and food Food chemistry Instrumental analysis of food products Sensory analysis of food products Food microbiology and toxicology Functional food Final thesis
Special abilities	Student is able to analyse and to critically evaluate the factors influencing raw material and food management processes, ensuring sustainable production, respecting human health and the environment.	Agricultural systems General microbiology Inorganic and analytical chemistry Physical and colloid chemistry Physics General ecology and environmental protection Plant physiology Physiology of human nutrition Vegetable food raw materials Animal food raw materials Sustainable food systems Production of food Gastronomic science Food microbiology and toxicology Storage of food raw materials Packaging materials and technologies Biotechnology of food raw materials Professional language Final thesis
	Student is able to select appropriate raw materials, equipment, tools, processes and methods for handling food raw materials and products.	Physics Mathematics and computer science Plant food raw materials Animal food raw materials Sustainable food systems Gastronomic science

		Professional internship Food chemistry Inorganic and analytical chemistry Physical and colloid chemistry Engineering of processing and storage of food raw materials and products Food quality assessment Food safety and quality management systems Biologically active nutrients Storage of food raw materials Coursework (Innovative product development) Biotechnology of food raw materials Packaging materials and technologies Information technology in the food sector Final thesis
	Student is able to apply quality management systems to control and to evaluate the quality and safety of food raw materials and products at all stages of primary production and food handling.	Food safety and quality management systems Food microbiology and toxicology Information technology in the food sector Production of food Engineering of processing and storage of food raw materials and products Instrumental analysis of food products Sensory analysis of food products Food quality assessment Coursework (Innovative product development) Professional internship
Social abilities	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.	Plant food raw materials Animal food raw materials General ecology and environmental protection Sustainable food systems Food chemistry Sensory analysis of food products Instrumental analysis of food products Food microbiology and toxicology Biologically active nutrients Physiology of human nutrition Food quality assessment Professional language
	Student is able to make decisions independently and/or in a team, to critically evaluate and to apply the knowledge in practice, making decisions that ensure food quality and safety.	Functional food Research methodology Production of food Gastronomic science Storage of food raw materials Engineering of processing and storage of food raw materials and products

		<p>Coursework (Innovative product development)</p> <p>Food safety and quality management systems</p> <p>Professional internship</p> <p>Biotechnology of food raw materials</p> <p>Packaging materials and technologies</p> <p>Final thesis</p>
Personal abilities	<p>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.</p>	All study courses

Table 2. Coherence of the aims and intended learning outcomes of the Food field study programme with the programme courses

The aim of the second-cycle study programme <i>Quality and Safety of Plant Food Raw Materials</i>		
The aim is to prepare highly qualified specialists in the field of food studies who are able, by using interdisciplinary knowledge, to independently manage sustainable food production systems, to implement innovations and to analyse their impact on the environment and people, to solve problems related to the provision of high-quality and healthy food, as well as to plan and to implement research, and to put the knowledge gained into practice.		
Description of learning outcomes of each study cycle	Intended learning outcomes of the Programme	Study courses of the Programme
Knowledge and its application	Student is able to identify the quality and safety problems of plant food raw materials that reflect the needs of society as well as to explain their solutions based on scientific principles.	Career management modelling Consumer law and education Bioethics Educational public health promotion Quality and safety management of plant food raw materials Research planning and analysis Human ecology and environmental epidemiology
	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.	Agroecosystems and quality of crop production Chemistry of plant food raw materials Methods of quality assessment of plant food raw materials Biodegradation of organic compounds Enhancing plant genetic diversity by biotechnological methods
	Student is able to apply the latest scientific knowledge in the development of innovative raw materials and products, applying the principles of sustainable production as well as assessing the impact of their production process on society and the environment.	Chemical safety of plant raw materials Microbiological contamination of plant food raw materials and toxins Food allergens Novel foods of plant origin
Research skills	Student is able to formulate a scientific hypothesis defining the quality of plant food raw materials, to select innovative quality assessment methods, to independently plan research on raw material quality assessment.	Research planning and analysis Research work I Research work II Methods for assessing the quality of plant food raw materials Chemistry of plant food raw materials

	Student is able to independently and, in a group, to carry out planned research, to analyse research results, to evaluate and to interpret them, to prepare scientific conclusions of the evaluation of plant food raw materials and recommendations for the improvement of food raw materials and products management process.	Microbiological contamination of plant food raw materials and toxins Final thesis
Special abilities	Student is able to assess the quality and safety issues of plant food raw materials and products in the handling, storage and processing of raw materials related to the impact on the environment, human health, and public welfare.	Chemical safety of plant raw materials Chemistry of plant food raw materials Human ecology and environmental epidemiology Consumer law and education Quality and safety management of plant food raw materials Educational public health promotion
	Student is able to identify and to apply food quality management systems, as well as to comply with environmental and ethical requirements in primary production and food management chain.	Quality and safety management of plant food raw materials Methods for assessing the quality of plant food raw materials Consumer law and education Bioethics Agroecosystems and quality of crop production
	Student is able to identify the factors necessary for the optimization of production processes of innovative food raw materials and products, to make complex process improvement decisions and to assess their impact on the society and the environment.	Quality and safety management of plant food raw materials Microbiological contamination of plant food raw materials and toxins Food allergens Enhancing plant genetic diversity by biotechnological methods Novel foods of plant origin Chemical safety of plant raw materials Biodegradation of organic compounds Career management modelling
Social abilities	Student is able to present information in a clear, reasoned manner and to communicate with specialists in various fields of science; is able to organize work independently and/or in a team, to be a team leader, to responsibly apply interdisciplinary knowledge in the food sector as well as to	Chemical safety of plant raw materials Quality and safety management of plant food raw materials Career management modelling Consumer law and education Bioethics Food allergens Novel foods of plant origin

	critically evaluate decisions and to select the best one.	Educational public health promotion Final thesis
Personal abilities	Student is able to continuously deepen the knowledge of food studies and other fields, to improve his/hers ability to solve relevant professional tasks related to the processes of primary production and food management, and to plan his/hers personal career.	Chemical safety of plant raw materials Quality and safety management of plant food raw materials Career management modelling Consumer law and education Bioethics Food allergens Novel foods of plant origin Educational public health promotion Final thesis

Table 3. Coherence of the learning outcomes of the Food field study programme with the learning outcomes of the programme courses, study methods and assessment methods

Learning outcomes of the study programme <i>Food Quality and Safety</i>	Learning outcomes of the study field course <i>Instrumental analysis of food products</i>	Study methods of the study field course <i>Instrumental analysis of food products</i>	Assessment methods of the study field course <i>Instrumental analysis of food products</i>
Student is able to explain the impact of primary production and food handling processes on the quality and safety of food raw materials and products, the environment, and the human.	1. Student understands the impact of the interactions of food raw materials on their quality and safety and on human health.	Interpretation, presentation of questions and answers, literature analysis, case studies.	Written survey, case study evaluation.
	2. Student models the desired properties of food raw materials using instrumental methods.	Interpretation, presentation of questions and answers, literature analysis, case studies.	Written survey, case study evaluation.
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 the food management chain.	3. Student evaluates the problem, plans the experiment, applies the appropriate analytical method to solve the problems of ensuring the quality and safety of food raw materials, evaluates the obtained results, clearly formulates conclusions.	Interpretation, question and answer presentation, case analysis, testing, preparation, and presentation of reports.	Written survey, case analysis evaluation, trial monitoring, report delivery monitoring.
Student is able to apply quality management systems to control and to evaluate the quality and safety of food raw materials and products at all stages of primary production and food handling.	4. Student explains the importance of applying instrumental and sensory research methods in solving practical problems.	Interpretation, case analysis, discussion, testing, preparation, and presentation of reports. Completion of a group task.	Written survey, evaluation of case studies, discussion of discussions and trials, monitoring of report presentation.

Table 4. Coherence of the learning outcomes of the Food field study programme with the learning outcomes of the programme courses, study methods and assessment methods

Learning outcomes of the study programme <i>Quality and Safety of Plant Food Raw Materials</i>	Learning outcomes of the study field course <i>Chemical safety of plant raw materials</i>	Study methods of the study field course <i>Chemical safety of plant raw materials</i>	Assessment methods of the study field course <i>Chemical safety of plant raw materials</i>
Student is able to apply the latest scientific knowledge in the development of innovative raw materials and products, applying the principles of sustainable production as well as assessing the impact of their production process on society and the environment.	1. Student applies the latest scientific knowledge describing the importance of plant production quality and pollution risk assessment and prevention.	Narration, interpretation, case studies, discussion.	Evaluation of case studies, monitoring of debates.
	2. Student defines state-of-the-art information in research related to changing environmental conditions and factors influencing product quality.	Case study, analysis of problematic examples and questions, video review.	Case study evaluation, evaluation of problem solutions.
	3. Student identifies some chemical contaminants in the raw material of plant origin and formulate correct conclusions and present the results of the study properly.	Interpretation, illustration, discussions, performance of practical tasks.	Discussion of discussions, evaluation of the analysis of the performed practical tasks, written survey.
Student is able to assess the quality and safety issues of plant food raw materials and products in the handling, storage and processing of raw materials related to the impact on the environment, human health, and public welfare.	4. Student assess and analyses the influence of environmental and risk factors on the quality of plant raw materials and products.	Interpretation, discussion.	Observation of discussions.
	5. Student evaluates the results of chemical safety research of plant food raw materials by integrating interdisciplinary knowledge.	Narration, interpretation, case study evaluation, illustration, practical tasks.	Case study evaluation, evaluation of the analysis of completed practical tasks, written survey.
Student is able to identify the factors necessary for the optimization of production processes of innovative food raw materials and products, to make complex process improvement decisions and to assess their impact on the society and the environment.	6. Student identifies the factors necessary for the optimization of the production process of innovative food raw materials and products, to make complex decisions and assess their consequences for society and the environment.	Narration, interpretation, illustration, analysis of scientific sources, preparation and presentation of a report, video review.	Evaluation of a report, testing.

List of the Final Theses
First-cycle study programme *Food quality and safety*

No.	The topic of the final thesis	The supervisor	The evaluation
2018			
1.	Effect of Drying Temperature on The Colour and Nutritional Value in Rowan (<i>Sorbus aucuparia</i> L.) Fruits	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
2.	Relationship between Nutrition, Physical Activity and Health of 12-13-Year-Olds	Assoc. Prof. Dr. Virginija Dulskienė	8 (good)
3.	Chemical Content and It's Changes During Processing of <i>Lamiaceae</i> Family Plants	Assoc. Prof. Dr. Živilė Tarasevičienė	9 (very good)
4.	The Nutrition of Pre-school Child and Recommendations for Improvement of the Ration in Educational Institutions	Lect. Vitalija Jurevičienė	9 (very good)
5.	The Quality of Grapes Dessert Varieties Grown in Lithuania	Assoc. Prof. Dr. Asta Ramaškevičienė	7 (highly satisfactory)
6.	Comparison of Quality and Culinary Properties of the Boiled Potato Tubers of Different Genotype	Lect. Dr. Nijolė Vaitkevičienė	9 (very good)
7.	Research of Dehydration Process of Stored Carrots	Lect. Dr. Aušra Čiplienė	7 (highly satisfactory)
8.	The Influence of Biological Product on Rape Yield and Seeds Quality	Assoc. Prof. Dr. Asta Ramaškevičienė	9 (very good)
9.	The Chemical Composition of White Mulberry (<i>Morus alba</i> L.) Leaves	Prof. Dr. Elvyra Jarienė	8 (good)
10.	Evaluation of the Quality of Raw Cow Milk in Private Milk Farm	Assoc. Prof. Dr. Sabina Mikulionienė	8 (good)
11.	The Possibilities to Use Different Cultivars of Pumpkin Fruits for Jam Production	Lect. Dr. Judita Černiauskienė	9 (very good)
12.	The Quality of Pork Meat Sold in Supermarkets	Assoc. Prof. Dr. Sabina Mikulionienė	10 (excellent)
14.	The Influence of Processing on the Nutritional Value and Quality of Rosehip	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
15.	Quality Analysis of White Cabbage of Different Varieties	Lect. Dr. Judita Černiauskienė	9 (very good)
16.	The Phenols and Volatile Compounds in Red Italian Wine	Assoc. Prof. Dr. Sabina Mikulionienė	10 (excellent)
17.	Quality Changes of Chokeberry During Storage	Assoc. Prof. Dr. Živilė Tarasevičienė	9 (very good)
18.	Microbiological Contamination of Bee Pollen	Assoc. Prof. Dr. Jolanta Sinkevičienė	9 (very good)
19.	The Effect of Drying and Freezing on Parsley Quality	Assoc. Prof. Dr. Jurgita Kulaitienė	10 (excellent)
20.	Research of Fresh Fruits Sold in Markets Contamination with Micromycetes	Assoc. Prof. Dr. Aurimas Krasauskas	9 (very good)
21.	Microbiological Research of Grounded Beef	Assoc. Prof. Dr. Aurimas Krasauskas	9 (very good)
22.	Research of the Quality of Wolfberry (<i>Lycium Barbarum</i>)	Prof. Dr. Honorata Danilčenko	7 (highly satisfactory)

No.	The topic of the final thesis	The supervisor	The evaluation
23.	Quality Assessment of Apples for Sale in the Local Market	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
24.	Comparison of the Quality of Spice Plants	Prof. Dr. Honorata Danilčenko	7 (highly satisfactory)
25.	The Quality of Berries and their Use for the Production of Oatmeal Bars	Assoc. Prof. Dr. Jurgita Kulaitienė	8 (good)
26.	The Influence of Berries Pomace on Quality of Cookies	Assoc. Prof. Dr. Živilė Tarasevičienė	9 (very good)
27.	Research of the Quality of Pumpkin (<i>Cucurbita Maxima</i> D.) Fruits	Prof. Dr. Honorata Danilčenko	10 (excellent)
28.	Comparison of Yield and Quality of Potato Tubers with Red Flesh	Dr. Nijolė Vaitkevičienė	9 (very good)
29.	Evaluation of the Quality of Leguminous Sprouted Seeds for Food	Prof. Dr. Honorata Danilčenko	8 (good)
30.	Comparison of Quality of Spice Plants	Prof. Dr. Honorata Danilčenko	7 (highly satisfactory)
31.	The Influence of Aromatic Plants Addition on Quality of Cookies	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
32.	Quality of Sunflower Seed Oil	Assoc. Prof. Dr. Milda Gumbytė	7 (highly satisfactory)
33.	The Quality of Different Colour Tomatoes	Assoc. Prof. Dr. Aurelija Paulauskienė	8 (good)
34.	Comparison of the Quality of Seeds Sprouted for Food of <i>Family Brassicaceae</i>	Prof. Dr. Honorata Danilčenko	9 (very good)
35.	Quality Evaluation of Potato Tubers with Coloured Flesh	Prof. Dr. Elvyra Jarienė	10 (excellent)
36.	Impact of Biological Fertilizers on the Quality and Quantity of Baby Leaf Lettuce	Assoc. Prof. Dr. Ernestas Zaleckas	9 (very good)
37.	The Studies of the Fruit Quality of Edible Tomato (<i>Lycopersicon esculentum</i> Mill.)	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
38.	The Effect of Nitrogen Fixing Bacteria on Buckwheat Growth	Assoc. Prof. Dr. Jolanta Sinkevičienė, Research Consultant Renata Žvirdauskienė	8 (good)
39.	Quality of Rapeseed Oil	Assoc. Prof. Dr. Milda Gumbytė	7 (highly satisfactory)
40.	Comparison of Yield and Quality of Potato Tubers with Purple Flesh	Lect. Dr. Nijolė Vaitkevičienė	9 (very good)
41.	Changes in Winter Cultivars Apple Fruit Quality During Storage	Assoc. Prof. Dr. Aurelija Paulauskienė	8 (good)
42.	The Compliance of Quality of Organic Vegetables in the Local Market with Consumer Expectations	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
43.	Research of Biological Activity of Fibre Hemp Seeds	Assoc. Prof. Dr. Egidijus Zvicevičius	8 (good)
44.	Research of the Quality of Different Seeds Sprouted for Food	Prof. Dr. Honorata Danilčenko	10 (excellent)
45.	The Nutritional Value and Quality of the Yellow Flowers	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
46.	The Influence of Nano Fertilizers on the Quality of Grapes	Assoc. Prof. Dr. Asta Ramaškevičienė	8 (good)
47.	The Influence of <i>Mentha</i> Plants Addition on Chemical Content and Physical Properties of Cookies	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
48.	The Influence of <i>Borago officinalis</i> L. on the Quality of Pasta	Assoc. Prof. Dr. Živilė Tarasevičienė	9 (very good)
49.	Different Berry Additives Used for Apple Wines Production	Lect. Dr. Judita Černiauskienė	10 (excellent)

