

# Expert group joint opinion

Evaluation Procedure: Assessment of Study Field

Higher Education Institution: Latvijas Lauksaimniecības universitāte

Study field: Agriculture, Forestry, Fishery, and Food Hygiene

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# Summary Assessment of the Study Field

## Summary Assessment of the Study Field

The study field “Agriculture, Forestry, Fishery, and Food Hygiene” of LLU is relevant in the context of both the EU and Latvian agriculture and forestry. The content and administration of the study field and programmes correspond to legal requirements. The quality assurance system at the university is well-functioning. University and faculties implementing the study programmes provide students and staff with necessary resources. The academic staff of study programmes is actively carrying out research work not only at the university but also in the scientific institutes outside the university and also involves students in the research work. Different forms of collaboration with Latvian and foreign institutions are developed. The main positive aspects of the study field are effective cooperation, competent staff, and research-based studies. The main negative aspects are connected with low international mobility of the academic staff, partly outdated library resources, and unbalanced workload for academic staff.

The professional bachelor study programme “Agriculture” corresponds to the study field and legal requirements. The study programme has the necessary provisions and support. The programme provides students with good basic practical and theoretical knowledge. Academic staff qualification corresponds to requirements, they integrate research and practical experience into study courses. The main positive aspects are the possibility to choose between four qualifications, high satisfaction with the programme at different levels, strong connection with employers, and good laboratory equipment. The main negative aspects are bad PR for agriculture, low incoming mobility, low English language skills for some of the academic staff members.

The professional bachelor study programme “Forest Engineering” corresponds to the study field and legal requirements. The programme provides students with good basic practical and theoretical knowledge. Academic staff qualification corresponds to requirements, they integrate research and practical experience into study courses. The main positive aspects are the possibility for the students to get real labour market experience, high satisfaction with the programme at different levels, and updated infrastructure. Substantial negative aspects were not identified.

The bachelor study programme “Sustainable Agriculture” corresponds to the study field and legal requirements. The programme is new and innovative, trying to use modern scientific insights. Academic staff qualification corresponds to requirements, they integrate research and practical experience into study courses, their English language level is adequate to provide programmes in English. The main positive aspects are preparation of students for the whole European labour market, incorporation of future employers' needs into the programme, good laboratory equipment, and academic staff actively involved in research activities. A minor negative aspect is missing information on prior knowledge in course descriptions.

The bachelor study programme “Sustainable Forestry” corresponds to the study field and legal requirements. The programme is new and innovative, trying to use modern scientific insights. The programme is student-centred. Academic staff qualification corresponds to requirements, they integrate research and practical experience into study courses, their English language level is adequate to provide programmes in English. The main positive aspects are involvement of practitioners, highly qualified staff, strong cooperation with LVMI “Silava”. Substantial negative aspects were not identified.

The bachelor study programme “Forestry Science” corresponds to the study field and legal requirements. The programme complies with the needs the labour market and development trends

in the society. The programme is student-centred. Academic staff qualification corresponds to requirements, they integrate research and practical experience into study courses. The main positive aspects are involvement of practitioners, highly qualified staff, strong cooperation with LVMI “Silava”. The main negative aspects are missing information on prior knowledge in course descriptions, low international mobility.

Master study programme “Agriculture” corresponds to the study field and legal requirements. This study programme complements and provides a continuation of studies after a professional bachelor, to obtain more academic knowledge in agricultural sciences. Students, alumni and employers were overall satisfied with the study process. The main positive aspects are good study and research infrastructure, highly qualified academic staff, involvement of the master students in research projects and publication writing. The main negative aspects are missing information on prior knowledge in course descriptions, low international mobility.

The master study programme “Forestry Science” corresponds to the study field and legal requirements. The programme provides students with the possibility to choose one of the three specialisations. The study programme is maintaining student-centred learning and teaching. The study programme has adequate provisions and support, indicating the strong possibility to ensure a high-quality study process in the future. The main positive aspects are the involvement of industry professionals and research institutions in the development of the study programme, strong support with providing laboratories and involvement in research by LVMI “Silava”, highly qualified staff. Substantial negative aspects were not identified.

The professional master study programme “Food Hygiene” corresponds to the study field and legal requirements. The programme is timely considering the international context of food safety issues. According to the information obtained during the on-site visit, the study programme will be closed. The main positive aspects are good study provision and scientific support, good qualification of the academic staff. The main negative aspects are the lack of elective speciality courses, and course descriptions are not uniform.

The doctoral study programme “Agriculture” corresponds to the study field and legal requirements. The quality of the content of the courses is very good and the offer of the courses in PhD Programmes covered very well a big area of interest from the agriculture field. The study programme has adequate provisions and supports, indicating the strong possibility to ensure a high-quality study process in the future, ongoing national and international research projects. The main positive aspects are very good cooperation among academic staff, PhD students. The main negative aspects are lack of incoming mobility, English language level of some academic staff.

The doctoral study programme “Forestry Science” corresponds to the study field and legal requirements. The study programme has adequate provisions and support, indicating the strong possibility to ensure a high-quality study process in the future. The programme is student-centred, students are involved in programme evaluation. The academic staff fully corresponds to the requirements. The main positive aspects are cooperation with science partner LVMI “Silava”, cooperation between academic staff and PhD students, and good research infrastructure. The negative aspect is the too-short duration of the studies

## **1. Management of the Study Field**

### **Analysis**

1.1 Latvia University of Life Sciences and Technologies (LLU) is a state-founded higher education institution. It is the only university in Latvia to provide studies in Agriculture, Forestry and Food hygiene therefore has a unique position in the higher education field. LLU aims to be one of the leading science and technology universities of The Baltic Sea region, with specialisation in the sustainable use of natural resources to improve the life quality of society. This aim directly corresponds with this study field and research directions implemented in this study field can be found in LLU strategy (<https://www.llu.lv/sites/default/files/2021-03/StrategijaLV.pdf>). All of the programmes that are included in this study field aim to prepare well-qualified specialists in forestry, agriculture, food hygiene which also is the long-term aim of the LLU strategy. These programmes are sustainable and complement the needs of society and the economy. This study field includes all study levels, which allows LLU to accumulate knowledge, develop new technologies and allows to create a succession of the study process. It also corresponds to labour market needs not only locally but in the European Union, agriculture, forestry and fishery industries are facing problems of attracting qualified specialists in this field. (SAR 1.2. section)

During the site visit, experts could see that the management structure of this study field is integrated within the LLU structure. Faculties of Agriculture, Forestry, Veterinary medicine are responsible for carrying out study programmes included in this field, and other structural units of LLU complement and are involved in delivering quality study processes in study programmes included in this study field. (Annex 4. Management of the study field ). Main academic staff delivers the study process in this study field. (SAR section 1.4.)

1.2. Students, alumni, employers are involved in the decision-making process and can suggest improvements to the study field and study programmes. Study field director rights and responsibilities are determined by LLU Senate, each study programme has its own director which is responsible for the elaboration of the study programme. LLU has created and taken into account different councils which help to provide ideas of improvements of study field and programmes. Similar responsibilities are carried out by the methodological council of LLU (annex 4.) Representatives of decision-making structures and administration of LLU are easily approachable stated by all parties – students, academic staff and employers. Which let's conclude that all issues and decisions can be resolved in a polite and effective way. There are support structural units (Study department, international relation department etc.) that help to sustain information of students, academic staff, provides connections to other Higher education institutions (HEI) and provides courses for improvement of didactic and other skills, etc.

1.3. LLU has created a system for the admission of students. Admission requirements and documents regulating the admission process can be found on LLU official website (<https://www.llu.lv/lv/uznemsana>). Applicants have the possibility to apply electronically via Latvija.lv system, which has one platform for admission to up to 12 different universities in Latvia. (More details are provided in SAR section 1.5.) Since the study field provides unique programmes, students may have difficulties recognising previously acquired experience from other study fields, but it is possible, during the site visit students named examples of how they have used this option. The possibility to do so can also be accessed on the LLU website (<https://www.mc.llu.lv/pakalpojumi/pieredzes-atzisana>). Nevertheless, LLU is also open to admitting students from other HEI to continue studies on higher education levels, confirmed from student examples during the site visit. Procedures for evaluation of the achievements and learning outcomes of students are in place. They are regulated by different documents, for example, Regulations of studies ([https://www.llu.lv/sites/default/files/2021-05/Study\\_regulation\\_2021\\_EN.pdf](https://www.llu.lv/sites/default/files/2021-05/Study_regulation_2021_EN.pdf)); they are described in study course descriptions (Annexes of study course descriptions). Students have been acquainted with these requirements in each study course, they are logical and efficient, confirmed by all study level students during the site visit.

1.4. LLU has created their internal academic integrity document ([https://www.llu.lv/sites/default/files/2019-12/Akad\\_godigums\\_2019.pdf](https://www.llu.lv/sites/default/files/2019-12/Akad_godigums_2019.pdf)). LLU emphasises that all

parties involved in the study process are equally responsible for providing academic integrity principles, that are declared in university and can be found in this document. To control and check student plagiarism level LLU have been using electronic plagiarism systems. At first, this system was only used to check qualification works but during the site visit, the LLU administration stated that they have started to use this system for all student submissions within the Moodle system. If the system shows more than 10% similarities in the qualification work then the thesis is forwarded to the methodological council and looked through to determine if there really is plagiarism. LLU also has introduced certain procedures for the examination of these works, more details at the SAR 1.7 section.

1.5. LLU official website is available at <https://www.llu.lv> (viewed at 04.11.2021). Under the section "Studies" students can use different filters to find their own programme of interest. All programmes provided under this study field can be found on the website. Based on the information provided by the LLU administration Master programme "Food hygiene" will be closed in March of 2022, no more students are being enrolled in this study program, so information regarding this study programme should be excluded from the website. Most important information about study programmes (duration, study fees, degree awarded etc.) can be found by clicking on the programme of interest, contacts for programmes directors also are provided if candidates have additional questions. For the programmes with the language of instruction Latvian only, the descriptions are provided also only in Latvian language, study programmes descriptions and basic information in English can be viewed to all programmes that support study language in English. The design to apply for programmes also is simple

## **Conclusions. Strengths and weaknesses**

Conclusions.

LLU has taken a unique position in the Latvian higher education landscape providing studies in agriculture, forestry and veterinary medicine. Study field strategic development complies with LLU strategy to prepare high-quality specialists and be one of the best universities with a specialisation in the sustainable use of natural resources. Goals are reachable. Decision making in the university is aimed at the development of the study field. LLU has created an efficient and logical system for student admission and recognition of previously gained formal/informal experience. LLU also has created and implemented in the study process academic integrity. All information about study programmes is up to date, correct and is not misleading.

Strengths:

1. LLU has close cooperation with scientific institutes and employers.
2. LLU is the only university in the country to provide studies in agriculture, forestry, veterinary medicine.
3. Students, graduates, and employers have confirmed participation in the decision making of improvements of the study field.
4. LLU ensures the continuation of studies up to the doctoral level.
5. Students acquire a good theoretical and practical skill set to enter the labour market.
6. The Faculty of forestry recently has been renovated, providing better possibilities for study process and research.

Weaknesses:

1. Regarding agriculture study programmes there is a negative perception in the society and insufficient positive PR.
2. Master study programme "Food hygiene" will not admit students, but information about the study programme is still available on the university webpage.

## 2. Efficiency of the Internal Quality Assurance System

### Analysis

LLU is a Higher Education Institution that takes a specific place in the Latvian higher education field and is offering unique study programmes and ensuring close relationships with students, employers, partner organizations and alumni.

2.1. Quality management issues are involved in each step of the education system. The University has detailed documentation describing quality assessment and improvement activities in the areas of university administration, organization of the study process, staff development and organization of research activities.

LLU has developed a quality management system based on the international standards for excellence (see Investors in Excellence Standard, [www.investorsinexcellence.com](http://www.investorsinexcellence.com)). The quality management system of LLU is externally audited every two years. A general description of the LLU Quality Management System and the Quality Assurance Plan is available at <https://www.llu.lv/index.php/en/mission-and-vision>.

The Quality policy, strategic directions and strategic objectives are in line with LLU mission and vision. The Quality policy also contains LLU main competitive advantages, factors influencing quality and standards LLU activities are in line with. LLU updates and improves its internal quality management system by assessing and applying the best quality management practices already available in the national space, while also benchmarking the relevance of the system with international standards.

The internal quality assurance system is based on several phases: planning, doing, checking, and acting.

The management structure of the study field is clearly defined. To achieve a unique value proposition, the assessment of each study programme within the study field and its comparison with other similar programmes was performed and is available in the Strategy of LLU (2015-2020 <https://www.llu.lv/sites/default/files/2017-03/Strate%CC%84g%CC%A7ija%20gara.pdf>). The missing or imprecise information in the course descriptions (prior knowledge, list of compulsory literature) in many study programmes shows that not all aspects of quality assurance works.

2.2. Every year, annual reports are drawn up for all study programmes; the reports are approved by the Senate and published on the LLU website.

The improvement of the study process organization and the content of the study programmes as well as the assurance the outcomes achieve the goals of the study programmes is done taking into consideration the information, feedback and ideas submitted via various surveys.

Every semester, a survey of students is conducted to find out students' opinions regarding the courses taken, satisfaction with the way the courses are organised, the content of the courses, the teaching staff delivering the courses (an electronic questionnaire). The survey results are available to each teaching staff member, directors of study programmes, department/institute directors, deans of the Faculties and the Vice-Rector for studies.

Feedback mechanisms (including feedback to students, employers, and graduates and employers) have been defined and they are logical, efficient and available for all stakeholders.

HEI collects statistics on relevant study fields on a regular basis, including feedback from the students involved in mobility projects.

LLU has an easy to navigate Internet home page, all necessary documents for students and other interested parties are available in Latvian and English simply to find.

2.3. The development and approval of new study programmes are done according to the Senate regulations. In order to supervise study environment quality, self-assessment reports of the study programme are prepared on a yearly basis and it contains information about changes in study plans and courses, creation of new courses, study materials and information resources, cooperation with stakeholders and changes in infrastructure etc.

LLU centrally collects statistical data in various perspectives and with various regularity, which is dictated by external or internal stakeholders - Once a month: (Number of students across the programmes, study types and forms) and Filling of state-funded study places.

Once a study year - Number of alumni across the study programmes; Admission results; Statistical data collection in LLU "University-1"

Once a year- Statistical data collection across study fields; Filling the state-funded study places within a year; LLU Development Strategy 2015-2020, a summary of performance results of Education Programmes; Student and academic staff mobility indicators.

Data are still analysed at the level of faculties:

evaluation of academic staff work quality by students (each semester),

alumni survey results (annually), information about student employment (existing or potential workplaces, once a year before finishing studies), quantitative and qualitative indicators of the scientific activity of academic staff members, including student engagement in the scientific work (annually), materially technical provision (at least annually).

2.4. Environmental, social and governance standards are elaborated in LLU envisages responsibility of parties involved in the delivery of quality assurance.

(<https://www.llu.lv/sites/default/files/2021-03/StrategijaLV.pdf>) LLU quality assurance system description and implementation plan can be found on LLU website <https://www.llu.lv/en/study-guide-documents>

LLU Development Strategy, implementation of quality management, personnel development, administration improvement plan, infrastructure development plan are the main lines of activity in LLU strategic priorities.

Equipped laboratories are available to perform good quality practical laboratory works.

The recruitment of teaching staff and the election of academic personnel is done according to the state regulatory enactments and LLU internal regulations. The improvement of teaching staff qualification is done systematically.

## **Conclusions. Strengths and weaknesses**

LLU has developed an internal quality assurance system that is effective and efficient. The data necessary for the effective management of the study process is systematically collected from all interested parties and analysed. The improvement of the study process and the content of study programmes is performed according to the internal regulation and based on the stakeholders' needs, requirements and recommendations. The KPIs of the strategic objectives are developed, measured systematically, analysed and the necessary improvements are done. The external document and internal documents management systems are in place and seem to be effective. HEI has established policies and procedures to ensure a high quality of education according to the ESG standards.

Strengths:

1. Strong cooperation with governmental and non-governmental organisations, potential employers, scientific staff and education staff of HEI are involved. The quality policy is developing according to students and labour market needs.
2. Academic staff members elaborate on suitable study materials, practical classes and methodological materials.
3. The development of new study programmes is done according to a structured plan, it involves and considers multiple stakeholders' interests - academic staff, lecturers and potential lecturers, employers' representatives, alumni, experts and specialists from education, private and public sectors, representatives of business associations, current and future students (high school graduates).

4. LLU has a user-friendly Internet home page, most of the necessary documents for students and other interested parties are available in Latvian and English and easy to find.
  5. HEI has established KPI for the strategic goals and the monitoring system. The monitoring system is based on different surveys that are performed with established regularity. The surveys cover all stakeholders' interests and opinions (students, including international, employers, alumni, employees, ERASMUS students, library visitors). There are clear roles and responsibilities for conducting and analysing these surveys. The surveys' results are used as input for LLU improvement processes.
  6. The internal and external document management system is structured, clear and well maintained.
  7. The standards for the remote study process organization are developed, improved based on students recommendations and effectiveness.
  8. The established quality assurance system is publicly available and covers all areas of the university's activities.
- A well-functioning communication system with students, graduates and staff is created.

#### Weaknesses:

1. Feedback from students is given only for weak points or neutral mostly. If everything is working well, there is a lack of feedback. Not easy to develop programmes, the competence of education staff if there is not defined needs clearly.
2. Burnout of academic staff members because the majority of them are involved also in the research and administrative work. The attraction of new academic staff members, considering that delivery of specialised courses does not make a full workload, is still a huge challenge.
3. Some publicly available documents are outdated - 2020 year and have not been replaced with actual information.
4. Quality assurance of the course descriptions do not fully works.

### **3. Resources and Provision of the Study Field**

#### **Analysis**

3.1. LLU has developed a system to determine the financial resources required for the implementation of the study field and relevant study programmes. According to the SAR (starting p 41.) funding for the studies mainly consist of the state budget and tuition fees. State budget financing depends on the number of study places and the cost per one student in a particular year. Internal regulation approved by the university Senate sets proportional division of the available resources for salaries and other expenses, for example, 80% of state financing is intended for salaries and 20% for other expenses. For particular study programmes costs are distributed for four parts: salaries (72-77%), scholarships (3-7%), goods and services (22-23%), the building of the fixed capital (3-4%). Other financial resources, for example, ERASMUS+ are used for exchange visits and joint education projects.

Scientific activities are financed by the attracted external projects, contract research, as well as, by state scientific base and performance funding. From state base funding 50% is given directly at disposal of the faculties. Science base funding is used to promote scientific performance, ensure co-funding in different projects, for the development of scientific infrastructure and support for scientific staff (publication fees, participation in conferences). Such a system seems to promote further scientific activities and increase attracted resources.

There is a system for internal financing of research activities and enhancing them. Three LLU support programmes are (SAR p. 59): Strengthening of the scientific capacity in LLU, LLU research programme implementation and Fundamental research in LLU. As mentioned by the doctoral students during interviews special grants are available to the PhD students to buy supplies, attend conferences and cover publication fees and in such a way further enhance scientific activities.

3.2. LLU has identified the infrastructure resources and the material and technical provisions required for the implementation of the study field, and they are available for the university. The students and the teaching staff mainly have access to the necessary resources.

Faculties and institutes involved in the implementation of the study field are located in different LLU objects in Jelgava and outside the city. The Faculty of Agriculture is located in the main building of the LLU (the Palace) where there are shared auditoriums, computer classrooms, as well as special laboratories for teaching and research. Additional laboratories and classrooms are located in the second building of the Faculty of Agriculture in Strazdu iela. The Forest Faculty is located in a separate building with its own classrooms, computer classrooms and laboratories. The building of the Forest Faculty is freshly renovated but the building is not suitable for persons with disabilities as there are no elevators in the building. For the Food Hygiene study programme infrastructure of the Faculty of Veterinary Medicine is used. Buildings have special areas for the student's free time, group studies, vending machines, and cafes.

The equipment of the study and research laboratories is being continuously updated using state budget financing, project money, and part of the equipment is provided by the industry (for example, in the Forestry Faculty). As mentioned by the academic staff during the interviews they also have the financial resources necessary to run the laboratories (to buy supplies, to cover broken things) but sometimes there is a lack of assisting staff members for work in the laboratories and research.

Regarding the IT infrastructure, all the buildings have the WIFI-networks (but there are problems in part of the Palace due to building specific) accessible for students and staff. There are free access computers in the buildings for the students. LLU has an intranet system MansLLU with the information and documents for internal use. E-studies platform Moodle is extensively used, containing study materials, possibilities to evaluate students works and an integrated video conference system BigBluButton that is used for online lectures, especially during the COVID-19 time. As stated in SAR p. 45-46 computer equipment is good but should be updated.

For the studies and research premises Study and research farm "Pēterlauki", Study and research farm "Vecauce" and Forest research Station are used, providing possibilities to gain practical experience in fieldwork.

As stated in SAR p. 47 students and academic staff have access to LLU Fundamental Library with reading rooms and subscribed databases. The collection of the library includes textbooks, scientific monographs and periodicals. Library resources are updated according to academic staff suggestions and by looking at the new books available. Library provides access to different software (AutoCAD, CorelDraw, SPSS, VISIO), databases (CAB Abstracts, CRC Press, EBSCO eBook, EBSCO host, ScienceDirect, Scopus, Scival, Web of Science, Wiley Online Journals, Lursoft). Students and graduates during on-site interviews mentioned that some of the books are outdated and should be replaced with newer ones and that there should be more e-books available.

3.3. LLU has developed and implemented and complies with the procedures for attracting highly skilled teaching staff). According to the SAR p. 51, the attraction of teaching staff is set by Statutes of LLU on Academic Jobs Positions. The number of positions for academic staff is approved by the Senate according to the needs and financial possibilities of the faculties. Requirements for the candidates are determined by the national regulation. Elections of the new academic staff members are organised after open competition and placement of announcement of vacancies.

The Senate can also approve visiting positions for academic staff without the announcement of competition (up to a two-year period) if suggested by the faculty council.

University has a system of Professional Development for the academic staff. As mentioned in SAR p.53 and approved in interviews with the academic staff, each member of the academic staff must attend the course "Innovations in University Didactics" during each election period (6 years). There are possibilities to attend other courses, for example, improve the English level, improve IT

competencies etc. Part of the courses is organised as an activity of SAM 8.2.2. project. Academic staff of all faculties involved in the implementation of the study field take part in the outgoing mobility. According to the SAR Annex "Incoming and outgoing mobility of academic staff..." in total 57 persons took part in outgoing mobility to give lectures during the evaluation period. A sharp decrease in mobility is observed during the previous academic year due to the COVID-19 pandemic. Incoming mobility includes 63 persons giving lectures during the evaluation period. LLU has implemented an internal motivation system for academic and scientific activities (SAR p. 15) (gaining points for particular activities, publications, student evaluations) that influence the salaries of academic staff. During the on-site interviews, academic staff mentioned this system as a good motivation to work better and ensure a qualitative study process.

3.4. LLU has identified the support necessary for the students and established a well-functioning support system, based on the needs of the students. According to SAR p. 56, there are different support systems: informative (for example, websites and intranet), methodological support (consultations - on-site and off-site, e-studies system, lists of databases), technical support and financial support. Financial support is available as state scholarships (monthly), single scholarships, special scholarships for the acquisition of science degrees and LLU Development Fund scholarships. For foreign students, additional support is provided by the International Cooperation Centre, for example, support in receiving visas, residence permits, finding dormitories, and providing consultations.

Students and graduates during the interviews admitted that they can receive different kinds of support, they know where to find information or whom to ask. They know persons in the faculties they approach to try to solve different types of problems. PhD students are mentioned as a good example of possibilities to receive special grants for their studies. Grants can be used to cover conference and seminar participation fees, publication costs in open-access journals.

