

**LITHUANIAN UNIVERSITY OF HEALTH SCIENCES**

**VETERINARY ACADEMY**



**STUDY FIELD OF ACULTURE SCIENCE**

**FIRST CYCLE PROGRAMME**

**ANIMAL HUSBANDRY TECHNOLOGY**

**(National code – 612D73001)**

**THE SELF-EVALUATION REPORT**

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Kaunas

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## KEY INFORMATION OF THE STUDY PROGRAMME

Title of the study programme	Animal Husbandry Technology
National code	612D73001
Study area	Biomedical sciences
Study field (group)	Agriculture sciences
Study field (branch)	Animal Husbandry
Higher education type	University
Circle (type) of study	Bachelor
Study mode(duration in years)	Full-time (4 year); Continuous (6 year)
Scope of the programme in credits	240 ECTS
Qualification awarded	Bachelor of Agricultural Sciences
The Registration date of study programme	1992
The programme language	Lithuanian

## SELF-EVALUATION GROUP OF THE STUDY PROGRAMME

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1.	Dr. Evaldas Šlyžius	Head of self-evaluation group	Introduction, Administration, coordination, development of the final self-evaluation report, presentation the faculty.
2.	Prof. Vida Juozaitienė	Member	The programme aims and learning outcomes.
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4.	Assoc. Prof. Asta Racevičiūtė Stupelienė	Member	Facilities and learning resources
5.	Dr. Renata Bižienė	Member	The teaching staff
6.	Dr. Lina Ašmenskaitė	Member	Programme management
7.	Stud. Agnietė Švedaitė,	Member	The curriculum design
8.	Stud. Aistė Katolikaitė	Member	The teaching staff
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10.	Aida Grockienė	Member	Study process and students' performance
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## ABBREVIATIONS

AHT - The animal husbandry technology;  
AIKOS - Open Information, Counselling and Guidance System;  
CC - Career Centre;  
CIRS - Centre of International Relations and Study;  
ECTS – European Credit Transfer and Accumulation system;  
FAHT - Faculty of Animal Husbandry Technology;  
FIRSTCLASS - university intranet;  
LAHI - Lithuanian Animal Husbandry Institute;  
LAMABPO - Association of Lithuanian Higher Education Institutions;  
LIC - Library and information centre;  
LR - Republic of Lithuania;  
LUHS - Lithuanian University of Health Sciences;  
LUHSSIS - Lithuanian University of Health Sciences study information system;  
LVA Lithuanian Veterinary Academy;  
LVI - Lithuanian Veterinary Institute;  
MA - Medical Academy;  
SA – Student Council;  
SKVC - Centre for Quality Assessment in Higher Education;  
SPC - Study Programme Committee;  
SSS - Students 'Scientific Society';  
TBA - Interlibrary loan directory;  
VA – Veterinary Academy;  
VU – Vilnius University.

## INTRODUCTION

1. Lithuanian University of Health Sciences (hereinafter referred to as LUHS) is a state university established on the 30 of June in 2010 by the resolution of Seimas of the Republic of Lithuania, according to which two institutions of higher education - Kaunas University of Medicine and Lithuanian Veterinary Academy were merged. LUHS is the largest university of biomedical study area in Lithuania.
2. The University has collegial management bodies – the Council, Senate and a sole management body – the rector. The university encompasses academies, faculties, research institutes, departments, rehabilitation centre, veterinary clinics, institutes, science laboratories, Centre for Practical Training and Experimentation, and other structural and functional divisions required for study, research, healthcare, social, cultural and other needs. Academy is the main division of the university. The university comprises Medical Academy and Veterinary Academy. Veterinary academy consists of Veterinary Faculty and Faculty of Animal Husbandry Technology. Over 7800 students (including 761 foreign students from over 55 countries) study in more than 40 programmes offered by the university.
3. Teaching staff of LUHS consists of teachers, researchers, specialists of human and animal health care, administration and other employees maintaining activity of the university. In LUHS 168 professors, 243 associate professors, 327 lecturers and 448 assistant professors are employed. The sufficient number of staff enables to execute high quality basic, master’s and doctoral studies in the agricultural area. LUHS actively participates in Erasmus exchange programme. The programmes for academic exchange are signed with universities in 27 European countries.
4. The Faculty of Animal Husbandry dates back to 1936, when in Lithuanian Veterinary Academy (LVA) veterinary doctors were being trained, whereas in 1946, the second faculty (Faculty of Zootechnics) started to train zootechnicians. In 1992, the faculty was restructured and named as Faculty of Animal Husbandry (FAHT).
5. In 2001, Lithuanian Animal Husbandry Institute (LAHI) and Lithuanian Veterinary Institute (LVI) were joined to LVA, and became parts of it. The formed structure enables to ensure high quality of the study, research development in animal husbandry, veterinary, food safety and animal wellness areas, science and business cooperation, to implement new research technologies in manufacturing of animal origin production. Doctoral studies in the field of agricultural sciences are being executed.
6. The employees of the FAHT perform fundamental, applied research, experimental development, which contributes to improvement of teachers and researchers’ qualification and quality of taught subjects, and to development of students research skills.
7. The activity of the faculty is governed by faculty Council and the dean. The provisions of the faculty Council are obligatory for faculty employees and students. The dean heads the faculty implementing the requirements of LUHS Statute, and provisions of the faculty Council. Pursuant to the position, the dean is a member of faculty Council and the rectorate.
8. Self-evaluation of the Programme was carried out by a group established by the resolution of LUHS FAHT dean (17 Oct. 2016, No VGF-1-57). The group consists of 11 members (8 teachers of the university, 2 students and a representative of social partners). The final version of self-evaluation was approved by all members of the group and by the Board of Faculty of ATH (table 1).
9. The external evaluation of the first circle study programme ATH was made by the Centre for Quality Assessment in Higher Education, in 2014. (Team leader: Prof. Dr. Ulf Magnusson).

**Table 1. Work schedule of the group of self-evaluation**

Activities	Date
Discussion of self-evaluation course and distribution of activities.	24-10-2016
Data collection and analysis.	24-10-2016 – 22-12-2016
Discussion of initial self-evaluation results and means to ensure the quality of the programme.	22-12-2016 – 03-01-2017
Discussion of self-evaluation summary project.	04-01-2017
Self-evaluation summary presentment for faculty community, social partners and Board of Faculty of Animal Husbandry Technology.	17-01-2017

# ANALYSIS OF PROGRAMME

## THE PROGRAMME AIMS AND LEARNING OUTCOMES

10. In Lithuania the animal husbandry field is important traditionally, thus specialists of this area are consistently in demand. Specificity of Lithuania (geographical position, farming traditions) is favourable for development of animal husbandry, whereas technical potential of reproducing meat, milk and other products provides all possibilities for reproduction of animal origin products. In national Programme of 2014-2020 for development of animal husbandry area<sup>1</sup>, the increase of farm animals number is planned: 15% - cattle, 20% - pigs. Only 30% of persons engaged in Lithuanian farming have basic and comprehensive education for farming. The demand of animal husbandry specialists, able to work in national institutions and private business is real and prospective. It is evidenced by official information sources: in 2012, as per order of Lithuanian Ministry of Agriculture, the analysis of the demand for agricultural qualified workers was performed (The analysis of the demand for agricultural specialists and qualified workers<sup>2</sup>): in 2017-2020 the demand of agricultural specialists – 67 specialists per year.
11. The study Programme ensures formation of steady theoretical knowledge and practical skills, guaranteeing career in labor market of Lithuania and foreign countries. The animal husbandry technology (AHT) Programme is aiming at preparing highly qualified specialists bachelors of agricultural area, using teaching-scientific staff, experimental base for breed value investigation of laboratory animals, reproduction, and quality analysis of animal origin products.
12. A person, having acquired professional qualification of animal husbandry technology may take a position of animal husbandry technologist and realise the knowledge and skills in a variety of animal husbandry areas: animal raising, keeping, care, working in breeding enterprises and farms, industry of feeds production, enterprises for feeds evaluation and control, enterprises of production quality evaluation both in national and foreign sectors. Bachelors of AHT may continue their study in master's programme.
13. Analyzing graduates employment, a successful integration of some specialists to the areas of various ministries has been detected, therefore graduates of the programme will be required not only in the area under Ministry of Agriculture, but in the areas under ministries of economics and environment.
14. Considering Lithuanian prospects of agricultural development, regional strategic goals for harmonious development, in order to ensure progressive growth related to promotion of knowledge, research, and innovation – the aim of AHT study Programme is: to train animal husbandry technologists of high qualification, capable to apply and ensure the updated technologies for animal raising, handling, balanced nutrition, breeding, productivity enhancement, quality and safety of animal origin products, animal wellness; to investigate, to propagate knowledge, to solve complicated problems of animal husbandry area, to apply skills and knowledge in independent activity; to train educated, integral personalities ready for second cycle study.
15. The objective of the study Programme is pursuant to the university aims of strategic development for 2017-2021<sup>3</sup>. The mission – to create, cumulate, systemize, and propagate science knowledge, the newest science and study achievements, to train and educate creative, honest, initiative, healthy, independent and enterprising personality, to treasure democracy and welfare, to educate healthy and educated society. Exceptional role of the LUHS in the process is the objective of healthy society ensuring social and economic progress, civilized identity of Lithuania, creation of Lithuanian and world cultural traditions, their maintaining and development. The guarantee of animal health and welfare is an integral part of this attempt.

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<sup>1</sup> <https://zum.lrv.lt/lt/veiklos-srity/zemes-ir-maisto-ukis/zemes-ukis/nacionaline-2014-2020-metu-gyvulininkystes-sektoriaus-pletros-programa>

<sup>2</sup> [https://zum.lrv.lt/uploads/zum/documents/files/LT\\_versija/Veiklos\\_srity/Mokslas\\_mokymas\\_ir\\_konsultavimas/Moksliniu\\_tyrimu\\_ir\\_taikomosios\\_veiklos\\_darbu\\_galutines\\_ataskaitos/aigiamojiLRTISpec\\_poreikis2012galutine.pdf](https://zum.lrv.lt/uploads/zum/documents/files/LT_versija/Veiklos_srity/Mokslas_mokymas_ir_konsultavimas/Moksliniu_tyrimu_ir_taikomosios_veiklos_darbu_galutines_ataskaitos/aigiamojiLRTISpec_poreikis2012galutine.pdf)

<sup>3</sup> <http://www.lsmuni.lt/media/dynamic/files/11107/2tarybosprendimas1priedaslsmpletrosgaire.pdf>

16. Intended outcomes of the study Programme:

16.1. To apply knowledge and understanding about biological peculiarities of farm animals and plants, principles of indications heritability and changeability, the peculiarities of animal productivity and principles of ecology and environmental protection:

16.1.1. to analyse, evaluate and compare functional and morphological diversity of various biological systems, structure and composition of animals' organs, physiological and biochemical processes in a living organism;

16.1.2. to understand and evaluate environmental factors, their impact on ecosystem, health of humans and animals, usage and protection of nature resources of all kinds;

16.1.3. to understand basic laws of environmental protection and apply them in the activity performed;

16.1.4. to apply fundamental knowledge of genetics, required for work with animals and animal biological material and to understand correlation between impairments in genome functioning and farm indications, diseases of animals; to evaluate animals according to genotype and phenotype; to breed animals improving their genetic potential.