No.	The topic of the final thesis	The supervisor	The evaluation
50.	Quality Evaluation of Processed Products of Sea Buckthorn (<i>Hippophae rhamnoides</i>) Berries	Prof. Dr. Elvyra Jarienė	8 (good)
51.	Evaluation of the Quality of Amaranth (<i>Amaranthus</i> L.) Seeds	Assoc. Prof. Dr. Aurelija Paulauskienė	8 (good)
52.	Microbiological Research of Grounded Chicken	Assoc. Prof. Dr. Aurimas Krasauskas	10 (excellent)
53.	Quality Evaluation of Mushrooms (<i>Agaricus</i> L.) Sold in Lithuanian Supermarkets	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
54.	Quality Evaluation of Dried Apricots	Prof. Dr. Elvyra Jarienė	10 (excellent)
55.	Relationship between Nutrition, Negative Emotions and Health of 14-15-Year-Old Teenagers	Assoc. Prof. Dr. Virginija Dulskienė	10 (excellent)
56.	The Quality Flowers of Jerusalem Artichoke (<i>Helianthus tuberosus</i> L.)	Prof. Dr. Elvyra Jarienė	10 (excellent)
57.	Effect of Bio-fertilizers on the Quality and Productivity of Baby Leaf Lettuce	Assoc. Prof. Dr. Ernestas Zaleckas	9 (very good)
58.	Research of Nuts Contamination with Micromycetes	Assoc. Prof. Dr. Aurimas Krasauskas	9 (very good)
59.	Evaluation of the Quality of Common Sea Buckthorn (<i>Hippophae rhamnoides</i> L.) Berries Processing Products	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
60.	Chemical Composition of Forest Berries and its Use for the Production of Gel Candies	Assoc. Prof. Dr. Jurgita Kulaitienė	10 (excellent)
61.	Microbiological Research of Grounded Pork	Assoc. Prof. Dr. Aurimas Krasauskas	8 (good)
62.	Comparison of the Quality of Various Types of Pumpkin Fruits	Prof. Honorata Danilčenko	10 (excellent)
63.	Analysis of Different Apple Cultivars Used for Wine Production	Lect. Dr. Judita Černiauskienė	9 (very good)
64.	The Quality Evaluation of Tubers of Jerusalem Artichoke (<i>Helianthus tuberosus</i> L.) Grown in Different Soils	Prof. Dr. Elvyra Jarienė	9 (very good)
65.	The Nutritional Value of Berries and their Use for the Production of Fruit Strips	Assoc. Prof. Dr. Jurgita Kulaitienė	10 (excellent)
66.	Relationship between Nutrition, Physical Activity and Health of 14-15-Year-Old Teenagers	Assoc. Prof. Dr. Virginija Dulskienė	10 (excellent)
67.	The Quality of Cereal Grains	Prof. Dr. Elvyra Jarienė	8 (good)
68.	Evaluation of the Carrot Quality During Storage	Assoc. Prof. Dr. Aurelija Paulauskienė	10 (excellent)
69.	The Influence of Different Fertilizing on Winter Wheat Yield and Grain Quality	Assoc. Prof. Dr. Asta Ramaškevičienė	6 (satisfactory)
70.	Changes in Apple Fruit Quality During Storage	Assoc. Prof. Dr. Aurelija Paulauskienė	10 (excellent)
71.	Quality Evaluation of Berries of Sea Buckthorn	Prof. Dr. Elvyra Jarienė	9 (very good)
2019			
1.	Milk Quality Changes During Grazing and Barn Periods	Assoc. Prof. Dr. Judita Černiauskienė	9 (very good)
2.	Quality Evaluation of Extruded Products	Prof. Dr. Elvyra Jarienė	9 (very good)
3.	Quality Evaluation of Different Varieties of Lettuce	Assoc. Prof. Dr. Audronė Žebrauskienė	9 (very good)

No.	The topic of the final thesis	The supervisor	The evaluation
4.	The Effect of Conventional and Organic Farming Systems on Potato Tuber Yield and Quality	Dr. Nijolė Vaitkevičienė	9 (very good)
5.	Quality Evaluation of Groats Realized in Supermarkets	Prof. Dr. Elvyra Jarienė	9 (very good)
6.	Bread Quality Investigation	Assoc. Prof. Dr. Aurelija Paulauskienė	10 (excellent)
7.	Study of Buckwheat Groats Quality	Assoc. Prof. Dr. Judita Černiauskienė	8 (good)
8.	Effect of Plant Extracts on the of Quality of Germinated Bean Seeds	Prof. Dr. Honorata Danilčenko	7 (highly satisfactory)
9.	Quality Changes of Blueberries During Storage	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
10.	Improving the Quality of Sprouted Beans and Lentil Seeds	Prof. Dr. Honorata Danilčenko	9 (very good))
11.	Quality Evaluation of <i>Freeze-Dried Berries</i>	Prof. Dr. Elvyra Jarienė	8 (good)
12.	The Comparison of Different Varieties of Sweet Peppers (<i>Capsicum annuum</i> L.)	Assoc. Prof. Dr. Audronė Žebrauskienė	8 (good)
13.	Investigation of the Quality of Organic and Inorganic Bananas Dried at Different Temperatures	Assoc. Prof. Dr. Aurelija Paulauskienė	8 (good)
14.	Quality Evaluation of Fruits-Vegetables Cocktails	Prof. Dr. Elvyra Jarienė	8 (good)
15.	Investigation of the Quality of Organic and Inorganic Bananas and their Purees	Assoc. Prof. Dr. Aurelija Paulauskienė	8 (good)
16.	Investigation of the Quality of Peanut Butter	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
17.	Investigation of the Chemical Composition of <i>kolomikta actinidia</i> Berries	Assoc. Prof. Dr. Aurelija Paulauskienė	7 (highly satisfactory)
18.	Investigation the Quality of Tomato Juice in Lithuanian Market	Assoc. Prof. Dr. Jurgita Kulaitienė	7 (highly satisfactory)
19.	Investigation of the Quality of Different Cultivars of Tomatoes and their Sauces	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
20.	Possibilities of Using Pumpkin for Biscuit Production	Assoc. Prof. Dr. Jurgita Kulaitienė	10 (excellent)
22.	The Effect of Different Farming Systems on the Yield and Quality of Potato Tuber of cv. 'Red Emmalie'	Lect. Dr. Nijolė Vaitkevičienė	9 (very good)
23.	Quality Evaluation of Curd Cheeses with Additives	Assoc. Prof. Dr. Judita Černiauskienė	7 (highly satisfactory)
24.	Quality Assessment of Carrot Puree for Baby Food	Prof. Dr. Elvyra Jarienė	8 (good)
25.	Quality Evaluation of Yogurt with Different Additives	Assoc. Prof. Dr. Judita Černiauskienė	8 (good)
26.	Qualitative and Quantitative Composition of Phenolic Compounds in Plants of the Genus <i>Mentha</i>	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
27.	Enrichment of Confectionery with Vegetables and Berries Additions	Assoc. Prof. Dr. Aurelija Paulauskienė	8 (good)
28.	Investigation the Quality of Orange Juice in Lithuanian Market	Assoc. Prof. Dr. Jurgita Kulaitienė	8 (good)
29.	Relationship between Nutrition and Health of 14-Year-Old Teenagers	Prof. Dr. Virginija Dulskienė	9 (very good)
30.	Investigation of the Chemical Composition of Perennial Plants	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
31.	Quality Changes of Dill During Storage	Assoc. Prof. Dr. Živilė Tarasevičienė	7 (highly satisfactory)
32.	Changes in the Chemical Composition of Lemons During Storage	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
33.	The use of Fruit in the Production of Natural Sweets and their Quality Analysis	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)

No.	The topic of the final thesis	The supervisor	The evaluation
34.	Nutrition Value and Quality of Edible Blue Flowers	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
35.	Selection of Raw Materials without Gluten-Free for Confectionery Products and their Quality Analysis	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
36.	Investigation of the Quality of Edible Beet Roots of Different Genotypes	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
37.	Influence of Storage Conditions on the Quality of Apples Grown in Lithuania	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
38.	Quality Investigation of Sea Buckthorn (<i>Hippophae rhamnoides</i> L.) Processing Products	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
39.	The Comparison of Yield and Grain Quality of Different Winter Wheat Varieties	Assoc. Prof. Dr. Ilona Vagusevičienė	10 (excellent)
40.	Activation of the Synthesis of Biologically Active Compounds in Germinated Legumes Seeds	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
41.	Quality of Apples Cheese from Different Varieties with Additives	Assoc. Prof. Dr. Judita Černiauskienė	9 (very good)
42.	Activation of the Synthesis of Biologically Active Compounds by Watering Solutions in Germinating Radish Seeds	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
43.	Evaluation of Feta-Type Cheese Quality	Assoc. Prof. Dr. Judita Černiauskienė	8 (good)
44.	The Influence of Nutrition and Physical Activity on the Health of 12-15-Year-Old Children	Prof. Dr. Virginija Dulskienė	9 (very good)
45.	The Influence of Feed on Milk Quality	Assoc. Prof. Dr. Sabina Mikulionienė	8 (good)
46.	Evaluation of Fermented Tea (Kombucha) Quality	Assoc. Prof. Dr. Aurimas Krasauskas	10 (excellent)
47.	The Influence of Storage on the Time Quality of Asparagus Shoots	Assoc. Prof. Dr. Audronė Žebrauskienė	9 (very good)
48.	The Influence of Food Plant Raw Supplements on the Quality of Chickpea Biscuits	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
49.	Relationship between Nutrition, Physical Activity and Negative Emotions and Health of 15-17-Year-Old Teenagers	Prof. Dr. Virginija Dulskienė	10 (excellent)
50.	Quality of Rosehips and their Processing Products	Assoc. Prof. Dr. Jurgita Kulaitienė	8 (good)
51.	Evaluation of Pork Quality During Storage	Assoc. Prof. Dr. Judita Černiauskienė	8 (good)
52.	Evaluation of Germinated Cannabis Seeds Contamination with Micromycetes and Ways to Reduce it	Assoc. Prof. Dr. Aurimas Krasauskas	8 (good)
53.	The Quality of Minced Pork in Grocery Stores	Assoc. Prof. Dr. Sabina Mikulionienė	7 (highly satisfactory)
54.	The Effect of Drying on the Quality of Actinidia Berries	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
2020			
1.	Relationship between Malnutrition, Insufficient Physical Activity and Health of 14-15-Year-Old Teenagers	Prof. Dr. Virginija Dulskienė	10 (excellent)
2.	Chemical Composition Changes in the Raspberry Jam During Storage	Assoc. Prof. Dr. Judita Černiauskienė	8 (good)

No.	The topic of the final thesis	The supervisor	The evaluation
3.	The Influence of Different Sprouting Time on Food Sprouted Lentil Seeds Quality	Assist. Dalė Šumskienė	9 (very good)
4.	Quality Changes of Frozen Beef During Storage	Assoc. Prof. Dr. Judita Černiauskienė	8 (good)
5.	Evaluation of the Quality of Curd with Different Herbs	Assoc. Prof. Dr. Judita Černiauskienė	8 (good)
6.	The Influence of Nano Fertilizers on the Quality of Currant Berries	Assoc. Prof. Dr. Asta Ramaškevičienė	7 (highly satisfactory)
7.	Quality of Dried Beetroot Powder	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
8.	Microbiological Research of Grounded Fresh Pork Quality	Assoc. Prof. Dr. Aurimas Krasauskas	9 (very good)
9.	The Variation of Flavonoid's and Tannin's Content in the Leaves of Fireweed (<i>Chamerion angustifolium</i> (L) Holub) During Solid - Phase Fermentation	Prof. Dr. Elvyra Jarienė	10 (excellent)
10.	Chemical Composition Changes in the Sea Buckthorn Berry Puree During Storage	Assoc. Prof. Dr. Judita Černiauskienė	8 (good)
11.	Evaluation of Maize Grain Mycological Condition	Assoc. Prof. Dr., Aurimas Krasauskas	10 (excellent)
12.	Microbiological Research of Grounded Fresh Chicken Quality	Assoc. Prof. Dr. Aurimas Krasauskas	9 (very good)
13.	Quality of <i>Carum carvi</i> L. Fruits	Assoc. Prof. Dr. Živilė Tarasevičienė	9 (very good)
14.	The Quality Investigation of Gluten-Free Cookies	Assoc. Prof. Dr. Jurgita Kulaitienė	8 (good)
15.	Investigation of the Quality of Curd Cheese from Different Manufacturers	Assoc. Prof. Dr. Jurgita Kulaitienė	7 (highly satisfactory)
16.	Effect of Drying Temperature on the Colour and Nutritional Value of Raspberry Berries	Assoc. Prof. Dr. Jurgita Kulaitienė	8 (good)
17.	Quality Investigation of Different Kinds of Honey	Prof. Dr. Elvyra Jarienė	9 (very good)
18.	The Influence of Blackberry Pomace on the Quality of Beef Patties	Assoc. Prof. Dr. Živilė Tarasevičienė	9 (very good)
19.	Evaluation of the Quality of Different Flours and of their Pasta	Assoc. Prof. Dr. Judita Černiauskienė	8 (good)
20.	Quality Changes of Different Types of Pumpkin Fruit During Storage	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
22.	The Influence of Storage on the Carrot Quality of Different Cultivars	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
23.	Chemical Composition of Different Varieties of Mints	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
24.	The Influence of Field Horsetail Extract on Protein Content Changes in Food Sprouted Leguminous Seeds	Assist. Dalė Šumskienė	8 (good)
25.	Investigation of Cowslip (<i>Primula veris</i> L.) Chemical Composition	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
26.	The Influence of Nettle Extract on Micronutrients Content Changes in Food Sprouted Leguminous Seeds	Assist. Dalė Šumskienė	7 (highly satisfactory)
27.	The Quality Changes of Honey During Storage	Prof. Dr. Elvyra Jarienė	9 (very good)
28.	Pasta Enrichment with Berries Pomace	Assoc. Prof. Dr. Živilė Tarasevičienė	9 (very good)
29.	The Quality of Purees for Children's Nutrition	Prof. Dr. Elvyra Jarienė	8 (good)