## **Conclusions. Strengths and weaknesses**

LLU has the necessary resources to provide qualitative studies for the students and to implement the study programmes. There is a system to ensure financial resources for the study programmes and scientific activities, including internal grant systems for research projects and PhD students. LLU attracts qualified academic staff.

Strengths:

1. LLU has an internal grant system for scientific activities and PhD students
2. The academic staff is motivated and qualified
3. Premises, IT resources, and laboratory equipment is regularly updated and improved to provide qualitative studies and research
4. Study and research farms and Forests Research Station provides possibilities for the students to gain practical skills

Internal motivation system for academic and scientific activities of academic staff promotes interest to keep high standards in academic activities.

Weaknesses:

1. The building of Forestry Faculty is not suitable for persons with disabilities
2. Part of the books in the library are outdated, the amount of the books in ebook format is rather low

## **4. Scientific Research and Artistic Creation**

### **Analysis**

4.1 Self-assessment report (SAR) refers to the long-term goals of the University, which defines excellence in research. The referred document is "LLU Strategy 2015-2022", but this is the too general reference (none of the action plans referred), also various strategy periods mentioned across SAR or implementation periods are not harmonised with mentioned action plans (for instance with Forest Faculty Strategy – action plan 2020-2024). It gives the feeling that there is a breach in strategic planning processes or at least in its implementation. Furthermore, none of the strategy implementation plans was mentioned for the faculty of Agriculture.

On another hand this study field is unique for Latvia, with very deep traditions at this University therefore it doesn't look like some inconsistencies in strategic planning might question the compliance of the study field with the development aims of the University. Chosen research field priority (biosciences) coming from the needs of relevant economic industries consulted via established advisory boards and cooperation with partnering scientific institutions. Cooperation and multilevel partnering with LVMI "Silava" in Forestry programmes and with the Institute of Horticulture in Agricultural programmes is the key factor to assure compliance to actual scientific developments in relevant study fields.

4.2 There is no doubt that scientific research in the study field is comprehensively related to the study process. SAR confirms and provides various examples of how research is integrated into the study process - study materials developed during the implementation of research programmes, final thesis are high quality and receiving specific awards, international and national patents obtained, international student conferences organized at both faculties also including events of European researchers night.

Because resources for research in the study field are sourced externally (external national or international grants) it might be complicated to assure continuous and stable research in particular topics, research can get fragmented. Internal funding might be allocated to assure and guarantee such stability.

4.3 International cooperation is ongoing via a wide range of international programmes, starting from bilateral and ending with major European research funding programmes. Especially important participation in the COST programme, which provides additional instruments for wide international short term research mobility and helps to strengthen and develop research networks. It's very important that academic staff participate in various relevant international societies and associations. On another hand, it is not always institutional participation of the University, but attribution to partnering institutions if staff employed at University and partner institutions. Like participation in H2020 projects not confirmed by the presence of University between official grant signatories.

University has clear plans for further improvements of visibility at international setting - ResearchGate, ORCID mentioned, but in all cases, the University should assure that both names in English (former "Latvia University of Agriculture" and new since 2018 "Latvia University of Life sciences and technologies") are tidily linked and assure that institution is recognized.

4.4 SAR and information obtained via meetings with academic staff confirms teaching staff involvement in scientific research via a full range of academic activities - workshops and scientific conferences, participation in research programmes, preparation of publications and providing expert opinion. Mentioned international research programmes and academic press have a high reputation and confirm high competencies of academic staff and their strong engagement into research and international visibility.

4.5 Students are engaged via main engagement mechanisms - research planning and research results presentation at conferences. Naturally, the strongest engagement is for PhD studies, also very important. There are many examples of PhD students cooperating among themselves, while at the bachelor level it might need some improvement. Research teams will benefit and guarantee necessary human resources if teams are combined from representatives of all study levels - bachelors, master and PhD students and especially if such teams will be multidisciplinary.

4.6 SAR provided examples of innovative solutions in the study process that are more relevant to

organizing the studies in general but not specifically attributed to the integration of scientific research in the study process. Some potential to develop University's information system exists and is utilised already (like using decision support systems DSS), but it has to be explored further and to have clear plans to fully utilise it in the future.

## **Conclusions. Strengths and weaknesses**

All specific evaluation criteria generally confirm the adequate role of scientific research in ongoing studies and compliance with requirements. Research activities are clearly relevant and well linked with studies, collaboration is ongoing with relevant academic partners and well responds to market and policy needs. Some processes might need additional attention, strategic planning, closer cooperation between different study levels, development and better integration of available IS for research needs.

Strengths:

1. Part of the academic staff is very actively involved in research, have many publications in journals with high impact factors, involve students in the research, and write books.
2. Scientific research is well-linked with study fields.

Weaknesses:

1. Improvements of visibility at international setting still required, the University should assure that both names (former "Latvia University of Agriculture" and new "Latvia University of Life sciences and technologies") are tidily linked and assure that institution is recognised.

## **5. Cooperation and Internationalisation**

### **Analysis**

5.1 University has a wide range of cooperation institutions due to its unique profile of study programmes and long traditions in Latvia - it is the only Latvian university providing studies in agriculture and forestry. Employers, scientific institutions and professional organisations are well presented among cooperative partners. Such cooperation confirmed in SAR and during onsite interviews, it clearly contributes to the achievement of the aims and learning outcomes of the study field "Agriculture, Forestry, Fishery, and Food Hygiene".

Furthermore, the University is playing an important expert role via representatives in advisory boards and councils. Partnerships with relevant schools (Ogre Technical School, Bulduri Horticulture Secondary School) is very important to assure adequate preparation and knowledge of offered study programmes for the potential students.

University has a long list of international partners for cooperation in higher education, but the elaborated internationalisation plan looks a bit outdated (made in 2015) and has no clear procedures for updating.

5.2 Provided statistical data confirm that levels of incoming teaching staff and students remain pretty low. It's a strong impact of the present pandemic situation which has almost stopped all types of mobility since early 2020, but on another hand, plans should be ready when the situation is back to normal. Besides passive communication (website information channel) University claims also use active marketing, but recognise a major reason for keeping it low - the majority of study programmes and study information is available in Latvian only, there is inadequate funding for salaries of incoming teachers.

5.3 The traineeships are available as study traineeship, professional traineeship or research traineeship. Procedures look clear and well organized with adequate support to trainees offered (student has 2 supervisors). Students can get information about available traineeship places from

the website, information board and promotional emails. Furthermore, students can change traineeship providers if it is needed. On another hand, even students can undergo traineeship in foreign companies, but it is not actively used and reasons preventing it should be found and eliminated.

5.4 University is not running any joint programmes and does not plan to develop them.

## **Conclusions. Strengths and weaknesses**

Information provided in the self-assessment report and obtained during interviews with staff, teachers, students and graduates confirms that University performance in Cooperation and Internationalisation is compliant with requirements.

University has strong and fruitful cooperation with relevant national and foreign partners. But mobility levels (both incoming and ongoing) remain low, furthermore, the internationalization programme looks outdated and without plans for updating.

Strengths:

1. University has strong and fruitful cooperation with relevant national and foreign partners.
2. A wide range of traineeships is offered, procedures are well organised and clear for students.

Weaknesses:

1. International mobility of teaching staff and students is quite low and steps to further increase it should be taken. Also, incoming mobility could be more used.

## **6. Implementation of the Recommendations Received During the Previous Assessment Procedures**

### **Analysis**

During previous accreditation of the study field, the majority of recommendations provided by experts were implemented or action plans were elaborated to perform them, ensuring both development of the study field and programmes contained in it, consolidation and improvement of study quality.

The academic staff has improved the English language skills that are necessary for working with ERASMUS+ students and will be needed for working with students in the new study programmes.

The teaching staff has 100 to 200 hours of internships in the companies of the branch, thus improving both the content of the study courses and closer cooperation with the companies (potential internships).

The involvement of doctoral students in the study process is a step towards changing the generation of academic staff, which is still not happening to a sufficient extent. LLU has a staff development plan, and foreign university lectures can be involved within the framework of projects. Most of the teaching staff have improved their English language skills, which allows them to start implementing two new academic bachelor study programmes “Sustainable Agriculture” and “Sustainable Forestry”.

Mobility level increment is fulfilled partly. Mainly students and staff are taking place in ERASMUS+, BOVA and similar programmes however employment agreements are signed with foreign universities (both for LLU funding and attracting project funding).

The university is improving both motivation systems taking account of financial possibilities to

improve the publication of research results in internationally available and reviewed editions. There is a considerable increase in scientific publications and work in this section should be constant. LLU has two motivation systems 1) for academic staff and 2) bonuses for research performance.

Faculties have elaborated recommendations for groundings and execution of theses, including pointing at the quality of bibliography used in the theses and its impact on assessment, procedure for elaboration and defence of theses is improved, which helps to improve the quality of theses.

Academical Bachelor's and second-level higher professional programme "Agriculture" have been closed to support the Professional Bachelor Study Program.

In the reporting period, no students are longer admitted to the professional graduate programme Agriculture since 2015 because it was found that good quality studies require two years. If delivering solely one graduate programme, resources are used more rationally.

Three graduate programmes were consolidated into a joint academic graduate programme Forestry Science with three specialisation directions Forest Ecology and Silviculture, Forest Work and Machinery, and Forest Economy and Politics.

Recommendations for the graduate programme "Food Hygiene" have been taken into account and partially fulfilled. As the study programme will be closed in near future there was no need to fully implement all recommendations.

### **Conclusions. Strengths and weaknesses**

In general, recommendations from previous procedures of accreditation have been taken into account.

Strengths:

1. The teaching staff has improved both the content of the study courses and closer cooperation with the enterprises.
2. The involvement of doctoral students in the study process is a step towards changing the generation of academic staff
3. The opportunity to attract foreign academic staff also increases the quality of studies.
4. Within the consolidation of different study programmes, resources are used more rationally.

Weaknesses:

1. English language skills for some of the academic staff still needs to be improved.

### **7. Assessment of the Requirements for the Study Field**

- 1 R1 - Pursuant to Section 5, Paragraph 21 of the Law on Institutions of Higher Education, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study direction whilst implementing their internal quality assurance systems:

**Assessment of compliance:** Partially compliant

LLU has developed an internal quality assurance system to ensure improvement of the study field. There is partial compliance regarding the assurance of the quality of higher education.

- 2 1.1. The higher education institution/ college has established a policy and procedures for assuring the quality of higher education.

**Assessment of compliance:** Partially compliant

SAR 1.3. section and LLU have a certificate of investor in excellence which also indicates that a quality assurance system has been developed and is implemented in provision of the study field. The missing or imprecise information in the course descriptions (prior knowledge, list of compulsory literature) shows that not all aspects of quality assurance works.

- 3 1.2. A mechanism for the development and internal approval of the study programmes of the higher education institution/ college, as well as the supervision of their performance and periodic inspection thereof has been developed.

**Assessment of compliance:** Fully compliant

LLU has procedures for development and approval of study programmes.

[https://www.llu.lv/sites/default/files/2019-03/Studiju\\_programmu\\_izstradasanas\\_noteikumi\\_2019.pdf](https://www.llu.lv/sites/default/files/2019-03/Studiju_programmu_izstradasanas_noteikumi_2019.pdf) (Accessed 13.11.2021)

Periodic inspection is presented to the LLU Senate annually. SAR page 14.

- 4 1.3. The criteria, conditions, and procedures for the evaluation of students' results, which enable reassurance of the achievement of the intended learning outcomes, have been developed and made public.

**Assessment of compliance:** Fully compliant

Criteria and conditions for evaluation of students is available and made public.

[https://www.llu.lv/sites/default/files/2021-05/Studiju\\_nolikums\\_2021.pdf](https://www.llu.lv/sites/default/files/2021-05/Studiju_nolikums_2021.pdf) (Accessed 13.11.2021).

More specific criteria are available in study course descriptions. (Annexes of study course descriptions). Students confirmed that information about evaluation is available.

- 5 1.4. Internal procedures and mechanisms for assuring the qualifications of the academic staff and the work quality have been developed.

**Assessment of compliance:** Fully compliant

The procedure for the election of academic staff members is available publicly.

<https://www.llu.lv/sites/default/files/2021-04/Nolikums%2014.04.2021.pdf>

When a staff member is elected or re-elected they have to finish didactic courses held in LLU for improvement of their skills.

- 6 1.5. The higher education institution/ college ensures the collection and analysis of the information on the study achievements of the students, employment of the graduates, satisfaction of the students with the study programme, efficiency of the work of the academic staff, the study funds available and the disbursements thereof, as well as the key performance indicators of the higher education institution/ college.

**Assessment of compliance:** Fully compliant

Collection and analysis of information is carried out via surveys or oral interviews including students, alumni, employers. Students have the ability to evaluate academic staff performance via surveys. Staff members annually have to create plans for the next academic year to achieve the strategic goals of this study field. SAR page 15. , section 2.3.

- 7 1.6. The higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study direction whilst implementing their quality assurance systems.

**Assessment of compliance:** Fully compliant

SAR 2.1. section. LLU has developed and created an internal quality assurance system, which ensures the improvement of the study field.

- 8 R2 - The cooperation with different organisations from Latvia and abroad implemented within the study direction ensures the achievement of the aims of the study direction.

**Assessment of compliance:** Fully compliant

SAR 5.1. section. Strong cooperation ongoing on various levels - employers, professional organizations, research institutions and expert councils. All also confirmed during interviews. International mobility of teaching staff and students can be improved and used more.

- 9 R3 - Compliance of scientific research and artistic creation with the development level thereof (if applicable).

**Assessment of compliance:** Fully compliant

Research activities are clearly relevant and well linked with studies. SAR 4.1. section.

- 10 R4 - Elimination of the shortcomings and deficiencies identified during the previous assessment of the study direction, if it has been conducted, or the implementation of the provided recommendations.

**Assessment of compliance:** Fully compliant

Prior recommendations have been taken into account. SAR 6.1 section and Annex 14.

## 8. Recommendations for the Study Field

### Short-term recommendations

Update official webpage information regarding masters study programme "Food hygiene", indicate study programme end date and that no students will be admitted in this program.
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Update outdated publicly available documents with actual information
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### Long-term recommendations

Improve the possibilities for the persons with disabilities to study in the building of Forestry Faculty
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Continuously update resources of the library by replacing outdated books and increasing the amount of the books in ebook format
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Work on a strategy to improve the perception of the agriculture field and studies among potential students, as well as, to improve recognition of the university internationally to link former name in English and new one.
--

Consider making study courses surveys mandatory to have feedback from all students
--

Reconsider administrative tasks (for example, writing reports) for academic staff to balance workload
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Information systems might be updated with research modules (open data and any others) and linked to already existing study-specific information
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To develop plans to eliminate main reasons preventing international mobility, assure more active offering of international mobility to all interested groups, share good practices via the presentation of "success stories"
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Continuously work on improvement of the English language skills of academic staff
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## II. "Agriculture" ASSESSMENT

### II. "Agriculture" ASSESSMENT

#### 1. Indicators Describing the Study Programme

##### Analysis

Professional Bachelor's study programme Agriculture (code 42621 according to the Classification of the Latvian Education system) provides the possibility for students to obtain one of four specialisations during the study process: Agronomist with a specialisation in Field crops or Horticulture; Zootechnician in Breeding; Manager of Agricultural Enterprise. In accordance with Cabinet of Ministers regulation No. 626. Standard for specialisation - "Agronomist" is mandatory. The latest standard for this specialisation was developed on 14.02.2003. This standard is in force, but is outdated and LLU should monitor when the new standard will come in force and assess compliance of the study programme with the new standard. The same situation is for specialisation "Zootechnician in breeding", the latest standard is old, but still in force and LLU should assess compliance with the new standard when it will be created. Regarding specialisation "Manager of Agricultural enterprise," the Cabinet regulations that LLU has provided in SAR are outdated. Standard for this specialisation also is not mentioned in the Cabinet of Ministers regulation No. 626. No valid document about this standard is available to compare with the study programme. So the qualification awarded is questionable. LLU have to provide proof of the validity of this qualification standard and reassess if this qualification can be awarded in this study programme.

The main goal of the study programme is to provide basic theoretical and practical knowledge in agricultural science. Study programme objectives are to prepare students in their desired qualification to be ready to enter the labour market, these objectives directly derive from the study programme goal. (SAR pages 177-178) This programme also provides part-time extramural studies, in which goals, objectives and learning outcomes are the same as full time. For each specialisation learning outcomes are set the same and they are as follows - graduates have the basic knowledge in agriculture subjects, they can organise agricultural production, are familiar with legislation requirements in Latvia and European union, they can work independently and can utilise special literature regarding each specialisation. Outcomes are interrelated with goals and tasks of the study programme. The final examination of this programme is the Bachelor thesis defence. Admission requirements are general secondary education or vocational secondary education, which allows students from different backgrounds to apply for the study programme. During the site visit, the LLU administration indicated and the students supported the argument that agriculture as a field is misunderstood and a lot of new students do not apply for the study programme since agriculture deals only with soil, which is a misleading concept and creates bad PR for the study programme. Both forms of the study programme comply with the regulations of the Cabinet of Ministers No. 512.

##### Conclusions by specifying the strengths and weaknesses

Study programme aims, objectives and learning outcomes are defined, they are achievable, they reflect on the degree awarded which students obtain. This study programme complements the overall goal of the study field and provides agricultural specialists.

Strengths.

1. Any secondary school graduate can apply for this study program, which may be attractive for new students.
2. Professional programme provides all the basic necessary knowledge for entering the labour market.

3. Students have the possibility to choose one of four qualifications within the programme.

Weakness.

1. Bad PR of agriculture among Latvian society, most secondary school graduates think that agriculture is just digging soil and planting plants, which may seem unattractive.

## **2. The Content of Studies and Implementation Thereof**

### **Analysis**

The study programme is compliant with the Law of Higher Education Institutions, which means that in study course descriptions necessary information is included, except almost in none of the study courses previous knowledge for starting a study course has been indicated and mandatory literature can be updated to more recent versions. Both programs are worth 160 credit points, studies are at least 4 years (8.semesters), study programmes provide general study courses (Philosophy, Ethics, Aesthetics, professional languages, Basics of enterprises etc. which are required by legislation), there are also study courses, such as Biometry, Chemistry, Zoology, Agricultural resources etc. for basic theoretical knowledge in the field worth of 36 credit points. All of the field professional specialization courses regarding specialisations in field crop, horticulture, zootechnician and manager of agricultural enterprise have equal number of courses with a value of 61 credit points and in the opinion of experts complies with professional standards. Since this is a professional study programme, students also have to have at least 20 credit points of practice, in this study programme students have practised in total with 25 credit points. Students can also choose and attend elective study courses in a total amount of 6 credit points. Regarding bachelor thesis with 12 credit points that should be awarded is also compliant. The content of the study programme ensures that outcomes of this programme are achieved. Since this is a professional study programme students are exposed to acquiring practical skills directly in the industry via internships, traineeships etc. Most of the academic staff that are involved in implementing study courses also work in different projects or do scientific research often in collaboration with industry. Because of strong collaboration with employers, the scientific institute's study programme has the possibility to follow tendencies in the labour market and in scientific research. During the site visit students showed overall satisfaction with how academic staff works, their mentors are easily approachable and help to provide solutions to real-life problems in agriculture. During the site visit students provided information about how to find out for example about learning outcomes, they also had no complaints about lack of information about procedures, how to defend the thesis, how to start research activities etc.

Study course descriptions are available for students. They include learning outcomes, evaluation system, works that have to be done during study courses etc. Study implementation methods lead to achieving outcomes determined in study courses and the whole programme itself. During the site visit students indicated that they can go directly to staff members and raise any issues regarding the study process, some lecturers after the study course ask questions about what students have liked or not, etc. Students also are involved in decision making bodies in accordance with the law of higher education (confirmed by students and administration members).

Surveys are conducted after each study course students there can express their opinions about the course, about lecturers. Surveys are analysed and analysis is delivered to study programme directors, faculty council. If the complaints raised are reasonable then the faculty council, programme director consulting with the methodological council can initiate changes in study courses. Employers are involved in the evaluation of internships or sometimes in councils evaluating the thesis of students. They are very close to the study process and can bring the latest innovations to the study process, via councils, joint projects with LLU, connections with the staff members.

Alumni could not indicate any particular surveys, but they confirmed that they have been asked for opinions about the study programme after graduation in the form of verbal communication with the study programme director.

Students have the possibility to go in foreign mobility to different countries, mostly through the ERASMUS project. Before leaving they have the opportunity to find the most similar study courses to attend, so they can get recognised back at LLU after mobility. Students provided examples of how to go through this process. The process of recognising previously acquired experience is possible and available on the LLU homepage. Regarding all information available, students' outgoing mobility is low, most of the reasons indicated are family or financial issues. Incoming mobility currently is not active among students, since this programme is only in the Latvian language.

### **Conclusions by specifying the strengths and weaknesses**

Conclusions.

The professional study programme "Agriculture" provides students with good basic practical and theoretical knowledge. Content of studies leads to achieving goals set by the programme and the whole study field - to accumulate knowledge, to prepare high-quality employees for the labour market. Information about finishing each study course, requirements for the final thesis are available and achievable. Students, graduates and employers are involved in improving the study programme. Mobility options are possible for students, but most students do not use them due to different reasons ( not interested, family, financial problems, language barriers etc.) Since the programme is only in Latvian, there is no incoming mobility of students in this programme.

Strengths:

1. Students have the possibility to get real labour market experience during the study process.
2. Student, alumni, employer overall satisfaction with the study programme.
3. Strong connection to enterprises, employers, scientific institutes.

Weaknesses:

1. Study course descriptions should indicate previous knowledge for starting courses and literature should be updated.
2. Incoming mobility of students is limited as the study programme is offered in Latvian only.

### **3. Resources and Provision of the Study Programme**

#### **Analysis**

3.1. The study provision, scientific support, informative provision, material and technical provision, financial provision comply with the specific features and the conditions for the implementation of the study programme and have all the prerequisites for the achievement of the learning outcomes.

As stated in the assessment of the study field and also in the SAR p. 194, there are various laboratories (Grain and seed science scientific laboratory, soil and agrochemistry science laboratory, soil and agrophysics laboratory, plant pathology and entomology laboratory, microbiology laboratory, plant biology and physiology laboratory, horticulture plant and apiculture laboratory) in the faculties involved in this study programme for practical tasks, computer classes with the necessary software, modern auditoriums. Information resources include books and journals in LLU Fundamental library, different databases (for example, ScienceDirect, EBSCO eBook Academic collection). Comparing the list of the compulsory reading in the course descriptions and the information in the joint library catalogue (<http://kopkatalogs.lv>) not all books can be found, for example, course LauZ2109 Agronomy Experiment Design has listed book Singh, Y.K. "Fundamentals of research and methodology and statistics". Databases and electronic catalogues are available also

in English. For the studies e-studies system, Moodle is used and as shown during the on-site visit. To provide students with practical experience, LLU uses study and research farms “Pēterlauki”, “Vecauce”, and training centre “Mušķi” (for horse breeding course). Special natural study materials such as herbariums, insect collections, soil, seed, fertiliser and forage production samples are available to use for study courses.

Finances for the study programme consists of the state budget financing (costs per 1 student in 2020 was 2897.93 EUR) and tuition fees (1900 EUR for full-time studies and 1340 part-time studies). The number of the students is slightly decreasing each year (SAR annex 4 “Statistical data Lauks BAK”), approximately 2/3 of the students have state budget places and 1/3 studies for a fee but as mentioned in the on-site interviews with the graduates and employers the interest in the study programme should remain high (as specialist are demanded) and there should be enough students to ensure the study programme.