16.2. Ensure, evaluate and control complete animal nutrition, resources of feeds, their quality and technologies of their preparing:

16.2.1. to apply progressive technologies for preparing and producing various feeds, feed additives and supplements;

16.2.2. to obtain various samples for different laboratory analyses, to prepare samples for analysis, applying optimal ways for their storage or conservation;

16.2.3. to perform main analysis procedures, to apply general analysis methods for investigation and analyse the obtained results;

16.2.4. to identify feeds quality on the ground of sensory analysis and laboratory analyses data, to calculate the ratios for animals and to apply evaluation methods for feeds nutritive characteristics according to the energy of metabolism and production;

16.2.5. to apply various ways for feeds storage, preparing for feeding, distribution, mechanization of animal watering processes, equipment and tools;

16.2.6. to implement system of Good production practice in mechanism of animal husbandry;

16.2.7. to apply systems of rationed animal feeding, required nutrients to maintain the life processes and production synthesis.

16.2.8. to organise animal feeding for various technological groups, ensuring their productivity, wellness, reproductive characteristics, rational and economic usage of feeds.

16.3. To apply and control the newest technologies for animal raising, keeping, handling, breeding, ensuring quantity and quality of the production, conformity to the production standards and efficiency of the farm:

16.3.1. to analyse and generalise the data of animal productivity and breeding recording, to foresee results of selection;

16.3.2. to analyse and apply legislation of animal breeding;

16.3.3. to understand, apply and evaluate the factors affecting production quality of cattle meat and milk; technologies for raising and keeping progeny and adult animals, breeding;

16.3.4. to choose adequate milking equipment and milking technology, to prepare and keep milk in an appropriate way, to collect milk samples;

16.3.5. to apply industrial methods and the newest technology for getting milk of good quality;

16.3.6. to evaluate milk quality, condition of milk dishes, milking apparatus considering veterinary sanitation, to perform basic analysis of milk and milk products and to determine their quality;

16.3.7. to understand, apply and evaluate technologies for raising and producing products of sheep, goats, production quality and to propose schemes for its improvement, to keep records of breeding;

16.3.8. to evaluate pig breeding prospects, productivity and producing of organic poultry products;

16.3.9. to organize reproduction of a pig herd, choosing keeping systems, technologies for keeping and rearing in pig enterprises of different production field, commercial poultry production;

- 16.3.10. to apply practical skills for horses identification and main technologies for selection, raising training and optimal use of horses;
- 16.3.11. to evaluate breeds of carnivorous and herbivorous fur animals, their reproductive properties, progeny raising, feeding, handling, disease prevention, fur quality;
- 16.3.12. evaluate and ensure genetic potential of poultry, quality of systems for their keeping, production of eggs and meat - poultry production;
- 16.3.13. to apply and evaluate strategy for development of fish farming, technologies for breeding and raising cold water and warm water fishes, principles for equipment of fish farms;
- 16.3.14. to apply and evaluate the advanced technologies for bee keeping, to execute breeding in bee keeping;
- 16.3.15. to evaluate reproductive function of various animals, to identify the most frequent ailments, to organise prophylaxis;
- 16.3.16. to evaluate principles of animal technology and organising the work of animal technologists;
- 16.3.17. to understand and evaluate environmental factors and their impact on animal organism, formation and improvement of microclimate in buildings of animal husbandry, possibilities and conditions of transportation;
- 16.3.18. to organise and manage activity of animal husbandry enterprise and its divisions;
- 16.3.19. to form resources required for manufacturing of animal husbandry products and be active in competitive market.
- 16.4. To work in team solving professional issues, to consistently improve professional skills of a technologist of animal husbandry:
- 16.4.1. to apply LR orders and documents regulating professional activity;
- 16.4.2. to plan and organise practical work of a technologist, to act honestly, to think critically and self-critically, be initiative, independent, communicate and work in team;
- 16.4.3. to solve professional problems pursuant to professional competence, ethics and make solutions;
- 16.4.4. to collaborate with agricultural and other institutions;
- 16.4.5. to work in various areas related to the production and reproducing of animal products in Lithuania and international area;
- 16.4.6. to integrate knowledge seeking optimal professional goals;
- 16.4.7. to organise and manage actions for preventing harm and rescue work in emergencies, to apply principles of first aid and prophylaxis;
- 16.4.8. to take innovative decisions preparing projects in the area of animal husbandry.
- 16.5. To apply advanced achievements of fundamental and applied sciences in the area of animal husbandry:
- 16.5.1. to apply principles for development of science information;
- 16.5.2. to use specialised databases and to analyse scientific information;
- 16.5.3. to apply study skills required for qualification improvement of animal husbandry technologists;
- 16.5.4. to study independently professional literature for educational development of a personality;
- 16.5.5. to develop independent learning skills, required for continuing studies in another cycle.
17. The structured Programme conforms to the order of higher education of LR<sup>4</sup>, the description of general requirements for degree awarding first cycle and integrated study programmes<sup>5</sup>, the description of Lithuanian qualifications framework<sup>6</sup>, list of study fields and areas according to which

<sup>4</sup> <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.343430>

<sup>5</sup> <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.369937>

<sup>6</sup> [https://www.e-tar.lt/portal/lt/legalAct/TAR.BC967702800C/TAIS\\_405326](https://www.e-tar.lt/portal/lt/legalAct/TAR.BC967702800C/TAIS_405326)



studies are conducted at Schools of higher education in Lithuania<sup>7</sup>, list of qualification degrees<sup>8</sup>, requirements adopted by LUHS Senate documents.

18. The objective of the study Programme is pursuant to the description of Lithuanian qualifications framework, Dublin descriptors, and the main provisions of Bergen communique. The content and logics of the intended outcomes of the study Programme comply with the VI level of Lithuanian qualification framework or the 1st level of European qualifications framework for higher education<sup>9</sup>; provisions of Education and Science law of Lithuanian Republic<sup>10</sup>; descriptor of general requirements for the first cycle and continuous study Programmes conferring a degree; provisions of study cycles descriptor; objectives foreseen in Bologna declaration<sup>11</sup> (to implement systems for higher education based on two cycles studies, to implement system of credits, encourage mobility and other); goals foreseen in Bologna process 2020 – The European Higher Education Area in the new decade (to improve quality and availability of higher education, graduates’ employment opportunities, mobility and internationality of students and teachers, to aim at the updating of study content and methods); Tuning project attempt<sup>12</sup> – to correlate learning objectives, competences and ECTS credits based upon learning load, principles of learning, teaching and evaluation was taken into account improving the study Programme.
19. Programme objectives, intended study outcomes and summary of description are presented on the internet website, in the AIKOS<sup>13</sup>, on the website for general admission organised by association of Lithuanian higher education institutions (LAMABPO)<sup>14</sup>, on social website (Facebook), the website of the university<sup>15</sup>. Information regarding study Programme is given in the publications released every year (University newspaper, booklets, leaflets etc.). Useful information is available in the descriptions of the subjects and modules on LUHSSIS<sup>16</sup> website.
20. The study information is disseminated during open days events, career events, study fairs (“A fair of higher education schools“), shows (exhibition “Studies“ in the Lithuanian centre of exhibitions and congresses LITEXPO), international exhibition of agriculture and food products “AgroBalt“, exhibition of pure bred animals (in Algirdiskes) during visits to schools, also during activities “Investigators night“, “Spaceship night“ and others.
21. The objectives and intended outcomes of the Programme are based on professional and academic requirements for preparing first cycle animal husbandry technologists; the requirements are given in national and international documents and reflect demands of market and society.
22. Constituting the Programme objective and outcomes, animal husbandry specialists working both in state and private enterprises, specialists from Ministry of Agriculture, municipality institutions and others are participating. The study results are concrete and defined. The study content is coherent with the processes in Lithuania and EU countries, manifests European and worldwide tendencies.
23. The outcomes of the Programme are being implemented through the study objective and are accessible through study subjects.
24. To deepen knowledge and skills, the list of electives is consistently supplemented with new subjects, their studying strengthens the implementation of study Programme outcomes. The content of all subjects corresponds to the Programme outcomes, name of the Programme and qualification awarded (Annex 7).

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<sup>7</sup> <https://www.e-tar.lt/portal/lt/legalAct/TAR.2CA827932AE2>

<sup>8</sup> <https://www.e-tar.lt/portal/lt/legalAct/ae5d5730b7c211e693eea1ef35f20da9>

<sup>9</sup> European Qualifications Framework (EQF), 2008 [http://ec.europa.eu/education/pub/pdf/general/eqf/broch\\_lt.pdf](http://ec.europa.eu/education/pub/pdf/general/eqf/broch_lt.pdf)

<sup>10</sup> <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.343430>

<sup>11</sup> The Bologna Process 2020 - The European Higher Education Area in the new decade ([http://www.ond.vlaanderen.be/hogeronderwijs/bologna/conference/documents/leuven\\_louvain-la-neuve\\_communique%C3%A9\\_april\\_2009.pdf](http://www.ond.vlaanderen.be/hogeronderwijs/bologna/conference/documents/leuven_louvain-la-neuve_communique%C3%A9_april_2009.pdf))

<sup>12</sup> TuninStudg projektas ([http://www.unideusto.org/tuningeu/images/stories/documents/Lithuanian\\_version.pdf](http://www.unideusto.org/tuningeu/images/stories/documents/Lithuanian_version.pdf)).

<sup>13</sup> <https://www.aikos.smm.lt/en/Pages/About-AIKOS.aspx>

<sup>14</sup> <http://www.lamabpo.lt/turinys/holders-foreign-qualifications>

<sup>15</sup> <http://www.lsmuni.lt/en/>

<sup>16</sup> <https://lsmusis.lsmuni.lt/Prisijungimas/Prisijungimas>



25. The study Programme was improved conforming to the laws of higher education, development plan of LUHS, provisions of Senate of the University, Council of AS faculty, the questionnaire results (of students, graduates, alumni, employers). The Programme improvement is also stimulated by national and international documents regarding the area of higher education and study: implementation of the Programme for prioritised research and experimental development, innovation strategies (smart specialisations) fields and processes of their priorities<sup>17</sup>; national Programme of study, research and experimental development for 2013-2020 years<sup>18</sup>; documents and recommendations of EU smart specialisations. The Programme improvement permits to better meet changing needs and demands of academic staff, students and labour market.
26. Outcomes of the Programme and individual study subjects are reviewed annually. Taking into account remarks, proposals of social partners, students, teachers, employers, alumni and others, the subject descriptions are reviewed and updated. The changes are discussed at the Committee of Study Programme and at the faculty Council. The participating representative of employers gives remarks and proposals for improvement of objectives and outcomes of the Programme.
27. To the Programme improvement, updating of study process on the basis of their professional, managerial and other experience representatives of business and academic partners are invited to deliver relevant lectures to students on animal breeding, animal nutrition, animal production and growing technologies and other issues.
28. In the recommendations of the former evaluation two issues were recommended: 1) intended outcomes of every study subject should be accessible, coherent and integrated; 2) students should understand interrelation of similar subjects. Taking into account the recommendations, the intended outcomes of every subject were reviewed and updated; the subjects interrelation was highlighted, for example, intended outcome to arrange animal feeding for various technological groups, ensuring their productivity, wellness, reproductive properties, rational and efficient feeds usage was structured, which will permit to understand interrelation of nutrition, health, productivity, reproductive characteristics of animals.
29. The first cycle study Programme of agricultural sciences field, Animal Husbandry Technology is executed only at LUHS. In Aleksandras Stulginskis university, study Programme of Smart Animal Husbandry of first cycle agricultural sciences field is being executed, aiming at the use of smart technologies (such as robotisation, computerisation) in animal husbandry. Universities in EU execute similar Programmes, for example University of Warmia and Mazury in Olsztyn trains specialists of zootechnics; University of Agriculture in Krakow – technologists of animal husbandry.