No.	The topic of the final thesis	The supervisor	The evaluation
30.	The Variation of Phenolic Acids Content in the Leaves of Fireweed (<i>Chamerion angustifolium</i> (L.) Holub) During Solid-Phase Fermentation	Prof. Dr. Elvyra Jarienė	9 (very good)
31.	Guelder-Rose Berry Syrup Production and Evaluation	Assoc. Prof. Dr. Jurgita Kulaitienė	8 (good)
32.	Quality of Organic and Non-Organic Cereal Flour Available on the Local Market	Assoc. Prof. Dr. Živilė Tarasevičienė	9 (very good)
33.	The Quality Investigation of Jerusalem Artichoke (<i>Helianthus tuberosus</i> L.) Flowers	Lect. Dr. Dovilė Levickienė	9 (very good)
34.	The Quality of Different Varieties Pumpkin Fruits and their Sweetmeats	Assoc. Prof. Dr. Judita Černiauskienė	7 (highly satisfactory)
35.	Preparation of Plums for Drying and Evaluation of Their Quality	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
36.	The Impact of Different Cultivation Technologies on Quality of Potato Tubers with Purple Flesh	Lect. Dr. Nijolė Vaitkevičienė	9 (very good)
37.	Changes in Lemon Fruit Quality During Storage	Assoc. Prof. Dr. Aurelija Paulauskienė	10 (excellent)
38.	The Influence of Picking Time on the Chemical Composition of Stinging Nettle (<i>Urtica dioica</i> L.)	Assoc. Prof. Dr. Aurelija Paulauskienė	10 (excellent)
39.	The Investigation of Quality of Spinach and Rocket Leaves Sold in Lithuanian Market	Assoc. Prof. Dr. Jurgita Kulaitienė	8 (good)
40.	The Influence of Honey Plants on the Honey Quality	Prof. Dr. Elvyra Jarienė	10 (excellent)
41.	The Investigation of Quality of Potato Chips in the Lithuanian Market	Lect. Dr. Nijolė Vaitkevičienė	8 (good)
42.	The Influence of Different Biological Preparations on Grape Quality	Assoc. Prof. Dr. Asta Ramaškevičienė	8 (good)
43.	The Influence of the Freezing Process on the Chemical Composition of Different Cultivars of Strawberries	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
44.	The Influence of Different Growing Media on Greenhouse Tomatoes	Lect. Dr. Rita Čepulienė	9 (very good)
45.	The Quality Investigation of Tauragė City Drinking Water	Lect. Dr. Dovilė Levickienė	7 (highly satisfactory)
46.	Optimization of Raspberry Berry Powder Preparation and Evaluation of their Quality	Assoc. Prof. Dr. Jurgita Kulaitienė	8 (good)
47.	Comparison of Yield and Quality of Different Cultivars of Carrots	Lect. Dr. Nijolė Vaitkevičienė	9 (very good)

List of the Final Theses
Second-cycle study programme *Quality and Safety of Food Plant Raw Materials*

No.	The topic of the final thesis	The supervisor	The evaluation
2018			
1.	Research of the Quality of Ecological Oil Pumpkin Fruits	Prof. Dr. Honorata Danilčenko	7 (highly satisfactory)
2.	Influence of Non-chemical Weed Control on Sugar Beet Productivity and Quality Parameters	Lect. Dr. Aida Adamavičienė, Consult. Prof. Dr. Kęstutis Romanekas	10 (excellent)
3.	The Quality of Starch and Gluten of Wheat Grain	Assoc. Prof. Dr. Jurgita Kulaitienė	8 (good)
4.	The Effects of Irrigation Water on the Quality of the Sprouted Cereal Seeds for Food	Prof. Dr. Honorata Danilčenko	9 (very good)
5.	The Influence of Medicinal Plants on Mead Quality	Assoc. Prof. Dr. Jurgita Kulaitienė	10 (excellent)
6.	Mineral Composition of Mulberry (<i>Morus Alba</i> L.) Leaves	Prof. Dr. Elvyra Jarienė, Consult. Dr. R. Mažeika	10 (excellent)
7.	Chemical Content of Seeds Germinated under Abiotic Stress Conditions	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
8.	Impact of Reduced Tillage on Faba Bean Productivity and Quality Parameters	Prof. Dr. Kęstutis Romanekas, Consult. Lect. Dr. Aida Adamavičienė	9 (very good)
9.	Comparison of Quality of Boiled Potato Tubers with Coloured Flesh	Lect. Dr. Nijolė Vaitkevičienė	8 (good)
10.	Humus Quality Evaluation	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
11.	Comparison of Quality of Potato Tubers with Red and Purple Flesh	Lect. Dr. Nijolė Vaitkevičienė	9 (very good)
12.	The Influence of Soil on the Quality of the Wolfberry (<i>Lycium Barbarum</i>)	Prof. Dr. Honorata Danilčenko	9 (very good)
13.	The Influence of Storage Conditions on Honey with Lyophilized Additives Quality	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
2019			
1.	Quality of Organic Yogurt with Beetroot Addition	Assoc. Prof. Dr. Živilė Tarasevičienė	8 (good)
2.	The Influence of Plant-Based Material Quality when Applying Drying Methods	Assoc. Prof. Dr. Aurelija Paulauskienė	7 (highly satisfactory)
2020			
1.	Effect of Different Agricultural Systems on Accumulation of Biologically Active Compounds in Potato Tubers	Lect. Dr. Nijolė Vaitkevičienė	9 (very good)
2.	Use of Rare Berries in the Production of Dessert Curd	Assoc. Prof. Dr. Judita Černiauskienė	7 (highly satisfactory)
3.	The Effect of Storage on the Quality of Potato Tubers with Different Coloured Flesh	Lect. Dr. Nijolė Vaitkevičienė	8 (good)
4.	The Influence of Roasting Regime on The Quality of Nut Butter	Assoc. Prof. Dr. Aurelija Paulauskienė	8 (good)
5.	Potential Possibilities for Reducing of Pollutions of Oranges for Consumption	Prof. Dr. Elvyra Jarienė	9 (very good)

No.	The topic of the final thesis	The supervisor	The evaluation
6.	The Influence of Berry Pomace on the Quality of Sweetened Condensed and Sterilized Milk	Assoc. Prof. Dr. Živilė Tarasevičienė	7 (highly satisfactory)
7.	The Influence of Spring Rape Sowing Time on Seed Quality and Yield	Assoc. Prof. Dr. Robertas Kosteckas	8 (good)
8.	Chemical Composition and Physical Properties of Biscuits Enriched with coffee grounds	Assoc. Prof. Dr. Živilė Tarasevičienė	9 (very good)
9.	Investigation of Different Species Currant Berries Chemical Composition	Assoc. Prof. Dr. Aurelija Paulauskienė	8 (good)
10.	The Effect of Biostimulants on Yield and Quality of Potato Tubers of Different Genotypes	Lect. Dr. Nijolė Vaitkevičienė	9 (very good)
11.	Qualitative and Quantitative Composition of Phenolic Compounds of Different <i>Mentha genus</i> Plants	Assoc. Prof. Dr. Živilė Tarasevičienė	8 (good)
12.	The Influence of Essential Oils on Toxigenic Microscopic Fungi	Assoc. Prof. Dr. Aurimas Krasauskas	10 (excellent)
13.	The Impact of Meteorological Conditions on the Quality of Potato Tubers	Lect. Dr. Nijolė Vaitkevičienė	8 (good)
14.	The Influence of Cannabis Seeds Additive on Bread quality	Lect. Dr. Dovilė Levickienė	9 (very good)
15.	Quality Analysis of Natural Sweets	Assoc. Prof. Dr. Aurelija Paulauskienė	9 (very good)
16.	Quality of Products from Different Varieties of Sea Buckthorn Berries	Assoc. Prof. Dr. Judita Černiauskienė	8 (good)
17.	The Employment of Berry-Squeeze for Crisp Bread Production and its Quality Analysis	Assoc. Prof. Dr. Jurgita Kulaitienė	10 (excellent)
18.	The Influence of Rose Hips (<i>Rosa sp.</i>) Genotype for Berries and Seeds Quality	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
19.	Quality Evaluation of Buckwheat Grains During Storage	Prof. Dr. Elvyra Jarienė	10 (excellent)
20.	Quality Dynamic of Rose Hips Fruit Seeds During Ripening	Assoc. Prof. Dr. Jurgita Kulaitienė	9 (very good)
22.	The Influence of Different Farming Systems on Stored Apple Quality	Assoc. Prof. Dr. Aurelija Paulauskienė	7 (highly satisfactory)
23.	The Influence of Drying Temperatures on the Quality of Dried Tomatoes	Assoc. Prof. Dr. Judita Černiauskienė	9 (very good)
24.	Quality of the Different Types of Flour and their Cake Products	Assoc. Prof. Dr. Judita Černiauskienė	8 (good)
25.	The Influence of Raspberry Pomace on the Quality of Beef Patties	Assoc. Prof. Dr. Živilė Tarasevičienė	10 (excellent)
26.	The Quality Evaluation of Coloured Flesh Potato Chips	Lect. Dr. Nijolė Vaitkevičienė	9 (very good)
27.	Changes of Biologically Active Substances in Food Sprouted Lentil Seeds using Different Concentration of Cannabis Extract Solutions	Assist. Dalė Šumskienė	8 (good)
28.	The Influence of Storage Conditions on the Quality of Stored Pekinensis Cabbage (<i>Brassica oleracea</i> L. var. <i>Pekinensis</i>)	Assoc. Prof. Dr. Audronė Žebrauskienė	7 (highly satisfactory)
29.	The Influence of Extraction Time and Water pH on Quality of Green Tea (<i>Camellia sinensis</i> L.)	Assoc. Prof. Dr. Aurelija Paulauskienė	10 (excellent)
30.	The Influence of Solid-Phase Fermentation on the Quality in Fireweed (<i>Chamaenerion angustifolium</i> L. Holub) Leaves	Prof. Dr. Elvyra Jarienė	10 (excellent)

List of the permanent teaching staff of the courses

No	Surname, name	Pedagogical and/or scientific degree	Research interests and 3 major works over the last 5 years	Courses taught	Pedagogical work experience (years)	Practical work experience in the field of the course (years)	Current workload at the HEI
TEACHING STAFF OF THE COURSES OF THE FIELD							
1.	Elvyra Jarienė	Prof. Dr.	The research interests: Field of Science: Agronomy (Influence of biotic/abiotic factors on the quality of plant raw materials; functional food). 3 major works: 1. Manager of the international project “Effect of Farming Systems on the Accumulation of Biologically Active and Anticancer Compounds of potato tubers with Coloured Flesh” (2018–2020). 2. The Chair of the Organizing Committee of two international conferences “ <i>New trends in Food safety and Quality</i> (NIFSA –2017 ir NIFSA –2019)”. 3. Jarienė, Elvyra; Lasinskas, Marius; Danilčenko, Honorata; Vaitkevičienė, Nijolė; Šlepetienė, Alvyra; Najman, Katarzyna; Hallmann, Ewelina. Polyphenols, antioxidant activity and volatile compounds in fermented leaves of medicinal plant rosebay willowherb (<i>Chamerion angustifolium</i> (L.) Holub). Plants-Basel. Basel: MDPI AG. ISSN 2223-7747, 2020, vol. 9 iss. 12, p. 1-15. doi:10.3390/plants9121683. Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Scopus; Biological Abstracts; BIOSIS Previews. [20.500.12259/111963] [2020] [S1] [WOS => title: Plants-Basel, if: 2.762, aif: 3.005, aif_min: 3.005, aif_max: 3.005, cat: 1, av: 0.919, year: 2019, quartile: Q1] [SCOPUS => title: Plants, cite score: 1.8, snip: 1.273, sjr: 0.877, year: 2019, quartile: Q3].	First cycle MKS2044 Functional food Second-cycle AMZKS5007 Chemical safety of plant raw materials AMZKS6005 Food allergens AMZKS6007 Novel foods of plant origin	28	8	1.0
2.	Aušra Blinstrubienė	Prof. Dr.	The research interests: Field of Science: Agronomy (Plant biology, biotechnology, physiology). 3 major works: 1. Blinstrubienė, Aušra; Burbulis, Natalija; Vaida Jonytienė; Ramunė Masienė. Effect of growth regulators on <i>Stevia rebaudiana</i> Bertoni callus genesis and influence of auxin and proline to steviol glycosides, phenols, flavonoids accumulation, and antioxidant activity <i>in vitro</i> . Agronomy-Basel. Basel: MDPI AG. ISSN 2073-4395, 2020, vol. 10, issue 11, 1783;	First cycle MKS3020 Biotechnology of food raw materials Second-cycle AMZKS6002	15	-	1.5