3.2. Not applicable as it is not a doctoral programme.

### **Conclusions by specifying the strengths and weaknesses**

The resource base for the use by the academic staff and students complies with all the requirements of the implementation of the study programme. Students have access to various laboratories for research activities and practical tasks. Both academic staff and students have most of the necessary resources for a successful study process (databases, technical equipment, materials for laboratories, Moodle system).

Strengths:

1. Good laboratory equipment, Study and research farms for practical studies;
2. State budget places for the students;
3. Effective Moodle system with online lectures possibilities.

Weaknesses:

1. Not all books mentioned in the course descriptions as compulsory are available in the library.

## **4. Teaching Staff**

### **Analysis**

4.1. According to the SAR p. 196 there are changes in the composition of academic staff for the study programme. The ratio of the professors has slightly decreased during the evaluation period and the ratio of assistant professors increased. As this is a professional bachelor programme there is no reason to assume that those changes could substantially negatively affect the quality of the study programme implementation. Also, those changes happened gradually. Additionally, each year representatives of industry are attracted as visiting lecturers.

4.2. As already stated in the evaluation of the study field, LLU applies systemic criteria for admission of the academic staff. The academic staff complies with the legal requirements set for the study programme.

According to the SAR p. 196, there are 91 academic staff members (17% professors, 16% associated professors, 28% assistant professors, 37% lecturers and 2% assistants) from different LLU faculties are involved in the implementation of this study programme, from which 60% are elected in the university and 53% have a doctoral degree.

Academic staff involved in the study programme have practical work experience in the industry or scientific institutions and/or have scientific publications. Part of the academic staff during the

evaluation period has prepared more than 50 scientific publications. According to Annex 4 “List of projects implemented by the academic staff of the Faculty of Agriculture...” there are more than 80 different kinds of projects, some of which are implemented by the academic staff of this programme. The academic staff members regularly raise their qualifications by attending different courses – English language (4 persons), communication tools in IT platforms (25 persons), and as mentioned in on-site interviews with academic staff, they attended courses also outside the university.

Although this study programme is delivered only in the Latvian, the English knowledge level of part of academic staff according to “Annex 6. Academic staff of study direction” is evaluated only to levels A1, A2 or B1 (Common European Framework of Reference for Languages). That could limit the possibilities for the academic staff to actively participate in conferences, meetings, and raise the qualifications using resources in English.

4.3. Not applicable as it is not a doctoral programme.

4.4. The academic staff members of the study programme actively participate in the scientific research activities and practical projects both at the national and international levels in respective fields relevant to the study programme. International projects are such programmes as Horizon 2020, ERA-NET, 7th Framework Programme (SAR p. 198). At the national level, there are projects funded by the Latvian Science Council and by the European Structural Funds, as well as special research projects of the Ministry of Agriculture (field cultivation, horticulture, and animal husbandry field). Projects are implemented also together with industry organisations, for example, Latvian Sheep Growers Association, Latvian Fruit Production Association.

Results of the research projects are implemented in the study programme and in the study courses as academic staff acts both as lecturers and as researchers and so can provide students with the latest conclusions from the actual research activities. According to SAR, results obtained from research are shown in practical courses.

4.5. Information provided in the SAR, as well as, interviews with the study field and study programme management, and with academic staff, confirms that there are mechanisms for collaboration to improve the study courses. The content of study courses and changes in it are, firstly, discussed in the Methodological Commission of the appropriate Faculty, secondly, discussed in the institutes that provide study courses and only then study courses are approved in the Council of the Faculty. Necessary changes to the study course content are proposed by the academic staff, as well as, by management. Collaboration between academic staff happens also by providing common study courses (involving staff from two faculties) and by jointly supervising student thesis.

### **Conclusions by specifying the strengths and weaknesses**

The qualification of the academic staff involved in the implementation of the study programme fully corresponds to the conditions of implementation of the study programme and the requirements of regulatory enactments, as well as ensures the achievement of aims and learning outcomes of the study programme and respective study courses.

The academic staff members of the study program, both at the national and international level, are engaged in scientific research in the field of quality management and conformity assessment, and the acquired information and experience are integrated into the study process

#### **STRENGTHS**

1. The study programme is delivered by highly qualified specialists, including persons with practical experience.

2. Academic staff is actively involved in scientific research - they participate in the projects, have publications in the field leading journals.
3. Academic staff use possibilities to raise their qualification by attending courses not only provided by the university but also outside the university.

#### WEAKNESSES

1. The English language skills for some of the academic staff members are rather low.

### 5. Assessment of the Compliance of the Study Programme "Agriculture"

#### Requirements

- 1 1. The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure by which state-recognised documents of higher education are issued.

**Assessment of compliance:** Fully compliant

Diploma complies with the procedure by which state-recognised documents of higher education are issued. Annex Diploms-un-pielikumi\_bak\_PI\_NL\_Iv .

- 2 2. Documents confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued.

**Assessment of compliance:** Fully compliant

Annex 6. Agreement between LU\_LLU and LLU

apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets confirms that students of the bachelor programme "Agriculture" (qualifications Agronomist and Zootechnician in breeding) will have possibility to continue education in the bachelor programme "Biology" of University of Latvia, Faculty of Biology. Students of the qualification Manager of Agriculture enterprise will have the possibility to continue education in the bachelor programme "Entrepreneurship and Business Management" of LLU. All students will have the possibility to continue studies in the appropriate study programme.

- 3 3. Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

**Assessment of compliance:** Fully compliant

Third point in the annex "LLU

apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets". LLU confirms that LLU will re-pay back money to students in case they do not wish to continue studies in other HEI in case that programme is closed.

- 4 4. The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

**Assessment of compliance:** Fully compliant

8. point in annex "LLU apiecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets"

confirms language level of academic staff.

- 5 5. The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language.

**Assessment of compliance:** Not relevant

- 6 6. At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts.

**Assessment of compliance:** Not relevant

- 7 7. The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Institutions of Higher Education.

**Assessment of compliance:** Not relevant

- 8 8. The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

**Assessment of compliance:** Fully compliant

Annex "Studiju\_ligums\_2021" complies with the requirements of the Cabinet of Ministers.

- 9 9. The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Partially compliant

Study courses are available in all study process languages (Annexes about study course descriptions), almost none of the study courses have indicated prior knowledge needed for successfully completing a study course.

In some of the study courses descriptions mandatory literature is older than 15 years and should be replaced with newer materials. Not all books mentioned in the course descriptions as compulsory are available in the library

- 10 10. The study programme complies with the valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided that the completion of the study programme leads to a professional qualification.

**Assessment of compliance:** Partially compliant

Annex 2\_pielik\_Atbiltiba\_profesijas-standartam\_Ls\_bak\_LV\_prec. For the qualifications Agronomist and Zootechnician - the standard is mentioned in the Cabinet regulations Nr. 626 as compulsory standard, there is a standard approved on 14.02.2003 which is in force, but is outdated. When new standards for Agronomist and Zootechnician in breeding are available LLU have to reevaluate compliance to new standards. Regarding qualification Manager of Agricultural enterprise, no valid documents have been provided to support this qualification.

- 11 11. Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Not relevant

- 12 12. The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard.

**Assessment of compliance:** Fully compliant

Annex 1\_pielik\_Atibilstiba-valsts-izglitibas-standartam\_Ls-bak\_LV\_prec. Program complies with state legislation.

- 13 13. The joint study programmes comply with the requirements prescribed in Section 551, Paragraphs one, two, and seven of the Law on Institutions of Higher Education (if applicable).

**Assessment of compliance:** Not relevant

- 14 14. Each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions (if they have worked for a shorter period of time, the number of publications shall be in proportion to the work period), or artistic creation achievements (for instance, exhibitions, films, theatre performances, and concert activity), or a five-year practical work experience (except for the experience in the implementation of the study programme) in accordance with the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Academic members have publications or at least 5 years of work experience according to academic staff CV.

- 15 R5 - Overall rating

**Assessment of compliance:** Partially compliant

Previous knowledge in study course descriptions should be indicated and no valid documents have been provided to support one of the qualifications.

## Requirements (R6-R8)

- 1 R6 - The compliance of the study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of the learning outcomes.

**Assessment of compliance:** Fully compliant

Students have the ability to use LLU infrastructure, literature resources are available (books can be renewed as indicated previously), all other necessary resources for study programme provision and implementation ensures to achieve the learning outcomes.

- 2 R7 - The compliance of the qualification of the academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments.

**Assessment of compliance:** Fully compliant

All academic staff are qualified for providing a qualitative study process and qualifications comply with the necessary legislation

- 3 R8 - The study programme leading to the master or doctoral degree is based on the advances and findings in the relevant field of science or artistic creation.

**Assessment of compliance:** Not relevant

Not applicable since this is a Bachelor study program

### **Conclusions by specifying the strengths and weaknesses**

Conclusions.

All requirements for the study programme are met. Academic staff is qualified to participate in the implementation of the study programme and the material-technical base is sufficient to achieve learning outcomes.

### **Evaluation of the study programme "Agriculture"**

Evaluation of the study programme:

Good

## **6. Recommendations for the Study Programme "Agriculture"**

### **Short-term recommendations**

Revise and add the previous knowledge section in the study course descriptions, revise the list of compulsory reading to ensure that books are available in the university library.

Provide clear reference to regulations of the Cabinet of Ministers that is in force regarding professional standard.

### **Long-term recommendations**

Continue to raise English language skills for the members of the academic staff with a knowledge level below B2.

Work on a strategy (PR) to improve the perception of the agriculture field and studies among potential students, possibly find ways to educate secondary school students on how diverse agriculture is.

Consider offering part of the study courses in English to increase incoming student mobility.

## **II. "Forest Engineering" ASSESSMENT**

### **II. "Forest Engineering" ASSESSMENT**

#### **1. Indicators Describing the Study Programme**

##### **Analysis**

Students of the professional Bachelor's study programme "Forest Engineering" (code 42623 according to the Classification of the Latvian education system) are conferred the Professional Bachelor Degree in Forest Science and the qualification of Engineer of Forestry. The obtained qualification corresponds to the fifth professional qualification level. In accordance with Cabinet of Ministers regulation No. 626. Standard for specialisation - "Engineer of Forestry" is mandatory. The latest standard for this specialisation was developed on 14.02.2003. This standard is in force, but is outdated and LLU should monitor when the new standard will come in force and assess compliance of the study programme with the new standard. Tasks to achieve the goals of the study programme are well described and lead to accomplishing the study programme. The resulting outcomes provide

students with all necessary skills to enter the labour market or to continue their studies at the Master level. Admission requirements are: general secondary education or vocational secondary education, requirements for student admission is a successfully passed examination of the Latvian language in the secondary school and foreign language for the same time, as successfully passed a centralised examination in mathematics.

These requirements are providing the possibility to all students with an interest in forest science and forest engineering to enrol in the study programme. This professional Bachelor programme is held only in Latvian, the admission requirements are appropriate. The final examination is foreseen at the end of the study programme - Bachelor's thesis defence.

Duration of full-time studies is 4 years and part-time studies – 5 years.

### **Conclusions by specifying the strengths and weaknesses**

Study programme aims, objectives and learning outcomes are clearly defined, they are achievable, they reflect on the degree awarded which students obtain. This study programme complements the overall goal of the study field and provides professional forest engineers.

Strengths.

1. Any secondary school graduate can apply for this study program, which may be attractive for new students.
2. Professional programme provides all the basic necessary knowledge for entering the labour market.

Weaknesses:

There are no weaknesses identified.

## **2. The Content of Studies and Implementation Thereof**

### **Analysis**

The study programme is compliant with the Law of Higher Education Institutions, which means that in study course descriptions necessary information is included, except almost in none of the study courses previous knowledge for starting a study course has been indicated.

The study programme corresponds to a standard “Forest Engineer”. The professional standard was approved by the Order of the Ministry of Education and Science of 14 February 2003 No. 79. The developed standard is available on the website of the State Education Content Center, in the section “Mandatory applicable professional standards and pre-professional qualification requirements”. Programme title includes a wide range of competences which characterise the qualification/position/speciality included in this title.

Programme’s task is to provide students with theoretical knowledge and develop practical skills in forest evaluating, regenerating, maintaining and harvesting, timber delivery, sale and primary processing for consumers, as well as for solving issues related to forestry economics and Latvian economy. Programme “Forest Engineer” contains 160 credit points, studies are at least 4 years (8.semesters).

Study programme provides general study courses (Philosophy, Ethics, Aesthetics, professional languages, Fundamentals of law and commercial laws), there are also study courses, such as Mathematics, Physics, and IT sciences. For basic theoretical knowledge a total amount of 20 credit points must be earned.

Foreign language skills are necessary for elaboration of various course papers and final thesis. They are fundamental for a student to take an opportunity to participate in student mobility programmes.

Since the study course offers engineering subjects, students must have appropriate basic knowledge which is shown by successfully passing a centralised examination in mathematics. If persons who acquired their secondary education before 2004 or have been discharged from centralised examinations wish to apply for studies, they must submit the average annual grade in Latvian, foreign language in their diploma or a passed centralised exam as satisfactory proof.

For basic theoretical knowledge in the field worth of 36 credit points. There are study courses of Forest botanical, Dendrology, Game management, surveying basics, Technical drafting, Forest regeneration and breeding, Silviculture, Basic courses on enterprise management and bookkeeping, Safety in the works and civil protection, Basics in Forest entomology and phytopathology, Ecology and environmental protection.

Professional specialization courses have an equal number of courses with a value of 60 credit points and in the opinion of experts complies with professional standards. Courses regarding specialisation are more deeply within Forest valuation, surveying and economy. Different specialisation into different silviculture and logging technologies with economical, social and environmental essential requirements, Forest inventory basic knowledge, Infrastructure in forest for silviculture and harvesting activities, Commercial activities into forest management, Logistic and wood market specifications.

In this study programme students have practised in total with 26 credit points.

Regarding bachelor thesis with 12 credit points that should be awarded is also compliant.

The content of the study programme ensures that outcomes of this programme are achieved. Since this is a professional study programme students are exposed to acquiring practical skills directly in the industry via internships, traineeships etc. Most of the academic staff that are involved in implementing study courses also work in different projects or do scientific research often in collaboration with industry. Because of strong collaboration with employers, the scientific institute's study programme has the possibility to follow tendencies in the labour market and in scientific research. During the site visit students showed overall satisfaction with how academic staff works, their mentors are easily approachable and help to provide solutions to real-life problems in forestry and logging activities.. During the site visit students provided information about how to find out for example about learning outcomes, they also had no complaints about lack of information about procedures, how to defend the thesis, how to start research activities.

Taking into account the instruction language of the programme (Latvian only), one of requirements for student admission is a successfully passed examination of the Latvian language in the secondary school. In order for a student to be competitive in the labour market and be able to root their decisions in scientific conclusions and have an international perspective, they also need to study in foreign language for some time. It defines a requirement for potential students to pass centralised examination in foreign language (Assessment of centralised examination in foreign language can be substituted with international test assessment, pursuant to Cabinet Regulation No. 543 of 29.09.2015).

Study course descriptions are available for students. They include learning outcomes, evaluation system, works that have to be done during study courses etc. Study implementation methods lead to achieving outcomes determined in study courses and the whole programme itself. During the site visit students indicated that they can go directly to staff members and raise any issues regarding the study process, some lecturers after the study course ask questions about what students have liked or not, etc. Students also are involved in decision making bodies in accordance with the law of higher education (confirmed by students and administration members).

Surveys are conducted after each study course students there can express their opinions about the course, about lecturers. Surveys are analysed and analysis is delivered to study programme directors, faculty council. If the complaints raised are reasonable then the faculty council, programme director consulting with the methodological council can initiate changes in study courses. Employers are involved in the evaluation of internships or sometimes in councils evaluating

the thesis of students. They are very close to the study process and can bring the latest innovations to the study process, via councils, joint projects with LLU, connections with the staff members. Alumni could not indicate any particular surveys, but they confirmed that they have been asked for opinions about the study programme after graduation in the form of verbal communication with the study programme director.

Students have the possibility to go in foreign mobility to different countries, mostly through the ERASMUS project. Before leaving they have the opportunity to find the most similar study courses to attend, so they can get recognised back at LLU after mobility. Students provided examples of how to go through this process. The process of recognising previously acquired experience is possible and available on the LLU homepage. Regarding all information available, students' outgoing mobility is low, most of the reasons indicated are family or financial issues. Incoming mobility currently is not active among students, since this programme is only in the Latvian language.

Regular cooperation with industry representatives, which are also employers, take place within the framework of the study programme Forest Engineering. Industry representatives are in the Convent, NEC, and are invited as visiting lecturers, review theses, work in different action groups with representatives from the Department of Forest Utilisation, and it provides a platform for constant opinion exchange and there is no need to organise special surveys to find out opinions.

### **Conclusions by specifying the strengths and weaknesses**

The professional Bachelor's study programme "Forest Engineering" provides students with good basic practical and theoretical knowledge. Content of studies leads to achieving goals set by the programme and the whole study field - to accumulate knowledge, to prepare high-quality employees for the labour market. Information about finishing each study course, requirements for the final thesis are available and achievable. Students, graduates and employers are involved in improving the study programme. Since the programme is only in Latvian, there is no incoming mobility of students in this programme.

#### Strengths

1. Students have the possibility to get real labour market experience during the study process.
2. Student, alumni, employer overall satisfaction with the study programme.
3. Strong connection to enterprises, employers, scientific institutes.

#### Weaknesses

1. Study course descriptions should indicate previous knowledge for starting courses and literature should be updated.

### **3. Resources and Provision of the Study Programme**

#### **Analysis**

3.1 Studies are well covered by general services available at University - access to the library, online databases, information services (including WIFI-networks and intranet system MansLLU with the information and documents for internal use) and faculty - specialized classrooms/auditoriums and laboratories for practical activities, also excellent and newly renovated public spaces. There are continued annual and planned investments in study programme infrastructure. Computer equipment and training equipment purchased, partners also are supporting the study programme by providing specific software and simulators. Besides qualified academic staff, forest industry professionals are also involved in the study process to lead certain topics (guest lectures). Study programme materials are also well presented in the E-studies platform Moodle, this guarantees an efficient distance learning process. Comparing the list of the compulsory reading in the course descriptions

and the information in the joint library catalogue (<http://kopkatalogs.lv>) not all books can be found, for example, course MežZ2042 Forest regeneration and tree breeding has listed book Borges, J.G. "The management of industrial forest plantations...."; course MežZ3046 Mechanization of Forestry Work I has listed book Uusitalo J "Introduction to forest operations and technology".

During interviews with students, teachers and graduates it was confirmed that studies are well supported academically, informative, material and technical provisions also are good.

3.2 Not applicable (NA).

### **Conclusions by specifying the strengths and weaknesses**

The professional bachelor study programme "Forest engineering" has adequate provisions and support therefore able to guarantee the achievement of the learning outcomes, good preparation of students for the labour market and indicate the possibility to ensure a high-quality study process also in the future.

Strengths:

1. Continued and planned investments in infrastructure.
2. Students are consulted directly by industry experts (guest teachers).

Weaknesses:

1. Not all books mentioned in the course descriptions as compulsory are available in the library.

## **4. Teaching Staff**

### **Analysis**

4.1. Requirements for academic staff involved in the delivery of the study programme are laid down in Article 39 of the Law on Higher Education Institutions (<https://likumi.lv/ta/id/37967-augstskolu-likums> or <https://likumi.lv/ta/en/en/id/37967>, only in Latvian).

According to information provided in SAR, during visits to Forest faculty and meeting with academic staff, it was identified that the basic composition of academic staff is stable and does not change during the academic year. Over the last five years, several university lecturers have terminated their work due to retirement and career development. A university lecturer who deals with the topics in this programme on a daily basis started to deliver courses Dendrometry and Forest Management in the academic year of 2020/2021. It means that students will benefit not only from high-level theoretical knowledge, but it also provides a direct link to traineeship and the forest industry. Modern software will be gradually introduced to the mentioned courses which are used in the industry only for some years - LVM GEO.

University lecturers of the programme actively engage in preparing the text-books, write publications and partake in projects. For example, the course Biomass Utilisation for Energy is delivered by an academic staff member whose research activity is related to work in LVMI "Silava" and who participates in projects and scientific work that corresponds to the content of the course for 80%. Therefore, it is possible to ensure not only acquisition of theoretical knowledge, but also provide students with competent knowledge on the most topical research and their results. Traineeship "Dendrometry and Forest Inventory" is delivered by certified dendrometry specialist. Professionalism of the academic staff members involved in the study process is evaluated as high, and it is indirectly shown by an increase in demand for full-time studies and also constantly high interest in part-time studies.

4.2. There are 74 university lecturers involved in the study programme, equalling 11.26 workloads.

Student: academic staff ratio is 23.4 : 1.

In the implementation of the professional bachelor's study process, 3% of lecturers have a bachelor's degree, 47% have a master's degree and 50% have a doctor's degree. Forest-related courses are mainly taught by teachers related to the forest sector, which means active participation in science or participation in production processes. The results of the lecturers' academic, scientific and organizational work are summarized once a year and reports are prepared.

The academic staff members regularly raise their qualifications by attending different courses - English language, communication tools in IT platforms, and as mentioned in on-site interviews with academic staff, they attended courses also outside the university.

University lecturers of the programme actively engage in preparing the textbooks, writing publications and partake in projects.

4.4. During the reporting period, the teaching staff is involved in various scientific research activities as participants or managers of institutional projects and programmes. The projects are implemented together with industry organizations, such as SIA "Metrum", JSC "Latvijas valsts meži", Forest Industry Competence Center, SIA "Rīgas siltums" and other representatives of the Forest Industry. During the reporting period, lecturers have also been involved in international projects, as well as in State research programs. An integral part is scientific activities, including conducting international scientific conferences, which are organized in Latvia.

4.5. Visiting lecturers from other LLU structural units of the industry are invited to cover specific topics, for example on Forestry management specific databases, increment calculation different algorithms, Forest works and specific mechanisation practice works. As of the academic year of 2020/2021, also visiting professors come to deliver study programme Forest Engineering.

## **Conclusions by specifying the strengths and weaknesses**

HEI is working on recruitment and selection of lecturers, visiting lecturers who are experts in their field and employs highly qualified staff with the requested competencies and expertise.

### **Strengths**

1. The professional bachelor study programme "Forest engineering" is delivered by highly qualified specialists, including persons with practical experience.
2. Academic staff is actively involved in scientific research - they participate in the projects, have publications in the field leading journals.
3. Academic staff use possibilities to raise their qualification by attending courses not only provided by the university but also outside the university.

### **Weaknesses**

No specific weaknesses were identified

## **5. Assessment of the Compliance of the Study Programme "Forest Engineering"**

### **Requirements**

1. The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure by which state-recognised documents of higher education are issued.

**Assessment of compliance:** Fully compliant

Diploma complies with the procedure by which state-recognised documents of higher education are issued. Annex Diploms-un-pielikums\_Mezinz\_lv.rar

- 2 2. Documents confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued.

**Assessment of compliance:** Fully compliant

Annex 6. Agreement

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confirms that students of the bachelor programme "Forest engineering" will have the possibility to continue education in the bachelor programme "Forest Science" of LLU. Students will have the possibility to continue studies in the appropriate study programme.

- 3 3. Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

**Assessment of compliance:** Fully compliant

Third point in the annex "LLU

apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets". LLU confirms that LLU will re-pay back money to students in case they do not wish to continue studies in other HEI in case that programme is closed.

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- 4 4. The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

**Assessment of compliance:** Fully compliant

8. point in annex "LLU apviecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets" confirms language level of academic staff.

- 5 5. The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language.

**Assessment of compliance:** Not relevant

- 6 6. At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts.