## Summary

30. In Lithuanian Programme of development for 2014-2020, priority is given to animal husbandry area, thus the need of animal husbandry specialists will not decrease. The Programme objective complies with the mission of the University. The achievement of intended outcomes enables graduates to work professionally in animal husbandry sector since the competences acquired in the study Programme are adequate to the needs of labour market. Social partners participate in reviewing study outcomes every year. However, alumni and students' activity in giving remarks and proposals regarding improvement of the Programme objectives and outcomes is insufficient. After completing AH bachelor's Programme, graduates are prepared for master's study. To improve study objectives and outcomes of the study Programme we will seek for more active social partners' participation and will encourage closer partnership with other European and International universities.

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<sup>17</sup> <https://www.e-tar.lt/portal/lt/legalAct/f416d360d77c11e3bb00c40fca124f97>

<sup>18</sup> <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.439448>

## PROGRAMME STRUCTURE

31. The scope of the study Programme conforms to the description of general requirements for degree awarding first cycle and integrated study Programme<sup>19</sup> – the scope of the Programme comprises 240 credits for full-time and continuous study credits (Table 2).
32. The structure of the programme corresponds to 240 credits pursuant to the recommendations set in the guide<sup>20</sup> of European Credit Transfer and Accumulation System. The scopes of study subjects are based on a learning time period necessary for a student to achieve study objectives and outcomes. One ETCS credit is worth 26.7 hours of student’s work (in classrooms, laboratories, independent work, and so forth).

**Table 2. Compliance of the study programme with legislation requirements**

Analysis area	Requirements for university first cycle study Programme	In the Programme
Programme scope	Not less than 210 and not more than 240 ECTS	240
General university subjects	Not less than 15 ECTS	22
Study field subjects	Not less than 165 ECTS	200
Total scope of practices	Not less than 15 ECTS	15
Final work preparation	Not less than 12 ECTS	12
Electives	Not more than 60 ECTS	18

33. The content of AHT bachelor (full time and continuous) study Programme conforms to the requirements of LUHS regulation (Senate provision No 47-05, 20 June, 2014, amended provision No 54-04 on 23 Jan. 2015). After completing the Programme, students reach intended study outcomes. The study scope (240 ECTS credits) is equal in full time and continuous Programmes, only the study duration is different: full time – 4 years (8 semesters; continuous – 6 years (12 semesters).
34. The number of subjects to be studied in full-time study is not higher than 7 (practice including), whereas study subject volume is not less than 3 ECTS credits. The study scope per one study year (2 semesters) – 60 ECTS credits. The continuous study plan and volume of study subjects are identical to that of full-time study, only the distribution of study subjects and the number of credits in individual semesters differ, thus the study subjects of continuous study are not described separately in this report of self-evaluation (table 3 and 4).
35. The study Programme comprises general university subjects (B) and subjects of study field (S). General university subjects – 9.17% of the programme structure, the study subjects of the main study field – 83.33% and electives – 7.5%.
36. Students of I-III study years choose 2 elective subjects from the electives list (each equals to 3 ECTS credits per semester). During AHT full time bachelor study, at least 18 ECTS credits are acquired from elective subjects. For study subjects chosen by students, 7.5% of the Programme scope is allotted. Students of AHT bachelor continuous study have the same electives as full time students, only the number of independent work is higher by 42 per cent.
37. During the year, full time students study between 10 and 15 subjects/modules, the scope of which is from 3 to 8 ECTS credits. Students’ independent work comprises on average 38 per cent of the scope of every subject. During a year of continuous studies, students study between 4 and 10 subject/modules (scope between 3 and 12 ECTS credits). The amount of 80 per cent of every subject is set for independent work.
38. For continuous study the mentioned subjects/modules are distributed conforming to the same principles as in full time study, only during a longer period of time: the subjects for basic knowledge – I-III years; speciality subjects – III-VI study years.

<sup>19</sup> <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.369937/sjXTbvczpj>

<sup>20</sup> [http://www.smpf.lt/lt/dokumentai/leidiniai\\_straipsniai/europos\\_kreditu\\_perkelimo\\_ir\\_kaupimo\\_sistemas\\_ects\\_naudotojo\\_vadovas\\_lt](http://www.smpf.lt/lt/dokumentai/leidiniai_straipsniai/europos_kreditu_perkelimo_ir_kaupimo_sistemas_ects_naudotojo_vadovas_lt)

39. In AHT first cycle full time study, students commence formation of practical skills from semester 4 in the study year II, and complete in semester 6, study year III. To form practical skills students apply the acquired theoretical knowledge at LUHS practical centre of training and experimentation, enterprises for feed production, laboratories, Institute of Animal Husbandry, individual farms and others. Total of 22 guided learning hours (15 ETCS credits) are set for formation of practical skills between II and III study years.
40. In continuous study, students start formation of practical skills in study year IV (7-8 semesters). Total scope comprises 22 guided learning hours (15 ETCS credits). To form practical skills students apply the acquired theoretical knowledge at the same animal husbandry enterprises as full time students.
41. The knowledge and skills acquired during study process are consolidated at practice. Students obtain theoretical and partial practical knowledge required to perform practice before starting it. Before starting practice activity, the required subjects had already been studied by the students. In the first cycle of full-time animal husbandry technology study, the production practice is executed in the IV year, semester 8 (15 ECTS credits); in the Continuous study – VI year, semester 11 (15 ECTS credits).
42. The study Programme foresees advanced study methods (lectures, seminars, discussions, various presentations, team assignments), learning methods adequate to intended study outcomes, assignments for independent work, variety of methods, time is allocated for consultations. The logics of study subjects correlation and priority is substantiated by: 1) subjects of general education part develop outlook and general erudition – subjects of study basics constitute a core of study, while students are acquiring sufficient knowledge and skills to gain qualification of higher education; 2) subjects of the main study field provide basics of fundamental and agricultural sciences area required for expanded study of agricultural sciences field and for independent solution of problems in agriculture. The plans of Animal Husbandry Technology full-time and continuous study are given in Tables 3 and 4.
43. Subjects/modules of AHT bachelor full-time and continuous studies are arranged considering consistency, sequence, complexity and their correlation. In the first and second study years, subjects providing basic knowledge are studied: biology of plants and animals, genetics, animal morphology, agrotechnics, animal physiology, biochemistry, microbiology, zoohygiene and other subjects conforming to the regulation of agricultural study field. In third and fourth study years, subjects of specialty are studied: nutrition of farm animals, animal breeding, poultry production, fur animal production, sheep and goat farming, equine farming, cattle farming, pig farming and others. According to this sequence of study subjects, students gradually acquire knowledge and skills starting from universally applied subjects in first study years and graduating with specific knowledge gained in chosen specializations. The subject content corresponds to the kind and cycle of the study. The study descriptions (Annex 2) are accessible on LUHS SIS intranet. Themes in different subjects are not repeating. The study content is consistent with the kind and cycle of the study.
44. The newest technologies in science and animal husbandry area are reflected through the themes and content of the Programme subjects. The achievements in animal husbandry science and technologies are being discussed in lectures and seminars. Students are acquainted with science novelties preparing, presenting individual, and team works, defending reports of professional practical activity.
45. The subject themes foreseen in full time and continuous study Programmes are thoroughly presented: aims of study subjects, content annotation, outcomes, content, volume of academic hours for students, types of learning activity (lectures, practical's, seminars, independent work, etc.), literature to be used and recommended, knowledge evaluation (accumulative score formula) . Themes in different subjects are not repeating, but some subjects are closely linked and consistently complement each other, providing students with systemic understanding and profound professional competences. Compulsory and elective subjects, their scope in credits, hours per semester, and names of teachers responsible for study subjects are given in the Programme study plan (Annex 1).
46. Subject and module themes of AHT full time and continuous studies reflect the newest science achievements in the area of animal husbandry technology.

47. After completing every subject of bachelor's study, students' knowledge and capabilities are evaluated by an examination or defence of an individual work (project). Starting the study of a subject, students are informed about the deadlines and criteria of assessment.
48. The study Programme is completed by a preparation of bachelor's final work (regarding the specialisation field) and its defense in open meeting of defense commission. For preparation of final work, 12 ECTS credits are awarded. The main preparation of final work for AHT first cycle full time study is executed in semester 8, whereas that of continuous study – in semester 12; final works are submitted at the end of the term. Students prepare and defend their final works conforming to the regulation on preparation and defense of bachelor's final work of AHT study Programme pursuant to: the Law of Education and Science of the Republic of Lithuania<sup>21</sup>; LUHS regulation on first and second cycle integrated studies, approved by Senate (07 June, 2013, provision No 32-03) and regulation on assessment of students achievements (approved by Senate on 14 Dec. 2012, provision No 25-07).
49. Student's final work has to demonstrate theoretical knowledge on the topic under investigation, capabilities to identify problem of research, to apply methodics for analyses, to give possible ways to solve the problem and conclusions based on theoretical knowledge and practical results of investigation.
50. Intended outcomes of study subjects, content and assessment methods, learning and achievements are designated for accomplishment of the Programme's objective and outcomes. Particularity and compatibility of the study subjects' themes with study outcomes are evaluated by Study Programme Committee (SPC). The descriptions of study subjects are consistently updated, which preconditions conformity of study subjects' content to current actualities and needs. In the meetings of SPC and faculty Council, study plans for the coming year, methodical aids are discussed and approved. Means and goals for improvement of independent work are foreseen. The Programmes of students practical skills and practical work are being updated; the animal husbandry base to execute them is foreseen; links with production are being developed; agreements with social partners are contracted.
51. In the study of individual subjects, innovative teaching/learning methods are applied: analysis of situations (cases) and examples of practical activity, team work, classroom presentation and discussion of students independent work, public presentation and discussion. The study Programme plans with subjects distributed in semesters are accessible on LUHS website<sup>22</sup>.
52. All information on the Programme structure is accessible for students on LUHSSIS and University intranet (Firstclass), LUHS Moodle system is to be wider used. Regarding the recommendations of former evaluation, students' suggestions and the study quality, the study content is improved consistently: elective subject Sport Games (year I, semester 2) is substituted with a new subject Physical Activity and Health, and elective study subject Basics of Research and Innovation is registered for AHT third year students (full- time and continuous). Seeking for consistency in study subjects, considering equal distribution of credits in the study years – the subject Extreme Animal Husbandry from the study year V was moved to the year IV, and Zoohygiene – from the year IV to the year V.