			doi:10.3390/agronomy10111783. [WOS => title: Agronomy-Basel, if: 2.603, aif: 2.643, aif_min: 2.281, aif_max: 3.005, cat: 2, av: 0.943, year: 2019, quartile: Q1]. 2. Blinstrubienė, Aušra; Burbulis, Natalija; Juškevičiūtė, Neringa; Vaitkevičienė, Nijolė; Žūkienė, Rasa. Effect of growth regulators on <i>Stevia rebaudiana</i> Bertoni callus genesis and influence of auxin and proline to steviol glycosides, phenols, flavonoids accumulation, and antioxidant activity In Vitro. <i>Molecules</i> . Basel: MDPI AG. ISSN 1420-3049, 2020, vol. 25, no. 12, p. 1-15. doi:10.3390/molecules25122759. https://doi.org/10.3390/molecules25122759 >. Science Citation Index Expanded (Web of Science); Chemical Abstracts (CAplus); Biological Abstracts; BIOSIS Previews; Current Contents (Life Sciences); Scopus. [20.500.12259/108523] [2020] [S1] [WOS => title: MOLECULES, if: 3.267, aif: 5.426, aif_min: 4.694, aif_max: 6.158, cat: 2, av: 0.634, year: 2019, quartile: Q2] [SCOPUS => title: Molecules, citescore: 4.1, snip: 1.15, sjr: 0.698, year: 2019, quartile: Q2]. 3. Blinstrubienė, Aušra; Burbulis, Natalija; Juškevičiūtė, Neringa; Žūkienė, Rasa. Factors affecting organogenesis of <i>Stevia rebaudiana</i> and in vitro accumulation of steviol glycosides. <i>Agriculture. Akademija (Kėdainių r.)</i> . ISSN 1392-3196, 2020, t. 107, nr. 2, p. 171–178. doi:10.13080/z-a.2020.107.022. [WOS => title: Agriculture, if: 0.833, aif: 2.184, aif_min: 2.184, aif_max: 2.184, cat: 1, av: 0.381, year: 2019, quartile: Q3].	Enhancing plant genetic diversity by biotechnological methods			
3	Natalija Burbulis	Prof. Dr.	The research interests: Field of Science: Agronomy (Plant biotechnology). 3 major works: 1. Blinstrubienė, Aušra; Burbulis, Natalija; Vaida Jonytienė; Ramunė Masienė. Effect of growth regulators on <i>Stevia rebaudiana</i> Bertoni callus genesis and influence of auxin and proline to steviol glycosides, phenols, flavonoids accumulation, and antioxidant activity <i>in vitro</i> . <i>Agronomy-Basel</i> . Basel: MDPI AG. ISSN 2073-4395, 2020, vol. 10, issue 11, 1783; doi:10.3390/agronomy10111783. [WOS => title: Agronomy-Basel, if: 2.603, aif: 2.643, aif_min: 2.281, aif_max: 3.005, cat: 2, av: 0.943, year: 2019, quartile: Q1]. 2. Blinstrubienė, Aušra; Burbulis, Natalija; Juškevičiūtė, Neringa; Vaitkevičienė, Nijolė; Žūkienė, Rasa. Effect of growth regulators on <i>Stevia rebaudiana</i> Bertoni callus genesis and influence of auxin and proline to steviol glycosides, phenols, flavonoids accumulation, and antioxidant activity In Vitro. <i>Molecules</i> . Basel: MDPI AG. ISSN 1420-3049, 2020, vol. 25, no. 12, p. 1-15. doi:10.3390/molecules25122759. [WOS => title: MOLECULES, if: 3.267, aif: 5.426, aif_min: 4.694, aif_max: 6.158, cat: 2, av: 0.634, year: 2019, quartile: Q2]. 3. Blinstrubienė, Aušra; Burbulis, Natalija; Juškevičiūtė, Neringa; Žūkienė, Rasa. Factors affecting organogenesis of <i>Stevia rebaudiana</i> and in vitro	Second-cycle AMZKS6002 Enhancing plant genetic diversity by biotechnological methods	19	-	1.0

			accumulation of steviol glycosides. Agriculture. Akademija (Kėdainių r.). ISSN 1392-3196, 2020, t. 107, nr. 2, p. 171–178. doi:10.13080/z-a.2020.107.022. [WOS => title: Agriculture, if: 0.833, aif: 2.184, aif_min: 2.184, aif_max: 2.184, cat: 1, av: 0.381, year: 2019, quartile: Q3].				
4	Rimantas Velička	Prof. Habil. Dr.	<p>The research interests: Field of Science: Agronomy (Research of technological parameters of rapeseed cultivation; plant allelopathy; crop rotation; agricultural systems; technological parameters of crop production under changing climate conditions).</p> <p>3 major works:</p> <p>1. Manager of the National Research Programme project “Integrated impact of environmental and climate change to the productivity, biodiversity and sustainability of agro-ecosystems” (KLIMAGRO), Nr. B-05-46/15 (SIT-8/2015) (2015-2018).</p> <p>2. Juknys, Romualdas; Velička, Rimantas; Kanapickas, Arvydas; Kriauciūnienė, Zita; Masilionytė, Laura; Vagusevičienė, Ilona; Pupalienė, Rita; Klepeckas, Martynas; Sujetovienė, Gintarė. Projecting the impact of climate change on phenology of winter wheat in northern Lithuania. International journal of biometeorology. Berlin: Springer Verlag. ISSN 0020-7128. 2017. DOI 10.1007/s00484-017-1360-y. [Science Citation Index Expanded (Web of Science); MEDLINE; SpringerLINK]. [Citation rate: 2.309; total citation rate: 3.103 (2015, SCIE)].</p> <p>3. Sujetovienė, Gintarė; Velička, Rimantas; Kanapickas, Arvydas; Kriauciūnienė, Zita; Romanovskaja, Danuta; Bakšienė, Eugenija; Vagusevičienė, Ilona; Klepeckas, Martynas; Juknys, Romualdas. Climate-change-related long-term historical and projected changes to spring barley phenological development in Lithuania. Journal of agricultural science. New York: Cambridge univ press. ISSN 0021-8596. 2018, vol. 156, iss. 9, p. 1061-1069. DOI: 10.1017/S0021859618000904. [Science Citation Index Expanded (Web of Science)] [Citation rate: 1.330, sv(if/aif): 0.698, quartile: Q2 (2018, CA JCR)] [CiteScore: 1.55, SNIP: 0.809, SJR: 0.577 (2018, Scopus Journal Metrics)].</p>	Second-cycle AMZKS5001 Quality of agroecosystem and crop production	31	8	1.5
5	Zenonas Dabkevičius	Prof. Habil. Dr.	<p>The research interests: Field of Science: Agronomy (Plant pathology, microbiology; plant fungal diseases and their importance for the quality of crop production).</p> <p>3 major works:</p> <p>1. Kochiieru Y., Mankevičienė A., Cesevičienė J., Semaškienė R., Dabkevičius Z., Janavičienė S. 2020. The influence of harvesting time and meteorological conditions on the occurrence of Fusarium species and mycotoxin contamination</p>	Second-cycle AMZKS5001 Quality of agroecosystem and crop production	25	5	0.25

			<p>of spring cereals. Journal of the Science of Food and Agriculture, 100 (7): 2999–3006. IF – 2,614.</p> <p>2. Ramanauskienė J., Dabkevičius Z., Tamošiūnas K., Petraitiienė E. 2019. The incidence and severity of take-all in winter wheat and <i>Gaeumannomyces graminis</i> soil inoculum levels in Lithuania. Zemdirbyste-Agriculture, 106 (1): 37–44. IF – 0,833.</p> <p>3. Tilvikiene V., Kadziulienė Z., Dabkevičius Z., Venslauskas K., Navickas K. 2016. Feasibility of tall fescue, cocksfoot, and reed canary grass for anaerobic digestion: Analysis of productivity and energy potential. Industrial crops and products, 84: 87–96. IF – 3,181.</p>				
6	Aušra Marcinkevičienė	Prof. Dr.	<p>The research interests: Field of Science: Agronomy (Research on optimization of technological parameters of rapeseed in organic farming; the research on allelopathic properties of weeds; multifunctional crops; effect of climate change on agricultural crops).</p> <p>3 major works:</p> <p>1. Čepulienė, Rita; Kriauciūnienė, Zita; Maruška, Audrius; Stankevičius, Mantas; Marcinkevičienė, Aušra; Kosteckas, Robertas. Effects of allelochemicals in <i>Brassica napus</i> L. residues on the germination of weeds. Allelopathy Journal. Haryana: International Allelopathy Foundation. ISSN 0971-4693. Vol. 45, iss.1 (2019), p. 277-290. [Science Citation Index Expanded (Web of Science); Scopus; Current Contents; BIOSIS Previews]. [Citation rate: 0.705; total citation rate: 1.946 (2017, SCIE)].</p> <p>2. Kriauciūnienė, Zita; Čepulienė, Rita; Velička, Rimantas; Marcinkevičienė, Aušra; Lekavičienė, Kristina; Šarauskis, Egidijus. Oilseed Rape Crop Residues: Decomposition, Properties and Allelopathic Effects. Sustainable Agriculture Reviews 32: Waste Recycling and Fertilisation. Cham: Springer International Publishing AG, 2018. ISBN 9783319989136, p. 169-205. doi:10.1007/978-3-319-98914-3. Available online: < https://www.springer.com/us/book/9783319989136 >.</p> <p>3. Marcinkevičienė, Aušra; Keidan, Marina; Pupalienė, Rita; Velička, Rimantas; Kriauciūnienė, Zita; Butkeviičenė, Lina, Marija; Kosteckas, Robertas. Nonchemical Weed Control in Winter Oilseed Rape Crop in the Organic Farming System. Organic Agriculture. IntechOpen, 2020. DOI: 10.5772/intechopen.91044. Available online: <https://www.intechopen.com/online-first/nonchemical-weed-control-in-winter-oilseed-rape-crop-in-the-organic-farming-system>.</p>	<p>First-cycle MKS3012 Research methodology of raw materials and food (Research methodology)</p> <p>Second-cycle AMZKS5005 Research planning and analysis</p>	17	15	1.0

7	Rimantas Vaisvalavičius	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Agronomy (The study of soil properties under the influence of natural and anthropogenic factors; monitoring and evaluation of soil quality in urban areas).</p> <p>3 major works:</p> <p>1. Volungevičius, Jonas; Amalevičiūtė - Volungė, Kristina; Feizienė, Dalia; Feiza, Virginijus; Šlepetienė, Alvyra; Liaudanskienė, Inga; Veršulienė, Agnė; Vaisvalavičius, Rimantas. The effects of agrogenic transformation on soil profile morphology, organic carbon, and physico-chemical properties in Retisols of Western Lithuania. Archives of Agronomy and Soil Science. Oxon: Taylor & Francis. ISSN 0365-0340. Vol. 64, n. 13 (2018), p. 1910–1923. [Science Citation Index Expanded (Web of Science); Scopus]; [Citation rate: 2.254; total citation rate: 2.321; quartile: Q1 (2017, SCIE)] [SNIP: 0,696; SJR: 0,442 (2015, Scopus)].</p> <p>2. Świtoniak, Marcin; Kabała, Cezary; Karklins, Aldis; Charzyński, Przemysław; Hulisz, Piotr; Mendyk, Łukasz; Michalski, Adam; Novak, Tibor Jozsef; Penizek, Vit; Reintnam, Endla; Repe, Blaž; Saksa, Martin; Vaisvalavičius, Rimantas; Waroszewski, Jarosław. Guidelines for Soil Description and Classification Central and Eastern European Students' Version. Marcin Świtoniak, Cezary Kabała, Aldis Karklins, Przemysław Charzyński, Piotr Hulisz, Łukasz Mendyk, Adam Michalski, Tibor Jozsef Novak, Vit Penizek, Endla Reintnam, Blaz Repe, Martin Saksa, Rimantas Vaisvalavicius, Jarosław Waroszewski. Toruń, 2018. 286 p.: ilustr. ISBN 9788393409662.</p> <p>3. Vaisvalavičius, Rimantas; Volungevičius, Jonas; Buivydaite, Vanda; Gregorauskiene, Virgilija. Agricultural areas within hummocky moraine landscapes of north-east Lithuania. Soil Sequences Atlas. T. 4 / edited by M. Świtoniak, P. Charzyński. Toruń, 2018, ISBN 9788395187827. p. 183-197.</p>	Second-cycle AMZKS5001 Quality of agroecosystem and crop production	22	-	1.0
8	Rūta Dromantienė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Agronomy (Plant nutrition).</p> <p>3 major works:</p> <p>1. Pranckietienė, Irena; Dromantienė, Rūta; Smalstienė, Vita; Jodaugienė, Darija; Vagusevičienė, Ilona; Paulauskienė, Aurelija; Marks, Marek. Effect of liquid amide nitrogen fertilizer with magnesium and sulphur on spring wheat chlorophyll content, accumulation of nitrogen and yield. Journal of elementology. Olsztyn: Polskie Towarzystwo Magnezologiczne, 2020, vol. 25, iss. 1. p. 139-152. 2020. DOI: 10.5601/jelem.2019.24.2.1742.</p> <p>2. Smalstienė, Vita; Pranckietienė, Irena; Dromantienė, Rūta; Šidlauskas, Gvidas; Vagusevičienė, Ilona; Jodaugienė, Darija. The relationship between nitrogen fertilizer forms and meteorological conditions on nitrogen transformation in the soil and loss via volatilization. Agriculture. Akademija</p>	Second-cycle AMZKS5001 Quality of agroecosystem and crop production	11	2	0.55

			(Kėdainių r.). ISSN 1392-3196, 2019, t. 106, nr. 3, p. 195–202. doi:10.13080/z-a.2019.106.025. 3. Pranckietienė, Irena; Mažuolytė-Miškinė, Editā; Pranckietis, Viktoras; Dromantienė, Rūta ; Šidlauskas, Gvidas; Vaisvalavičius, Rimantas. The effect of amino acids on nitrogen, phosphorus, and potassium changes in spring barley under the conditions of water deficit. Agriculture. Lithuanian Research Centre for Agriculture and Forestry, Aleksandras Stulginskis University. ISSN 1392-3196. T. 102, Nr. 3 (2015), p. 265-272.				
9	Nobertas Uselis	Assoc. Prof. Dr.	The research interests: Field of Science: Agronomy (Development and improvement of strawberry and apple growing technologies; study of strawberry cultivars and breeding systems; structures of dwarf gardens, fruit tree formation and pruning; optimization of fruit tree growth and consistency; analysis of the development of horticultural business and economics). 3 major works: 1. Laužikė K., Sirgėdaitė-Šėžienė V., Uselis N. , Samuolienė G. 2020. The Impact of Stress Caused by Light Penetration and Agrotechnological Tools on Photosynthetic Behavior of Apple Trees. Scientific Reports, 10: 9177. IF – 3,999. 2. Luksienė Z., Rasiukeviciute N., Zudyte B., Uselis N. 2020. Innovative approach to sunlight activated biofungicides for strawberry crop protection: ZnO nanoparticles. Journal of Photochemistry and Photobiology B: Biology, 203: article 111656. IF – 4,067. 3. Viškelis J., Uselis N. , Liaudanskas M., Lanauskas J., Bielicki P., Univer T., Lepsis J. Kviklys D. 2019. Location effects across northeastern Europe on bioactive compounds in apple fruit. Agricultural and Food Science, 28 (2): 93–100. IF – 1,200.	First-cycle MKS2041 Plant food raw materials	14	8	0.95
10	Aurelija Paulauskienė	Assoc. Prof. Dr.	The research interests: Field of Science: Agronomy (The quality of food raw materials; biologically active compounds of food raw materials and products, their changes during storage and processing of raw materials). 3 major works: 1. Paulauskienė, Aurelija ; Tarasevičienė, Živilė; Žebrauskienė, Audronė; Pranckietienė, Irena. Effect of controlled atmosphere storage conditions on the chemical composition of super hardy kiwifruit. Agronomy-Basel. Basel: MDPI AG. ISSN 2073-4395, 2020, vol. 10, iss. 6, p. 1-10. doi:10.3390/agronomy10060822. Available online: < https://doi.org/10.3390/agronomy10060822 >. Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Scopus. [20.500.12259/108076] [2020] [S1] [WOS => title: Agronomy-Basel, if: 2.603, aif: 2.643, aif_min: 2.281, aif_max: 3.005, cat: 2, av: 0.943, year: 2019, quartile:	First-cycle MKS3018 Food chemistry MKS3046 Manufacture of food products (Processing of food raw materials I +	34	-	1.3