**Assessment of compliance:** Not relevant

- 7 7. The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Institutions of Higher Education.

**Assessment of compliance:** Not relevant

- 8 8. The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

**Assessment of compliance:** Fully compliant

Annex "Studiju\_ligums\_2021" complies with requirements of the Cabinet of Ministers.

- 9 9. The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Partially compliant

Study courses are available in all study process languages (Annexes about study course descriptions), part of the study courses have not indicated prior knowledge needed for successfully completing a study course.

In some of the study courses descriptions mandatory literature is older than 15 years and should be replaced with newer materials. Not all books mentioned in the course descriptions as compulsory are available in the library.

- 10 10. The study programme complies with the valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided that the completion of the study programme leads to a professional qualification.

**Assessment of compliance:** Partially compliant

Annex 2\_pielikums\_atbilstiba-valsts-izglitiba standartam\_LV\_prec.pdf information on when the last standard was approved.

The study program is developed in accordance with the Cabinet regulations Nb.512 and University Law.

Standard document is not providing the latest date of approval of Standard.

According SAR The study programme corresponds to a standard "Forest Engineer". The professional standard was approved by the Order of the Ministry of Education and Science of 14 February 2003 No. 79. This standard is in force, but is outdated and LLU should monitor when the new standard will come in force and assess compliance of the study programme with the new standard.

- 11 11. Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Not relevant

- 12 12. The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard.

**Assessment of compliance:** Fully compliant

Annex 2\_pielikums\_atbilstiba-valsts-izglitiba standartam\_LV\_prec.pdf

The study programme is developed in accordance with the Cabinet of Ministers Regulations No. 512

Program Indicators meet requirements of the Standard on 160 KP, according Cabinet regulation Nb.512

- 13 13. The joint study programmes comply with the requirements prescribed in Section 551, Paragraphs one, two, and seven of the Law on Institutions of Higher Education (if applicable).

**Assessment of compliance:** Not relevant

- 14 14. Each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions (if they have worked for a shorter period of time, the number of publications shall be in proportion to the work period), or artistic creation achievements (for instance, exhibitions, films, theatre performances, and concert activity), or a five-year practical work experience (except for the experience in the implementation of the study programme) in accordance with the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Academic members have publications or at least 5 years of work experience according to academic staff CV.

- 15 R5 - Overall rating

**Assessment of compliance:** Partially compliant

Previous knowledge in study course descriptions should be indicated. All other criteria are fully compliant.

### Requirements (R6-R8)

- 1 R6 - The compliance of the study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of the learning outcomes.

**Assessment of compliance:** Fully compliant

SAR 3.1 (p.169-171), distance excursion and information obtained during interviews confirms that the study programme has adequate provisions and support therefore able to guarantee the achievement of the learning outcomes, good preparation of students for the labor market and indicate the possibility to ensure a high-quality study process also in the future.

- 2 R7 - The compliance of the qualification of the academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments.

**Assessment of compliance:** Fully compliant

All academic staff are qualified for providing a qualitative study process and qualifications comply with the necessary legislation.

- 3 R8 - The study programme leading to the master or doctoral degree is based on the advances and findings in the relevant field of science or artistic creation.

**Assessment of compliance:** Not relevant

### Conclusions by specifying the strengths and weaknesses

Almost all requirements for the study programme are met (except course descriptions and outdated standard). Academic staff is qualified to participate in the implementation of the study programme and a material-technical base is sufficient to achieve learning outcomes.

## Evaluation of the study programme "Forest Engineering"

Evaluation of the study programme:

Excellent

## 6. Recommendations for the Study Programme "Forest Engineering"

### Short-term recommendations

Revise and add the previous knowledge section in the study course descriptions, revise the list of compulsory reading to ensure that books are available in the university library.

Add the original date and date of last update for document "2\_Annex\_compliance-with-the-national-education-standard\_EN\_prec"

### Long-term recommendations

## II. " Sustainable Agriculture" ASSESSMENT

### II. " Sustainable Agriculture" ASSESSMENT

#### 1. Indicators Describing the Study Programme

##### Analysis

Academic Bachelor's study programme "Sustainable Agriculture" (code 43621 according to the Classification of the Latvian education system) provides students with innovative thinking regarding sustainable agriculture. Degree obtained "Bachelor's degree in agricultural sciences" complements the programme name. Tasks to achieve goals of the study programme are well described and leads to accomplishing the study programme. The resulting outcomes provide students with all necessary skills to enter the labour market or continue studies at the Masters' level. Admission requirements are general secondary education or vocational secondary education. LLU provided a test in biology, to which conducting LLU have received Higher Education Council approval, and at least B2 level of English language skills. These requirements are providing the possibility to all students with an interest in sustainable agriculture to enrol in the study programme. Since this is an academic Bachelor held only in the English language admission requirements are appropriate.

##### Conclusions by specifying the strengths and weaknesses

"Sustainable agriculture" is a new innovative study programme that aims to use information technologies and modern scientific insights for improvement of production technologies in the industry. Study programme goals, aims and tasks are well described and achievable.

Strengths.

1. This programme can attract international students.
2. This study programme is held only in English preparing students for the labour market in the whole European Union.

Weaknesses.

Currently none.

#### 2. The Content of Studies and Implementation Thereof

## Analysis

Study programme "Sustainable Agriculture" is compliant with Higher education law and regulations of the Cabinet of Ministers No. 240. Indicators regarding this study programme are as follows and complies with the standard : programme is 6 semesters long, with workload of 120 credit points, study course about civil protection and disaster management is included in the programme. Compulsory courses regarding the agriculture field are worth of 27 credit points, and development of history and current problems are covered under 13 credit points. (Annex 4. and Annex 3.). Study course descriptions describe study course outcomes, which help to achieve the overall goal of the study programme, to evaluate the role of sustainable agricultural production. Nevertheless, mandatory literature in study course descriptions should be updated and previous knowledge before starting a study course should be shown, to better understand how study courses complement each other. Sustainable agriculture is becoming more topical since the overall population of the world is growing and new innovative agriculture practices should be implemented. (SAR 1.1 section). Study courses in this programme are relevant to solve future problems in agriculture, achieving learning outcomes in each study course complements the overall study programme goal. These specialists are needed in the labour market and are relevant to the industry. There was one student in discussions during the site visit who is currently enrolled in this study programme. The student was satisfied with the system, overall attitude of academic staff and learning materials.

Since this is an academic study programme students during the study process are more focused on academic development. Study courses are designed to create an overall understanding of sustainable agriculture. For example, the evaluation system of students and what will create the final mark in a study course is described in study course descriptions. This system helps to achieve goals set by study courses and the whole programme, to prepare specialists with knowledge in sustainable agriculture. As the study programme is new and only two students are studying, the full potential of the student-centred approach might not be fully disclosed yet, but based on overall assessment and system developed by LLU and information acquired during the site visit this study programme should not be different from others, surveys after each study course are conducted, academic staff members seem to be easily approachable to resolve any issues etc. Employers have been involved in study programme development.

Since the study programme is recently licensed and there are only two active students (Information provided from academic staff members) there is no analysis and survey results to analyse and implement in upgrading the study process.

International mobility options are much better for this study program, since it is held only in English. If the programme will develop in accordance with the demand of the labour market, then it can serve as an enormous attraction of foreign students, for incoming mobility. Outgoing mobility options are broad as well, from partner universities, institutes and of course ERASMUS program possibilities. Since there is no student statistics, the overall assessment of outgoing mobility can not be analysed as well. Programme shows promising options for mobility options.

## Conclusions by specifying the strengths and weaknesses

### Conclusions

Bachelor's study programme Sustainable Agriculture is a newly developed study programme held only in English. It complies with Latvian higher education regulating legislation. Since this is an academic study programme students have the possibility to acquire more theoretical knowledge and they can continue studies in masters level, where they can start research possible implementations of this knowledge.

### Strengths

1. Study programme can be used as an attraction for international students and can raise the overall

student count.

2. Study programme aims to contribute to future employee needs in agriculture.
3. Students after graduation can continue studies at the masters level.

Weaknesses

1. Lack of prior knowledge indicated in study course descriptions does not allow to fully comprehend the interrelations of study courses.

### **3. Resources and Provision of the Study Programme**

#### **Analysis**

3.1. The study provision, scientific support, informative provision, material and technical provision comply with the specific features and the conditions for the implementation of the study programme and have all the prerequisites for the achievement of the learning outcomes. As this is a newly licensed study programme and first two students are enrolled only in the study year 2021/2022 it is hard to assess financial provision. With only two students the programme is not profitable but during the on-site visit representatives of the university informed that there are faculty resources to ensure the programme. This study programme is mainly intended for the international students, so in the future financial provision will depend on the tuition fees and the number of students in the programme. The tuition fee for this study programme is 3000 EUR per year.

As stated in assessment of the study field and also in the SAR p. 268 there are various laboratories in the faculties involved in this study programme for practical tasks, computer classes with the necessary software, modern auditoriums. Information resources include books and journals in LLU Fundamental library, different databases (for example, ScienceDirect, EBSCO eBook Academic collection). Comparing the list of the compulsory reading in the course descriptions and the information in the joint library catalogue (<http://kopkatalogs.lv>) not all books can be found, for example, course LauZ3193 Mechanisation of Agriculture has listed books Banks, S., Skinner J.L., "The complete handbooks of Poultry-keeping", "Agricultural automation: fundamentals and practices"; course Fizi3006 Agrophysics lists book Ahrens C.D. "Meteorology today". Databases and electronic catalogues are available also in English. For the studies e-studies system Moodle is used and as shown during the on-site visit, this system is available also in English.

Special natural study materials such as herbariums, insect collections, soil, seed, fertiliser and forage production samples are available to use for study courses.

3.2. Not applicable as it is not a doctoral programme

#### **Conclusions by specifying the strengths and weaknesses**

The resource base for use by the academic staff and students complies with all the requirements of the implementation of the study programme. Students have access to various laboratories for research activities and practical tasks. Both academic staff and students have most of the necessary resources for a successful study process (databases, technical equipment, materials for laboratories, Moodle system).

Strengths:

1. Good laboratory equipment, Study and research farms for practical studies;
2. Effective Moodle system with online lectures possibilities.

Weaknesses:

1. Not all books mentioned in the course descriptions as compulsory are available in the library.

## 4. Teaching Staff

### Analysis

4.1. As this is a new study programme that just has been licenced there are almost no changes in the composition of the academic staff. According to the SAR p. 270, two lecturers have been replaced as suggested during the licencing process, so it could be concluded that the quality of implementation is maintained.

4.2. As already stated in the evaluation of the study field, LLU applies systemic criteria for admission of the academic staff. The academic staff complies with the legal requirements set for the study programme.

According to the SAR p. 270 there are 32 academic staff members (31% professors, 28% associated professors, 16% assistant professors, 23% lecturers, 2% assistants) from different LLU faculties are involved in the implementation of this study programme, from which more than 50% have a doctoral degree.

Academic staff involved in the study programme have practical work experience in the industry or scientific institutions and/or have scientific publications. Part of the academic staff during the evaluation period has prepared more than 50 scientific publications.. According to Annex 4 "List of projects implemented by the academic staff of the Faculty of Agriculture...", there are more than 80 different kinds of projects, some of which are implemented by the academic staff of this programme. The academic staff members regularly raise their qualifications by attending different courses or participating in internships in companies, and as mentioned in on-site interviews with academic staff, they attended courses also outside the university.

According to "Annex 6. Academic staff of study direction" and CV information English level of all academic staff members is evaluated at least at level B2 (Common European Framework of Reference for Languages), that is the requirement to provide study programmes in English.

4.3. Not applicable as it is not a doctoral programme.

4.4. The academic staff members of the study programme actively participate in the scientific research activities and practical projects both at the national and international levels in respective fields relevant to the study programme. International projects are such programmes as ERA-NET (Climate care cattle farming systems), 7th Framework Programme (Pyrenophora tritici-repentis development specifics and restriction possibilities in winter whey fields in Latvia and Belarus) (SAR p. 271). At the national level there are projects funded by Latvian Science Council and contract research.

Results of the research projects will be implemented (as this is a new programme with only first-year students) in the study programme and in the study courses as academic staff acts both as lecturers and as researchers and so can provide students with the latest conclusions from the actual research activities. According to SAR, programme students will have the possibility to develop their Bachelor theses as part of research projects.

4.5. Information provided in the self-report, as well as, interviews with the study field and study programme management, and with academic staff, confirms that there are mechanisms for collaboration to improve the study courses. The content of study courses and changes in it are, firstly, discussed in the Methodological Commission of the appropriate Faculty, secondly, discussed in the institutes that provide study courses and only then study courses are approved in the Council of the Faculty. Necessary changes to the study course content are proposed by the academic staff,

as well as, by management. Collaboration between academic staff happens also by providing common study courses (involving staff from two faculties) and by jointly supervising student thesis

### **Conclusions by specifying the strengths and weaknesses**

The qualification of the academic staff involved in the implementation of the study programme fully corresponds to the conditions of implementation of the study programme and the requirements of regulatory enactments, as well as ensures the achievement of aims and learning outcomes of the study programme and respective study courses.

The academic staff members of the study program, both at the national and international level, are engaged in scientific research in the field of quality management and conformity assessment, and the acquired information and experience are integrated into the study process.

#### **STRENGTHS**

1. The study programme is delivered by highly qualified specialists, including persons with practical experience.
2. Academic staff is actively involved in scientific research - they participate in the projects, have publications in the field leading journals.
3. Academic staff use possibilities to raise their qualification by attending courses not only provided by the university but also outside the university.
4. English language skills of the academic staff are appropriate to ensure the programme in English..

#### **WEAKNESSES**

1. To provide a study process of the highest quality, the English language level could be improved amongst academic staff members.

### **5. Assessment of the Compliance of the Study Programme " Sustainable Agriculture"**

#### **Requirements**

1. The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure by which state-recognised documents of higher education are issued.

**Assessment of compliance:** Fully compliant

Annex "LF\_Sus\_Agric\_diploms-diploma\_diploma-pielik-diploma-suplement\_LV-EN" complies with the procedure by which state-recognised documents of higher education are issued.

2. Documents confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued.

**Assessment of compliance:** Fully compliant

Agreement of cooperation added. Annex "LLU\_VMU\_sadarbibas\_ligums". Students will have the possibility to continue studies in the study programme "Biotechnology" or "Agricultural Mechanical Engineering". Students will have the possibility to continue studies in English and in related study programmes.

3. Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

**Assessment of compliance:** Fully compliant

Third point in the annex "LLU

apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets". LLU confirms that LLU will re-pay back money to students in case they do not wish to continue studies in other HEI in case that programme is closed.

4. The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

**Assessment of compliance:** Fully compliant

8. point in annex "LLU apviecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets" confirms that the language skill qualification of academic staff is appropriate.

5. The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language.

**Assessment of compliance:** Fully compliant

Ninth point in the annex "LLU

apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets" confirms that the language skill qualification of academic staff is appropriate.

6. At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts.

**Assessment of compliance:** Not relevant

7. The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

The Fourth point in the annex "LLU

apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets" confirms that at least 5 professors or associated professors will participate in study programme implementation.

8. The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

**Assessment of compliance:** Fully compliant

Annex "Studiju\_ligums\_2021" complies with the requirements of the Cabinet of Ministers.

9. The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Partially compliant

Study course descriptions are available in all study process languages (Annexes about study course descriptions) , almost none of study courses have indicated prior knowledge needed for successfully completing study course, in some of the study courses literature that is older than

15 years can be found and should be replaced with newer materials. Not all books mentioned in the course descriptions as compulsory are available in the library.

- 10 10. The study programme complies with the valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided that the completion of the study programme leads to a professional qualification.

**Assessment of compliance:** Not relevant

- 11 11. Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Annex "bak\_stud\_progr\_llgtspējīga lauksaimniecība\_AIP atzinums" provides confirmation for this point.

- 12 12. The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard.

**Assessment of compliance:** Fully compliant

Annex "3\_pielik\_Akad\_BAK\_Sust\_Agr\_atbilstība VAS\_lv" complies with the State educational standard.

- 13 13. The joint study programmes comply with the requirements prescribed in Section 551, Paragraphs one, two, and seven of the Law on Institutions of Higher Education (if applicable).

**Assessment of compliance:** Not relevant

- 14 14. Each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions (if they have worked for a shorter period of time, the number of publications shall be in proportion to the work period), or artistic creation achievements (for instance, exhibitions, films, theatre performances, and concert activity), or a five-year practical work experience (except for the experience in the implementation of the study programme) in accordance with the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Academic members have publications according to academic staff CV.

- 15 R5 - Overall rating

**Assessment of compliance:** Partially compliant

Study course descriptions should indicate prior knowledge required

## **Requirements (R6-R8)**

- 1 R6 - The compliance of the study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of the learning outcomes.

**Assessment of compliance:** Fully compliant

All resources allocated for this programme helps to achieve all learning outcomes.

- 2 R7 - The compliance of the qualification of the academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments.

**Assessment of compliance:** Fully compliant

All academic staff members have the necessary qualifications and publications in the last 6 years.

- 3 R8 - The study programme leading to the master or doctoral degree is based on the advances and findings in the relevant field of science or artistic creation.

**Assessment of compliance:** Not relevant

Not relevant since this is a Bachelors study programme.

### **Conclusions by specifying the strengths and weaknesses**

Sustainable agriculture is a new innovative study programme in the agriculture field which complies with all necessary requirements for enrolling students and providing a high-quality study process.

### **Evaluation of the study programme " Sustainable Agriculture"**

Evaluation of the study programme:

Good

### **6. Recommendations for the Study Programme " Sustainable Agriculture"**

#### **Short-term recommendations**

Revise and add the previous knowledge section in the study course descriptions, revise the list of compulsory reading to ensure that books are available in the university library.

#### **Long-term recommendations**

Provide and motivate academic staff members to participate in English language courses, seminars, projects to improve their overall language skills.

Promote the study programme in other countries, create PR campaigns to attract international students.

## **II. "Sustainable forestry" ASSESSMENT**

### **II. "Sustainable forestry" ASSESSMENT**

#### **1. Indicators Describing the Study Programme**

##### **Analysis**

Academic Bachelor's study programme "Sustainable Forestry" (code 43623 according to the classification of the Latvian education system) provides students with relevant knowledge and innovative thinking regarding sustainable forestry. Degree obtained "Bachelor of Agricultural Sciences in Forestry" complements programme name. Tasks to achieve goals of study programme

are well described and lead to accomplish study programme. The resulting outcomes provide students with all necessary skills to enter the labour market or to continue their studies at the Master level. Admission requirements are: general secondary education or vocational secondary education. LLU carries out a test in biology and at least B2 level English language skills as additional entrance requirements. As this academic Bachelor programme is held only in the English language, the admission requirements are appropriate. The final examination is foreseen at the end of the study programme - Bachelor's thesis defence.

### **Conclusions by specifying the strengths and weaknesses**

The aims and objectives of the study programme are clearly defined and achievable, they comply with the general strategic development directions of LLU. The study programme complies with the needs of the labour market and development trends in society. The study programme ensures that students have an understanding and extensive knowledge of sustainable forestry.

Strengths:

1. The indicators and the aim of the study programme are relevant.
2. The programme can attract students from abroad.
3. The study programme complies with the needs of the labour market.

Weaknesses:

There are no weaknesses identified.

## **2. The Content of Studies and Implementation Thereof**

### **Analysis**

2.1 The study programme is compliant with the Law on Higher Education Institutions, that means that in study course descriptions all necessary information is included. Indicators regarding this study programme are as follows and complies with the standard: programme is 6 semesters long, with workload of 120 credit points, study course about labour and civil protection is included in the programme. Total amount of the compulsory part is 78 credit points, including 10 credit points for the bachelor thesis. Compulsory courses regarding forestry are worth 46 credit points, including the courses about the methodology and principles (for example, courses Function and Production of Forests, Forest Policy and Economics, Silviculture), recent problems of development (Function and Production of Forests, Forest Regeneration and Afforestation), description of science branch and interdisciplinary problems (Forest Ecology, Risk Management in Forestry, Practical Training in Wood processing and New Technology) As the study programme is delivered in English language, the study plan also includes the course of Latvian language. The content of the study programme is in line with outcomes of the programme. Because of strong collaboration with employers, the study programme has the possibility to follow tendencies in the labour market and in scientific research. Study course descriptions are available for students. They include learning outcomes, evaluation system, works that have to be done during study courses, previous knowledge requirements etc., except in most of the study courses previous knowledge for starting a study course has not been indicated Study implementation methods lead to achieving outcomes determined in study courses and the whole programme itself.

2.2 The teaching and assessment methods follow the tendencies of modern education. The assessment methods and criteria are an integral part of each study course description. The teaching methods include traditional and modern approaches. The proportion of theoretical and practical classes in most of the courses varies around 50%. The teaching methods and their implementation

are described in each study course description. Student-centred learning and teaching principles are implemented into the study process. In order to enhance the industry experience, the guest lecturers from companies are invited to several courses.

2.3 As the study programme is recently licensed and there are no students yet,, the surveys of students, graduates and employers have not been made yet. The university has explained the reasons why the study programme has not started yet in the self-assessment report and during interviews (due to the challenges to attract students and ensure on-site studies during the COVID-19 pandemic) and the reasons are justified.

2.4 International mobility options are good for this study programme since it is provided in the English language. If the programme will develop in accordance with the demand of the labour market, then it can be very attractive to foreign students, considering also short-time incoming mobility. Outgoing mobility options are broad as well, from partner universities, institutes and ERASMUS+ programme possibilities. Since there is no student statistics yet, the overall assessment of outgoing mobility cannot be analysed as well.

### **Conclusions by specifying the strengths and weaknesses**

Bachelor's study programme "Sustainable Forestry" is a newly developed study programme held only in English. It complies with Latvian higher education regulating legislation. Since this is an academic study programme students have the possibility to acquire more theoretical knowledge and they can continue studies in masters level.

Strengths:

- 1.The design and the content of the study programme comply with the regulatory requirements.
2. The industry professionals and the representatives of forest research institutions took an active part in the development of the study programme according to the contemporary and future labour market trends.
3. The study programme is maintaining student-centred learning and teaching.

Weaknesses:

There are no weaknesses identified.

### **3. Resources and Provision of the Study Programme**

#### **Analysis**

3.1 As it is a newly established study programme, significantly aimed at internationalisation activities of LLU, the programme has been elaborated and licensed as a result of the ESF project. Due to pandemic situations, the programme has not succeeded in attracting foreign students yet. Study programme foresees strong involvement and collaboration of the main contributor Forest faculty with 5 other faculties.

SAR declares that modern, suitable fundamental informative and material basis for delivery of the new

a study programme is created. Such information can not be confirmed or denied by students or graduates as they do not exist yet, therefore expert evaluation remains generally based on SAR information.

Beside that general services available at University - access to the library, online databases and information services are ready to support foreign students. Comparing the list of the compulsory reading in the course descriptions and the information in the joint library catalogue

(<http://kopkatalogs.lv>) not all books can be found, for example, course MežZ4106 Research methodology and biometrics I has listed book Sahu, P.K. "Research methodology: a guide for researchers...."; course VidZ3006 Ecology and Environmental Protection has listed the book Basu, M., Xavier, S, "Fundamentals of Environmental Science". At Forest faculty, there are specialized classrooms/auditoriums and laboratories for practical activities, also excellent and newly renovated public spaces. The E-studies environment is available in English, this assures an efficient distance learning process.