## Summary

53. The structure of the Programme is pursuant to EU, LR legislation and documents approved by LUHS. The study subjects/modules are distributed consistently, the subject content does not duplicate and corresponds to the field and form of the study; the structure of the Programme allows the students to reach and acquire intended study outcomes. It is planned to apply innovative teaching methods oriented to the development of students' creativity, general and special competences.

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21 <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.343430>

22 <http://www.lsmuni.lt/lt/veikla/studijos/akademine-informacija/studiju-planai/studiju-planai-2016---2017-mm/>

**Table 3. Plan for Animal Husbandry Technology full-time study programme**

	I year				II year				III year				IV year											
	Study scope per semester								I		II		III		IV		V		VI		VII		VIII	
	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS
I. Part of general university education																								
Compulsory subjects	74	7	135	9	51	3	51	3																
II. Part of study field/speciality																								
Compulsory subjects	266	20	254	18	352	24	292	24	495	28	328	26	476	29	52	4								
Elective subjects	60	3	60	3	60	3	60	3	60	3	60	3												
Practice																					10	15		
Final work																					6	12		
Total number of hours	849				866				943				544											
Total number of ECTS	60				60				60				60											

**Table 4. Plan for Animal Husbandry Technology continuous study programme**

	I year				II year				III year				IV year				V year				VI year			
	Study scope per semester																							
	I		II		III		IV		V		VI		VII		VIII		IX		X		XI		XII	
	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS	Hours	ECTS
I. Part of general university education																								
Compulsory subjects	24	6	10	3									22	3							14	3		
II. Part of study field/speciality																								
Compulsory subjects	74	14	80	16	98	21	112	18	85	16	125	23	32	6	93	17	118	19	50	11	16	4		
Elective subjects	16	3	16	3	16	3	16	3	16	3	16	3												
Practice																							10	15
Final work																							4	12
Hours	220				242				242				169				168				44			
ECTS	45				45				45				41				30				34			

## THE TEACHING STAFF

54. Staff competitions and attestations are executed pursuant to the legislation:
- LUHS Statute (resolution of LR Parliament on 3 June, 2010 No XI-973, amended 28 June, 2012 resolution No XI-2147);
  - Law of Education and Science of the Republic of Lithuania <sup>23</sup>.
  - Regulation for election of the leader of a department / institute or profile clinic (by resolution of Senate on 30 June, 2014 No 48-02, amendment 21 Oct. 2016, resolution No 80-9);
  - Order for attestation and recruitment competitions for the positions of teachers and research staff (approved by LUHS Senate 17 June, 2016 provision No 75-08);
  - European Commission Recommendation on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers (2005/251/EC)<sup>24</sup>.
  - Teaching staff has to follow Code of Ethics (LUHS Senate, 20 June, 2014, resolution No 47-17).
55. The academic staff of LUHS undergoes attestation every 5 years. In case the teacher under attestation does not conform to the defined pedagogic, research and practical activity criteria for a certain position his/her academic activity is either terminated (its renewing attestation procedure is repeated), or the position is reduced.
56. The teachers are competent in animal biology, morphology and physiology, animal breeding and nutrition, animal production and growing technologies, business and management of animal husbandry areas. Adjacent to scientific activity, professors, associate professors and lecturers propagate science in Lithuania and foreign countries, make reports, provide consultations for animal raisers, beginners in business, feed producers and other specialists of this area and attend international conferences and seminars.
57. Teachers (Annex 3) engaged in the Programme have sufficient experience in practical, pedagogic and research work; take part in researchers' training; supervise preparation of final work and research in study cycles I, II and III (doctoral). Some teachers are experts of international level, assessors of science publications and members of journals' editorial boards, experts of international Programmes, experts of research projects and reports.
58. Teachers consistently improve their qualification (Table 5) being interested in technological innovations and studying them, participate in conferences, seminars, courses for educational competence improvement, trainings, qualification improvement, exchange Programmes (Erasmus+), publicize science articles, are able to communicate in at least one foreign language used for international collaboration.

**Table 5. Numbers of teachers and fields of their competence development**

Areas of competence development	2012	2013	2014	2015	2016	Total
<b>Competence improvement programmes</b>	8	1	1	2	1	13
<b>Exchange programmes</b>		3	1		2	5
<b>Trainings</b>	9	5	5	5	12	36
<b>Courses</b>	5		2	1	1	9
<b>Conferences:</b>	41	22	51	34	63	211
<b>Seminars:</b>	10	2	4	5	4	25
<b>Total</b>	<b>73</b>	<b>33</b>	<b>63</b>	<b>47</b>	<b>83</b>	<b>299</b>

59. As many as 42 teachers are employed in the Programme, professors – 13 (29.5 %), associate professors- 14 (31.8 %). Doctor's degree is held by 35 teachers (78%), which evidences their sufficient professional competence.
60. After graduation part of the PHD students stay at the department of AHT educational or scientific activity.

<sup>23</sup> <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.343430>

<sup>24</sup> <http://eur-lex.europa.eu/legal-content/LT/ALL/?uri=CELEX:32005H0251>



61. Teachers' work load and distribution is determined by LUHS regulation for the calculation of divisions teaching load and salary foundation (approved by Senate resolution on 30 June 2014, No 48-1). A full-time teacher's working week consists of 30 hours per week. The structure of the teacher's position encompasses: 1) organisation and realisation of study, 2) applying of research outcomes in study, 3) accumulation of science knowledge, 4) health care related to the study process, 5) development of creative activity, 6) culture cherishing, 7) participation in another activity relevant to the University and its subdivisions.
62. Majority of teachers engaged in the Programme are younger than 54 years (Table 6). The highest percentage (62%) is of teachers aged between 35-54 years (most efficient group). None of the teachers is older than 65 years of age.

**Table 6. Age profile of the academic staff**

Teachers	25-34 yr	35-44 yr.	45-54 yr	55-64 yr	65 yr and more	Total
<b>Number</b>	<b>4</b>	<b>10</b>	<b>17</b>	<b>13</b>	<b>-</b>	<b>44</b>

63. For academic work, teachers most frequently go to universities in Germany, Austria, Italy, Holland, Czech, Poland, Portugal, Spain, Finland, USA and other countries. The main causes of teachers' fluctuation are their transfer to higher positions on the competition basis, retirement, maternal leave. Changing a job place is a rare case. After a teacher's contract terminates, any scientist, who corresponds to the requirements, may take part in the competition for the position. It ensures the necessity for teachers to improve qualification and qualitative study process.
64. Teachers are provided with conditions to participate in research programmes, exchange programmes, to go to conferences, courses for qualification improvement, to prepare publications, monographs, text books. Teachers have possibilities to go abroad for qualification improvement, to participate in conferences and similar activities. That is preconditioned by a special LUHS foundation.
65. Teachers are active scientists, executing fundamental and applied research, methodical work and other scientific activity; they are interested in advanced teaching methods and actively take part in creating them. Every teacher performs research conforming to the science field approved by the Senate. Research and applied scientific activities improve teachers' professional qualification, precondition updating study subjects with the newest science and practical knowledge and provide students with research skills. Teachers' research activity and number of scientific publications within 5 years are the main indices in teachers' assessment during their attestation. Science publications evidence scientific activity of teachers engaged in AHT Programme. On average 3.6 science publications are written by a teacher annually (Table 7.)

**Table 7. Scientific publications of teachers employed in AHT Programme in the 2012-2016 years**

Publication type	Quantity
Monographs, textbooks, teaching and methodical material, reference books guides, and other books	79
Other information publications	20
Patents registered in Lithuania	1
Article in conference ISI proceedings	2
Article in conference publication in other DB	5
Article in reviewed Lithuanian international conference publication	70
Article in reviewed foreign international conference publication	81
Article in ISI Web of Science	62
Article in ISI Master Journal List	4
Article in reviewed science publications referred on other DB	77

Article in other reviewed publications	81
Article in a popular science publication	72
Theses on other DB	2
Theses on other reviewed publications	111
Conference theses in not reviewed publications	123
Total publications	790

66. The Programme teachers are active members of various commissions and projects (heads of the projects or executors); they organize activities, seminars and conferences, the themes of which correspond to the study field (Table 8).

**Table 8. Dynamics of faculty staff having participated in organising activities**

Activites, projects (organised)	2012	2013	2014	2015	2016	Total
<b>Conferences in Lithuania</b>	4	2	5	7	9	27
<b>International conferences</b>	2	1	4		4	11
<b>Seminars</b>	7	2	7	11	12	39
<b>Competitions</b>	2	2	11	7	8	30
<b>Courses</b>	4	2	15	22	10	53
<b>Training courses for farmers</b>	3	4	10	4	5	26
<b>Exibitions</b>			1	4	5	10
<b>Total</b>	22	13	53	55	53	196

## Summary

67. Research and study subjects, performed by teachers employed in the Programme, conform to the study field. Qualification of teachers engaged in the Programme is high: 78 per cent hold doctor's degree, 60 per cent – are professors and associate professors. Teachers actively improve qualification participating in scientific activities and educational seminars organised by LUHS Study Centre. However, teachers' relationship with universities of EU and of other countries are not sufficient – participation in qualification improvement courses and exchange programmes is rare. Furthermore, teachers' encouragement to improve qualification visiting modern foreign laboratories and institutes and to intensify participation in international scientific projects will be intensified.

## FACILITIES AND LEARNING RESOURCES

68. The study Programme is being executed in compliance with the general order of LUHS for organizing studies, coordinating study venue and time with other programmes of the University. The LUHS possesses all main resources (lecture halls, laboratories, laboratory equipment, information technology, and library) for successful execution of the Programme. For the organisation of the studies, lecture halls of different size (table 9), a classroom for distance teaching, 48 training laboratories, and 32 classrooms are available. The conditions for the Programme students are adequate for independent work – reading room, six computer classrooms are installed. Study rooms meet the requirements for safety and hygiene standards.