			<p>Q1] [SCOPUS => title: Agronomy, citescore: 1.8, snip: 1.266, sjr: 0.7, year: 2019, quartile: Q2].</p> <p>2. Paulauskienė, Aurelija; Tarasevičienė, Živilė; Šileikienė, Daiva; Česonienė, Laima. The quality of ecologically and conventionally grown white and brown agaricus bisporus mushrooms. Sustainability. Basel: MDPI AG. ISSN 2071-1050, 2020, vol. 12, iss. 15, p. 1-10. doi:10.3390/su12156187. Available online: < https://doi.org/10.3390/su12156187 >. Social Sciences Citation Index (Web of Science); Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Current Contents (Social and Behavioral Sciences); Food Science Source (EBSCO); Scopus. [20.500.12259/109806] [2020] [S1] [WOS => title: Sustainability, if: 2.576, aif: 4.525, aif_min: 3.486, aif_max: 5.779, cat: 3, av: 0.624, year: 2019, quartile: Q2] [SCOPUS => title: Sustainability, citescore: 3.2, snip: 1.165, sjr: 0.581, year: 2019, quartile: Q2].</p> <p>3. Dromantienė, Rūta; Pranckietienė, Irena; Jodaugienė, Darija; Paulauskienė, Aurelija. The influence of various forms of nitrogen fertilization and meteorological factors on nitrogen compounds in soil under laboratory conditions. Agronomy-Basel. Basel: MDPI AG. ISSN 2073-4395, 2020, vol. 10, iss. 12, p. 1-12. doi:10.3390/agronomy10122011. https://doi.org/10.3390/agronomy10122011 >. Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Scopus. [20.500.12259/115313] [2020] [S1] [WOS => title: Agronomy-Basel, if: 2.603, aif: 2.643, aif_min: 2.281, aif_max: 3.005, cat: 2, av: 0.943, year: 2019, quartile: Q1] [SCOPUS => title: Agronomy, citescore: 1.8, snip: 1.266, sjr: 0.7, year: 2019, quartile: Q2].</p>	<p>Food additives)</p> <p>MKS4054 Gastronomic science (Processing of food raw materials II)</p> <p>Second-cycle AMZKS5002 Chemistry of plant food raw materials</p>			
11	Živilė Tarasevičienė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Agronomy (Sustainable food systems; isolation of biologically active compounds from secondary plant food raw materials and their stabilization; changes in the biological activity in the plant food raw materials during storage).</p> <p>3 major works:</p> <p>1. Paulauskienė, Aurelija; Tarasevičienė, Živilė; Šileikienė, Daiva; Česonienė, Laima. The quality of ecologically and conventionally grown white and brown agaricus bisporus mushrooms. Sustainability. Basel: MDPI AG. ISSN 2071-1050, 2020, vol. 12, iss. 15, p. 1-10. doi:10.3390/su12156187. Available online: < https://doi.org/10.3390/su12156187 >. Social Sciences Citation Index (Web of Science); Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Current Contents (Social and Behavioral Sciences); Food Science Source (EBSCO); Scopus.</p>	<p>First-cycle MKS2043 Sustainable food systems (Organic food products)</p> <p>MKS2045 Sensory analysis of food products</p>	17	-	1.0

			<p>[20.500.12259/109806] [2020] [S1] [WOS => title: Sustainability, if: 2.576, aif: 4.525, aif_min: 3.486, aif_max: 5.779, cat: 3, av: 0.624, year: 2019, quartile: Q2] [SCOPUS => title: Sustainability, citescore: 3.2, snip: 1.165, sjr: 0.581, year: 2019, quartile: Q2].</p> <p>2. Paulauskienė, Aurelija; Tarasevičienė, Živilė; Žebrauskienė, Audronė; Pranckietienė, Irena. Effect of controlled atmosphere storage conditions on the chemical composition of super hardy kiwifruit. <i>Agronomy-Basel</i>. Basel: MDPI AG. ISSN 2073-4395, 2020, vol. 10, iss. 6, p. 1-10. doi:10.3390/agronomy10060822. Available online: < https://doi.org/10.3390/agronomy10060822 >. Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Scopus. [20.500.12259/108076] [2020] [S1] [WOS => title: Agronomy-Basel, if: 2.603, aif: 2.643, aif_min: 2.281, aif_max: 3.005, cat: 2, av: 0.943, year: 2019, quartile: Q1] [SCOPUS => title: Agronomy, citescore: 1.8, snip: 1.266, sjr: 0.7, year: 2019, quartile: Q2].</p> <p>3. Tarasevičienė, Živilė; Viršilė, Akvilė; Danilčenko, Honorata; Duchovskis, Pavelas; Paulauskienė, Aurelija; Gajewski, Marek. Effects of germination time on the antioxidant properties of edible seeds. <i>CyTA - Journal of food</i>. Oxon: Taylor & Francis. ISSN 1947-6337, 2019, vol. 17, iss. 1, p. 447-454. doi:10.1080/19476337.2018.1553895. Available online: < https://www.tandfonline.com/doi/full/10.1080/19476337.2018.1553895 > < https://hdl.handle.net/20.500.12259/99447 > < https://doi.org/10.1080/19476337.2018.1553895 >. Science Citation Index Expanded (Web of Science); Scopus; CAB Abstracts; Academic Search Complete (EBSCO); Chemical Abstracts (CAplus). [20.500.12259/99447] [2019] [S1] [WOS => title: CyTA-Journal of Food, if: 1.653, aif: 3.277, aif_min: 3.277, aif_max: 3.277, cat: 1, av: 0.504, year: 2019, quartile: Q3] [SCOPUS => title: CYTA - Journal of Food, citescore: 2.8, snip: 0.987, sjr: 0.519, year: 2019, quartile: Q2].</p>	<p>(Instrumental and sensory analysis)</p> <p>MKS4032 Biologically active nutrients</p> <p>MKS3049 Instrumental analysis of food products (Instrumental and sensory analysis)</p> <p>MKS3014 Storage of food raw materials</p> <p>Second-cycle AMZKS5006 Methods of quality assessment of plant food raw materials</p>			
12	Jurgita Kulaitienė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Agronomy (Effect of biotic and abiotic factors on the quality of plant raw materials).</p> <p>3 major works:</p> <p>1. Kulaitienė, Jurgita; Medveckienė, Brigita; Levickienė, Dovilė; Vaitkevičienė, Nijolė; Makarevičienė, Violeta; Jarienė, Elvyra. Changes in fatty acids content in organic rosehip (<i>Rosa</i> spp.) seeds during ripening. <i>Plants-Basel</i>. Basel: MDPI AG. ISSN 2223-7747, 2020, vol. 9 iss. 12, p. 1-15. doi:10.3390/plants9121793. https://doi.org/10.3390/plants9121793 >. Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Scopus; Biological Abstracts; BIOSIS Previews.</p>	<p>First-cycle MKS3050 Food safety and quality management systems</p> <p>MKS4056 Food quality assessment</p>	11	3	1.0

			<p>[20.500.12259/115320] [2020] [S1] [WOS => title: Plants-Basel, if: 2.762, aif: 3.005, aif_min: 3.005, aif_max: 3.005, cat: 1, av: 0.919, year: 2019, quartile: Q1] [SCOPUS => title: Plants, citescor: 1.8, snip: 1.273, sjr: 0.877, year: 2019, quartile: Q3].</p> <p>2. Kulaitienė, Jurgita; Vaitkevičienė, Nijolė; Jarienė, Elvyra; Černiauskienė, Judita; Jeznach, Maria; Paulauskienė, Aurelija. Concentrations of minerals, soluble solids, vitamin C, carotenoids, and toxigenic elements in organic goji berries (<i>Lycium barbarum</i> L.) cultivated in Lithuania. Biological Agriculture & Horticulture. Oxson: Taylor & Francis Ltd. ISSN 0144-8765, 2020, vol. 36, no. 2, p. 130-140. doi:10.1080/01448765.2020.1748714. Science Citation Index Expanded (Web of Science); Biological Abstracts; BIOSIS Previews; Current Contents (Agriculture, Biology & Environmental Sciences); Scopus. [20.500.12259/104577] [2020] [S1] [WOS => title: Biological Agriculture & Horticulture, if: 1.674, aif: 2.088, aif_min: 1.896, aif_max: 2.281, cat: 2, av: 0.776, year: 2019, quartile: Q2] [SCOPUS => title: Biological Agriculture and Horticulture, citescor: 2.8, snip: 1.169, sjr: 0.5, year: 2019, quartile: Q2].</p> <p>3. Lasinskas, Marius; Jarienė, Elvyra; Vaitkevičienė, Nijolė; Kulaitienė, Jurgita; Najman, Katarzyna; Hallmann, Ewelina. Studies of the variability of polyphenols and carotenoids in different methods fermented organic leaves of willowherb (<i>Chamerion angustifolium</i> (L.) Holub). Applied sciences. Basel: MDPI. ISSN 2076-3417, 2020, vol. 10, iss. 15, p. 1-11. doi: doi.org/10.3390/app10155254. https://hdl.handle.net/20.500.12259/109501. https://doi.org/10.3390/app10155254 >. Science Citation Index Expanded (Web of Science); Scopus; Applied Science & Technology Source (EBSCO). [20.500.12259/109501] [2020] [S1] [WOS => title: Applied Sciences-Basel, if: 2.474, aif: 4.704, aif_min: 2.759, aif_max: 6.158, cat: 4, av: 0.52, year: 2019, quartile: Q2] [SCOPUS => title: Applied Sciences (Switzerland), citescor: 2.4, snip: 1.048, sjr: 0.418, year: 2019, quartile: Q2].</p>	<p>(Science of food products)</p> <p>Second-cycle AMZKS5003 Quality and safety management of plant food raw materials</p> <p>AMZKS6001 Consumer law and education</p> <p>AMZKS6004 Educational public health promotion</p>			
13	Judita Černiauskienė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Agronomy (The quality of plant and animal food raw materials, their processing; development of new products).</p> <p>3 major works:</p> <p>1. Kulaitienė, Jurgita; Vaitkevičienė, Nijolė; Jarienė, Elvyra; Černiauskienė, Judita; Jeznach, Maria; Paulauskienė, Aurelija. Concentrations of minerals, soluble solids, vitamin C, carotenoids, and toxigenic elements in organic goji berries (<i>Lycium barbarum</i> L.) cultivated in Lithuania. Biological Agriculture & Horticulture. Oxson: Taylor & Francis Ltd. ISSN 0144-8765, 2020, vol. 36, no. 2, p. 130-140. doi:10.1080/01448765.2020.1748714. Available online: <https://doi.org/10.1080/01448765.2020.1748714>. Science Citation Index</p>	<p>First-cycle MKS2009 Animal food raw materials</p> <p>MKS3014 Storage of food raw materials</p>	7	13	1.42

			<p>Expanded (Web of Science); Biological Abstracts; BIOSIS Previews; Current Contents (Agriculture, Biology & Environmental Sciences); Scopus. [20.500.12259/104577] [2020] [S1] [WOS => title: BIOLOGICAL AGRICULTURE & HORTICULTURE, if: 1.674, aif: 2.088, aif_min: 1.896, aif_max: 2.281, cat: 2, av: 0.776, year: 2019, quartile: Q2] [SCOPUS => title: Biological Agriculture and Horticulture, citesscore: 2.8, snip: 1.169, sjr: 0.5, year: 2019, quartile: Q2] [ai: 0,835, iai: 0,167, na: 6, nia :5, nip: 0, pai: 2,174, piai: 0,435, al: 0.786].</p> <p>2. Černiauskienė, Judita; Kulaitienė, Jurgita; Jarienė, Elvyra; Danilčenko, Honorata; Žaldarienė, Sandra; Jeznach, Maria. Relationship between harvesting time and carbohydrate content of Jerusalem artichoke (<i>Helianthus tuberosus</i> L.) tubers. Acta Scientiarum Polonorum: Hortorum Cultus. Lublin: Wydawnictwo akad rolniczej w Lublinie. ISSN 1644-0692, 2018, Vol. 17, iss. 3, p. 41-48. doi:10.24326/asphc.2018.3.4. Available online: <http://www.hortorumcultus.actapol.net/volume17/issue3/abstract-41.html>.</p> <p>Science Citation Index Expanded (Web of Science), CAB Abstracts. [20.500.12259/92095] [2018] [S1] [WOS => title: Acta Scientiarum Polonorum-Hortorum Cultus, if: 0.443, aif: 1.597, aif_min: 1.597, aif_max: 1.597, cat: 1, av: 0.277, year: 2018, quartile: Q4] [SCOPUS => title: Acta Scientiarum Polonorum, Hortorum Cultus, citesscore: 0.9, snip: 0.519, sjr: 0.258, year: 2018, quartile: Q3] [ai: 1,18, iai: 0,236, na: 6, nia :5, nip: 1, pai: 1,835, piai: 0,367, al: 0.571].</p> <p>3. Vaitkevičienė, Nijolė; Jarienė, Elvyra; Kulaitienė, Jurgita; Danilčenko, Honorata; Černiauskienė, Judita; Aleinikovienė, Jūratė; Šrednicka-Tober, Dominika; Rembiałkowska, Ewa. Influence of agricultural management practices on the soil properties and mineral composition of potato tubers with different colored fles. Sustainability. Basel: MDPI AG. ISSN 2071-1050, 2020, vol. 12, iss. 21, p. 1-12. doi:10.3390/su12219103. <https://hdl.handle.net/20.500.12259/111252> <https://doi.org/10.3390/su12219103>. Science Citation Index Expanded (Web of Science); Food Science Source (EBSCO); Current Contents (Agriculture, Biology & Environmental Sciences); Current Contents (Social and Behavioral Sciences); Social Sciences Citation Index (Web of Science); Scopus. [20.500.12259/111252] [2020] [S1] [WOS => title: Sustainability, if: 2.576, aif: 4.525, aif_min: 3.486, aif_max: 5.779, cat: 3, av: 0.624, year: 2019, quartile: Q2] [SCOPUS => title: Sustainability, citesscore: 3.2, snip: 1.165, sjr: 0.581, year: 2019, quartile: Q2].</p>				