3.2 Not applicable (NA).

### **Conclusions by specifying the strengths and weaknesses**

Academic bachelor study programme "Sustainable forestry" has adequate provisions and support therefore will be able to guarantee achievement of the learning outcomes, good preparation of students for the international labour market and indicate the possibility to ensure a high-quality study process also in the future. Having no students and graduates might hide some problems when the study programme will start

Strengths:

1. Strong collaboration and active involvement in the study programme by a group of faculties.

Weaknesses:

1. Not all books mentioned in the course descriptions as compulsory are available in the library.

## **4. Teaching Staff**

### **Analysis**

4.1 Since the licensing of the programme in 2020, the composition of the teaching staff has not changed.

In order to ensure the quality of the study process, the English language skills of the teaching staff have been assessed by LLU and the qualification of the teaching staff complies with the requirements of the Law on Higher Education Institutions.

4.2 Academic staff members involved in delivery of the programme "Sustainable Forestry", both from the Forest Faculty and other structural units of LLU, are knowledgeable and competent professionals each in the course they deliver lectures on. In total, 32 lecturers are involved in the implementation of the study program, of which 6 are professors, 4 associate professors, 9 assistant professors and 12 lecturers. From the academic staff members involved in the programme delivery, for 63% of LLU academic staff members it is a primary work, and 81% of them hold a doctoral degree, while the remaining 37% are the visiting lecturers with 23% of them holding a doctoral degree. Special pedagogical competence upgrade training courses are attended by the staff and provided by LLU. University lecturers publish articles in internationally indexed journals, such as iForest, Forests, Baltic Forestry, European Journal of Forest Research, Silva Fennica, BioResources, Agronomy Research etc., which are indexed in several databases, including Scopus and Web of Science; anonymously reviewed international scientific publications, including proceedings. International conference materials (Abstract), scientific popular and scientific methodological works (text-books, other publications) are published.

4.3 Not applicable as it is not a doctoral programme.

4.4 The academic staff is involved in scientific research. Each year applications are submitted for projects financed by the state, EU structural funds, National research programmes, in cooperation with the academic staff members and researchers from several LLU faculties as well in cooperation with LVMI SILAVA and other partners. When engaged in active scientific activity, the academic staff members may transfer and implement the new knowledge, skills and competencies in the study courses they lecture on, thus enhancing study efficiency and giving the real-world dimension to the programme.

4.5 Information provided in the SAR p. 259, as well as, interviews with the study field and study programme management, and with academic staff, confirms that there are mechanisms for collaboration to improve the study courses. The content of study courses and changes in it are, firstly, discussed in the Methodological Commission of the Faculty, secondly, discussed in the institutes that provide study courses and only then study courses are approved in the Council of the Faculty. Necessary changes to the study course content are proposed by the academic staff, as well as, by management. Collaboration between academic staff happens also by providing common study courses (involving staff from two faculties) and by jointly supervising student thesis.

### **Conclusions by specifying the strengths and weaknesses**

The qualification of the academic staff involved in the implementation of the study programme fully corresponds to the conditions of implementation of the study programme and the requirements of regulatory enactments, as well as ensures the achievement of aims and learning outcomes of the study programme and respective study courses.

The academic staff members of the study program, both at the national and international level, are engaged in scientific research in the field of quality management and conformity assessment.

Strengths:

1. LLU employs highly qualified staff, who possess the requested competencies and expertise in the field of forestry.

Weaknesses:

There are no weaknesses identified.

## **5. Assessment of the Compliance of the Study Programme "Sustainable forestry"**

### **Requirements**

1. The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure by which state-recognised documents of higher education are issued.

**Assessment of compliance:** Fully compliant

Annex Diploms-un-pielikums\_llgstp-mez\_lv.rar

complies with the procedure by which state-recognised documents of higher education are issued.

2. Documents confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued.

**Assessment of compliance:** Fully compliant

Agreement of cooperation added. Annex "LLU\_VMU\_sadarbibas\_ligums".

On 15th of October, 2019 Agreement of cooperation between LLU and Vytautas Magnus University (VMU) confirms that VMU shall provide students of LLU study programme "Sustainable Forestry" with an opportunity to continue studies in the VMU study programme "Biotechnology" in case the implementation of the higher education study programme at LLU is discontinued.

- 3 3. Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

**Assessment of compliance:** Fully compliant

LLU confirms that LLU will re-pay back money to students in case they do not wish to continue studies in other HEI in case that programme is closed.

Point Nb.3

LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc

Point Nb.8 in annex LLU

apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc

- 4 4. The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

**Assessment of compliance:** Fully compliant

Point Nb.8 in annex LLU

apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc

- 5 5. The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language.

**Assessment of compliance:** Fully compliant

Point No.9 in the annex

LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc

confirms that the language skill qualification of academic staff is appropriate.

- 6 6. At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts.

**Assessment of compliance:** Not relevant

- 7 7. The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Point Nb.4 in the annex

LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc

confirms that at least 5 professors or associated professors will participate in study programme

implementation.

- 8 8. The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

**Assessment of compliance:** Fully compliant

Annex "Studiju\_ligums\_2021" complies with the requirements of the Cabinet of Ministers.

- 9 9. The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Partially compliant

Study courses are available in all study process languages (Annexes about study course descriptions), part of the study courses have not indicated prior knowledge needed for successfully completing a study course.

In some of the study courses descriptions mandatory literature is older than 15 years and should be replaced with newer materials. Not all books mentioned in the course descriptions as compulsory are available in the library.

- 10 10. The study programme complies with the valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided that the completion of the study programme leads to a professional qualification.

**Assessment of compliance:** Not relevant

- 11 11. Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Annex

bak\_stud\_progr\_llgtspējīga\_mežsaimniecība\_AIP\_atzinums.pdf  
provides conformation for this point.

- 12 12. The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard.

**Assessment of compliance:** Fully compliant

Annex

1\_pielikums\_Studiju\_progr\_llgtsp\_mezsaimn\_atbilstiba\_VIS\_prec.pdf  
complies with the State education standard.

- 13 13. The joint study programmes comply with the requirements prescribed in Section 551, Paragraphs one, two, and seven of the Law on Institutions of Higher Education (if applicable).

**Assessment of compliance:** Not relevant

- 14 14. Each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions (if they have worked for a shorter period of time, the number of publications shall be in proportion to the work period), or artistic creation achievements (for instance, exhibitions, films, theatre performances, and concert activity), or a five-year practical work experience (except for the experience in the implementation of the study programme) in accordance with the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Academic members have publications according to academic staff CV.

15 R5 - Overall rating

**Assessment of compliance:** Partially compliant

Previous knowledge in study course descriptions should be indicated. All other criteria are fully compliant.

**Requirements (R6-R8)**

- 1 R6 - The compliance of the study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of the learning outcomes.

**Assessment of compliance:** Fully compliant

SAR, distance excursion and information obtained during interviews confirms that the study programme will have adequate provisions when students are attracted, and support therefore able to guarantee the achievement of the learning outcomes, good preparation of students for the labour market and indicate the possibility to ensure a high-quality study process also in the future.

- 2 R7 - The compliance of the qualification of the academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments.

**Assessment of compliance:** Fully compliant

All academic staff are qualified for providing a qualitative study process and qualifications comply with the necessary legislation.

- 3 R8 - The study programme leading to the master or doctoral degree is based on the advances and findings in the relevant field of science or artistic creation.

**Assessment of compliance:** Not relevant

**Conclusions by specifying the strengths and weaknesses**

Sustainable forestry is a new study programme in English which complies with all requirements (except minor problems with course descriptions) for enrolling students and providing high quality studies. As there are no students yet, experts could not assess the progress and results.

**Evaluation of the study programme "Sustainable forestry"**

Evaluation of the study programme:

Good

**6. Recommendations for the Study Programme "Sustainable forestry"**

**Short-term recommendations**

Revise and add the previous knowledge section in the study course descriptions, revise the list of compulsory reading to ensure that books are available in the university library.

# II. "Forest Science" ASSESSMENT

## II. "Forest Science" ASSESSMENT

### 1. Indicators Describing the Study Programme

#### Analysis

1.1. Academic Bachelor's study programme "Forestry Science" (code 43623 according to the Classification of the Latvian education system) provides students with relevant knowledge and skills in forestry science. Degree obtained "Bachelor of Agricultural Sciences in Forestry Sciences" complements programme name. Parameters of the study programme have not changed since the last accreditation. Tasks to achieve the goals of the study programme are well described and lead to the accomplishment of the study programme. Main tasks of the study programme are connected with preparation of the specialists at the national level (difference with the Sustainable forestry programme). Resulting outcomes provide students with all necessary skills to enter the labour market or to continue their studies at the Master level. Admission requirements are: general secondary education or vocational secondary education; compulsory: centralized exam in Latvian, in a foreign language, and in mathematics. These requirements are providing the possibility to all students with interest in forestry to enrol in the study programme. The admission requirements are appropriate. The final examination is foreseen at the end of the study programme - Bachelor's thesis defence.

#### Conclusions by specifying the strengths and weaknesses

The aims and objectives of the study programme are clearly defined and achievable, they comply with the general strategic development directions of LLU. The study programme complies with the needs of the labour market and development trends in the society. The study programme ensures that students have an understanding and extensive knowledge of forestry science.

Strengths:

1. The indicators and the aim of the study programme are relevant.
2. The study programme complies with the needs of the labour market.

Weaknesses:

There are no weaknesses identified.

### 2. The Content of Studies and Implementation Thereof

#### Analysis

2.1 The study programme "Forestry Science" is compliant with Higher education law and regulations of the Cabinet of Ministers No. 240. The content of the study programme is in line with the outcomes of the programme. Indicators regarding the study programme are as follows and complies with the standard: programme is 8 semesters with workload of 160 credit points, study courses on civil protection and environmental protection are included. Compulsory courses in total are 66 credit points worth, additionally 12 credit points are for bachelor thesis. Regarding forestry and field-specific problems, methodology, the programme has such courses as Fores Botany, Dendrology, Biology of Forest Animals, Forest Soil Science, Forest Science, Dendrometry, etc. Although this is an academic bachelor programme the study plan includes Traineeships (practice) part with such

courses as Forest Botany, Dendrometry, Forest Regeneration, Forest Exploitation, etc. Because of strong collaboration with employers, the study programme follows the trends in the labour market and in scientific research. Study course descriptions all necessary information is included, except almost in none of the study courses previous knowledge for starting a study course has been indicated and mandatory literature can be updated to more recent versions..

Study course descriptions are available for students. They include learning outcomes, evaluation system, works that have to be done during study courses etc. Study implementation methods lead to achieving outcomes determined in study courses and the whole programme itself.

2.2 The teaching and assessment methods follow the tendencies of modern education. The assessment methods and criteria are an integral part of each study course description. The teaching methods include traditional and modern approaches. The proportion of theoretical and practical classes in most of the courses varies around 50%. The teaching methods and their implementation are described in each study course description. Student-centred learning and teaching principles are implemented into the study process, e.g. problem solving exercises during individual and group works allowing integrating the knowledge, skills and competences acquired in the specific courses. In order to enhance the industry experience, the guest lecturers from companies are invited to several courses.

2.3 Surveys are conducted after each study course where students can express their opinions about the course, about lecturers etc. Surveys are analysed and the results are available for each university lecturer of a particular course, director of the study programme, dean, employee in charge from the LLU Study Centre, and vice-rector of studies. If the concerns raised are reasonable then the programme director initiates the changes in the course content or teaching methods. There is regular cooperation with the representatives of the industry/employers for improvement of studies. Representatives of the industry are present at the Convention, State Examinations Commission, and are invited as guest lecturers to the faculty. Graduates of the study programme evaluate their readiness for work in the field as good. Graduates highly value cooperation with the supervisor of the final thesis, material and technical support, increasing presentation skills. Relatively lower ratings from graduates are for the ability to use information, and for improvement of organizational skills.

2.4 Students have the possibility to go in foreign mobility to different countries, mostly through the ERASMUS+ programme. Before leaving they have the opportunity to find the most similar study courses to attend, so they can get recognised back at LLU after mobility. Students provided examples of how to go through this process. The process of recognising previously acquired experience is possible and available in LLU homepage. Incoming mobility currently is low as this programme is only in the Latvian language.

### **Conclusions by specifying the strengths and weaknesses**

The content of studies in the Bachelor programme “Forestry Science” is held at a very good level. Learning outcomes correspond and help to achieve goals and tasks set by the programme. Students, alumni and employers were overall satisfied with the study process. Mobility options for students are available and employed.

Strengths:

- 1.The design and the content of the study programme comply with the regulatory requirements.
2. The industry professionals and the representatives of forest research institutions took an active part in the development of the study programme according to the contemporary and future labour

market trends.

3. The study programme is maintaining student-centred learning and teaching.

Weaknesses:

1. Study course descriptions should indicate previous knowledge for starting courses and literature should be updated.
2. Incoming mobility of students is limited as the study programme is offered in Latvian only.

### **3. Resources and Provision of the Study Programme**

#### **Analysis**

3.1 Study programme foresees strong involvement and collaboration of the main contributor Forest faculty with 5 other faculties. Premises and equipment modernised on a regular basis, during recent years the existing laboratories got modern equipment, as well as a new laboratory, has been created - Precise Forestry Laboratory. Studies are well covered by general services available at University - access to the library, online databases, information services and at the faculty - specialized classrooms/auditoriums and laboratories for practical activities, also excellent and newly renovated public spaces. Practical sessions and seminars outside LLU supported by partner institution SILAVA.

Computer equipment and training equipment is up to date with software for data processing and designing installed. Study programme materials are also well presented in E-studies platform Moodle, this guarantees an efficient distance learning process. Comparing the list of the compulsory reading in the course descriptions (that do not have remark about e-book) and the information in the joint library catalogue (<http://kopkatalogs.lv>) not all books can be found, for example, course MežZ4086 Forest Resource Assessment and Inventory has listed book "Sustainable forest management, from concept to practice...."; course VidZ3006 Ecology and Environmental Protection has listed book Basu, M., Xavier, S, "Fundamentals of Environmental Science".

During interviews with students, teachers and graduates it was confirmed that studies are well supported academically, informative, material and technical provisions also are good.

3.2 Not applicable (NA).

#### **Conclusions by specifying the strengths and weaknesses**

Academic bachelor study programme "Forest science" has adequate provisions and support therefore able to guarantee achievement of the learning outcomes, good preparation of students for the labour market or continuation in master studies and indicate the possibility to ensure a high-quality study process also in the future.

Strengths:

1. Continued and planned investments in infrastructure.

Weaknesses:

1. Not all books mentioned in the course descriptions as compulsory are available in the library

### **4. Teaching Staff**

#### **Analysis**

4.1 Lecturers of the courses have been changed constantly as the leading forest industry researchers and specialists with practical hands-on experience join the study process and research. Both doctoral students and university lecturers who recently acquired their degree are involved in

delivery of studies. The qualification of the teaching staff complies with the requirements of the Law on Higher Education Institutions.

4.2 Academic staff members involved in the delivery of programme “Forestry Science”, both from the Forest Faculty and other structural units of LLU, are knowledgeable and competent professionals each in the course they deliver lectures on. In total, 65 academic staff members deliver the academic Bachelor’s study programme, of which 19 hold doctoral degrees, 12 are associate professors or professors. The Bachelor’s study programme is delivered by elected academic staff (46%) and non-elected academic staff (54%). Special pedagogical competence upgrade training courses are attended by the staff and provided by LLU. University lecturers publish articles in internationally indexed journals, such as iForest, Forests, Baltic Forestry, European Journal of Forest Research, Silva Fennica, BioResources, Agronomy Research etc., which are indexed in several databases, including Scopus and Web of Science; anonymously reviewed international scientific publications, including proceedings. International conference materials (Abstract), scientific popular and scientific methodological works (text-books, other publications) are published.

4.3 Not applicable as it is not a doctoral programme.

4.4 The academic staff is involved in scientific research. Each year applications are submitted for projects financed by the state, EU structural funds, National research programmes, in cooperation with the academic staff members and researchers from several LLU faculties as well in cooperation with LVMI SILAVA and other partners. When engaged in active scientific activity, the academic staff members may transfer and implement the new knowledge, skills and competences in the study courses they lecture on, thus enhancing study efficiency and giving the real-world dimension to the programme.

4.5 Information provided in the SAR p. 224, as well as, interviews with the study field and study programme management, and with academic staff, confirms that there are mechanisms for collaboration to improve the study courses. The content of study courses and changes in it are, firstly, discussed in the Methodological Commission of the Faculty, secondly, discussed in the institutes that provide study courses and only then study courses are approved in the Council of the Faculty. Necessary changes to the study course content are proposed by the academic staff, as well as, by management. Collaboration between academic staff happens also by providing common study courses (involving staff from two faculties) and by jointly supervising student thesis.

### **Conclusions by specifying the strengths and weaknesses**

The qualification of the academic staff involved in the implementation of the study programme fully corresponds to the conditions of implementation of the study programme and the requirements of regulatory enactments, as well as ensures the achievement of aims and learning outcomes of the study programme and respective study courses.

The academic staff members of the study program, both at the national and international level, are engaged in scientific research in the field of quality management and conformity assessment, and the acquired information and experience are integrated into the study process

Strengths:

1. LLU employs highly qualified staff, lecturers and visiting lecturers, who possess the requested competencies and expertise in the field of forestry.
2. LLU involves practitioners' with relevant work experience.

3. Strong science partner - LVMI "Silava".

Weaknesses:

1. Quite a low level of elected academic staff does not ensure the sustainability of the programme delivery in the long term.

## 5. Assessment of the Compliance of the Study Programme "Forest Science"

### Requirements

1. The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure by which state-recognised documents of higher education are issued.

**Assessment of compliance:** Fully compliant

Annex

Diploms-un-pielikumi\_Mezzin\_bak\_lv (1).rar

complies with the procedure by which state-recognised documents of higher education are issued.

2. Documents confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued.

**Assessment of compliance:** Fully compliant

Point. Nb.1.6. in Annex

LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc confirms that students of the bachelor programme "Forest Science" will have the possibility to continue education in the bachelor programme "Forest Engineering" of LLU. Students will have the possibility to continue studies in the appropriate study programme.

3. Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

**Assessment of compliance:** Fully compliant

LLU confirms that LLU will re-pay back money to students in case they do not wish to continue studies in other HEI in case that programme is closed.

Point Nb.3

LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc

4. The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

**Assessment of compliance:** Fully compliant

Point Nb.8 in annex LLU

aplēcinajums\_Lauksaimniecības\_mezsaimniecības\_virzienam\_precizēts.edoc

- 5 5. The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language.

**Assessment of compliance:** Not relevant

- 6 6. At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts.

**Assessment of compliance:** Not relevant

- 7 7. The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Point Nb.4 in the annex

LLU aplēcinajums\_Lauksaimniecības\_mezsaimniecības\_virzienam\_precizēts.edoc

confirms that at least 5 professors or associated professors will participate in study programme implementation.

- 8 8. The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

**Assessment of compliance:** Fully compliant

Annex "Studiju\_līgums\_2021" complies with the requirements of the Cabinet of Ministers.

- 9 9. The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Partially compliant

Study course descriptions are available in Latvian and English languages (Annexes about study course descriptions), part of the study courses have not indicated prior knowledge needed for successfully completing a study course.

Not all books mentioned in the course descriptions as compulsory are available in the library.

- 10 10. The study programme complies with the valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided that the completion of the study programme leads to a professional qualification.

**Assessment of compliance:** Not relevant

- 11 11. Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Annex

bak\_stud\_progr\_Mežzinātne\_AIP\_atzinums.edoc  
provides conformation for this point

- 12 12. The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard.

**Assessment of compliance:** Fully compliant

Annex

3\_pielikums\_atbilstiba-valsts-izglitiba\_standartam\_MZ\_LV.pdf  
complies with the State education standard.

- 13 13. The joint study programmes comply with the requirements prescribed in Section 551, Paragraphs one, two, and seven of the Law on Institutions of Higher Education (if applicable).

**Assessment of compliance:** Not relevant

- 14 14. Each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions (if they have worked for a shorter period of time, the number of publications shall be in proportion to the work period), or artistic creation achievements (for instance, exhibitions, films, theatre performances, and concert activity), or a five-year practical work experience (except for the experience in the implementation of the study programme) in accordance with the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Academic members have publications according to academic staff CV.

- 15 R5 - Overall rating

**Assessment of compliance:** Partially compliant

Previous knowledge in study course descriptions should be indicated. All other criteria are fully compliant

## Requirements (R6-R8)

- 1 R6 - The compliance of the study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of the learning outcomes.

**Assessment of compliance:** Fully compliant

SAR, distance excursion and information obtained during interviews confirms that the study programme has adequate provisions and support therefore able to guarantee the achievement of the learning outcomes, good preparation of students for the labour market and indicate the possibility to ensure a high-quality study process also in the future.

- 2 R7 - The compliance of the qualification of the academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments.

**Assessment of compliance:** Fully compliant

All academic staff is qualified for providing a qualitative study process and qualifications complies with necessary legislation.

- 3 R8 - The study programme leading to the master or doctoral degree is based on the advances and findings in the relevant field of science or artistic creation.

**Assessment of compliance:** Not relevant

### **Conclusions by specifying the strengths and weaknesses**

Bachelor study programme "Forest Science" complies with all related requirements (except course descriptions) and it is providing high quality studies in forestry at the national level.

### **Evaluation of the study programme "Forest Science"**

Evaluation of the study programme:

Good

## **6. Recommendations for the Study Programme "Forest Science"**

### **Short-term recommendations**

Revise and add the previous knowledge section in the study course descriptions, revise the list of compulsory reading to ensure that books are available in the university library.

### **Long-term recommendations**

Provide some courses in the programme also in English to improve the language skills of students and academic staff and to attract incoming foreign students, e.g. ERASMUS+ students.

Develop a plan to increase the proportion of the elected academic staff to ensure sustainability of the study programme.

## **II. "Agriculture" ASSESSMENT**

### **II. "Agriculture" ASSESSMENT**

#### **1. Indicators Describing the Study Programme**

##### **Analysis**

Academic Masters study programme "Agriculture" represents and is interrelated with degree name awarded - Master degree of Agricultural Sciences. This study programme complies with the Regulation of the Cabinet of Ministers on academic education standard No 240. Students, who do not have prior knowledge in agriculture also can enrol in the programme by passing entrance exams in Plant and Animal Biology. Since agriculture is multidisciplinary field which interacts with biology, chemistry, veterinary medicine, forestry, economics etc. students from different backgrounds should be able to continue their studies in agriculture field if they want to. Because of this interrelation with different fields it is appropriate to enroll students with other higher education diplomas than just Bachelor in agriculture. Regarding students who apply from other fields it is reasonable for LLU to assess their basic knowledge in biology. During the site visit there were students who have enrolled in master level studies with different background than agriculture, they were satisfied with the study process and pleased that they could use their previously acquired knowledge in agriculture. This exam tests the basic knowledge of students which is necessary for starting the study process. Study courses provided in this programme helps to achieve goals set in the programme to prepare leading

specialists in agricultural production and public administration. Aims, objectives, learning outcomes and admission requirements are interrelated with one another.

### **Conclusions by specifying the strengths and weaknesses**

Study programme aims, objectives and learning outcomes are defined, they are achievable, they reflect on the degree awarded which students obtain. This study programme complements the overall goal of the study field and provides agricultural specialists.

Strengths.

1. Students with different background knowledge can enrol in the study programme.
2. This study programme complements and provides a continuation of studies after a professional Bachelor, to obtain more academic knowledge in agricultural sciences.

Weaknesses.

None.