**Table 9. Auditoriums and the number of seats in them**

<b>Auditorium</b>	Dr. Stasys Jankauskas	II Prof. Konradas Juozo Aleksa	III Prof. Rimantas Karazija	IV	V Assoc.prof. dr. Jonas Čygas	VI	VII Prof. dr. Juozas Žemaitis	Žalčio hall
<b>Number of seats</b>	210	280	275	275	105	50	108	40

69. Lecture halls are provided with computerised studio visualisation equipment (multimedia, smart boards). Legal, modern software is used for the study: Microsoft Office, Hybrimin Futter 2008, PEST, VCE, Windows“, „Internet Explorer“, „IBM SPSS Statistics“, „AMOS“, „Sample Power“, „EpiInfo“.
70. In the study process students of the programme have a possibility to use LUHS scientific laboratories, centres, vivarium and the equipment in them.
71. *Department of Anatomy and Physiology*: zoology laboratory – 14 places, provided with microscopes, stuffed animals, preparations; botany laboratory – 14 places, provided with microscopes, micro preparations, herbaria; teaching physiology laboratory – 30 places, 9 computers, 20 microscopes; Anatomicum – preparations: bones, joints, moulages, teaching films, 3D programmes. Vivarium – classroom provided with portable and stationary tables for procedures, fixation equipment for rabbits and rats, CO<sub>2</sub> euthanasia apparatus, electronic scales, centrifuge.
72. *Laboratory for meat characteristics and meat quality evaluation*: Knauer firm HPLC system (high pressure liquid chromatographic system) with UV detector, degassing equipment, and automatic equipment for sample setting, colour meter „Minolta chromameter 410“, automatic scales SM-3 – to determine dry substances, electrophotometer „Ultraspec 3100“ (Eppendorf firm), Shimadzu firm, gas chromatographic system GCMS-QP2010 Ultra, with automatic equipment for setting liquid and overspaced samples AOC-500 Plus, and masses (MS) and flame ionization (FID) detector, microscope „Nicon YS 100“ connected to the computer.
73. *Laboratory for animal welfare investigation*: The reference materials, standards, immunofermentic tests for determination of mycotoxins are accumulated. ALMAMO-22993, ALMAMO-22993, air gas analyser “Dräger”, TSI thermal environmental analyser, Gilian equipment (designated for investigation of dust dispersion), temperature accumulators–EBI-6 and others. In the laboratory a sterile room is designated for isolation of micromycetes; for identification of micromycetes a light microscopy is used. Modified chromatographic methods (Romer Labs, USA) are used to determine mycotoxins: Romer mill, mixer, Romer® autospoter, Romer® Evap system. Romer Labs cleaning columns are used for sample cleaning. Immunofermentic analysis is used for screening; assessment is performed with StatFax 303 Plus“. (Neogen company).
74. *Laboratory of Animal productivity*: The accumulated equipment enables to conduct quality analysis of feeds/fodder, meat, eggs quality: Gerhardt system – for fat analysis, Fibrebag system – for fibre analysis, Memmert drying oven, High pressure liquid chromatography system (HPLC) VarianProStar (VarianInc, USA), containing 2 pumps VACUM pumps ProStar 210, automatic sample system ProStar 410 and 4 detectors: Prostar 363 Fluorescence Detector (FLD), UV/VIS detector ProStar 325 and elektrochemical detector (PAD) and Mass spectrometer LCQ FLEET (ThermoFisher SCIENTIFIC WISSENSCHAFTLICHE GERÄTE GMBH, Austria); spectrophotometric system of atomic absorption, iCE 3000 series with Czerney-Turnermonocromator, flame atomizer, air compressor, granite atomizer and autosampler, water cooling system ((ThermoFisher SCIENTIFIC WISSENSCHAFTLICHE GERÄTE GMBH, Austria); to which it is possible to connect microwave sample mineralisation system Mars Express (CEM Corporation, USA); to investigate egg quality multifunctional egg tester „EMT-5200“ (to meter egg weight, albumen height, Haugh index, yolk color intensity), egg shell firmness „Egg Shell Force GaugeModell-II“.

75. *Institute for investigation of biologic systems and genetics*: Training laboratory: the newest equipment for molecular and cytogenetic investigation, e.g. 3 DNA amplifiers, centrifuges, cooling centrifuge, vortexes, spectrophotometer Q 2.0, 10 horizontal electrophoresis apparatus for agarose gel, ABI 310 capillary DNR analyser, BioRad gels video documenting system, Biolar –70°C freezer, laminar, ventilation system, thermostats, thermostat Binder BD 53 1 unit., microscope MOTIC -10 units, transilluminator 2 units, thermocycler G-STORM - 2 units. Lecture hall No 106: 30 places, computerised, software; No 107- laboratory for teaching genetics: 24 work places provided with microscopes, electrophoresis apparatus, vortex, etc). 108 K. Janušauskas genetics laboratory (scientific): microscope NIKON ECLIPSE 80i, Konica Minolta, thermostats, Thermostat Binder, centrifuge UNIVERSAL 32R HETTICH ZENTRIFUGEN, microcentrifuge MICRO CENTAUR, spectrophotometer GENEquantll, mixer Vortex gene 2, Thermomixer comfort, thermobath THERMOLYNE DRI- BATH, ventilation system MICRO-FLOW, lamp MICRO-FLOW, PCR amplifier GENE AMP PCR SYSTEM, Cikler EPPENDORF MASTER CYCLER 5330, AMPLITRON II THERMOLYNE, Water cleaning system PINIX POWER, Water bath, freezer ANGELANTONE, Sekvenavimosystem, electrophoresis system MIDICELL PRIMO 2 units, electrophoresis apparatus, electronic scales SARTORIUS AG, electrophoresis system MAXI CELL, electrophoresis system, electrophoresis apparatus ADJUSTABLE VERTICAL GEL SYSTEM, transilluminator, Vacuum centrifuge EPPENDORF CENCENTRATOR, PH MetermulticalPH538, mixer, analyser ABI PRISM, transilluminator BIO-IMAGING SYSTEM REALtime PCR system, Centrifuge Multifuge 32.
76. *LUHS institute of microbiology and virology*: System Sensititre Aris 2X (ThermoScientific, USA) for microorganisms' antibacterial sensitivity investigation, microscope Olympus BX53 with video camera (MicroPublisher 3.3); epi- fluorescent equipment BX3-URA. (Olympus, Japan); electrophoresis system of pulsating electric field (PFGE) CHEF-DR III Chiller System (bio-Rad, JAV); gels documentation system GelDoc-It TS. (UVP, JAV); high speed rotation microcentrifuge Pico 17 (ThermoScientific, USA); real time gradientic PGR thermocycler StepOnePlus (Applied Biosystems, USA); thermostatic –incubators (4 units) Memmert INB 400 (VWR, Germany); thermostats – incubators (2 units) Memmert INB 500 (VWR, Germany); CO<sub>2</sub> thermostat-incubator AutoFlow 5500 (NuAire, USA); laminar box MicroFlowClass III/I ABS 1200 (BioQuell, JAV); 2 safety class laminar boxes NU-480-400E (NuAire, USA); Biowizard standard (Kojair, Suomija); microscope Eclipse E200 (Nikon, Japan); laboratory autoclaves (2 units) STE-TAN-18L (MRC Lab, USA); laboratory autoclaves VX-75, (Systec, Germany); laboratory heating – airing oven UNB 500 (VWR, Germany); laboratory heating–airing oven UNB 400 (VWR, Germany); laboratory freezer for deep freezing DF200-86E (Snijders, Nytherlands); distillator 2002 (GLF, Germany); ultra clean water purifying system Milli-Q (Milipore, France); PGR thermocycler for tubes and plates TC-PRO (Boeco, Germany); electrophoresis energy control block Cleaver (Scientific Ltd., UK); 3 safety class class laminar box BioWizard3 (Kojair, Finland); orthogonal spectrometer NanoAcquity (Waters, USA); DNA microcells reading system OpenArray (Applied Biosystems, USA); electronic scales (precision 0.001g) Highland (Adam Equipement, Nytherlands); density meter of bacterial suspensions DEN-18 (Biosan, Latvia); thermostatic shaker TS-100C (Biosan, Latvia); shaker Vortex (Velp Scientifica, (Germany)); mechanic /electronic (single tube/multitube) pipettes for liquid microamounts dosage F2/Novus (Finnpipette, (ThermoScientific, USA)); Computer programme Microgen™ Biochemical ID (Microgenbioproducts Ltd, UK), Orbit shaker Biosan PSU-20i.
77. *Laboratory of animal breeding value investigation and selection*: Programmes VCE + PEST, SPSS-15 for identifying animal breeding value and hereditary characteristics. For analysis of mares milk composition and quality - „EKOMILK-M” ultrasonic milk analyser defining milk fat, protein thickness of lean milk (SNF) density, amount of added water, freezing value, pH and lactose. “EKOMILK SCAN” – analyser of milk somatic cells “EKOTEST” – detecting of antibiotics and inhibitors in milk. „FT MULTILYSER” (Förster–Technik GmbH, Germany) for evaluation of reproductive properties based on progesterone content in milk. Feed analysis system „AgriNIR”. System „Afimilk” – for analysis of animals activity.
78. *Laboratory of animal reproduction*: For research, practical analysis and students' training in laboratories are used: FacsCalibur flow cytometer, microplate reader Elx800g s/n 18, microscopes of

various purposes – trinocular with epi-fluorescence accessory spectrum, inverted, fluorescence, eclipse 50i NIK–MBA 8502M, water treatment dionization system Ultra Clear Basic Plus, PGR mixing preparation equipment, horizontal Heliv electrophoresis system Mschoice10, CO<sub>2</sub> and System incubator F.Lli Gally, Diuaro dishes, Programme SCA 2002 Lte Microptic, assessment module SCA 2002, Progr. Module SCA 2002 LteMicroptic and others.