14	Jolanta Sinkevičienė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Agronomy (Microbiology and toxicology of food raw materials).</p> <p>3 major works:</p> <ol style="list-style-type: none"> 1. Vasinauskienė, Regina; Šilingienė, Gerda; Sinkevičienė, Jolanta. Surface sterilization of English oak (<i>Quercus robur</i> L.) acorns using wet water steam. Baltic forestry, 2020, vol. 26, no1, p. 1-8. IF: 0.754. Quartile: Q4. 2. Sinkevičienė, Jolanta; Amšiejus, Algirdas. Mycobiota in bee pollen collected by different types of traps. Žemdirbystė-Agriculture, 2019, t. 106, nr. 4, p. 377-382. IF: 1,02. Quartile: Q3. 3. Tarptautinio projekto dalyvė: ERA-NET COFUND ICT-AGRI-FOOD 2019 Joint Call (Call for transnational, collaborative, inter-/transdisciplinary research projects on ICT-enabled agri-food systems) (full proposal - stage two). Proposal title: Potential of selective harvest based on mycotoxins content assessment in cereal crops (POSHMyCo). Proposal ID (see online application): 41316; Project duration (months): 36; Total project costs (K€): 934.4; Total requested budget (K€): 741.9. Countries/regions/partners involved: Gent University (UGent), Belgium (coordinator); Aristotle University Thessaloniki (AUTH), Greece; Swedish University of Agricultural Sciences (SLU), Sweden; Vytautas Magnus University (VMU), Lithuania; Soluciones Agrícolas de Precisión S.L. (Agrosap), Spain; University of Sevilla (USE), Spain. Technology Readiness Level (TRL): TRL5. VDU biudžetas 34 000 Eur. 	<p>First-cycle MKS1038 General microbiology</p> <p>MKS3044 Food microbiology and toxicology</p> <p>Second-cycle AMZKS5008 Microbiological contamination of plant food raw materials and toxins</p>	22	7	0.8
15	Aurimas Krasauskas	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Agronomy (Microbiology and toxicology of the food raw materials).</p> <p>3 major works:</p> <ol style="list-style-type: none"> 1. Kazlauskaitė, Sonata; Spruogis, Vidmantas; Dautartė, Anželika; Mulerčikas, Povilas; Krasauskas, Aurimas; Rizan, Kimete Lluga; Survilienė, Elena. Influence of the ozonated water application on the occurrence of some pests and diseases in spring wheat crop. Rural development 2019: research and innovation for bioeconomy Academic Search Complete (EBSCO). 2. Šliažaitė, Vanesa; Paulauskienė, Aurelija; Krasauskas, Aurimas. Evaluation of fermented tea (Kombucha) quality. Agricultural sciences. ISSN 1392-0200, 2019, t. 26, nr. 4, p. 181-190. doi:10.6001/zemesukiomokslai. CAB Abstracts; IndexCopernicus. 3. Kazlauskaitė, Sonata; Žebrauskienė, Audronė; Mulerčikas, Povilas; Vagusevičienė, Ilona; Krasauskas, Aurimas. Influence of biological products on the growth and qualitative characteristics of sweet basil (<i>Ocimum basilicum</i> L.). Rural Development 2017: Bioeconomy Challenges: Proceedings of the 8th International Scientific Conference, 23-24th November 2017, Aleksandras 	<p>First-cycle MKS1038 General microbiology</p> <p>MKS3044 Food microbiology and toxicology</p> <p>Second-cycle AMZKS5008 Microbiological contamination of plant food</p>	25	-	1.0

			Stulginskis>. Academic Search Complete (EBSCO); Conference Proceedings Citation Index-Science (Web of Science) University. Akademija.	raw materials and toxins			
16	Darija Jodaugienė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Agronomy (Agricultural systems; reduced soil tillage; weed control; herbology; crop rotation; organic mulches).</p> <p>3 major works:</p> <p>1. Dromantienė, Rūta; Pranckietienė, Irena; Jodaugienė, Darija; Paulauskienė, Aurelija. The influence of various forms of nitrogen fertilization and meteorological factors on nitrogen compounds in soil under laboratory conditions. Agronomy-Basel. Basel: MDPI AG. ISSN 2073-4395, 2020, vol. 10, iss. 12, p. 1-12. doi:10.3390/agronomy10122011. https://doi.org/10.3390/agronomy10122011 >. Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Scopus. [20.500.12259/115313] [2020] [S1] [WOS => title: Agronomy-Basel, if: 2.603, aif: 2.643, aif_min: 2.281, aif_max: 3.005, cat: 2, av: 0.943, year: 2019, quartile: Q1] [SCOPUS => title: Agronomy, citescore: 1.8, snip: 1.266, sjr: 0.7, year: 2019, quartile: Q2].</p> <p>2. Smalstienė, Vita; Pranckietienė, Irena; Dromantienė, Rūta; Šidlauskas, Gvidas; Vagusevičienė, Ilona; Jodaugienė, Darija. The relationship between nitrogen fertilizer forms and meteorological conditions on nitrogen transformation in the soil and loss via volatilization. Agriculture. Akademija (Kėdainių r.). ISSN 1392-3196, 2019, t. 106, nr. 3, p. 195–202. doi:10.13080/z-a.2019.106.025. https://hdl.handle.net/20.500.12259/99726 > < https://doi.org/10.13080/z-a.2019.106.025 >. Science Citation Index Expanded (Web of Science); CAB Abstracts; Scopus. [20.500.12259/99726] [2019] [S1] [WOS => title: Agriculture, if: 0.833, aif: 2.184, aif_min: 2.184, aif_max: 2.184, cat: 1, av: 0.381, year: 2019, quartile: Q3] [SCOPUS => title: Zemdirbyste, citescore: 1.7, snip: 0.635, sjr: 0.311, year: 2019, quartile: Q2]</p> <p>3. Jodaugienė, Darija; Sinkevičienė, Aušra; Pupalienė, Rita; Ninkovic, Velemir; Kriauciūnienė, Zita. Allelopathic effect of organic mulches on vegetable germination and early development. Acta Scientiarum Polonorum: Hortorum Cultus. Lublin. ISSN 1644-0692, 2018, Vol. 17, iss. 3, p. 73-82. doi:10.24326/asphc.2018.3.7. [WOS => title: Acta Scientiarum Polonorum-Hortorum Cultus, if: 0.443, aif: 1.597, aif_min: 1.597, aif_max: 1.597, cat: 1, av: 0.277, year: 2018, quartile: Q4].</p>	First-cycle MKS1039 Agricultural systems	22	12	1.0
17	Audronė Žebrauskienė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Agronomy (Plant food raw materials).</p> <p>3 major works:</p>	First-cycle MKS2041	15	2	0.5

			<p>1. Paulauskienė, Aurelija; Tarasevičienė, Živilė; Žebrauskienė, Audronė; Pranckietienė, Irena. Effect of controlled atmosphere storage conditions on the chemical composition of super hardy kiwifruit. <i>Agronomy-Basel</i>. Basel: MDPI AG. ISSN 2073-4395, 2020, vol. 10, iss. 6, p. 1-10. doi:10.3390/agronomy10060822. Available online: < https://doi.org/10.3390/agronomy10060822 >. Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Scopus. [20.500.12259/108076] [2020] [S1] [WOS => title: Agronomy-Basel, if: 2.603, aif: 2.643, aif_min: 2.281, aif_max: 3.005, cat: 2, av: 0.943, year: 2019, quartile: Q1] [SCOPUS => title: Agronomy, citesscore: 1.8, snip: 1.266, sjr: 0.7, year: 2019, quartile: Q2].</p> <p>2. Mažeikienė, Ingrida; Šikšnianienė, Jūratė Bronė; Baniulis, Danas; Gelvonauskienė, Dalia; Frercks, Birutė; Starkus, Aurelijus; Žebrauskienė, Audronė; Stanys, Vidmantas. SSR analysis based on molecular characterisation of apple germplasm in Lithuania. <i>Agriculture. Akademija</i> (Kėdainių r.), 2019, t. 106, nr. 2. ISSN 1392-3196, doi:10.13080/z-a.2019.106.021, WOS:000466867700009, handle:20.500.12259/92619. Internet access: <https://www.vdu.lt/cris/bitstream/20.500.12259/92619/2/ISSN1392-3196_V_106.N_2.P_159-166.pdf> [S1] [Science Citation Index Expanded (Web of Science), CAB Abstracts, Scopus].</p> <p>3. Žebrauskienė, Audronė; Kazlauskaitė, Sonata; Vagusevičienė, Ilona; Paulauskienė, Aurelija. Comparison of the quality of different spear segments of asparagus (<i>Asparagus officinalis</i> L.) reared in Lithuania. Rural development 2017: bioeconomy challenges: proceedings of the 8th international scientific conference, 23-24th November 2017, Aleksandras Stulginskis University. Akademija: Aleksandras Stulginskis University, 2017. ISBN 9786094491283, ISSN 1822-3230, doi:10.15544/RD.2017.230, WOS:000527792100036, handle:20.500.12259/108318. [Academic Search Complete (EBSCO), Conference Proceedings Citation Index- Science].</p>	Plant food raw materials			
18	Asta Ramaškevičienė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Agronomy (Viticulture; the influence of biological preparations on various agricultural crops).</p> <p>3 major works:</p> <p>1. Ramaškevičienė, Asta; Gliebutė, Greta. Effects of nano fertilizers on lettuce growing (<i>Lactuca sativa</i> L.). International Scientific Conference "New trends in Food safety and quality" NIFSA 2017, 5 - 7 October 2017, Aleksandras Stulginskis University, Lithuania. ISBN 9786094491207., p. 56. [20.500.12259/90979] [2017] [T2] [ai: 0,5, na: 2, nia: 2, nip: 0, aip: 1, pai: 0,5].</p>	First-cycle MKS2041 Plant food raw materials	16	10	1.0

			<p>2. Šimonėlienė, Aušra; Ramaškevičienė, Asta. Influence of water technological parameters on the quality and stability of fruit berry wine. International scientific conference New trends in food safety and quality [NIFSA] 12-14 June 2019, VMU Agriculture academy. ISBN 9786094674013., p. 30-30. [20.500.12259/99107] [2019] [T1e] [ai: 0,5, na: 2, nia: 1, nip: 0, aip: 1, pai: 0,5].</p> <p>3. Ramaškevičienė, Asta. Effects of different biological preparations on onions grown according to national quality product (NCP) specifications. International scientific conference New trends in food safety and quality [NIFSA] 12-14 June 2019, VMU Agriculture academy. ISBN 9786094674013., p. 79-79. [20.500.12259/99296] [2019] [T1e] [ai: 1, na: 1, nia: 1, nip: 0, aip: 1, pai: 1].</p>				
19	Robertas Kosteckas	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Agronomy (Productivity of horticultural and field crops; allelopathy; multifunctional crops; precision farming).</p> <p>3 major works:</p> <p>1. Čepulienė, Rita; Kriauciūnienė, Zita; Velička, Rimantas; Maruška, Audrius; Stankevičius, Mantas; Marcinkevičienė, Aušra; Kosteckas, Robertas. Effects of allelochemicals in Brassica napus L. residues on the germination of weeds. Allelopathy journal. Haryana: International Allelopathy Foundation. ISSN 0971-4693, 2019, vol. 46, iss. 2, p. 277-290.</p> <p>2. Marcinkevičienė, Aušra; Keidan, Marina; Pupalienė, Rita; Velička, Rimantas; Kriauciūnienė, Zita; Butkevičienė, Lina; Kosteckas, Robertas. Nonchemical weed control in winter oilseed rape crop in the organic farming system. 2020. Organic Agriculture London: IntechOpen Limited, Part of book. P. 1-11.</p> <p>3. Manager of the project „Optimisation of field crops parameters in precision farming“ NMA prie LR ŽŪM. IPM-PV-13-2-008495-PR001.</p>	First-cycle MKS2041 Plant food raw materials	13	2	1.12
20	Rita Čepulienė	Lect. Dr.	<p>The research interests: Field of Science: Agronomy (Allelopathy; allelopathic properties of agricultural plants and weeds; environmentally friendly technologies that support plant and soil fertility).</p> <p>3 major works:</p> <p>1. Čepulienė, Rita; Kriauciūnienė, Zita; Maruška, Audrius; Stankevičius, Mantas; Marcinkevičienė, Aušra; Kosteckas, Robertas. Effects of allelochemicals in Brassica napus L. residues on the germination of weeds. Allelopathy Journal. Haryana: International Allelopathy Foundation. ISSN 0971-4693. vol. 46, iss. 2 (2019), p. 277-290. [Science Citation Index Expanded (Web of Science)]. [Citation rate: 0.705 (2017)].</p> <p>2. Kriauciūnienė, Zita; Čepulienė, Rita; Velička, Rimantas; Marcinkevičienė, Aušra; Lekavičienė, Kristina; Šarauskis, Egidijus. Oilseed Rape Crop Residues: Decomposition, Properties and Allelopathic Effects. Sustainable Agriculture</p>	First-cycle MKS3012 Research methodology of raw materials and food (Research methodology)	5	-	1.0

			<p>Reviews 32 : Waste Recycling and Fertilisation. Cham: Springer International Publishing AG, 2018. (Sustainable Agriculture Reviews, vol. 32), ISBN 9783319989136. p. 169-205. [SpringerLINK].</p> <p>3. Kriauciūnienė, Zita; Čepulienė, Rita; Velička, Rimantas; Naujokienė, Vilma; Šarauskis, Egidijus; Sasnauskienė, Jurgita; Adamavičienė, Aida; Masilionytė, Laura; Marcinkevičienė, Aušra; Kosteckas, Robertas; Sinkevičienė, Aušra; Matuizienė, Skaistė; Meškauskas, Simonas; Kazlauskas, Marius. The influence of biological preparations and organic fertiliser on soil temperature, electrical conductivity and CO₂. Actual Tasks on Agricultural Engineering: Proceedings of the 45 International Symposium on Agricultural Engineering, Opatija, Croatia, 21-24 February 2017. Opatija, 2017. ISSN 1848-4425. p. 55-62. [Conference Proceedings Citation Index (Web of Science); CAB Abstracts].</p>				
21	Nijolė Vaitkevičienė	Lect. Dr.	<p>The research interests: Field of Science: Agronomy (Effect of biotic and abiotic factors on the quality of plant raw materials).</p> <p>3 major works:</p> <p>1. Kulaitienė, Jurgita; Medveckienė, Brigita; Levickienė, Dovilė; Vaitkevičienė, Nijolė; Makarevičienė, Violeta; Jarienė, Elvyra. Changes in fatty acids content in organic rosehip (<i>Rosa</i> spp.) seeds during ripening. Plants-Basel. Basel: MDPI AG. ISSN 2223-7747, 2020, vol. 9 iss. 12, p. 1-15. doi:10.3390/plants9121793. https://doi.org/10.3390/plants9121793 >. Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Scopus; Biological Abstracts; BIOSIS Previews. [20.500.12259/115320] [2020] [S1] [WOS => title: Plants-Basel, if: 2.762, aif: 3.005, aif_min: 3.005, aif_max: 3.005, cat: 1, av: 0.919, year: 2019, quartile: Q1] [SCOPUS => title: Plants, citescore: 1.8, snip: 1.273, sjr: 0.877, year: 2019, quartile: Q3].</p> <p>2. Vaitkevičienė, Nijolė. A comparative study on proximate and mineral composition of coloured potato peel and flesh. Journal of the Science of Food and Agriculture. Hoboken: Wiley-Blackwell. ISSN 0022-5142, 2019, vol. 99, iss. 14, p. 6227-6233. doi:10.1002/jsfa.9895. [WOS => title: JOURNAL OF THE SCIENCE OF FOOD AND AGRICULTURE, if: 2.614, aif: 3.222, aif_min: 2.184, aif_max: 4.204, cat: 3, av: 0.837, year: 2019, quartile: Q1].</p> <p>3. Vaitkevičienė, Nijolė; Kulaitienė, Jurgita; Jarienė, Elvyra; Levickienė, Dovilė; Danilčenko, Honorata; Srednicka-Tober, Dominika; Rembiałkowska, Ewa; Hallmann, Ewelina. Characterization of bioactive compounds in Colored potato (<i>Solanum Tuberosum</i> L.) cultivars grown with conventional, organic, and biodynamic methods. Sustainability. Basel: MDPI AG. ISSN 2071-1050, 2020, vol. 12, iss. 7, p. 1-13. doi:10.3390/su12072701. https://hdl.handle.net/20.500.12259/104751. https://doi.org/10.3390/su12072701 >. Social Sciences</p>	<p>First-cycle MKS2044 Functional food</p> <p>MKS3051 Coursework (Innovative product development)</p> <p>MKS4054 Gastronomic science (Processing of food raw materials II)</p> <p>Second-cycle AMZKS5002 Chemical safety of plant raw materials</p>	4.5	-	1.0