## **2. The Content of Studies and Implementation Thereof**

### **Analysis**

2.1. Study course descriptions are created of high quality except for one minor issue - in most of study course descriptions no prior knowledge is indicated. Students also confirmed that they can get and find all basic information in study course descriptions. Each lecturer also at the beginning of the study course introduces students to the criteria and tasks that should be fulfilled during the study course. Regarding mandatory literature it can be updated since some of the books are older than 15 years, students indicated that they would like newer literature as well. The final thesis preparation is also high quality. Each student can choose a supervisor and can figure out topics on their own or choose a topic provided by academic staff members. Content of study course descriptions and study course implementation leads to the achievement of learning outcomes, which leads to successful defending of Masters thesis. Study programme workload is 80 credit points, length is 2 years or 4 semesters, and consist of compulsory, restricted elective and elective courses, research and theoretical aspects are covered in 26 credit points. Master thesis cover more than 20 credit points, students are available to choose specialisation courses in some of agriculture branches in total consisting of 19 credit points. These results comply with the goals set by the study programme. During the study programme students have the possibility to participate in projects, work in industry, this ensures connection with research activities that are relevant to the industry. Most of the academic staff members also work in the institutes or at some enterprises and can provide insight on innovations in the industry.

2.2. Study process is organised mainly to focus on scientific research activities. Students have the possibility to join projects, work their master's thesis in a corporation solving enterprise problems. Stakeholders confirmed that Master students are involved in research projects. To develop research skills of the students small practise for students are organised with worth of 6 credit points. Study course learning outcomes, aims can be found in study course descriptions as well as criteria for finishing and evaluating student work can be found there. During the site visit students confirmed that they are satisfied with the study process, that it adds more academic knowledge after finishing a professional bachelor's programme. These study implementation methods and evaluation of student assignments and qualification works contribute to achieving learning outcomes and goals set by the programme. Students are involved in decision-making bodies, they have the option to express their opinion in surveys that are conducted after each study course at the end of the semester. Students during the site visit gave the impression that issues can be resolved by talking

with academic staff members and that staff is easily approachable.

2.3. Surveys are conducted among students after finishing each study course where they can express their opinion about the course and provide suggestions for improvements. Alumni could not confirm participating in surveys about improving study quality, but they mentioned that the study programme director has conducted discussion in the form of feedback about the study programme. Employers are widely involved in decision making and providing suggestions on how to improve study quality, for example, they have been involved in qualification work commission, they are involved in the advisory board, most of the employers are connected to LLU through research institutes, or provide students with traineeships, which also helps to give input from industry regarding skills that are required in real-life situations.

2.4. There is a possibility of students going abroad and gaining new skills during the mobility, but these options are not very utilised among students. Some students are already working at home in private enterprises, they do not have time for mobility, others have financial issues which prevent going abroad. During the site visit, students provided information on how to find possible HEI for going on the mobility courses. They also know who they should contact regarding mobility, LLU has created an international coordination centre. Since this study programme is only in Latvian, the incoming mobility of students is currently impossible. Recognition of skills and credit points that are acquired during mobility is possible, not always fully since the programme is quite unique, but this option is provided. If some study courses can not be recognised students have the option to write only an exam in LLU to finish the study course after the mobility.

### **Conclusions by specifying the strengths and weaknesses**

The content of studies in Masters level programme Agriculture is held at a good level, and is confirmed by alumni and employers which showed overall satisfaction about skills acquired during the study process for joining the labour market. Students are informed about contact persons or places where to find all necessary information. Learning outcomes correspond and help to achieve goals and tasks set by the programme. Students, alumni and employers were overall satisfied with the study process. Mobility options for students are available, but it is not common practice to use these possibilities.

Strengths.

1. Satisfaction about the study quality from all involved parties.
2. Possibility to continue studies at the doctoral level.

Weaknesses.

1. Study course descriptions should be revised more often to include the newest literature and prior knowledge necessary for beginning the study course.
2. International mobility options are not widely used.

### **3. Resources and Provision of the Study Programme**

#### **Analysis**

3.1 As it results from the self-assessment report, scientific support and informative provision can be obtained from the course leaders, from scientific articles in the Library of the LLU, as well as in the associated research institutes. Apart from the central library and research centres informative materials, students can get specific scientific literature (mainly collections of scientific conference articles, narrow specialisation monographs or books and other information sources) from each academic staff member involved in supervising theses. Comparing the list of the compulsory reading in the course descriptions (that do not have remark about e-book) and the information in the joint

library catalogue (<http://kopkatalogs.lv>) not all books can be found, for example, course LauZ6115 Soil and Plant Analysis has listed book Miller J.C, Miller J.N. "Statistics for analytical chemistry"; course LauZ6133 Fruit Science has listed the book Sansavini, S., et al., "Principles of Modern Fruit Science". The amount of money dedicated to this programme per student is well explained in the self-assessment report. 50% of the funds are coming from research projects. A large part of works for master thesis is elaborated in the scientific institutes or proprietary study and research farms.

3.2 Not applicable as it is not a doctoral programme

### **Conclusions by specifying the strengths and weaknesses**

The study provision, informative provision, material and technical provision, and financial provision is sufficient for programme implementation

Strengths:

1. Research infrastructure of faculty of Agriculture, other collaborative faculties from LLU and research institutes associated with it;
2. Experimental workplaces available in farms of LLU and also on private farms which are in close cooperation with LLU;
3. Availability of fellowships programmes in LLU;
4. Support from LLU for academic staff and students skills improvements (conference participation, publication fees).

Weaknesses:

1. Not all books mentioned in the course descriptions as compulsory are available in the library.

## **4. Teaching Staff**

### **Analysis**

4.1. According to the SAR p.126 there are minimal changes in the composition of the academic staff for the study programme, mainly due to the retirement of several professors and leading researchers. They have been replaced with associate and assistant professors who have gained their experience in other study programmes and in scientific institutes, so the quality has been ensured. Each semester at least 1 CP is taught by the guest professors from the EU universities, as well as by researchers from scientific institutes.

4.2. As already stated in the evaluation of the study field, LLU applies systemic criteria for admission of the academic staff. The academic staff complies with the legal requirements set for the study programme.

According to the SAR p. 127 and "Annex 6. Academic staff of study direction" there are 26 academic staff members (27% professors, 19% associated professors, 22% assistant professors) from different LLU faculties are involved in the implementation of this study programme, from which only two persons do not hold a doctoral degree.

Academic staff involved in the study programme have practical work experience in the industry or scientific institutions and/or have scientific publications. Part of the academic staff during the evaluation period has prepared more than 50 scientific publications. According to Annex 4 "List of projects implemented by the academic staff of the Faculty of Agriculture..." there are more than 80 different kinds of projects, some of which are implemented by the academic staff of this programme. The academic staff members regularly raise their qualification by attending different courses (for

example “Dynamic and active presentations”, “Cloud services for data storage and sharing”) or participating in the internship in companies, and as mentioned in on-site interviews with academic staff, they attended courses also outside the university.

According to “Annex 6. Academic staff of study direction” and CV information only for one member of the academic staff English level is evaluated below level B2 (Common European Framework of Reference for Languages) but this programme is not delivered in English.

4.3. Not applicable as it is not a doctoral programme.

4.4. The academic staff members of the study programme actively participate in the scientific research activities both at the national and international levels in respective fields relevant to the study programme. Some examples are the Horizon 2020 project The Data-Driven Dairy Decisions for Farmers or the 7th Framework Programme project Enhancing of legumes growing in Europe through sustainable cropping for protein supply food and feed (SAR p. 128). At the national level, there are projects funded by Latvian Science Council and by the European Structural Funds. Results of the research projects are published in the field leading journals, for example, “European Journal of Agronomy”, “Frontiers in Plant Science, etc.

Results of the research projects are implemented in the study programme and in the study courses as academic staff acts both as lecturers and as researchers and so can provide students with the latest conclusions from the actual research activities. Master programme students are also directly involved in the research activities as some of them make their master thesis as part of the research projects (SAR p. 128, on-site interviews with the academic staff and master programme students). Students can also be co-authors of the research papers, participate in the scientific conference “Students of Their Way to Science”.

4.5. Information provided in the SAR p. 129, as well as, interviews with the study field and study programme management, and with academic staff, confirms that there are mechanisms for collaboration to improve the study courses. The content of study courses and changes in it are, firstly, discussed in the Methodological Commission of the appropriate Faculty, secondly, discussed in the institutes that provide study courses and only then study courses are approved in the Council of the Faculty. Necessary changes to the study course content are proposed by the academic staff, as well as, by management. Collaboration between academic staff happens also by providing common study courses (involving staff from two faculties) and by jointly supervising student thesis.

## **Conclusions by specifying the strengths and weaknesses**

The qualification of the academic staff involved in the implementation of the study programme fully corresponds to the conditions of implementation of the study programme and the requirements of regulatory enactments, as well as ensures the achievement of aims and learning outcomes of the study programme and respective study courses.

The academic staff members of the study program, both at the national and international level, are engaged in scientific research in the field of quality management and conformity assessment, and the acquired information and experience are integrated into the study process

### **STRENGTHS**

1. The study programme is delivered by highly qualified specialists, including persons with practical experience.
2. Academic staff is actively involved in scientific research - they participate in the projects, have publications in the field leading journals.

3. Academic staff use possibilities to raise their qualification by attending courses not only provided by the university but also outside the university.
4. Master programme students are involved in project realisation, giving presentations in conferences and are co-authors for publications.
5. English language skills of the academic staff are appropriate to engage in scientific cooperation.

#### WEAKNESSES

No weaknesses

### 5. Assessment of the Compliance of the Study Programme "Agriculture"

#### Requirements

- 1 1. The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure by which state-recognised documents of higher education are issued.

**Assessment of compliance:** Fully compliant

Annex "Diploms-un-pielikums-Mag\_en" complies with the requirements of the Cabinet of Ministers.

- 2 2. Documents confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued.

**Assessment of compliance:** Fully compliant

Annex. "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets" confirms that students of the master programme "Agriculture" will have the possibility to continue education in the master programme "Forest Science" of LLU. Students will have the possibility to continue studies in the programme of the same study field.

- 3 3. Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

**Assessment of compliance:** Fully compliant

Third point in the annex "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets". LLU confirms that LLU will re-pay back money to students in case they do not wish to continue studies in other HEI in case that programme is closed.

- 4 4. The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

**Assessment of compliance:** Fully compliant

8. point in annex "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets"

- 5 5. The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language.

**Assessment of compliance:** Not relevant

- 6 6. At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts.

**Assessment of compliance:** Not relevant

- 7 7. The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Institutions of Higher Education.

**Assessment of compliance:** Not relevant

- 8 8. The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

**Assessment of compliance:** Fully compliant

Annex "Study\_Agreement\_LV\_EN\_2021" complies with the requirements of Cabinet of Ministers No. 70.

- 9 9. The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Partially compliant

Study courses are available in all study process languages (Annexes about study course descriptions), almost none of the study courses have indicated prior knowledge needed for successfully completing study course, in most of the study courses literature is older than 15 years and should be replaced with newer materials, for example in the study course "Laukaugi II" the first book indicated is dated at 1969. Not all books mentioned in the course descriptions as compulsory are available in the library.

- 10 10. The study programme complies with the valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided that the completion of the study programme leads to a professional qualification.

**Assessment of compliance:** Not relevant

- 11 11. Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Annex "mag\_stud\_progr\_Lauksaimniecība\_AIP atzinums" provides confirmation for this point.

- 12 12. The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard.

**Assessment of compliance:** Fully compliant

Annex "2\_pielik\_Atibilstiba\_valsts\_standartam\_lv\_prec" meets the requirements of rules from Cabinet of Minister No. 240.

- 13 13. The joint study programmes comply with the requirements prescribed in Section 551, Paragraphs one, two, and seven of the Law on Institutions of Higher Education (if applicable).

**Assessment of compliance:** Not relevant

- 14 14. Each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions (if they have worked for a shorter period of time, the number of publications shall be in proportion to the work period), or artistic creation achievements (for instance, exhibitions, films, theatre performances, and concert activity), or a five-year practical work experience (except for the experience in the implementation of the study programme) in accordance with the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Each of the teaching staff members has publications in the last 6 years. According to Annex No.6 and "Macibuspeku\_CV\_latviski".

- 15 R5 - Overall rating

**Assessment of compliance:** Partially compliant

Study course descriptions should indicate previous knowledge for starting study course.

### Requirements (R6-R8)

- 1 R6 - The compliance of the study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of the learning outcomes.

**Assessment of compliance:** Fully compliant

All material-technical base provided for this study programme is sufficient to achieve all the learning outcomes determined.

- 2 R7 - The compliance of the qualification of the academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments.

**Assessment of compliance:** Fully compliant

Academic staff members are qualified to carry out the study process.

- 3 R8 - The study programme leading to the master or doctoral degree is based on the advances and findings in the relevant field of science or artistic creation.

**Assessment of compliance:** Fully compliant

Students and academic staff members are involved in scientific research of agriculture field in joint collaborations with scientific institutes (mentioned and checked during the site visit) etc.

### Conclusions by specifying the strengths and weaknesses

Academic Masters study programme Agriculture provides academic and research skill development for students and complies with state legislation to provide study process (excepts study course descriptions). Programme evaluation could be increased if the short-term recommendation is

resolved until decision on accreditation.

## **Evaluation of the study programme "Agriculture"**

Evaluation of the study programme:

Good

## **6. Recommendations for the Study Programme "Agriculture"**

### **Short-term recommendations**

Revise and add the previous knowledge section in the study course descriptions, revise the list of compulsory reading to ensure that books are available in the university library.

### **Long-term recommendations**

Provide the possibility of continuation of studies in case of study field or programme loose licence in other study field or other Higher education institution

Develop plan to promote incoming and outgoing international mobility among students

## **II. "Forest Science" ASSESSMENT**

### **II. "Forest Science" ASSESSMENT**

#### **1. Indicators Describing the Study Programme**

##### **Analysis**

1.1. Academic Master's study programme "Forestry Science" (code 45623 according to the Classification of the Latvian education system) provides students with relevant knowledge and skills in forestry science. Degree obtained "Master of Agricultural Sciences in Forest Sciences" follows the programme name. The new academic Master's study programme was launched in the academic year of 2017/2018. Changes have been introduced since the implementation of the programme by improving the courses. The instruction language for the programme is Latvian and English. Until now students have applied for studies only in Latvian. The resulting outcomes provide students with all necessary skills to enter the labour market or to continue their studies at the doctoral level. Admission requirements are Bachelor's degree or second level professional higher education in forestry science, materials science, agricultural science, biology, environmental science, geography, computer science, management science, economics, transport and traffic specialities, and B2 level of English language skills. These requirements are providing the possibility to all students with an interest in forestry to enrol in the study programme. The admission requirements are appropriate. The final examination is foreseen at the end of the study programme - Master thesis defence.

#### **Conclusions by specifying the strengths and weaknesses**

The aims and objectives of the study programme are clearly defined and achievable, they comply with the general strategic development directions of LLU.

Strength:

1. The study programme complies with the needs of the labour market and development trends in society.

2. The study programme ensures that students have an understanding and extensive knowledge of forestry.

Weaknesses:

None

## **2. The Content of Studies and Implementation Thereof**

### **Analysis**

2.1 The study programme is compliant with the Law on Higher Education Institutions, in study course descriptions most of the necessary information is included, except almost in none of the study courses previous knowledge for starting a study course has been indicated. The content of the study programme is in line with the outcomes of the programme. Total amount of the study programme for studies in Latvian and in English is 80 credit points, studies last two years (four semesters). The compulsory part is 26 credit points, master thesis 25 credit points, so the requirements set in the education standard are met. Compulsory content includes courses of theoretical knowledge of relevant scientific sector, for example, Forest Policy, Forest Value, Forest Ecology, Research Methodology. There are three specialisation directions in the programme, namely "Forest Ecology and Silviculture", "Forest Works and Technique," and "Forest Economy and Policy". All three specialisations are balanced in term of the study content. Students have to choose specialisation courses already in the first semester of the studies. Tasks to achieve the goals of the study programme are well described and lead to the accomplishment of the study programme. Because of strong collaboration with employers, the study programme follows the trends in the labour market and in scientific research. Study course descriptions are available for students. They include learning outcomes, evaluation system, works that have to be done during study courses etc. Study implementation methods lead to achieving outcomes determined in study courses and the whole programme itself.

2.2 The teaching and assessment methods follow the tendencies of modern education. The assessment methods and criteria are an integral part of each study course description. The teaching methods include traditional and modern approaches. The teaching methods and their implementation are described in each study course description. Student-centred learning and teaching principles are implemented into the study process. In order to enhance the industry experience, the guest lecturers from companies are invited to several courses.

2.3 Surveys are conducted after each study course where students can express their opinions about the course, about lecturers etc. Surveys are analysed and the results are available for each university lecturer of a particular course, director of the study programme, dean, employee in charge from the LLU Study Centre, and vice-rector of studies. If the concerns raised are reasonable then the programme director initiates the changes in the course content or teaching methods. There is regular cooperation with the representatives of the industry/employers for the improvement of studies. Representatives of the industry are present at the Convention, State Examinations Commission, and are invited as guest lecturers to the faculty.

2.4 Students have the possibility to go in foreign mobility to different countries, mostly through the ERASMUS+ programme. Before leaving they have the opportunity to find the most similar study courses to attend, so they can get recognised back at LLU after mobility. Students provided examples of how to go through this process. The process of recognising previously acquired experience is possible and the description is available on the LLU homepage.

### **Conclusions by specifying the strengths and weaknesses**

The content of studies in the Master programme “Forestry Science” is held at a very good level. Learning outcomes correspond and help to achieve goals and tasks set by the programme. Students, alumni and employers were overall satisfied with the study process. Mobility options for students are available and employed.

Strengths:

1. The design and the content of the study programme comply with the regulatory requirements.
2. Three specialisation directions.
3. The industry professionals and the representatives of forest research institutions took an active part in the development of the study programme according to the contemporary and future labour market trends.
4. The study programme is maintaining student-centred learning and teaching.

Weaknesses:

1. Study course descriptions should indicate previous knowledge for starting courses and literature should be updated.

### **3. Resources and Provision of the Study Programme**

#### **Analysis**

3.1 Study programme foresees strong involvement and collaboration of the main contributors 3 departments of Forest faculty with 3 other structural units. Premises and equipment modernised on a regular basis, recently laboratories (Wood Science Laboratory, Hunting Laboratory) were supplemented with modern devices, and new laboratories – Precision Silviculture Laboratory and Forest Protection Laboratory were created. Also, laboratories in LVMI Silava are available for specific research. Studies are well covered by general services available at University - access to the library, online databases, information services and at the faculty - specialized classrooms/auditoriums and laboratories for practical activities, also excellent and newly renovated public spaces. Comparing the list of the compulsory reading in the course descriptions (that do not have remark about e-book) and the information in the joint library catalogue (<http://kopkatalogs.lv>) not all books can be found, for example, course MežZ6013 Precise Forestry has listed book “National Forest Inventories, Assessment of Wood Availability and Use ”; course MežZ5034 Plantations of Wood Plants has listed book Elfing, B., Nystrom, K., “Stability of site index in Scots pine...”. Computer equipment and training equipment is up to date with software for data processing and designing installed. Study programme materials are also well presented in the Moodle system, this guarantees an efficient distance learning process. During interviews with students, teachers and graduates it was confirmed that studies are well supported academically, informative, material and technical provisions meet requirements.

3.2 Not applicable (NA).

### **Conclusions by specifying the strengths and weaknesses**

Master study programme “Forest science” has adequate provisions and support therefore able to guarantee the achievement of the learning outcomes, good preparation of students for the future career or continuation in PhD studies and indicate the possibility to ensure a high-quality study process also in the future.

Strengths:

1. Continued and planned investments in infrastructure.

2. Strong support with providing laboratories and involvement in research by LVMI “Silava”.

Weaknesses:

1. Not all books mentioned in the course descriptions as compulsory are available in the library.

#### **4. Teaching Staff**

##### **Analysis**

4.1 The composition of teaching staff changes cyclically over time as a normal process. The leading forest industry researchers and specialists with practical hands-on experience participate in the study process and research. Both doctoral students and university lecturers who recently acquired their degrees are involved in the delivery of courses. The qualification of the teaching staff complies with the requirements of the Law on Higher Education Institutions.

4.2 Academic staff members involved in the delivery of the programme “Forestry Science”, both from the Forest Faculty and other structural units of LLU, are knowledgeable and competent professionals each in the course they deliver lectures on. Special pedagogical competence upgrade training courses are attended by the staff and provided by LLU. University lecturers publish articles in internationally indexed journals, such as iForest, Forests, Baltic Forestry, European Journal of Forest Research, Silva Fennica, BioResources, Agronomy Research etc., who are indexed in several databases, including Scopus and Web of Science; anonymously reviewed international scientific publications, including proceedings. International conference materials (Abstract), scientific popular and scientific methodological works (text-books, other publications) are published (Annex 13 in SAR ). Forest Faculty organises conferences every year together with LVMI Silava, and academic staff members partake there as participants and present their research achievements).

4.3 Not applicable as it is not a doctoral programme.

4.4 The academic staff is involved in scientific research. Each year applications are submitted for projects financed by the state, EU structural funds, National research programmes, in cooperation with the academic staff members and researchers from several LLU faculties as well in cooperation with LVMI SILAVA and other partners. When engaged in active scientific activity, the academic staff members may transfer and implement the new knowledge, skills and competencies in the study courses they lecture on, thus enhancing study efficiency and giving the real-world dimension to the programme.

4.5 Information provided in the SAR p. 99, as well as, interviews with the study field and study programme management, and with academic staff, confirms that there are mechanisms for collaboration to improve the study courses. The content of study courses and changes in it are, firstly, discussed in the Methodological Commission of the Faculty, secondly, discussed in the institutes that provide study courses and only then study courses are approved in the Council of the Faculty. Necessary changes to the study course content are proposed by the academic staff, as well as, by management. Collaboration between academic staff happens also by providing common study courses (involving staff from two faculties) and by jointly supervising student thesis.

##### **Conclusions by specifying the strengths and weaknesses**

The qualification of the academic staff involved in the implementation of the study programme fully corresponds to the conditions of implementation of the study programme and the requirements of regulatory enactments, as well as ensures the achievement of aims and learning outcomes of the

study programme and respective study courses.

The academic staff members of the study program, both at the national and international level, are engaged in scientific research in the field of quality management and conformity assessment, and the acquired information and experience are integrated into the study process

Strengths:

1. LLU employs highly qualified staff, lecturers and visiting lecturers, who possess the requested competencies and expertise in the field of forestry.
2. LLU involves practitioners' with relevant work experience.
3. Strong science partner - LVMI "Silava".

Weaknesses:

There are no weaknesses identified.

## 5. Assessment of the Compliance of the Study Programme "Forest Science"

### Requirements

1. The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure by which state-recognised documents of higher education are issued.

**Assessment of compliance:** Fully compliant

Annex Diploms-un-pielikums\_Mezzin\_mg\_lv.rar complies with the requirements of the Cabinet of Ministers.

2. Documents confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued.

**Assessment of compliance:** Fully compliant

Point Nb. 1.7.in Annex

apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc confirms that students of the master programme "Forest Science" will have the possibility to continue education in the master programme "Agriculture" of LLU. Students will have the possibility to continue studies in the programme of the same study field.

3. Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

**Assessment of compliance:** Fully compliant

In point Nb.3 in annex

apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc

LLU confirms that LLU will re-pay back money to students in case they do not wish to continue studies in other HEI in case that programme is closed.

4. The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

**Assessment of compliance:** Fully compliant

Point Nb.8 in annex

aplēcinajums\_Lauksaimniecības\_mezsaimniecības\_virzienam\_precizēts.edoc

- 5 5. The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language.

**Assessment of compliance:** Not relevant

- 6 6. At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts.

**Assessment of compliance:** Not relevant

- 7 7. The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Institutions of Higher Education.

**Assessment of compliance:** Not relevant

- 8 8. The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

**Assessment of compliance:** Fully compliant

Annex "Study\_Agreement\_LV\_EN\_2021" complies with the requirements of Cabinet of Ministers No. 70.