79. *Laboratory for animals nutricology investigation. Department of nutrigenonics and animal husbandry processes systemic evaluation:* NIRS feed analyser; calorimeter, polarimeter, completely automatic Kjeldahl analyser, burning block for Kjeldahl analysis, automatic system for total fat content determination, equipment for fibre identification .
80. *Josifas Tacas centre for milking technologies:* milking equipment and its construction parts of various firms, means for udder preparation for milking, milking equipment for goats milking, various milking facilities of different automatisisation level, fragments of Eglutè and Tandem milking parlors, milking lines, equipment for work evaluation of vacuum, pulsators; herd management programmes DairyPlan, Alpro, e-GEBA, DelPro.
81. *Aquaculture laboratory:* Closed recirculation system, 1 m<sup>3</sup> capacity fish raising sets of biologic filters, mechanic filter water pump, oximeter.
82. *Vivarium:* Classroom: work tables, computer projector, chairs with small tables for students. Training laboratory: portable and stationary tables for procedures, fixation equipment for rabbits and rats, CO<sub>2</sub> euthanasia aparatus, electronic scales, centrifuge.
83. *Institute of animal husbandry:* Stable for 56 horses of žemaitukų breed (mares , stalions, and thoroughbred pedigree of various age). Two outside levadas are installed; a new electro mechanic horse walker is constructed. Equine inventory is set (show jumping obstacles, saddle, bridles, identification tools, etc).
84. *LUHS Experimental training centre:* In three farms of LUHS Centre for Practical Training and Experimentation, livestock of different breeds are kept (approximately 230 cows, 200 heifers, 30 bulls). Giraitės farm contains two training facilities (117m<sup>2</sup> and 66m<sup>2</sup>). Teaching equipment: milking system, Tandem milking parlor, (in Muniskiai farm milking is performed into milk lines), feed distributors BVL V-MIX 8 LS, manure removing transporters, enclosures, rubber mats, silo trenches and other equipment used in production process.
85. Students can make practice in practice bases with which the University has an agreement.
86. *Library funds.* The University's methodical resources are coordinated by LUHS Library and information centre (LIC). In the library and IC, 6 reading rooms containing 544 workplaces (143 computerized), 3 rooms for group learning, multimedia room containing 8 workplaces, computer training classroom (12 workplaces), 2 seminar/conference halls are available for the users. The library is opened on weekdays from 7.30 a.m. to 10.30 p.m., and on weekends -- from 10 a.m. to 8 p.m. The checkout and reading rooms of VA are open from 8 a.m. to 8 p.m., thus the readers have good possibilities to use the service of the library. Majority of the programme's students take advantage of LIC VA funds. In VA division, readers get service at the checkout, general and science reading rooms containing 71 workplaces (20 computerised); wireless internet is installed.
87. Funds of the University LIC contain 227 thousand titles and 819 thousand units of printed documents. Electronic printed publications (29175 titles) and electronic books (206 101 titles) are ordered. The funds in VA subdivision contain printed documents of more than 28 thousand titles and 125 thousand units.
88. In 2015, the library subscribed to 53databases, providing access to el. full text journals of 29175 titles and 206 101 el. books. The majority of subscribed databases were financed by Eu SF project eMoDB.LT: Opening of electronic databases for Lithuania.
89. University subscribes to 14 databases<sup>25</sup> Not a few data bases even in medical field are suitable for students of animal husbandry and veterinary fields students, however the databases, more suitable for students of agricultural studies are to be distinguished: CABI, CambridgeJournals Online, Ebrary, RefWorks, InCites, ScienceDirect, EBSCO Publishing, eBooksonEBSCOhost, Springer Links, Taylor&Francis, Wiley Online Library ir kt., and others - of biomedical field - SAGE Journals; OvideBooks; JoVE; Henry StewartTalks.

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<sup>25</sup> <http://ismuni.lt/lt/biblioteka/informacijos-istekliai/prenumeruojamos-duomenu-bazes/>

90. Books and copies of scientific articles (in case they are not available at the University library) can be borrowed from Lithuanian National library, Lithuanian Technical Library and other libraries through the interlibrary loan directory (TBA).
91. The library is consistently enriched with new publications. In 2015, BIC VA division acquired new scientific publications of 888 titles (5713 units). The number of publications acquired by VA subdivision comprises 262 titles (1189 items) – majority of them are publications and textbooks of veterinary and agricultural area. All the mentioned publications are available for the teachers and students directly through databases or using integrated virtual library (LUHS virtual library<sup>26</sup>; Lithuanian virtual library<sup>27</sup>).
92. All databases are available for community members on the University computers (library, computer classrooms, dormitories, teachers' rooms, and elsewhere). To use subscribed databases, not at the University premises, teachers and researchers can get connected via the University VPN (Virtual Private Network) or EZproxy.
93. Faculties, interior structural resources, teachers of subjects, and LIC department of publications' compiling and preserving cooperate ordering literature for research and studies. Information and advice concerning information search and resources are available on LIC website. The academic community of LUHS has possibility to order books for study and research. The fund of library and information centre is compiled considering the books needed for research and study. Electronic application form for ordering books is created.
94. Information and advice concerning information search and resources are available on LIC website; there is also information regarding services provided by the library, final work uploading online, order for use of plagiarism checker, teaching material, databases, etc. Library users have a possibility to use electronic catalogue, to book publications, to extend the loan period of the book, to use service of electronic readers' information. Short period courses for LUHS students and employees are arranged by staff of information centre. Annual seminars on information search for teachers and students are held in the library; courses for teachers, researchers, and students on information search and distribution are arranged consistently. Guidelines for final work's uploading (for authors) and the use of plagiarism checker (for advisors), training films are accessible.
95. The information about received publications and documents is available periodically: book fairs are arranged; lists of new books and their annotations are sent to the whole community by LUHS forum; the information is on the library website. All methodical material is consistently on display in the stand of LIC VA division.
96. At LUHS LIC, students with special needs ( hearing, mobility, vision and other impairments) can use equipment designated for their learning (adjustable tables, view magnifier (TOPAZ XL HD), sound equipment (BellmanAudio Domino Pro) software JAWS 14 for Windows – software, analysing information on the screen and transmitting it to speech synthesiser, which transforms text into sound. WinTalkerVoice 1.6 – software (speech synthesiser), transforming information on computer screen to user in voice in Lithuanian.

## Summary

97. The number of rooms (auditoriums, lecture halls, laboratories, offices is sufficient for implementation of the Programme; departments/institutes and laboratories are sufficiently provided with the equipment required for ensuring study process of high quality. Library is provided with books, study and methodical aids, and databases required for the study. To strengthen material base it is intended to further encourage teachers to be more active in preparing and performing projects.

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<sup>26</sup>[http://www.lvb.lt/primolibweb/action/search.do?dsct=1&dstmp=1386274425301&prefLang=lt\\_LT&vid=LSMU&fromLogin=true](http://www.lvb.lt/primolibweb/action/search.do?dsct=1&dstmp=1386274425301&prefLang=lt_LT&vid=LSMU&fromLogin=true)

<sup>27</sup> [www.lvb.lt](http://www.lvb.lt)



## STUDY PROCESS AND ITS ASSESSMENT

98. Students and listeners are admitted to the Animal Husbandry Technology study Programme pursuant to the order approved by laws of Lithuanian Republic, description of general requirements for admission to first cycle and integrated study in Lithuanian institutions of higher education approved by association of Lithuanian schools of higher education and LUHS rules for students<sup>28</sup>, admission annually approved by the Senate. Persons having education not lower than secondary, considering their learning achievements, results of entrance examinations and meeting other criteria set by the Senate are eligible to participate in the competition for admission to the Animal Husbandry Technology study Programme. The information on admission (study area, field, duration and mission) to AHT full time study Programme is accessible on LSMU website<sup>29</sup>.
99. The number of applicants and the number of admitted students: In 2012-2016 yr., 780 school leavers chose AHT study Programme, on average – 156 students annually. The average of admitted students per year comprises 33 school leavers. The highest number of applicants was in 2012 yr and 2014 yr. (167 each year). In 2016 yr. – 122 applicants. By the first preference the study was shown by 160 school leavers, 33 of them were enrolled (table 10).
100. The averages of competitive scores of the enrolled to Animal Husbandry Technology full-time study Programme study: the highest – 17.76 was in the year 2013; the lowest – 2.04 in 2016. In the continuous study Programme the highest average of the competitive score – 18.08 was in 2012, and the lowest – 1.81 was in 2014yr. The evaluation of competitive score not always is associated with motivation, because school leavers from rural schools have considerably better understanding about the specialty, they have direct experience of animal keeping, handling, raising conditions. Students, having bonds with animal husbandry, already know employment possibilities or they have their own or parents' farms where they can return.
101. The main part of AHT Study programme students are waived from the tuition fees, that means they have state funding or targeted state funding (table 11).

**Table 10. Choice of AHT study programme and admission in accordance to school leaver's option**

Year	Full-time study programme was chosen by (number of school leavers)	Continuous study programme was chosen by (number of school leavers)	Number of school leavers having entered full-time study programme	Number of school leavers having entered continuous study programme
2012	167		25	4
2013	162		22	2
2014	115	52	35	8
2015	128	34	32	10
2016	86	36	22	6

**Table 11. The number of funded and not funded students**

Year	Funded by the state	Target funds of the state	Not funded by the state	University funds
2012		12	4	18
2013	5	12	3	6
2014	11	20	12	
2015	16	24	2	
2016	14	7	7	

<sup>28</sup> <http://www.lsmuni.lt/lt/stojantiesiems/priemimo-taisykles/>

<sup>29</sup> <http://www.lsmuni.lt/lt/stojantiesiems/lsmu-studiju-programos>

102. Dean's office informs the enrolled students about study programme, the school of higher education; 1-2 days camps, with teachers and elder students are organised. The students-moderators take students around the campus, show facilities, auditoriums, laboratories, library. Furthermore, the information is provided by LUHS VA Students' representatives. Study subject "Introduction into studies" is offered in autumn semester of the first study year: students get acquainted with Firstclass system, used at the University, with data bases of the library, SSS activity, possibilities to go abroad for partial studies or practice and other.
103. Study plans are prepared in the Committee for Study, considered at the meeting of AHT faculty Council and approved by the Rector. Schedules are approved by LUHS Study Centre and placed on the University website. The schedules are composed for the whole academic year, lunch periods are projected. Lectures, practicals, laboratory works seminars and other activities are distributed sequentially within semesters. There are 2 or 3 lectures, practicals or laboratory works per day. Students have sufficient time for independent work. On average student's study, time comprises 30 hours per week. All teaching facilities are on the campus of veterinary academy, adjacent to each other and form a students' town, which provides a possibility to construct rational study schedule. At present, all subjects are completed by an examination or project. All study years are divided in semesters, at the end of which students take examinations. In the first study cycle, contact work should comprise at least 20% of all scope of the programme. At the University, lectures comprise not more than 30% of contact work time.
104. Students' achievements monitoring system comprises students attendance, recording the results of mediate and final examinations and their analysis. Every semester the dean submits a report to the meetings of rectorate and faculty Council. The greatest number of students drop out in the first two study years; in later years the number of expelled students decreases. The highest number of dropout students had lower competitive scores, however there are exceptions. Some students left study for health, maternity leave, child care or hard financial situation – stopped their study for a year and later returned to the same study year. To reduce the dropout, students are encouraged, consulted, additional time period is given to prepare assignments, to repeat study subjects (in cases of relevant causes). For students bringing up children individual schedule is composed; they can have an academic leave, change the study form or programme; subjects passed in other institutions are transferable; electives (contributing to solving the issue of the lack of knowledge) are offered.
105. University intranet is used for internal communication and to provide students with study material. The main document of recording is register of accomplishment, other documents: SIS electronic register and book for registration of study subjects' accomplishment are juridical documents.
106. Students of AHT study programme take part in the SSS (Students' Scientific Society) activity. The society unites more than 1000 LUHS students and young researchers performing investigation, seeking knowledge in the area of biomedical sciences. In 2014-2015, five new SSS groups were established – one of them of Animal Husbandry Technology (established on 20 Oct. 2015). The aim of the group is to provide direction, conditions for easier, more qualitative performance of scientific work, to teach working in team, to define professional prospects and career more precisely. Considering members' needs and intentions, seminars, meetings with scientists and specialists of animal husbandry are organised; students are visiting advanced farms, where their theoretical and practical skills (of a chosen science field) can be developed.
107. There is Culture Centre at the University, the aim of which is to organise cultural and art activity at the University; to intensify spiritual life, coordinate activity of amateur, art groups, clubs and other organisations, to educate a cultured society. The culture centre unites artistic groups of teachers and students. More than 250 students from various faculties of the University participate in the activity. Students can participate in the university amateur groups such as: folk dance group "Dzigunas", MA chorus "Neris" (the oldest and most famous of the university choirs) folk dance ensemble Ave Vita, in which more than 100 students take part. At the university, the activity of amateur groups is coordinated by Culture Centre. In March of 2016 the new facility Students' area was opened. It's a new space for leisure, communication, preparing for lectures, etc.