			Citation Index (Web of Science); Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Current Contents (Social and Behavioral Sciences); Food Science Source (EBSCO); Scopus. [20.500.12259/104751] [2020] [S1] [WOS => title: Sustainability, if: 2.576, aif: 4.525, aif_min: 3.486, aif_max: 5.779, cat: 3, av: 0.624, year: 2019, quartile: Q2]. [SCOPUS => title: Sustainability, citesscore: 3.2, snip: 1.165, sjr: 0.581, year: 2019, quartile: Q2].				
22	Dovilė Levickienė	Lect. Dr.	<p>The research interests: Field of Science: Agronomy (Effect of biotic and abiotic factors on the quality of plant raw materials).</p> <p>3 major works:</p> <p>1. Kulaitienė, Jurgita; Medveckienė, Brigita; Levickienė, Dovilė; Vaitkevičienė, Nijolė; Makarevičienė, Violeta; Jarienė, Elvyra. Changes in fatty acids content in organic rosehip (<i>Rosa</i> spp.) seeds during ripening. Plants-Basel. Basel: MDPI AG. ISSN 2223-7747, 2020, vol. 9 iss. 12, p. 1-15. doi:10.3390/plants9121793. https://doi.org/10.3390/plants9121793 >. Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Scopus; Biological Abstracts; BIOSIS Previews. [20.500.12259/115320] [2020] [S1] [WOS => title: Plants-Basel, if: 2.762, aif: 3.005, aif_min: 3.005, aif_max: 3.005, cat: 1, av: 0.919, year: 2019, quartile: Q1] [SCOPUS => title: Plants, citesscore: 1.8, snip: 1.273, sjr: 0.877, year: 2019, quartile: Q3].</p> <p>2. Vaitkevičienė, Nijolė; Kulaitienė, Jurgita; Jarienė, Elvyra; Levickienė, Dovilė; Danilčenko, Honorata; Srednicka-Tober, Dominika; Rembiałkowska, Ewa; Hallmann, Ewelina. Characterization of bioactive compounds in Colored potato (<i>Solanum Tuberosum</i> L.) cultivars grown with conventional, organic, and biodynamic methods. Sustainability. Basel: MDPI AG. ISSN 2071-1050, 2020, vol. 12, iss. 7, p. 1-13. doi:10.3390/su12072701. https://hdl.handle.net/20.500.12259/104751 > < https://doi.org/10.3390/su12072701 >. Social Sciences Citation Index (Web of Science); Science Citation Index Expanded (Web of Science); Current Contents (Agriculture, Biology & Environmental Sciences); Current Contents (Social and Behavioral Sciences); Food Science Source (EBSCO); Scopus. [20.500.12259/104751] [2020] [S1] [WOS => title: Sustainability, if: 2.576, aif: 4.525, aif_min: 3.486, aif_max: 5.779, cat: 3, av: 0.624, year: 2019, quartile: Q2] [SCOPUS => title: Sustainability, citesscore: 3.2, snip: 1.165, sjr: 0.581, year: 2019, quartile: Q2].</p> <p>3. Jarienė, Elvyra; Levickienė, Dovilė; Danilčenko, Honorata; Vaitkevičienė, Nijolė; Kulaitienė, Jurgita; Jakštas, Valdas; Ivanauskas, Liudas; Gajewski, Marek. Effects of biodynamic preparations on concentration of phenolic compounds in the leaves of two white mulberry cultivars. Biological Agriculture</p>	<p>First-cycle MKS4056 Food quality assessment (Science of food products)</p> <p>MKS3016 Professional internship</p> <p>MKS3014 Storage of food raw materials</p> <p>MKS3046 Manufacture of food products (Processing of food raw materials I + Food additives)</p>	3	-	0.8

			& Horticulture. Oxson: Taylor & Francis Ltd. ISSN 0144-8765. 2019, Vol. 35, iss. 2, p. 132-142. [Duomenų bazės: Science Citation Index Expanded (Web of Science); BIOSIS Previews (Thomson ISI); Biological Abstracts (Thomson ISI); Current Contents. Agriculture, Biology & Environmental Sciences (Thomson ISI); Scopus]; [Citation rate: 1.106; total citation rate: 1.69; Quartile: Q2 (2017, SCIE)].				
23	Ramunė Masienė	Lect. Dr.	<p>The research interests: Field of Science: Agronomy (Plant biology, biotechnology, physiology).</p> <p>3 major works:</p> <p>1. Blinstrubienė, Aušra; Burbulis, Natalija; Vaida Jonytienė; Ramunė Masienė. Effect of growth regulators on <i>Stevia rebaudiana</i> Bertoni callus genesis and influence of auxin and proline to steviol glycosides, phenols, flavonoids accumulation, and antioxidant activity <i>in vitro</i>“Agronomy-Basel. Basel: MDPI AG. ISSN 2073-4395, 2020, vol. 10, issue 11, 1783; doi:10.3390/agronomy10111783. [WOS => title: Agronomy-Basel, if: 2.603, aif: 2.643, aif_min: 2.281, aif_max: 3.005, cat: 2, av: 0.943, year: 2019, quartile: Q1].</p> <p>2. Blinstrubienė, Aušra; Burbulis, Natalija; Masienė, Ramunė. Genotypic and exogenous factors affecting linseed ovary culture. Agriculture. Lithuanian Research Centre for Agriculture and Forestry, Aleksandras Stulginskis University. Akademija, (Kėdainių r.). ISSN 1392-3196, T. 104, Nr. 3 (2017), p. 243–248.</p> <p>3. Jonytienė, Vaida; Masienė, Ramunė; Burbulis, Natalija; Blinstrubienė, Aušra. Factors affecting Zantedeschia Spreng. dedifferentiation in vitro. Biologija. Vilnius: Publishing House of the Lithuanian Academy of Sciences. ISSN 1392-0146, 2017, vol. 63, nr. 4, p. 334-340.</p>	First-cycle MKS3020 Biotechnology of food raw materials	7	-	1.0
TEACHING STAFF FROM OTHER FIELDS OF STUDY							
24	Virginija Dulskienė	Prof. Dr.	<p>The research interests: Field of Science: Public health (Children's health research).</p> <p>3 major works:</p> <p>1. Bixby, H; Bentham, James; Zhou, Bin; Di Cesare, Mariachiara; Paciorek, C. J; Bennett, J. E; Dulskienė, Virginija; Klumbienė, Jūratė; Kučienė, Renata; Tamošiūnas, Abdonas. Rising rural body-mass index is the main driver of the global obesity epidemic in adults: research letter. Nature. London: Nature Publishing Group. ISSN 0028-0836. eISSN 1476-4687. 2019, vol. 569, no. 7755, p. 260-264. DOI: 10.1038/s41586-019-1171-x. [Citav. rod.: 43,070, bendr. cit. rod.: 5,144, kvartilis: Q1 (2018, InCites JCR SCIE)] [Indėlis: 0,001; indeksas: 0,008].</p>	<p>First-cycle MKS4055 Physiology of human nutrition</p> <p>Second-cycle AMZKS5009 Human ecology and environmental epidemiology</p>	18	20	0.5

			<p>2. Kuciene, Renata; Dulskienė, Virginija. Associations between body mass index, waist circumference, waist-to-height ratio, and high blood pressure among adolescents: a cross-sectional study. Scientific reports. London: Nature Publishing Group. ISSN 2045-2322. 2019, vol. 9, no. 1, 9493, p. 1-11. DOI: 10.1038/s41598-019-45956-9. [Citav. rod.: 4,011, bendr. cit. rod.: 5,144, kvartilis: Q1 (2018, InCites JCR SCIE)] [Indėlis: 0,500; indeksas: 0,390].</p> <p>3. Simonyte, Sandrita; Kuciene, Renata; Dulskienė, Virginija; Lesauskaitė, Vaiva. Associations of the adrenomedullin gene polymorphism with prehypertension and hypertension in Lithuanian children and adolescents: a cross-sectional study. Scientific reports. London: Nature Publishing Group. ISSN 2045-2322. 2019, vol. 9, no. 1, p. 1-9. DOI: 10.1038/s41598-019-43287-3. [Citav. rod.: 4,011, bendr. cit. rod.: 5,144, kvartilis: Q1 (2018, InCites JCR SCIE)] [Contribution: 0.250; index: 0.195].</p>	AMZKS6003 Bioethics			
25	Saulius Mickevičius	Prof. Dr.	<p>The research interests: Field of Science: Physics (Mathematical methods in physics; theoretical nuclear physics; computer physics).</p> <p>3 major works:</p> <p>1. Stepšys, Augustinas; Mickevičius, Saulius; Germanas, Darius; Kalinauskas, Ramutis Kazys. Calculation of orbital fractional parentage coefficients for five particles in translationally invariant basis. Computer physics communications. Amsterdam, Netherlands: Elsevier B.V. ISSN 0010-4655. 2019, Vol. 236, p. 26–33.</p> <p>2. Nadiia Matvieieva, Kateryna Drobot, Volodymyr Duplij, Yakiv Ratushniak, Anatolij Shakhovsky, Tetiana Kyrpa-Nesmiian, Saulius Mickevičius. Jan Brindza. Flavonoid content and antioxidant activity of Artemisia vulgaris L. “hairy” roots. Preparative Biochemistry and Biotechnology. ISSN: 1082-6068. 2018, Vol. VOL. 49, NO. 1, 82–87.</p> <p>3. Germanas, Darius; Stepšys, Augustinas; Mickevičius, Saulius; Kalinauskas, Ramutis Kazys. HOTB update: Parallel code for calculation of three- and four-particle harmonic oscillator transformation brackets and their matrices using OpenMP. Computer physics communications. Amsterdam, Netherlands: Elsevier B.V. ISSN 0010-4655. 2017, Vol. 215, p. 259–264.</p>	First-cycle MKS2042 Physics	20	2	1.5
26	Eglė Sendžikienė	Prof. Dr.	<p>The research interests: Field of Science: Environmental engineerin (Renewable energy sources; research in the field of biofuel and biogas production, usage, and influence on environment).</p> <p>3 major works:</p> <p>1. Sendžikienė, E.; Santaraite, M.; Makareviciene, V. Lipase-Catalysed in Situ Transesterification of Waste Rapeseed Oil to Produce Diesel-Biodiesel Blends.</p>	First-cycle MKS1040 Physical and colloid chemistry (Organic chemistry)	15	-	1.0

			Processes 2020, vol. 8, iss. 9, p. 1-13, Article no. 1118 [if – 2.753, quartile: Q2] doi:10.3390/pr8091118. 2. Skorupskaitė, Virginija; Makarevičienė, Violeta; Sendžikienė, Eglė ; Gumbytė, Milda. Microalgae Chlorella sp. cell disruption efficiency utilising ultrasonication and ultrahomogenisation methods. Journal of Applied Phycology. Dordrecht: Springer. ISSN 0921-8971, 2019, vol. 31, iss. 4, p. 2349-2354. [if: 2.635, aif: 3.056, year: 2019, quartile: Q1] doi:10.1007/s10811-019-01761-5. 3. Sendžikienė, Eglė ; Sinkūnienė, Dovile; Kazanceva, Irina; Kazancev, Kiril. Optimization of low-quality rapeseed oil transesterification with butanol by applying the response surface methodology. Renewable energy. Oxford: Elsevier Ltd. ISSN 0960-1481, Vol. 87, part 1 (2016), p. 266-272 [if: 4.357, aif: 4.951, year: 2016, quartile: Q1] doi: 10.1016/j.renene.2015.10.024.				
27	Valdas Paulauskas	Prof. Dr.	The research interests: Field of Science: Environmental engineerin (Heavy metal mobility, bioavailability, removal, and immobilization; formulation and properties of macro- and microelement containing liquid fertilizers; renewable waste recycling, organic syntheses of heterocyclic compounds). 3 major works: 1. Solovjova, Joana; Malinauskas, Tadas; Daškevičienė, Marytė; Kasparavičius, Ernestas; Ilčiukaitė, Aistė; Šačkus, Algirdas; Paulauskas, Valdas ; Getautis, Vytautas. Triphenylamine-based phenylhydrazone-indolium cationic dyes for solid-state DSSC applications. Materials letters. Amsterdam: Elsevier Science. ISSN 0167-577X, 2020, Vol. 274, p. 1-5. doi: 10.1016/j.matlet.2020.128001. Available online: < https://www.sciencedirect.com/science/article/pii/S0167577X20307060#! > < https://doi.org/10.1016/j.matlet.2020.128001 >. Science Citation Index Expanded (Web of Science); ScienceDirect. [20.500.12259/108580] [2020] [S1] [WOS => title: MATERIALS LETTERS, if: 3.019, aif: 4.592, aif_min: 4.232, aif_max: 4.951, cat: 2, av: 0.645, year: 2018, quartile: Q2] [SCOPUS => title: Materials Letters, citesscore: 2.99, snip: 0.912, sjr: 0.771, year: 2018, quartile: Q1] [ai: 0,25, iai: 0,125, na: 8, nia :1, nip: 0, pai: 0,579, piai: 0,289, al: 0.357]. 2. Kasiulienė, Alfreida; Paulauskas, Valdas ; Marozas, Vitas; Waara, Sylvia. Accumulation of heavy metals in forest dwarf shrubs and dominant mosses as bioindicators of atmospheric pollution. Journal of Elementology. Olsztyn: Polskie Towarzystwo Magnezologiczne. ISSN 1644-2296, 2019, Vol. 24, iss. 3, p. 1079 - 1090. doi:10.5601/jelem.2019.24.1.1744. Available online: < https://www.vdu.lt/cris/bitstream/20.500.12259/99230/2/ISSN1644-2296_V_24.N_3.P_1079-1090.pdf > < https://hdl.handle.net/20.500.12259/99230 > <	Second-cycle AMZKS6008 Biodegradatio n of organic compounds	30	28	0.9