- 9 9. The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Partially compliant

Study courses are available in Latvian and English languages (Annexes about study course descriptions), part of the study courses have not indicated prior knowledge needed for successfully completing a study course.

In some of the study courses descriptions mandatory literature is older than 15 years and should be replaced with newer materials. Not all books mentioned in the course descriptions as compulsory are available in the library.

- 10 10. The study programme complies with the valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided that the completion of the study programme leads to a professional qualification.

**Assessment of compliance:** Not relevant

- 11 11. Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Annex mag\_stud\_progr\_Mezzinātne\_AIP\_atzinums.pdf provides conformation for this point.

- 12 12. The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard.

**Assessment of compliance:** Fully compliant

Annex 4\_pielikums\_Atblastiba-valsts-izgl-stand\_lv\_preciz.pdf

meet the requirements of rules from Cabinet of Minister No. 240.

Cabinet regulations Nb.512 requires a minimum 40 KP for the programme, Standard shows 80 KP amount. Master Thesis according standard are 25 KP instead of 20 KP as minimum requested in Cabinet regulations.

- 13 13. The joint study programmes comply with the requirements prescribed in Section 551, Paragraphs one, two, and seven of the Law on Institutions of Higher Education (if applicable).

**Assessment of compliance:** Not relevant

- 14 14. Each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions (if they have worked for a shorter period of time, the number of publications shall be in proportion to the work period), or artistic creation achievements (for instance, exhibitions, films, theatre performances, and concert activity), or a five-year practical work experience (except for the experience in the implementation of the study programme) in accordance with the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Each of the teaching staff members has publications in the last 6 years. According to Annex No.6 and "Macibuspeku\_CV\_latviski".

Annex "12\_pielik\_Qualification-assessment-of-teaching-staff\_Mezzin\_mag\_en" shows teaching staff activities during assessment period in the scientific and conferences.

- 15 R5 - Overall rating

**Assessment of compliance:** Partially compliant

Previous knowledge in study course descriptions should be indicated. All other criteria are fully compliant.

## Requirements (R6-R8)

- 1 R6 - The compliance of the study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of the learning outcomes.

**Assessment of compliance:** Fully compliant

SAR, distance excursion and information obtained during interviews confirms that the study programme has adequate provisions and support therefore able to guarantee achievement of the learning outcomes, good preparation of students for the future career or continuation in PhD studies and indicate the possibility to ensure a high-quality study process also in the future.

- 2 R7 - The compliance of the qualification of the academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments.

**Assessment of compliance:** Fully compliant

Academic staff members are qualified to carry out the study process.

- 3 R8 - The study programme leading to the master or doctoral degree is based on the advances and findings in the relevant field of science or artistic creation.

**Assessment of compliance:** Fully compliant

Students and academic staff members are involved in scientific research regarding forestry science in joint collaborations with scientific institutes (mentioned and checked during the site visit).

**Conclusions by specifying the strengths and weaknesses**

Master study programme "Forest Science" complies with all related requirements (except study course descriptions) and it is providing high quality studies in forestry. Programme evaluation could be increased if the short-term recommendation is resolved until decision on accreditation.

**Evaluation of the study programme "Forest Science"**

Evaluation of the study programme:

Good

**6. Recommendations for the Study Programme "Forest Science"**

**Short-term recommendations**

Revise and add the previous knowledge section in the study course descriptions, revise the list of compulsory reading to ensure that books are available in the university library.

**Long-term recommendations**

Stimulate mobility of students and academic staff by more actively proposing mobility options and presenting success stories

## **II. "Food Hygiene" ASSESSMENT**

### **II. "Food Hygiene" ASSESSMENT**

#### **1. Indicators Describing the Study Programme**

##### **Analysis**

Professional master study programme "Food Hygiene" (code 47640 according to the Classification of the Latvian education system) prepares students to become specialists able to work in state institutions in the field of food chain supervision. After graduation of this master programme, a student have to be able to define the production process of food, to know principle of food safety approach, to define food quality indicators, to understand and to apply the knowledge in order to establish the shelf life of a food product, to know the storage conditions required for certain type of food, to know how to analyse the physical-chemical and microbiological parameters of food, etc. The objectives and learning outcomes are interrelated.

According to the Cabinet regulations Nb. 49 on Research fields and subfields in Latvia, Food Hygiene is classified under Veterinary science and code of the programme 640 (according to Cabinet

regulations No 322) also corresponds to Veterinar. During the study process, Food Hygiene Master's students acquire a number of the study courses that are related to Veterinary Medicine, eg. food infections, food toxicology, food hygiene and inspection. These study courses teach in depth about infectious diseases, their agents, types of agents, pathogenicity and their impact on the quality of products of animal origin. Therefore, this program is linked to the group of educational programs Veterinary Medicine.

Study programme "Food hygiene", envisaged to award a professional Master's degree in Food Hygiene. According to the Law on Higher Education institutions, a professional master's degree may be awarded without a qualification. According to the Latvian qualification framework, there is no relevant category of professional qualifications to be awarded for the speciality of food hygiene in the wider field of agriculture (incl. veterinary medicine).

The admission requirements are well defined and they are related to bachelor's degree or second level higher professional education in veterinary medicine, medicine, food technology, agriculture, biology or chemistry, which is correct for the expected outcomes of this programme.

### **Conclusions by specifying the strengths and weaknesses**

The name of the Study programme "Food hygiene", envisaged qualification to be acquired, the objectives and learning outcomes as well as admission requirements are clearly interrelated.

Strengths:

1. The study programme is timely and prepares needed specialists in the field of food chain supervision.

Weaknesses:

None

## **2. The Content of Studies and Implementation Thereof**

### **Analysis**

2.1 The description of the study courses, traineeship and the final thesis are provided and in general are complying with the regulatory enactments. However, some of the disciplines (e.g. Food Additives do not provide course content and calendar) do not provide sufficient details in this regard and regarding the prior knowledge, only two disciplines have been provided all the necessary information("Analysis of food shelf life" and "Food control and inspection"). The content is relevant and complementary and it complies with the study programme scope and meets the need of the relevant industry and the scientific trends, with some few exceptions such as cleaning and sanitation in the food industry, not only in the animal origin processing area, and food traceability techniques, which are not covered. Study programme workload is 50 credit points, length is one year and two month. The compulsory course part meets the minimum requirement of 24 credit points, the same as the master thesis amount of the 20 credit points. The programme has a limited elective course part of six credit points but actually there is only one study course, so there is no possibility to choose courses. The programme is too short (1 year and 2 months).

2.2 The study implementation methods include, in general, the evaluation method, the percent of various planned activities and the learning outcomes. Student-centred learning and teaching principles are taken into consideration. Clearly achievable study course outcomes and students are introduced to them in the first lecture, students know the programme and study course defined results, the assessment of the knowledge acquired is also clearly described and presented to students and personal discussions of the Programme Director with the students can provide their

feedback. Practical works are clearly evidenced and more than 50% of the allocated hours are envisaged for it and this approach is very good.

2.3 The surveys among the students current or former students have not been regularly based organized, because the number of students in this programme was quite low for various periods as it was described in the self-evaluation report, but also discussions with students face to face in order to find out their feedback and to add some improvements in the quality of the courses offered by this programme. The score given for the course's content was from 3.8 to 5 (out of 5). Regarding the employers, this programme was created based on the suggestion of the Food and Veterinary Service (FVS) they need for such specialists and based on a survey there is an interest for this master programme. Regarding the meeting with graduates, the impression about the quality of this programme is quite good.

2.4 There has been no incoming or outgoing mobility in the study programme. Most probably the cause is because the students usually are working and the programme is very short (14 months).

### **Conclusions by specifying the strengths and weaknesses**

The programme Food Hygiene is overall good as the content and implementation planning. But according to the management of the University this study programme will be closed and new students will not be admitted.

Strengths:

1. Comprehensively described the content of some courses such as PärZ6015 Analysis of Food Shelf Life (this also having updated bibliography), or PärZ6007 Quality Systems in Food Chain.

Weaknesses:

1. The programme is too short and lacks more elective courses. Also, there are some important topics for the food hygiene field such as cleaning and sanitation in the food industry, not only in the animal origin processing area, and food traceability techniques, which are not fully covered.

2. Lack of uniformity of information provided in the course content in the Food Hygiene programme (some disciplines have comprehensive information provided on content, schedule and some of them insufficient details have been given).

3. There has been no incoming or outgoing mobility in the study programme.

### **3. Resources and Provision of the Study Programme**

#### **Analysis**

3.1 As it results from SAR scientific support and informative provision can be obtained from the course leaders, from scientific articles in the Library of the LLU, as well as in the VMF Information Center. Very important for student formation is the research traineeship, which takes place in Semester 1 of the first year for six weeks. The amount of money dedicated to this programme per student is well explained in the SAR p. 240.

The Library facility of LLU is very nice, renovated and comprises around 100 places and more than 500.000 book titles. However, Students have confirmed that paper format books are old, contain basic information, but should be updated. Also, they would prefer more digitized books to be found in the Library.

3.2. Not applicable

### **Conclusions by specifying the strengths and weaknesses**

The study provision and scientific support for the Food Hygiene programme are well elaborated and is convincing.

Strengths:

1. The Library facility of LLU is very nice, renovated and comprises around 100 places and more than 500.000 book titles.

Weaknesses:

2. Part of the paper format books are old, contain basic information, but should be updated. Number of e-books are too low..

#### **4. Teaching Staff**

##### **Analysis**

4.1 Measures undertaken by LLU to avoid negative effects and discontinuation of some disciplines are well described in the self-assessment report and they are effective and beneficial to students. ( e.g rename the course methodology of research as Biostatistics in Food Hygiene or lectures in courses “Foodborne Infections” and “Food Hygiene and Inspection” were given in 2019 by the academic staff member who was involved in the elaboration of the course and lectures on similar courses for the students of the Faculty of Veterinary Medicine). Also, the programme director was changed in 2019 and a few courses have been undertaken by the new director, who is a very good professional.

4.2 The qualification of the teaching staff members involved in this programme complies with requirements it is relevant to learning outcomes and to the study courses delivered. For this programme, there are 10 academic staff: 3 professors, 5 associated professors, 1 visiting lecturer and 1 lecturer. They are mainly food technologists and veterinarians and from engineering faculty staff according to the self-assessment report and their CVs they are well equipped with the necessary expertise. They are participating in mobilities, research projects, conferences and proved their very good professional expertise in the programme field.

4.3. - Not applicable

4.4 The academic staff is involved in some research projects as is mentioned in the self-assessment report between 2013 and 2020, the academic staff members of the Faculty of Agriculture have participated in more than 86 research projects (including in cooperation with other scientific institutes, Ministry of Agriculture), and produced many scientific papers in Scopus and WoS from which 13 were identified as the most representative and many patents were obtained (for example, “Method for cranberry drying”, “Production method for potato chips with a reduced fat content” ) and are enumerated in the university report.

4.5 Information provided in the SAR p. 246, as well as, interviews with the study field and study programme management, and with academic staff, confirms that there are mechanisms for collaboration to improve the study courses. The content of study courses and changes in it are, firstly, discussed in the Methodological Commission of the appropriate Faculty, secondly, discussed in the institutes that provide study courses and only then study courses are approved in the Council of the Faculty.

#### **Conclusions by specifying the strengths and weaknesses**

The academic staff involved in the Food Hygiene programme is very well equipped with professional expertise, and they are involved in ongoing research projects being a good occasion also for the master students to work for their master thesis.

Strengths:

1. Very good qualification of the teaching staff
2. Very good cooperation among Faculties involved in this programme as teaching staff and Veterinary Services

Weaknesses:

None

## 5. Assessment of the Compliance of the Study Programme "Food Hygiene"

### Requirements

1. The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure by which state-recognised documents of higher education are issued.

**Assessment of compliance:** Fully compliant

Annex "Diploma-and-dipl-supplem-Partikas-hig\_en" complies with the requirements of the Cabinet of Ministers.

2. Documents confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued.

**Assessment of compliance:** Fully compliant

Annex "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets" point 1.9. confirms that students of the master programme "Food Hygiene" will have the possibility to continue education in the master programme "Food Science" of LLU. Students will have the possibility to continue studies in the appropriate study programme.

3. Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

**Assessment of compliance:** Fully compliant

Third point in the annex "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets". LLU confirms that LLU will re-pay back money to students in case they do not wish to continue studies in other HEI in case that programme is closed.

4. The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

**Assessment of compliance:** Fully compliant

8. point in annex "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets"

- 5 5. The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language.

**Assessment of compliance:** Not relevant

- 6 6. At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts.

**Assessment of compliance:** Not relevant

- 7 7. The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Institutions of Higher Education.

**Assessment of compliance:** Not relevant

- 8 8. The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

**Assessment of compliance:** Fully compliant

Annex "Study\_Agreement\_LV\_EN\_2021" complies with the requirements of Cabinet of Ministers No. 70.

- 9 9. The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Partially compliant

Study courses are available in Latvian and English languages (Annexes about study course descriptions), part of the study courses have not indicated prior knowledge needed for successfully completing a study course.

In some of the study courses descriptions mandatory literature is older than 15 years and should be replaced with newer materials.

- 10 10. The study programme complies with the valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided that the completion of the study programme leads to a professional qualification.

**Assessment of compliance:** Not relevant

- 11 11. Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Not relevant

- 12 12. The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard.

**Assessment of compliance:** Fully compliant

Annex "2\_pielik\_Compliance\_with\_State\_ed\_standard\_EN\_prec.pdf" meets the requirements of rules from Cabinet of Minister No. 240.

- 13 13. The joint study programmes comply with the requirements prescribed in Section 551, Paragraphs one, two, and seven of the Law on Institutions of Higher Education (if applicable).

**Assessment of compliance:** Not relevant

- 14 14. Each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions (if they have worked for a shorter period of time, the number of publications shall be in proportion to the work period), or artistic creation achievements (for instance, exhibitions, films, theatre performances, and concert activity), or a five-year practical work experience (except for the experience in the implementation of the study programme) in accordance with the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

All academic staff have at least 5 years of experience in the current field or publications during the last 6 years. According to Annex No.6 and "Macibuspeku\_CV\_latviski".

- 15 R5 - Overall rating

**Assessment of compliance:** Partially compliant

Study course descriptions should indicate previous knowledge for starting study course

**Requirements (R6-R8)**

- 1 R6 - The compliance of the study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of the learning outcomes.

**Assessment of compliance:** Fully compliant

Although in the University library not many new books are available, there is also an FMV library and each discipline leader library which could add necessary new information resources as was explained during the visit and meetings with the academic staff.

- 2 R7 - The compliance of the qualification of the academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments.

**Assessment of compliance:** Fully compliant

Academic staff members comply with state legislation and can provide a study process.

- 3 R8 - The study programme leading to the master or doctoral degree is based on the advances and findings in the relevant field of science or artistic creation.

**Assessment of compliance:** Fully compliant

Academic staff members are engaged in scientific research, involve students in projects, these research topics are relevant to the study programme and study field.

**Conclusions by specifying the strengths and weaknesses**

Masters level Study programme Food hygiene complies with all necessary legislation to provide a good quality study process, but improvements can be done regarding the duration of the programme and consequently by adding few more speciality courses mentioned in the recommendations.

### **Evaluation of the study programme "Food Hygiene"**

Evaluation of the study programme:

Good

### **6. Recommendations for the Study Programme "Food Hygiene"**

#### **Short-term recommendations**

Revise and add the previous knowledge section in the study course descriptions.

Adding more speciality elective courses for students to have actual possibility to choose courses (more than one elective course).

#### **Long-term recommendations**

If the study programme is delivered also in the next years or in different format, consider changing the length of the programme to 2 years, by including more speciality courses such as Cleaning and sanitation in food industry and Food Traceability as well as elective courses could be added. This could also solve the problem of students wishing to go for international mobility.

Develop plan to attract more students and academic staff in the Erasmus mobilities.

Develop plan to update the paper format books in the university library, as well as, to acquire more ebooks.

## **II. "Agriculture" ASSESSMENT**

### **II. "Agriculture" ASSESSMENT**

#### **1. Indicators Describing the Study Programme**

##### **Analysis**

The doctoral study programme "Agriculture" (code 51621 according to the Classification of the Latvian education system) according to the information provided in the SAR and the legislative acts shows that the name of the Study programme, degrees to be acquired (doctoral degree Doctor of Science (Ph.D.) in Agriculture, Forestry and Fisheries, or Doctor of Science (Ph.D.) in Animal and Dairy Science) corresponds to legal requirements. The objectives and learning outcomes are well defined and interconnected. Admission requirements, namely master's degree or equivalent higher education in agriculture or a related sub-branch of science and B2 level of English language skills if the programme is delivered in English, are appropriate for the programme. This programme is unique in Latvia, and it is aimed at giving doctoral students the highest level of theoretical knowledge and research work methods, principles of organisation of the scientific work, elaboration of the doctoral thesis and obtaining a doctoral degree in line with the international requirements (PhD) in agriculture, forestry and fisheries or animal and dairy science. The programme is very important for the Latvia economy.

## Conclusions by specifying the strengths and weaknesses

The study doctoral Programme "Agriculture" is excellently implemented, it is timely and is unique in Latvia.

Strengths:

1. Doctoral programme "Agriculture" is important for Latvia considering the importance of this sector in the Economy of Latvia.

Weaknesses:

None

## 2. The Content of Studies and Implementation Thereof

### Analysis

2.1 The description of the study courses, and the doctoral thesis topics are provided and in general, are complying with the regulatory enactments. However, some of the disciplines do not provide sufficient details in this regard (e.g. Grassland Science, Plant breeding). In the study programme, according to the list of provided courses, the two specializations are unbalanced regarding the number of offered courses. For Agriculture and Fishery there are 9 various agricultural field speciality courses (field management, pest management, soil sciences, horticulture, vegetable, etc.) and only 3 courses for Animal and dairy science. The same unbalance is present in the doctoral thesis topics where only 2 out of 16 are related to Animal science.

The content of courses is relevant for certain fields and it complies with the study programme scope and meets the needs of the relevant scientific or academic institutions, with LLU research strategy and the scientific trends in the programme field and corresponding subsectors. Most of the study courses mention that no prerequisite knowledge is required but that do not correspond to the course aims, for example, study course LaukD024 Animal breeding and selection has aim to provide students with deep knowledge in the topic but that can not be achieved if the students do not have prior knowledge of the field.

2.2 The study implementation methods include, in general, the evaluation method, the content and calendar of various planned activities, the requirements for credits awarding, compulsory reading as books and periodicals and the learning outcomes. Student-centred learning and teaching principles are taken into consideration such as Learning outcomes and their assessments which are very well-identified in all the disciplines from the doctoral Programme Agriculture.

2.3 The surveys among the students, current or alumni were conducted to find out their feedback and to add some improvements in the quality of the courses offered by this programme. 19 persons participated in the survey out of which 13 are doctoral students and 6 alumni. They were in general satisfied with the content of the courses and the knowledge acquired, but 3 believe that should be broader. Based on this feedback some courses have been improved. They had constructive feedback for the programme running and many of their suggestions were taken into account, according to the self-assessment report.

The visit to LLU and the meeting with the students resulted in very good cooperation among the staff from different faculties involved in the students supervising for their PhD thesis. Also, very good cooperation among PhD supervisors and PhD students was clearly evidenced.

Regarding the employers, this programme was created for research institutes, academics and the Ministry of Agriculture especially and from discussion during our meeting, it was clear they need such specialists and based on this meeting, there is an interest in this doctoral programme. Regarding our meeting with graduates, the impression about the quality of this programme is quite good and they are quite satisfied with their choice.

2.4 There are many possibilities for student mobility. LLU has an ERASMUS+ exchange program that includes contracts with 29 countries. Apart from this, there are also some sources from fellowships mentioned in the self-assessment report. There are a few examples provided by the self-assessment report and the mobility of Latvian students to foreign universities is quite good. Regarding the incoming students there was nobody until now, because the programme has not yet been offered in the English language. Also, some of the academic staff have a low English level of proficiency as resulted from the meeting with them.

### **Conclusions by specifying the strengths and weaknesses**

The quality of the content of the courses is very good and the offer of the courses in PhD Programmes covered very well a big area of interest from the Agriculture field.

Strengths:

1. Very good cooperation among academic staff from various faculties of LLU
2. Very good cooperation among PhD supervisors and PhD students

Weaknesses:

1. English knowledge level of some academic staff
2. There has been no incoming mobility in the study program
3. Lack of prior knowledge indicated in study course descriptions does not allow to fully comprehend the interrelations of study courses.

## **3. Resources and Provision of the Study Programme**

### **Analysis**

3.1 The doctoral study programme "Agriculture" is implemented only as a full-time study. It is an agreement among 3 partners, namely LLU, the Ministry of Agriculture and the Ministry of Educational Sciences. Social provision for one place is clearly provided in the Self Assessment report. The scientific literature is available through the access of students to scientific literature databases. Comparing the list of the compulsory reading in the course descriptions (that do not have remark about e-book) and the information in the joint library catalogue (<http://kopkatalogs.lv>) not all books can be found, for example, course ValoD001 English for Research professional has listed book "Conducting Research Literature Review"; course LaukD058 Field Management has listed book Aldrich, R.J., Kremer, R.J., "Principles in weed management". The money needed for research work, necessary analysis and participation in conferences or publication is ensured by the supervisors' funded research projects. It's win-win cooperation among PhD students and the supervisor. For the implementation of the program, infrastructure from the university and faculty of agriculture is used.

3.2 Starting with 2015, LLU is a partner to the Latvian academic network (LAT) and this is beneficial to PhD students because they have access to various research infrastructures from Research Institutes, other universities. Apart from this, in 2016 LLU set up the Scientific Laboratory of Biotechnologies where there are two important divisions ( Division of Agronomic analysis section and Division of Molecular biology and microbiology) for the doctoral programme Agriculture. Institute of plant protection research Agrihortos of LLU and Research Institute of Agronomy of LLU conduct also top research in the field and the farms "Vecauce" and "Peterlauki" provide the experimental basis for the doctoral students. In 2016 two new institutes were opened in LLU: Institute of Agricultural

Resources and Economics and Institute of Horticulture. Agriculture Data Center, Republic of Latvia, Faculty of Veterinary Medicine and Faculty of Food technologies are used also for research about animal and dairy science disciplines.

Also, PhD students have access to very good research infrastructure and experimental places in the available farms and the possibility to participate in international and national research projects as part of the research team. According to the self evaluation report 22 academic staff and researchers are or were involved in the research projects, and according to the 4. pielikums / Annex 4, in the period from 2012/2013. until the study year 2019/2020 there are more than 60 projects with corresponding links for the project website and the amount of money for each of them and it is mentioned also the involvement of PhD students.

### **Conclusions by specifying the strengths and weaknesses**

The study provision, scientific support including the one provided from cooperation with the research institutes are excellent.

Strengths:

1. Infrastructure for research is very good in multiple subsectors of agriculture.
2. Availability of the experimental farms of LLU;
3. A number of ongoing national and international research projects.

Weaknesses:

1. Not all books mentioned in the course descriptions as compulsory are available in the library.

## **4. Teaching Staff**

### **Analysis**

4.1 Measures undertaken by LLU to avoid negative effects and discontinuation of some disciplines are well described in the self-assessment report and they are effective and beneficial to students. ( e.g Retirement of some academic staff conducted to an average age of the programme academic members to 55 which is less than the programme it started, involvement of leading scientists from the scientific institutes in supervising doctoral thesis). The English language and technology usage is better covered by the younger people involved now in the program.