108. Social support. This type of support comprises a possible psychological support for students and is provided by a psychologist. Students, as all Lithuanian citizens, have the right to choose a medical institution and get free medical service. In case of necessity students can get an academic leave on the basis of illness.
109. Conditions for students' self-governing are provided (SA); students' needs for self-expression are satisfied. Modern sports complex serves for electives and for students' leisure activities.
110. Students have opportunities to study and perform practice abroad. In March-April of every year, Centre of International Relations and Study (CIRS ) announces open competition for applying to become an Erasmus+ student and study or carry out practice abroad in the upcoming academic year. Additional competition to remaining vacancies for practice is arranged in September - October. All LUHS students and future graduates are eligible to take part in the competition. The criteria applied to the competitors: assessment of previous year study accomplishment, knowledge of a foreign language (grade 5 at least), motivation. Students mobility is also carried out through the academic net Nordplus and NOVA-BOVA .
111. The number of students who have undergone Erasmus+ programme is not high – the Committee of the study programme has performed study programmes' analysis of universities abroad and prepared proposal for the CIRS regarding signing of agreements, thus students can leave for exchange study Erasmus+ to 9 universities; information on the study programmes benefits is given to students during the Committee meeting of the study programme and in the lectures of study subject Introduction to Study; first year students are offered more electives for improvement of a foreign language. Students of continuous study programme are not able to take advantage of the exchange programme (majority are working and employers do not provide a possibility).
112. Students are consistently consulted concerning career possibilities. The information is available on internet and Career Centre (CC) that organises additional voluntary practices for students seeking to form better conditions for formation of practical skills and to facilitate students' employment. The University also organises Career days, during which students can communicate with employers directly.
113. The order for allotment of stipends and support for students is defined in documents approved by LUHS Senate. Students are eligible for social stipends that are administrated by state national foundation pursuant to the provision of Lithuanian government "On the approval of the description for social stipends allotment and administration to students of higher educational institutions (No 1801)<sup>30</sup>". Complying with the decision of LUHS commission of stipends, merit stipends can be allotted. The fund for these stipends consists of state budget assignments and from state budget funds for students' encouragement from finances allotted for study to cover study fee in the state funded study places and from study fees. Merit stipends are awarded to the best students (state funded and not funded by the state) for their best scores at admission or study results. Furthermore, the University awards single time grants in case of misfortune or especial cases. One personal grant of *Vilkijos Ukis* was awarded to a second year AHT study student in autumn semester of 2016-17 yr.
114. The assessment of students' achievements is pursuant to the recommendations of the European Parliament and Council on the establishment of the European Qualifications Framework for lifelong learning<sup>31</sup> (2008/c 111/01/EB, therefore, two main goals are sought to be achieved: to assess students' advancement; to assess final study outcomes (in the study programme named as anticipated outcomes). The assessment of students' achievements is directly associated with the study results. The principles of the achievements' assessment are determined in the LUHS study regulation approved by the University Senate (20 June, 2014, No 47-05; amended by LUHS Senate (23Sept. 2016, No 78-08) and described in the description of every subject. The system of assessment by a cumulative score is used at the University. The study subjects' outcomes are assessed by an examination; results of practice – by defence of practice, whereas the completion of the study

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<sup>30</sup> <https://www.e-tar.lt/portal/lt/legalAct/TAR.1D1C2FCC1DFA>

<sup>31</sup> [https://ec.europa.eu/ploteus/sites/eac-efq/files/broch\\_lt.pdf](https://ec.europa.eu/ploteus/sites/eac-efq/files/broch_lt.pdf)

programme – by the final bachelor’s work, which students start to prepare at the beginning of the studies and present publicly at the commission for defence of final work.

115. Requirements for preparation, methodical recommendations and assessment order are presented in the regulation for preparation and defence of final works approved by FAHT Council on 9 Nov. 2016, protocol No 3(100). Teachers, choosing assessment methods, are provided with methodical help by the Centre of University Teachers Educational Competence. The assessment of students’ achievements is directly associated with study results. Requirements for the score structure are determined by LUHS Senate documents and detailed in the description of every study subject. The system of accumulative score: accumulated part comprises at least 50 per cent of final grade; for assessment of students’ knowledge on 10 grade scale (the lowest pass is 5) is applied. The concept for the assessment of LUHS students’ achievements is coordinated with the content of national and international documents.
116. Evaluation forms for study subject/module colloquium, defence of practical’s, test, course paper compose a cumulative score. After completing study of subject/module, the assessment forms are credit, examination, independent work (project). The form and content of the assessment is planned by the department, and department presents it to the students before the start of the study subject.
117. To improve quality of bachelor’s final work, regulation of preparing and defence of bachelor’s final work is approved by the FAHT (available on the University intranet).
118. In the faculty, programme graduates’ employment results are under consistent investigation and analysis. The data is collected by means of (telephone) interviews following a structured questionnaire. The interview is carried out within 6, 12, and 36 months after graduation of the study programme; not less than 50 per cent of all graduates are interrogated. The number of AHT study programme graduates according to the data of career monitoring report present in 12 and 13 tables. The absolute majority of graduates were employed in Lithuania. The employment indices prove the demand of the programme.

**Table 12. The number of Animal Husbandry Technology graduates in 2012-2016**

Graduation year	The number of graduates
2012	48
2013	21
2014	9
2015	15

**Table 13. Percentge of AHT study programme graduates working by the work contract 2012-2016**

Graduation year	Percentage of working graduates 6 mo after graduation	Percentage of working graduates 12 mo after graduation	Percentage of working graduates 36 mo after graduation.
2012	54.2 %	54.2 %	54.2 %
2013	66.7 %	61.9 %	
2014	44.4 %	44.4 %	
2015	60.0 %		

119. The ways of assurance of study honesty are defined in the study regulation of LUHS, approved by the University Senate (20 June 2014, No 47-05, amended on 23 Sept. 2016, No 78-08. Dean forms the Commission to analyse cases of dishonesty, foreseen by the regulation. The commission consists of 1/3 University teachers (I should be from a different study implementing division than the work had been written at), representatives of faculty administration and 1/3 students delegated by students representatives. The commission not later than in 7 days (issue 325, regulation), and not later than within 4 days of its forming (issue 327, regulation) evaluate whether cases of dishonesty issues 325; 327) are present in the work and submit the conclusions to the dean of the faculty. After a case of academic dishonesty is confirmed, the faculty dean applies to the Rector with the request to consider

the penalty. Students complaints regarding execution and quality of AS programme in 5 previous years were not received.

## Summary

120. Summarising it is possible to state that the requirements for the admittance to the study are relevant and the course of the study is smooth. Graduates get employed in the areas related to the objectives of the study Programme. The system of assessment by a cumulative score is used at the University that motivates students to study throughout the semester. Students are provided with appropriate academic and social support. They have conditions to take part in mobility programmes, however the participation is not sufficient. To intensify students' participation in the aforesaid activity, teachers should collaborate more closely with students individually, disclose in greater detail the advantages of international studies. It is foreseen to intensify activity of programme students in SSS, suggesting more varied themes, which would provide better possibilities to carry out more qualitative SSS work, would facilitate formulation of future professional prospective and further career.

## PROGRAMME MANAGEMENT

121. Responsibility for the study Programmes' accomplishment, monitoring and taking decisions is distinctly distributed. General process of study organisation and quality assurance is vice-rector's responsibility. Activities of study quality assurance at the University level are coordinated by commission for study quality monitoring and assurance. Study Centre is responsible for organisation of study process and assurance of its appropriate implementation at the University level; at the faculty level – dean of the faculty (vice-dean). Deans (vice-deans) of faculties are responsible for assurance of study quality. Systematic evaluation and updating of the Programmes are under the responsibility of Study Programme committee.
122. The order of preparation, improvement and administration of the Programme is regulated in provisions of national legislation (Law of Science and Education of the Republic of Lithuania, orders of the Minister for Education and Science “On the approval of the description of general requirements for bachelor's degree awarding study; “On the approval of the description of full-time and continuous study”) and in the documents of the University (Statute of the University, in the plans of the University development, LUHS regulation, in LUHS provisions for study quality assurance<sup>32</sup>, in LUHS order of study programme's creation, improvement and management<sup>33</sup>, in faculty provisions<sup>34</sup>, in procedure documents prepared in accordance with the order determined and approved at the University (rules, regulations, descriptions of orders, etc.)<sup>35</sup>.
123. The dean and vice dean of the FAHT are responsible for implementation and quality of AHT study Programme. The FAHT dean is responsible for execution of orders and provisions approved by Senate and Rector of LUHS, organise and control study process in the faculty and submit proposals regarding the quality improvement of the study to AHT Council, Senate and Rector. The vice rector of the FAHT, together with the dean coordinates activities for Programme's quality assurance.
124. Departments, clinics and institutes of LUHS MA and VA take part in the accomplishment of AHT programme. Heads of divisions are responsible for study organisation and appoint teachers responsible for delivering study subjects. Responsible teachers compose descriptions of study subjects and upload them on LUHS SIS database, compose and publicise the plan of the study subjects teaching, coordinate the process of the study subjects discussing it with colleagues. The subject teachers are responsible for study quality and its supplementation with the newest scientific information.