			<p>https://doi.org/10.5601/jelem.2019.24.1.1744 >. Science Citation Index Expanded (Web of Science); Scopus. [20.500.12259/99230] [2019] [S1] [WOS => title: Journal of Elementology, if: 0.733, aif: 3.98, aif_min: 3.98, aif_max: 3.98, cat: 1, av: 0.184, year: 2018, quartile: Q4] [SCOPUS => title: Journal of Elementology, citescore: 0.86, snip: 0.638, sjr: 0.271, year: 2018, quartile: Q3] [ai: 1,062, iai: 0,354, na: 4, nia :3, nip: 1, pai: 1,453, pai: 0,484, al: 0.857].</p> <p>3. Kasiulienė, Alfreda; Paulauskas, Valdas; Kumpienė, Jūratė. Chelant-Assisted Accumulation of Cd, Cu, and Zn in Rapeseed (<i>Brassica napus</i> L.) Biomass as a Renewable Energy Feedstock. Polish Journal of Environmental Studies. Olsztyn: HARD Publishing Company. ISSN 1230-1485, Vol. 25, No. 5 (2016), p. 1985-1994. doi:10.15244/pjoes/62996. Available online: < http://www.pjoes.com/pdf-62996-23836?filename=Chelant-Assisted.pdf >. Science Citation Index Expanded (Web of Science); CAB Abstracts. [20.500.12259/89946] [2016] [S1] [WOS => title: Polish Journal of Environmental Studies, if: 0.793, aif: 3.392, aif_min: 3.392, aif_max: 3.392, cat: 1, av: 0.234, year: 2016, quartile: Q4] [SCOPUS => title: Polish Journal of Environmental Studies, citescore: 1.09, snip: 0.786, sjr: 0.33, year: 2016, quartile: Q2].</p>				
28	Asta Raupelienė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Economics (Strategic human resource management; quality and standardization of human resource management functions; innovative leadership; recruitment of staff).</p> <p>3 major works:</p> <p>1. Zielinska-Chmielewska, A. ir Raupelienė, A. (2020). Practical use of chosen recruitment methods in applying for a job in Poland and Lithuania. Management theory and studies for rural business and infrastructure development. 42 (1), 89-96. doi:10.15544/mts.2020.09 [20.500.12259/104746] [2020] [S1] [ai: 0,707, iai: 0,707, na: 2, nia :1, nip: 1, pai: 0,707, pai: 0,707, al: 0.571].</p> <p>2. Bertolozzi Caredio, D. ir Raupelienė, A. (2017). CETA and Italian Agri-food products: an analysis on compared advantages of the main Italian Agri-food sectors. Rural development 2017: bioeconomy challenges: proceedings of the 8th international scientific conference, 23-24th November 2017, Aleksandras Stulginskis University, 1286-1291. doi:10.15544/RD.2017.116 [20.500.12259/108752] [2017].</p> <p>3. Tamulienė, V., Raupelienė, A. ir Kazlauskienė, E. (2017). Farmers' Preferences Selecting Agricultural Consulting Services. Montenegrin Journal of Economics, 13 (4), 79-87. doi:10.14254/1800-5845/2017.13-4.6 [20.500.12259/91330] [2017] [S1] [SCOPUS => title: Montenegrin Journal of Economics, citescore: 0.5, snip: 0, sjr: 0, year: 2017, quartile: Q3].</p>	Second-cycle AMZKS5004 Career management modelling	26	20	1.0

29	Egidijus Zvicevičius	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Mechanical engineering (Storage, drying and processing of plant products for food and biofuels).</p> <p>3 major works:</p> <p>1. Paulikienė, Simona; Raila, Algirdas; Žvirdauskienė, Renata; Zvicevičius, Egidijus. Application of an environmentally friendly preventive measure for the preservation of fresh vegetables. Journal of food science and technology. New Delhi: Springer India. ISSN 0022-1155, 2019, vol. 56, iss. 4, p. 2147–2157. doi:10.1007/s13197. Available online: < https://doi.org/10.1007/s13197-019-03696-8 >. Science Citation Index Expanded (Web of Science); Scopus; SpringerLINK. [20.500.12259/61882] [2019] [S1] [WOS => title: JOURNAL OF FOOD SCIENCE AND TECHNOLOGY-MYSORE, if: 1.85, aif: 2.851, aif_min: 2.851, aif_max: 2.851, cat: 1, av: 0.649, year: 2018, quartile: Q2] [SCOPUS => title: Journal of Food Science and Technology, citescore: 2.41, snip: 1.174, sjr: 0.786, year: 2018, quartile: Q1] [ai: 0,75, na: 4, nia :3, nip: 0, pai: 1,723].</p> <p>2. Zvicevičius, Egidijus; Raila, Algirdas; Čiplienė, Aušra; Černiauskienė, Živilė; Kadžiulienė, Žydrė; Tilvikienė, Vita. Effects of moisture and pressure on densification process of raw material from Artemisia dubia Wall. Renewable energy. Oxford: Elsevier Ltd. ISSN 0960-1481, Vol. 119 (2018), p. 185-192. doi: doi.org/10.1016/j.renene.2017.12.016. Available online: < https://www.sciencedirect.com/science/article/pii/S0960148117312120 >. Science Citation Index Expanded (Web of Science); ScienceDirect; Scopus. [20.500.12259/91445] [2018] [S1] [WOS => title: RENEWABLE ENERGY, if: 5.439, aif: 5.72, aif_min: 5.612, aif_max: 5.829, cat: 2, av: 0.942, year: 2018, quartile: Q1] [SCOPUS => title: Renewable Energy, citescore: 6.19, snip: 2.075, sjr: 1.889, year: 2018, quartile: Q1] [ai: 0,668, na: 6, nia :4, nip: 0, pai: 1,963].</p> <p>3. Čiplienė, Aušra; Maruška, Audrius Sigitas; Raila, Algirdas; Zvicevičius, Egidijus; Ragažinskienė, Ona; Stankevičius, Mantas. The quantity of biologically active substances in purple coneflower as influenced by the preparation methods and drying technologies. Agriculture. Akademija, (Kėdainių r.): LAMMC Institute of Agriculture ISSN 1392-3196, T. 102, Nr. 3, 2015, p. 297-304. doi:10.13080/z-a.2015.102.038. Available online: < http://www.zemdirbyste-agriculture.lt/wp-content/uploads/2015/08/102_3_str38.pdf >. Science Citation Index Expanded (Web of Science); CAB Abstracts; Scopus. [20.500.12259/50877] [2015] [S1] [WOS => title: Zemdirbyste-Agriculture, if: 0.579, aif: 1.44, aif_min: 1.44, aif_max: 1.44, cat: 1, av: 0.402, year: 2015, quartile: Q3] [SCOPUS => title: Zemdirbyste, citescore:</p>	First-cycle MKS4053 Engineering of processing and storage of food raw materials and products	19	6	1.36
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			0.69, snip: 0.732, sjr: 0.263, year: 2015, quartile: Q2] [ai: 1,002, na: 6, nia :6, nip: 0, pai: 1,808].				
30	Daiva Rimkuvienė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Mathematics (Mathematics, probability theory and mathematical statistics, educology).</p> <p>3 major works:</p> <ol style="list-style-type: none"> 1. J. Kaminskienė, D. Rimkuvienė, E. Aruvee. Mathematical readiness assessment for first-year students. Education and New Developments 2019. Edited by M. Carmo. Lisbon: InScience Press. ISSN 2184-044X. 2019, vol. 2, ISBN 9789895431250. p. 265-267. 2. J. Kaminskienė, D. Rimkuvienė. Sharing the experience of teaching mathematics with Moodle. Teaching Mathematics: Retrospective and Perspectives: 18th international conference: proceedings, May 12-13, 2017, Riga, Latvia. Riga: University of Latvia, 2018. ISSN 2592-8198. p. 29-35. 3. J. Kaminskienė, D. Rimkuvienė. Attitudes of First Year Students Towards Studying Mathematics. The Future of Education : the 6rd Conference Proceedings, Florence, Italy, 30 June-1 July 2016. Florence, 2016. ISBN 9788862927550. p. 482-486. (Straipsnis recenzuojamoje užsienio tarptautinės konferencijos medžiagoje). 	<p>First-cycle AGR1004 Mathematics and computer science</p> <p>MKS3052 Information technology in the food sector</p>	31	9	1.5
31	Milda Gumbytė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Chemistry (Production of environmentally friendly lubricants and their properties; new raw materials for biodiesel fuel production; improvement of biofuels quality; the environmental performance of biofuels).</p> <p>3 major works:</p> <ol style="list-style-type: none"> 1. Kreivaitis, Raimondas; Gumbytė, Milda; Kupčinskas, Artūras; Kazancev, Kiril; Makarevičienė, Violeta. Investigating the tribological properties of PILs derived from different ammonium cations and long chain carboxylic acid anion. Tribology international. ISSN 0301-679X, 2020, vol. 141, p. [1-7]. doi: 10.1016/j.triboint.2019.105905. Available online: < https://doi.org/10.1016/j.triboint.2019.105905 > < https://hdl.handle.net/20.500.12259/99876 >. Science Citation Index Expanded (Web of Science); ScienceDirect; INSPEC; CAB Abstracts; Scopus. [20.500.12259/99876] [2020] [S1] [WOS => title: TRIBOLOGY INTERNATIONAL, if: 4.271, aif: 3.109, aif_min: 3.109, aif_max: 3.109, cat: 1, av: 1.374, year: 2019, quartile: Q1] [SCOPUS => title: Tribology International, citesscore: 7.9, snip: 2.373, sjr: 1.536, year: 2019, quartile: Q1] [ai: 1, iai: 0,2, na: 5, nia :5, nip: 0, pai: 3,748, pai: 0,75, al: 0.5]. 2. Kreivaitis, Raimondas; Gumbytė, Milda; Kupčinskas, Artūras; Kazancev, Kiril; Ta, Thi Na; Horng, Jeng Haur. Investigation of tribological properties of 	<p>First-cycle MKS1037 Inorganic and analytical chemistry</p> <p>MKS1040 Physical and colloid chemistry (Organic chemistry)</p>	8	-	1.0

			<p>two protic ionic liquids as additives in water for steel– steel and alumina–steel contacts. <i>Wear</i>. Lausanne: Elsevier Science. ISSN 0043-1648, 2020, vol. x, p. 1-14. doi: 10.1016/j.wear.2020.203390. Available online: < https://doi.org/10.1016/j.wear.2020.203390 >. Science Citation Index Expanded (Web of Science); INSPEC; ScienceDirect; Compendex; Current Contents (Engineering, Computing & Technology). [20.500.12259/108880] [2020] [S1] [WOS => title: WEAR, if: 4.108, aif: 4.192, aif_min: 3.109, aif_max: 5.274, cat: 2, av: 0.938, year: 2019, quartile: Q1] [SCOPUS => title: Wear, citesscore: 5.8, snip: 2.458, sjr: 1.335, year: 2019, quartile: Q1] [ai: 0,944, iai: 0,236, na: 6, nia :4, nip: 1, pai: 2,794, pai: 0,699, al: 1].</p> <p>3. Makarevičienė, Violeta; Sendžikienė, Eglė; Gumbytė, Milda. Application of simultaneous oil extraction and transesterification in biodiesel fuel synthesis: a review. <i>Energies</i>. Basel: MDPI AG. ISSN 1996-1073, 2020, vol. 13, iss. 9, p. 1-16. doi:10.3390/en13092204. Available online: < https://www.mdpi.com/1996-1073/13/9/2204 > < https://doi.org/10.3390/en13092204 >. Science Citation Index Expanded (Web of Science); Scopus; Current Contents (Engineering, Computing & Technology). [20.500.12259/105020] [2020] [S1] [WOS => title: Energies, if: 2.702, aif: 6.347, aif_min: 6.347, aif_max: 6.347, cat: 1, av: 0.426, year: 2019, quartile: Q3] [SCOPUS => title: Energies, citesscore: 3.8, snip: 1.154, sjr: 0.635, year: 2019, quartile: Q2] [ai: 0,999, iai: 0,333, na: 3, nia :3, nip: 0, pai: 1,85, pai: 0,617, al: 1.143].</p>				
32	Anželika Dautartė	Assoc. Prof. Dr.	<p>The research interests: Field of Science: Ecology and environmental (Dynamic sustainability of ecosystems).</p> <p>3 major works:</p> <p>1. Cole, L.J., Kleijn, D., Dicks, L.V., Stout, J.C., Potts, S.G., Albrecht, M., Balzan, M.V., Bartomeus, I., Bebeli, P.J., Bevk, D., Biesmeijer, J.C., Chlebo, R., Dautartė, A., Emmanouil, N., Hartfield, C., Holland, J.M., Holzschuh, A., Knoben, N.T.J., A critical analysis of the potential for EU Common Agricultural Policy measures to support wild pollinators on farmland. <i>Journal of Applied Ecology</i>. Hoboken: Wiley. ISSN 0021-8901. 2020, vol. 57, iss. 4, p. 681-694. IF (2019) – 5.84. [Quartile: Q1].</p> <p>2. Marozas, V., Augustaitis, A., Pivoras, A., Baumgarten, M., Mozgeris, G., Sasnauskienė, J., Dautartė, A., Abraitienė, J., Byčėnėnė, S., Mordas, G., Ulevičius, V., Matyssek, R., Comparative analyses of gas exchange characteristics and chlorophyll fluorescence of three dominant tree species during the vegetation season in hemi-boreal zone, Lithuania. <i>Journal of Agricultural Meteorology</i>. Tokyo: Society of Agricultural Meteorology of Japan. ISSN 0021-</p>	First-cycle MKS2003 General ecology and environmental protection (General ecology)	20	20	1.0

			8588. 2019, vol. 75, iss. 1, p. 3-12. IF 1,477 (2019). Agriculture, Multidisciplinary - Q2, Meteorology and Atmospheric Science - Q4. 3. Stravinskienė, V., Bartkevičius, E., Abraitienė, J., Dautartė, A. Assessment of <i>Pinus sylvestris</i> L. tree health in urban forests at highway sides in Lithuania. Global ecology and conservation. Amsterdam: Elsevier science BV. ISSN 2351-9894. 2018, vol. 16, p. 1-10. IF 2,526 (2019). Biodiversity Conservation and Ecology - Q2.				
33	Regina Malinauskaitė	Assoc. Prof. Dr.	The research interests: Field of Science: Biology (Plant physiology, allelopathy; influence of ionized water on the physiological processes; plant biodiversity). 3 major works: 1. Malinauskaitė, R.; Šaluchaitė, A. Effect of ionized water and stratification on the condition of <i>Allium ursinum</i> L. seeds. Biologija. Vilnius: Publishing House of the Lithuanian Academy of Sciences. ISSN 1392-0146, 2018, vol. 64, nr. 2, p. 160–165. 2. Malinauskaitė, R.; Kazlauskas, E. Investigation of sow lentil reaction to ionized alkaline water during early stages of ontogenesis. Rural Development 2015: Towards the Transfer of Knowledge, Innovations and Social Progress: Proceedings of the 7th International Scientific Conference, 19–20th November 2015, p. 1-6. 3. Malinauskaitė, R. Rūgščiojo jonizuoto vandens įtaka sėjamojo žirnio (<i>Pisum sativum</i> L.) biometriniams ir biocheminiams rodikliams. [Impact of acidic ionized water on head biometric and biochemical parameters]. Žemės ūkio mokslai [Agricultural sciences]. ISSN 1392-0200, 2016, t. 23, nr. 2, p. 56-64.	First-cycle MKS2004 Plant physiology	27	-	1.0
34	Indrė Bagdonienė	Lect. Dr.	The research interests: Field of Science: Environmental engineerin. 3 major works: 1. Bleizgys, Rolandas; Bagdonienė, Indrė. Control of ammonia air pollution through the management of thermal processes in cowsheds. Science of the total environment. ISSN 0048-9697. Vol. 568 (2016), p. 990-997. 2. Bleizgys, Rolandas; Bagdonienė, Indrė. The problems of microclimate in Lithuanian cowsheds. Rural development 2019: research and innovation for bioeconomy (RD2019): 9th international scientific conference, September 26-28, 2019, Agriculture Academy of Vytautas Magnus University. ISSN 1822-3230., p. 1-8	First-cycle MKS4029 Packaging materials and technologies	6	6	1.28