4.2 The qualification of the teaching staff members involved in this programme complies with legal requirements and it is relevant to learning outcomes and to the study courses delivered. For this programme, there are 20 academic staff from 3 LLU faculties. According to the self-assessment report and their CVs they are well equipped with the necessary expertise. H-index elevates year by year having 3 or more.

They are members of various international professional and scientific associations and unions, attending once every six years courses for the English language, or for new technologies such as Dynamic and Active Presentation, and according to the SAR p. 147 supervisors of PhD thesis are experts of the Latvian Science Council. According to the database of the Latvian Council of Science from academic staff mentioned in the SAR Annex 6 (Academic staff), 10 members are experts in the field of agriculture. The number exceeds the minimum required amount.

4.3 In the period 2013-2020, 228 publications have been published in Scopus or WoS issues out of them 107 are publications in Journals and 123 in scientific conference papers. The tendency is to elevate the number of publications in Journals, e.g.in the last 3 years. LLU has a journal indexed in Scopus starting with February 2020. Apart from this, the involvement of the academic staff and PhD students in ongoing research projects, ensure a good quality of scientific works of both. So, 20 academic staff have in 7 years 107 publications in Journals.

4.4 The academic staff of the Faculty of Agriculture is involved in some research projects as supervisors or active members as is mentioned in the self-assessment report. Since 2012/2013 ERA-NET projects and 2015/2016 INTERREG projects have been launched. There are some examples of international projects such as EUROLEGUME, or winner of Sower 2018 which demonstrates that academic staff of LLU faculties involvement and close cooperation among various faculties. In the reporting period, 22 academic staff members and researchers from the Faculty of Agriculture participated in such projects. LLU also implements internal research projects and researchers from the LLU Faculty of Agriculture involve doctoral students in the elaboration of projects to the extent possible, thus providing the data necessary for their theses. This is very good for funding resource attraction. Also, the academic staff of the Faculty of Agriculture is involved in projects related to the industry and delivered study courses and this approach is also good for continuous improvement of the content of the courses for the doctoral students.

4.5 The mechanism for mutual collaboration between the teaching staff members in place exists and it is well described in the self-assessment report. The proof of the effectiveness can be seen in the content of most courses which are provided in the 3\_pielik\_Study-plan\_LD\_en\_prec.pdf annex, Study\_courses\_description\_Ls\_PhD. Also, during the visit and discussions with academic staff and doctoral students an example of cooperation was provided by explaining that supervision of PhD theses was carried out by two different professors from two different faculties (Faculty of Agriculture and Forest Faculty).

### **Conclusions by specifying the strengths and weaknesses**

The qualification of the teaching staff and the participation in research grants to attract more funds for the experimental parts of the PhD thesis are very convincing.

Strengths:

1. Very good cooperation among academic staff of the Faculties involved in this doctoral program;
2. English language courses and technology usage, organized for academic staff

Weaknesses:

1. There is room for improvement of English language level for academic staff
2. The number of publications in Journals is still low for the academic staff (less than one per year for the period 2013-2020), having 107 publications in Journals for 7 years and 20 academic staff.
3. The programme is too short for the majority of topics in agriculture as it was declared by former PhD students.

## **5. Assessment of the Compliance of the Study Programme "Agriculture"**

### **Requirements**

1. The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure by which state-recognised documents of higher education are issued.

**Assessment of compliance:** Fully compliant

Annex "Doktora\_diplomi\_Lauksaimniecība\_LV"

2. Documents confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued.

**Assessment of compliance:** Fully compliant

Annex "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets" confirms that students of the doctoral programme "Agriculture" will have the possibility to continue education in the doctoral programme "Forest Science" of LLU. Students will have the possibility to continue studies in the programme of the same study field.

3. Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

**Assessment of compliance:** Fully compliant

Third point in the annex "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets". LLU confirms that LLU will re-pay back money to students in case they do not wish to continue studies in other HEI in case that programme is closed.

4. The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

**Assessment of compliance:** Fully compliant

8. point in the annex "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets"

5. The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language.

**Assessment of compliance:** Fully compliant

Seventh and ninth point in the annex "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets" confirms that language skill qualification of academic staff is appropriate.

6. At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts.

**Assessment of compliance:** Fully compliant

Fifth point in the annex "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets" provides a list of professors, who are Latvian Science council members with PhD.

7. The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Annex "LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets". Seventh point in the annex

8. The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

**Assessment of compliance:** Fully compliant

Annex "Study\_Agreement\_LV\_EN\_2021" complies with the requirements of Cabinet of Ministers No. 70.

- 9 9. The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Study courses are available in all study process languages (Annexes about study course descriptions), almost none of the study courses have indicated prior knowledge needed for successfully completing study course, in most of the study courses literature is older than 15 years and should be replaced with newer materials. Not all books mentioned in the course descriptions as compulsory are available in the library

- 10 10. The study programme complies with the valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided that the completion of the study programme leads to a professional qualification.

**Assessment of compliance:** Not relevant

- 11 11. Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Annex "dok\_stud\_progr\_Lauksaimnieciba\_AIP atzinums" provides confirmation for this point.

- 12 12. The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard.

**Assessment of compliance:** Not relevant

- 13 13. The joint study programmes comply with the requirements prescribed in Section 551, Paragraphs one, two, and seven of the Law on Institutions of Higher Education (if applicable).

**Assessment of compliance:** Not relevant

- 14 14. Each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions (if they have worked for a shorter period of time, the number of publications shall be in proportion to the work period), or artistic creation achievements (for instance, exhibitions, films, theatre performances, and concert activity), or a five-year practical work experience (except for the experience in the implementation of the study programme) in accordance with the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

All academic staff have publications during the last 6 years. According to Annex No.6 and "Macibuspeku\_CV\_latviski".

- 15 R5 - Overall rating

**Assessment of compliance:** Partially compliant

Previous knowledge in study course descriptions should be indicated. All other criteria are fully compliant.

**Requirements (R6-R8)**

- 1 R6 - The compliance of the study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of the learning outcomes.

**Assessment of compliance:** Fully compliant

Material-technical base, resources allocated for this study programme are enough to achieve learning outcomes.

- 2 R7 - The compliance of the qualification of the academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments.

**Assessment of compliance:** Fully compliant

Experts have concluded that all academic staff members involved in doctoral study programme implementation comply with necessary state legislation to provide the study process.

- 3 R8 - The study programme leading to the master or doctoral degree is based on the advances and findings in the relevant field of science or artistic creation.

**Assessment of compliance:** Fully compliant

The study programme cultivates and accumulates knowledge in the agriculture field, scientific research conducted is relevant to the study program, to the study field.

**Conclusions by specifying the strengths and weaknesses**

Doctoral study programme Agriculture complies with necessary requirements for study process implementation (minor problems with the course descriptions). The resources allocated are enough to finish studies in this study programme

**Evaluation of the study programme "Agriculture"**

Evaluation of the study programme:

Excellent

**6. Recommendations for the Study Programme "Agriculture"**

**Short-term recommendations**

Revise and add the previous knowledge section in the study course descriptions, revise the list of compulsory reading to ensure that books are available in the university library.

**Long-term recommendations**

Motivate academic staff members to learn and utilize the English language more often, and to gain an English proficiency certificate (mandatory requirement)

Evaluate the possibility to offer a study programme in English to increase incoming mobility
Promote co-supervisions of the PhD thesis with foreign academic staff
Introduce as compulsory a certain number of publications in Journals WoS and Scopus for PhD students during the doctoral studies

## II. "Forest Science" ASSESSMENT

### II. "Forest Science" ASSESSMENT

#### 1. Indicators Describing the Study Programme

##### Analysis

The doctoral study programme "Forestry Science" (code 51623 according to the Classification of the Latvian education system) provides students with relevant knowledge and skills in forestry science. The doctoral programme is very important for Latvia considering the importance of the forestry sector in Latvia. The name of the study programme is in accordance with the aims: to promote the development of the forest science and to achieve qualification level by virtue of efficient collaboration of the scientific institutions and in line with the international standards in order to establish the new generation of scientists, providing opportunities for doctoral students to acquire theoretical studies of the highest level, research methods and organisational principles as well as to elaborate doctoral thesis with theoretical, practical and scientific significance for the forest sector development in sub-branches "Forest Ecology and Silviculture", "Forest Economy and Politics", "Forest Work and Machinery" in branch "Agriculture, Fishery and Forest Science" and receive internationally recognised PhD degree.

Degree obtained "Doctor of Science (PhD) in Agriculture, Forestry and Fisheries" follows the programme name. Admission requirements are a Master's degree or equivalent higher education in forestry or in related sciences. The admission requirements are appropriate. The final examination is at the end of the study programme - doctoral thesis defence.

#### Conclusions by specifying the strengths and weaknesses

The doctoral programme "Forestry Science" is excellently implemented, it is timely and is unique in Latvia.

Strength:

1. The study programme indicators and the aim are relevant.
2. The study programme complies with the needs of the market.

Weaknesses:

None

#### 2. The Content of Studies and Implementation Thereof

##### Analysis

2.1 The description of the study courses, and the doctoral thesis topics are provided and in general, are complying with the regulatory enactments. The content is relevant and it complies with the study programme scope and meets the needs of the relevant scientific or academic institutions, with LLU research strategy and the scientific trends in the programme field and corresponding subsectors.

Study course descriptions describe study course outcomes, which help to achieve the overall goal of the study programme. Most of the study courses mention that no prerequisite knowledge is required but that do not correspond to the course aims, for example, study course ValoD001 English for Research Professionals covers specific topics of english language usage and not the elementary basics of language, so previous knowledge of english is needed.

The topics of PhD theses cover different aspects of forestry sector and forest science. Many PhD students (appr. 60% of defended theses in 2019-2020) prepare and defend their theses as a set of publications in high quality scientific journals (e.g. Forest Ecology and Management, Scandinavian Journal of Forest Research, Forests, Silva Fennica, BioResources).

2.2 The study implementation methods include, in general, the evaluation method, the content and calendar of various planned activities, the requirements for credits awarding, compulsory reading as books and periodicals and the learning outcomes. Student-centred learning and teaching principles are taken into consideration.

According to SAR, the studies have a form of contact lessons and are organised and supervised as individual studies. Scope and requirements of delivery of each course are defined in the course programme. For the studies to be evaluated as successful, a student must master courses specified in the study programme's plan each semester. E-studies are available for acquisition of courses, and this media contains study materials, tasks, tests and serves as a communication platform between the student and academic staff members.

2.3 The surveys among the students, current or alumni were conducted to find out their feedback and to add some improvements in the quality of the courses offered by this programme. They were in general satisfied with the content of the courses and the knowledge acquired. Students have expressed their opinion about some courses, and evaluations across the years do not have any significant trend and they reach or exceed 80% (4 or more in a 5-point system). Based on feedback some courses (e.g. Forest Ecology and Silviculture) have been improved. They had constructive feedback for the programme running and many of their suggestions were taken into account, according to the self-assessment report.

Regarding the employers, this programme was created for research institutes, academics and the Ministry of Agriculture especially and from discussion during our meeting, it was clear they need such specialists and based on this meeting, there is an interest in this doctoral programme. Regarding our meeting with graduates, the impression about the quality of this programme is quite good and they are quite satisfied by their choice.

2.4 There are many possibilities for student mobility. LLU has an ERASMUS+ exchange program that includes contracts with 29 countries. Also, there have been doctoral courses and summer schools where students participated.

### **Conclusions by specifying the strengths and weaknesses**

The quality of the content of the courses is very good and the offer of the courses in PhD Programmes covers many different aspects of forestry science.

#### Strengths

1. The study programme content corresponds to employers needs

#### Weaknesses

1. Lack of prior knowledge indicated in study course descriptions does not allow to fully comprehend the interrelations of study courses.

## **3. Resources and Provision of the Study Programme**

### **Analysis**

3.1 Study programme foresees strong involvement and collaboration of the 3 faculties and Language centre. Studies are well covered by general services available at University - access to the library, online databases, information services and at the faculty - specialized classrooms/auditoriums and laboratories, also excellent and newly renovated public spaces. Comparing the list of the compulsory reading in the course descriptions (that do not have remark about e-book) and the information in the joint library catalogue (<http://kopkatalogs.lv>) not all books can be found, for example, course ValoD001 English for Research professional has listed book "Conducting Research Literature Review"; course MežD031 Special course of research direction has listed book van Laar, A. Akca, A. "Forest Mensuration". Cooperating partner LVMI "Silava" supports studies by providing a research base. Computer equipment and training equipment is up to date with software for data processing and designing installed. During interviews with students, teachers and graduates it was confirmed that studies are well supported academically, informative, material and technical provisions meet requirements.

3.2 Forest research station, owned in cooperation with LVMI "Silava" is a nursery for scientific experiments with various research objects including long-term ones (established since WWI). SAR listed resources don't look specifically for PhD studies, but more for Bachelor and master studies. Therefore there are some doubts that PhD students are fully provided with necessary individual working spaces and adequately supported by technicians. But cooperating partner LVMI "Silava" provides full opportunities to work in various research groups and have access to modern and equipped laboratories to perform specific analyses. During interviews with PhD students, it was noted that also good interfaculty cooperation is ongoing between Agriculture and Forestry students, but the duration of studies often seems too short and more time is needed to prepare the thesis.

### **Conclusions by specifying the strengths and weaknesses**

The Doctoral study programme Forest Science complies with necessary requirements for the study process implementation. The study programme has adequate provisions and support therefore able to guarantee the achievement of the main tasks, ensure the training of new scientists and their abilities to run their own independent research in Forest science. The study programme also indicates the strong possibility to ensure a high-quality study process in the future.

Strengths:

1. Strong support with providing laboratories and involvement in research by LVMI "Silava"

Weaknesses:

1. Not all books mentioned in the course descriptions as compulsory are available in the library

## **4. Teaching Staff**

### **Analysis**

4.1 The composition of teaching staff changes cyclically over time as a normal process. According to SAR, several professors have been changed since the last accreditation without affecting the qualification of the professor because of retirement, election results and student feedback. The Director of the study programme has also been changed.

4.2 The qualification of the teaching staff members involved in this programme complies with legal requirements and it is relevant to learning outcomes and to the study courses delivered: 6 professors and 3 LZP experts are involved. Academic staff members involved in the delivery of the

programme "Forestry Science", both from the Forest Faculty and other structural units of LLU, are knowledgeable and competent professionals each in the course they deliver lectures on. Special pedagogical competence upgrade training courses are attended by the staff and provided by LLU.

4.3 The total number of publications of the academic staff involved in the implementation of the study programme (indexed in the Scopus database) during the reporting period is 262. Publications are included in the most important international scientific journals in forest science, incl. Agricultural and Forest Meteorology, Global Change Biology, Ecosphere, Canadian Journal of Forest Research, European Journal of Forest Research, Forest Ecology and Management, New Forests, Urban Forestry and Urban Greening, Silva Fennica, iForest, Forests, Forestry Studies and Baltic Forestry.

4.4 The academic staff is involved in scientific research. Each year applications are submitted for projects financed by the state, EU structural funds, National research programmes, in cooperation with the academic staff members and researchers from several LLU faculties as well in cooperation with LVMI SILAVA and other partners. When engaged in active scientific activity, the academic staff members may transfer and implement the new knowledge, skills and competencies in the study courses they lecture on, thus enhancing study efficiency and giving the real-world dimension to the programme.

4.5 Information provided in the self-assessment report, as well as, interviews with the study field and study programme management, and with academic staff, confirms that there are mechanisms for collaboration to improve the study courses. The content of study courses and changes in it are, firstly, discussed in the Methodological Commission of the Faculty, secondly, discussed in the institutes that provide study courses and only then study courses are approved in the Council of the Faculty. Necessary changes to the study course content are proposed by the academic staff, as well as, by management. Collaboration between academic staff happens also by providing common study courses (involving staff from two faculties) and by jointly supervising student thesis.

### **Conclusions by specifying the strengths and weaknesses**

The qualification of the academic staff involved in the implementation of the study programme fully corresponds to the conditions of implementation of the study programme and the requirements of regulatory enactments, as well as ensures the achievement of aims and learning outcomes of the study programme and respective study courses.

The academic staff members of the study program, both at the national and international level, are engaged in scientific research in the field of quality management and conformity assessment, and the acquired information and experience are integrated into the study process

Strengths:

1. Very good cooperation among academic staff of the faculties involved in this doctoral program.
2. Very good publication record of the academic staff.

Weaknesses:

There are no weaknesses identified.

## **5. Assessment of the Compliance of the Study Programme "Forest Science"**

### **Requirements**

1. The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure by which state-recognised documents of higher education are issued.

**Assessment of compliance:** Fully compliant

Annex Doktora\_diploms\_Mežzinātne\_LV.pdf

2. Documents confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued.

**Assessment of compliance:** Fully compliant

Point 1.8. in Annex

LLU apliecinājums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets confirms that students of the doctoral programme "Forest Science" will have the possibility to continue education in the doctoral programme "Agriculture" of LLU. Students will have the possibility to continue studies in the programme of the same study field.

3. Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

**Assessment of compliance:** Fully compliant

Point Nb.3 in annex

LLU apliecinājums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc

LLU confirms that LLU will re-pay back money to students in case they do not wish to continue studies in other HEI in case that programme is closed.

4. The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

**Assessment of compliance:** Fully compliant

Point Nb.8 in annex

LLU apliecinājums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc

5. The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language.

**Assessment of compliance:** Fully compliant

Point Nb.7 and point Nb.9 in annex

LLU apliecinājums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc confirm that the language skill qualification of academic staff is appropriate.

6. At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts.

**Assessment of compliance:** Fully compliant

Point Nb.6 in annex

LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc provides a list of professors, who are Latvian Science council experts with PhD

- 7 7. The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Point Nb.7 in Annex

LLU apliecinajums\_Lauksaimniecibas\_mezsaimniecibas\_virzienam\_precizets.edoc confirms such compliance.

- 8 8. The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

**Assessment of compliance:** Fully compliant

Annex Study\_Agreement\_LV\_EN\_2021.pdf

complies with requirements of Cabinet of Ministers No. 70

- 9 9. The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Partially compliant

Study courses are available in all study process languages (Annexes about study course descriptions), most study courses have not indicated prior knowledge needed for successfully completing study course. Not all books mentioned in the course descriptions as compulsory are available in the library

- 10 10. The study programme complies with the valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided that the completion of the study programme leads to a professional qualification.

**Assessment of compliance:** Not relevant

- 11 11. Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

Annex dokt\_stud\_progr\_Mezzinatne\_AIP atzinums.edoc

provides conformation for this point

- 12 12. The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard.

**Assessment of compliance:** Not relevant

- 13 13. The joint study programmes comply with the requirements prescribed in Section 55.1, Paragraphs one, two, and seven of the Law on Institutions of Higher Education (if applicable).

**Assessment of compliance:** Not relevant

- 14 14. Each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions (if they have worked for a shorter period of time, the number of publications shall be in proportion to the work period), or artistic creation achievements (for instance, exhibitions, films, theatre performances, and concert activity), or a five-year practical work experience (except for the experience in the implementation of the study programme) in accordance with the Law on Institutions of Higher Education.

**Assessment of compliance:** Fully compliant

All academic staff have publications during the last 6 years. According to Annex No.6 and Macibspeku\_CV\_latviski.rar

- 15 R5 - Overall rating

**Assessment of compliance:** Partially compliant

Previous knowledge in study course descriptions should be indicated. All other criteria are fully compliant.

**Requirements (R6-R8)**

- 1 R6 - The compliance of the study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of the learning outcomes.

**Assessment of compliance:** Fully compliant

SAR, distance excursion and information obtained during interviews confirms compliance with necessary requirements for the study process implementation. The study programme has adequate provisions and support therefore able to guarantee the achievement of the main tasks, ensure the training of new scientists and their abilities to run their own independent research in Forest science. Study programmes also indicate the strong possibility to ensure a high-quality study process in the future.

- 2 R7 - The compliance of the qualification of the academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments.

**Assessment of compliance:** Fully compliant

LLU has indicated that all academic staff members comply with necessary state legislation to provide a study process in this study programme.

- 3 R8 - The study programme leading to the master or doctoral degree is based on the advances and findings in the relevant field of science or artistic creation.

**Assessment of compliance:** Fully compliant

The study programme cultivates and accumulates knowledge in Forestry, scientific research conducted is relevant to the study program, to study field.

**Conclusions by specifying the strengths and weaknesses**

The doctoral study programme "Forest Science" complies with almost all related requirements and it is providing high-quality studies in forestry.

## Evaluation of the study programme "Forest Science"

Evaluation of the study programme:

Excellent

## 6. Recommendations for the Study Programme "Forest Science"

### Short-term recommendations

Revise and add the previous knowledge section in the study course descriptions, revise the list of compulsory reading to ensure that books are available in the university library.

### Long-term recommendations

Include in the study programme specific training on establishing spin-offs and connecting business with science.

## III. Assessment of the Requirements for the Study Field and the Relevant Study Programmes

### III. Assessment of the Requirements for the Study Field and the Relevant Study Programmes

#### Assessment of the Requirements for the Study Field

Requirements	Requirement Evaluation		Comment
R1 - Pursuant to Section 5, Paragraph 21 of the Law on Institutions of Higher Education, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study direction whilst implementing their internal quality assurance systems:		Partially compliant	LLU has developed an internal quality assurance system to ensure improvement of the study field. There is partial compliance regarding the assurance of the quality of higher education.
R2 - The cooperation with different organisations from Latvia and abroad implemented within the study direction ensures the achievement of the aims of the study direction.	Fully compliant		SAR 5.1. section. Strong cooperation ongoing on various levels - employers, professional organizations, research institutions and expert councils. All also confirmed during interviews. International mobility of teaching staff and students can be improved and used more.

<b>Requirements</b>	<b>Requirement Evaluation</b>		<b>Comment</b>
R3 - Compliance of scientific research and artistic creation with the development level thereof (if applicable).	Fully compliant		Research activities are clearly relevant and well linked with studies. SAR 4.1. section.
R4 - Elimination of the shortcomings and deficiencies identified during the previous assessment of the study direction, if it has been conducted, or the implementation of the provided recommendations.	Fully compliant		Prior recommendations have been taken into account. SAR 6.1 section and Annex 14.

### **Assessment of the Requirements for the Relevant Study Programmes of the Study Field**

<b>No.</b>	<b>Study programme</b>	<b>R5</b>	<b>R6</b>	<b>R7</b>	<b>R8</b>	<b>Evaluation of the study programme (excellent, good, average, poor)</b>
1	Agriculture (42621)	Partially compliant	Fully compliant	Fully compliant	Not relevant	Good
2	Forest Engineering (42623)	Partially compliant	Fully compliant	Fully compliant	Not relevant	Excellent
3	Sustainable Agriculture (43621)	Partially compliant	Fully compliant	Fully compliant	Not relevant	Good
4	Sustainable forestry (43623)	Partially compliant	Fully compliant	Fully compliant	Not relevant	Good
5	Forest Science (43623)	Partially compliant	Fully compliant	Fully compliant	Not relevant	Good
6	Agriculture (45621)	Partially compliant	Fully compliant	Fully compliant	Fully compliant	Good
7	Forest Science (45623)	Partially compliant	Fully compliant	Fully compliant	Fully compliant	Good

<b>No.</b>	<b>Study programme</b>	<b>R5</b>	<b>R6</b>	<b>R7</b>	<b>R8</b>	<b>Evaluation of the study programme (excellent, good, average, poor)</b>
8	Food Hygiene (47640)	Partially compliant	Fully compliant	Fully compliant	Fully compliant	Good
9	Agriculture (51621)	Partially compliant	Fully compliant	Fully compliant	Fully compliant	Excellent
10	Forest Science (51623)	Partially compliant	Fully compliant	Fully compliant	Fully compliant	Excellent

### **The Dissenting Opinions of the Experts**

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