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<sup>32</sup> [http://ismuni.lt/media/dynamic/files/281/studiju\\_kokybes\\_uztikrinimo\\_lsmu\\_nuostatos.pdf](http://ismuni.lt/media/dynamic/files/281/studiju_kokybes_uztikrinimo_lsmu_nuostatos.pdf)

<sup>33</sup> <http://ismuni.lt/media/dynamic/files/994/1-6.pdf>

<sup>34</sup> [http://www.ismuni.lt/media/dynamic/files/8519/lsmu\\_va\\_gyvulininkystes\\_tehnologijos\\_fakulteto\\_nuostatai.pdf](http://www.ismuni.lt/media/dynamic/files/8519/lsmu_va_gyvulininkystes_tehnologijos_fakulteto_nuostatai.pdf)

<sup>35</sup> <http://www.ismuni.lt/lt/veikla/kokybes-uztikrinimas/studiju-kokybe-reglamentuojantys-dokumentai/>

125. The Programme's supervision is performed, and improvement coordinated by the Study Programme Committee approved by the Rector after Dean's proposal. The Committee is made up of teachers engaged in the Programme and performing scientific research, representatives of students and social partners. The composition of the Committee is being reviewed and changed, to ensure the members' competence for executing monitoring of the Programme and submitting recommendations for its improvement.
126. In 2012-2013/2016-2017 the Committee structure was changed (the number of Committee was increased from 9 up to 13 (from the year 2014). Due to the reorganisation of the Committee, on 18 Dec. 2014 (LUHS Rector's order No SC-1-1301, 2014) the composition of the Committee was updated (University teachers, representatives of students and social partners were changed). The composition of the Programme Committee is given in Annex 8. Since 2016 the possibility for every study year students to be represented in the meetings of the Study Programme Committee has been provided, it ensures representation of students' interests in all study years – to express their opinion and recommendations for improvement of the programme.
127. The chairman of the Programme's Committee evaluates its compliance with the requirements set by the Ministry of Education and Science and by the University; organises and monitors the revision course of the study programme descriptions; involves social partners to the analysis and evaluation of the study Programme; carries out general coordination of the programme evaluation and considering proposals for improvement of the study Programme. The Programme Committee organises revision of the programme outcomes, revision of the study subjects list required to form competences determined in the Programme, revision of the study subjects' descriptions and detailed content. Scientists working in the Programme Committee are responsible for the compliance of study knowledge and capabilities with the newest tendencies in science, their integration to appropriate study subjects of the programme. A representative of employers is responsible for analysis of the programme compliance with the changing employers' needs, analysis evaluation, required changes in students capabilities. Students representatives analyse, assess changes in expectations of the programme students, their integration to the programme.
128. Within the period of the report, 20 Committee meetings were held. The most frequent issues under discussion were discussion of plans for the programme Committee activity, publicising and popularising of the study programme, implementation of marketing plan and measures, accomplishment of thorough evaluation of the programme before the accreditation procedure.
129. The chairman of the committee organises members' activity and makes decisions collegially. Working together, communicating directly or virtually the Committee members analyse the outcomes of the Programme's implementation, prepare projects for updating the Programme, submit them for the Committee meeting to be discussed and adopted on the basis of voting (majority votes). On the basis of authorization for approval of provisions the proposals sanctioned by the Committee are submitted to:
- the Heads of divisions if the proposals are related to the study subjects updating, projecting methods for active teaching, or literature updating
  - the dean of the faculty when the proposals are related to the improvement of the study process. The proposals are considered at the faculty Council that approves documents regulating study organisation
  - the faculty Council when the proposals are related to the change of the scope of the programme study subjects or to the consistency in teaching.
130. Such distribution of responsibilities for the Programme's implementation, surveillance and decision taking is approved by the University Statute, faculty provisions and assurance descriptions of the study quality, detailing them.
131. Documents regulating internal management of study quality are consistently updated by the University Study Centre and accessible for the Programme teachers and members of the Committee on LUHS site under the title 'Quality assurance'<sup>36</sup>.

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<sup>36</sup> <http://www.lsmuni.lt/lt/veikla/kokybes-uztikrinimas/>



132. The Committee carries out evaluation of the programme annually, approving plans of the study Programme. The study plans are considered and approved at the meetings of rectorate, FAHT Council, then approved by the Senate. The approved documents are available on LUHS website<sup>37</sup>.
133. The AHT study plans are implemented according to the study schedule prepared by LUHS Study Centre and approved by the head of the centre. The approved study plans are not to be changed except in the cases foreseen in the study regulation. The Study Centre projects the need for auditoriums and other facilities coordinate their engagement.
134. The heads of divisions are responsible for the accomplishment of the schedule in the division. They appoint teachers responsible for teaching the study subjects who, governed by the study regulation, compose the plan for the study subject, foresee periodicity of acquired knowledge control, requirements of the study subject, structures the study subjects' descriptions and uploads them on LUHS website of study information system and fills the register documents of students' achievements. The heads of divisions are also responsible for infrastructure of teaching base, its updating, distribution of pedagogic load and control of the study process; they analyse study quality at the initial level and submit data to the SPC and dean of the FAHT.
135. Objective and subjective (survey of stakeholders) data regarding the Programme implementation are collected systematically. The SPC performing evaluation uses electronic information system of the University: bases of students' admissions, integrated with LAMABPO data base, data of the FAHT dean's office, reports of the commissions for defence of final works, information system of career management, data of the commission for study monitoring and quality assurance.
136. Depending on the period of accreditation, every 6 or 3 yr a detailed evaluation of the programme is performed. At the moment of the current evaluation, methodics approved by SKVC is followed.
137. All the information on quality assessment is publicly announced: discussed with students, analysed at the meetings of divisions, faculty Council, meetings of academic community. The information concerning study quality and measures to improve it are thoroughly presented in annual reports of faculty Council, set on open AIKOS database, in sites and publications oriented for the first year students.
138. The aim of the internal quality evaluation is – quality of competences formed within the implementation of study programme; its mission is efficient feedback between academic community and students, graduates, stakeholders aiming at the improvement of formation of graduates capabilities. For that purpose experience of foreign universities is taken into account (University of Warmia and Mazury in Olsztyn, Poland; the Agricultural University of Athens, Greece; Hohenheim university, Germany; Kaposvá University, Hungary; SGGW – Warsaw University of Life Sciences, Poland; University of Agriculture in Krakow, Poland; The University of Szeged, Hungary; Aegean university, Turkey). The University itself periodically assesses quality of its study programmes. After collecting and analysing information on popularity among applicants, results of surveys, graduates' employment, study achievements, the newest science tendencies related to study programme, also after analysis of teachers, students, stakeholders' proposals, the Study Committee carries out the evaluation of the study programme improvement and submits summarised proposals to be considered at the Council of faculties and approved by the Senate.
139. The University offers study based on scientific research: (a) students prepare final work of research character; (b) elements of the research are applied at the seminars, performing laboratory work, practicals, practice; (c) teachers use the research results in the study subjects. It is intended to pay more attention to the comments of employers and students and revising the study programme to associate study subjects with the practice (analysis of good practice examples, real cases/situations) and application of active methods in teaching.
140. Taking students' mobility under consideration, students' encouragement to participate in international exchange programmes was intensified. At the end of the year 2016 the University had 164 active Erasmus+ cooperation agreements in 27 European countries. The University Centre for study and international relations provides assistance to students and teachers seeking to take part in Erasmus+ and in other programmes of international mobility. Since 1996 the University has been a member of the Baltic Forestry, Veterinary and Agricultural University Network (BOVA),

<sup>37</sup> <http://www.lsmuni.lt/lt/veikla/studijos/akademine-informacija/studiju-planai/studiju-planai-2016---2017-mm/>

collaborating with the Nordic Forestry, Veterinary and Agricultural University Network (NOVA). It provides possibilities for LUHS students and teachers to participate (supported by Nordplus) in intensive courses of high quality in Latvia, Estonia, Denmark, Finland, Norway, Sweden, and Iceland. In 2014 and 2016 the courses were offered at LUHS VA, under the theme “Quality evaluation of eggs and poultry meat”.

141. Recently, more attention is paid to the adaption of study subjects to be used on Moodle system. E-department of the University study Centre is responsible for development of Moodle system, periodically organises trainings for University teachers and offers individual and group consultations about the use of Moodle. In 2016 VU Centre for Electronic Study and Examination Organisation arranged distance training for the university teachers, the theme “Creation of methodics for E. learning and application possibilities of virtual learning environment”.
142. Considering the Programme means, other experts’ recommendations were also taken into account (Annex 6).
143. To ensure the programme quality, evaluation and opinion of highly qualified teachers, motivated students, employers (possessing innovative approach to study process) are of considerable importance. To involve them to the evaluation and improvement of the programme preparation, the system of social partners’ feedback is consistently developed at the University. Implementing the system surveys, discussions in target groups are arranged and the obtained generalised results are used for the updating of the study programme, improvement of the study process organisation, enhancement of academic staff composition and capabilities.
144. Assurance of student’s feedback. Students take part at the activity of LUHS VA Students Representatives office. Students’ representatives are members of LUHS Senate, FAHT Council, commissions for teachers’ attestation and allocation of grants, programme Committee. Moreover, students may speak out their problems at the dean’s office; they can also apply to the University Study Centre and at the joint meetings with members of study programmes’ Committee and directly to the teachers during lectures. During the implementation period of the study programme, students’ appellations regarding examinations or complaints were not submitted.
145. At the end of every semester students have the opportunity to speak out their opinion a) concerning all study subjects in the surveys via electronic system for recording study results (LUHS SIS). Summarized data of the surveys (2013-2014 yr) are presented in this system<sup>38</sup>. The survey is voluntary; the number of students engaged in the programme is not great, hence the number of filled questionnaires concerning study subjects is not significant. A survey was arranged after the practice of 2016 yr – seeking to evaluate students opinion b) about benefits and shortcomings of the professional practice activity. The Programme Committee arranges surveys of students after defending final work –c) the aim is to find out about fruition of students’ expectations, their opinion about study organisation, teachers’ academic and scientific competence during the whole study period. d) International department arranges surveys seeking to get information about exchange programmes’ benefits, quality differences between LUHS and the universities where they had practice on the basis of partial study agreements.
146. Assurance of graduates’ feedback. Since summer of 2015, University and some other schools of higher education have united into information system for career management (Karjera.lt), which permits to conduct graduates’ career monitoring 6, 12, and 36 months after completion of the study. In this system, objective data (from state information systems, registry offices) concerning graduates employment, market situation, salaries are provided. The University Career Centre coordinates activities of graduates monitoring. According to the objective data of career management IS, from 9 graduates 60 per cent were working 6 months after graduation (graduated in 2015). The system does not provide data on the type of employment, therefore the graduates were interviewed on the telephone in April, 2016 – the graduates were working in business area of agricultural infrastructure, Lithuanian Agricultural Advisory Service, Control of animal productivity.
147. Assurance of teachers’ feedback. Teachers of AHT study programme can speak out their comments and proposals in the meetings of their divisions, Committee meetings of study programme

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<sup>38</sup> <http://www.lsmuni.lt/lt/veikla/kokybes-uztikrinimas/studiju-kokybes-vertinimas-ir-tobulinimas/>

and at the Council meetings of AHT faculty. Teachers get acquainted with the report and proposals of the chairman of Evaluation Commission for final works. In December of the year 2016, the survey of teachers was carried out. The structure improvements of the study programme will be performed on the basis of teachers' proposals and evaluations.

148. Assurance of employers' feedback. Employers' representatives are involved in the activity of FAHT Council, Committee of study programmes, Commissions for evaluation of students' final works.

## Summary

149. The system of study Programmes and internal quality management is described and under the process of implementation. The responsibility for the management of the Programme is explicitly distributed among the programme Committee, divisions, dean's office, Study Centre, Centre of International Relations and Study Centre, Career Centre, University Senate. The Programme teachers, students, graduates, employers are involved in the processes of Programme evaluation and improvement.
150. To further improve management of the Programme, the information acquired in the process of the Programme management, expedition among teachers and students should be improved; the information accumulated in University information databases, publicity of the study Programme, its relevance in the market should be used more efficiently. Teachers should be encouraged not to limit their activity within the quality improvement of their study subjects, but to be more active in the process of the study programme updating, to react to the feedback results. Practicians should be more actively involved into the teaching of certain subjects themes.