

Expert group joint opinion

Evaluation Procedure: Assessment of Study Field

Higher Education Institution: Latvijas Lauksaimniecības universitāte

Study field: Manufacture and Processing

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Summary Assessment of the Study Field

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The aim of the study field is clearly defined, it is related to the offer of high-quality studies in the field of food, woodworking and design, and the relevant study programmes are in line with the needs of society and the national economy, smart specialisation, and this is also linked to the forecasts of Latvia and the European Union for these sectors in the labour market. The management of study programmes contributes to the development of the content of studies. The system and arrangements for student admissions are clear and understandable, with admissions rules approved in the Senate each year in October, which are then published on the LLU's home page.

The funding allocated to the field of study is satisfactory and project resources are used to improve infrastructure. Students have access to academic, career development and psychological support. In some programmes, the number of students is critically low, and the level of mobility is not very high.

Research is carried out effectively, the results are presented in publications, reported at conferences and integrated into the study process. Although internationalisation has increased, student participation in scientific research remains mediocre.

Incorporated partners in the study field are very varied, the study programmes are carried out in very close cooperation with the industry.

The management of the study field ensures internal communication within the framework of the study programme, the results of the programmes are formulated in a student-oriented approach in accordance with generally accepted good practice, integrated into different teaching and evaluation methods of the course and proportional to the results of the course. However, improvements are desirable in the programme's internal quality management and assurance system. Despite this, employers' satisfaction is high, and students' view of studies is good. The structure and content of all study programmes in this field are appropriate and consistent with academic and professional standards.

The implementation of study programmes involves highly qualified academic staff, developing active scientific and research activities, integrating professional experience and cooperating with industry.

1. Management of the Study Field

Analysis

1.1. The defined objective of the study field: high-quality studies which ensure the preparation of internationally competitive specialists in food, woodworking and design are clearly defined and achievable. The study field "Manufacture and Processing" is one of the 14 study fields currently carried out by the LLU. There is a clear path for the management of the study field. The study field is executed and systematically updated following both national and international strategic directions and overall plans governing the policy and development of the study field "Manufacture and Processing". It is sufficiently presented and detailed for the involved 8 programmes. The study field covers the needs of the Latvian economy and society covering the wide range of learning topics desirable for domestic purposes as means of education, training and deployment of the new human resources.

1.2. The LLU studies are implemented through an efficiently established system of control and comprehensive involvement of all players in the process. The international standard of excellence

entitled “Investors in Excellence” serves as a tool to accomplish the above-mentioned goals. There is a precisely specified “pyramid” of management from the University bodies in the form of various Councils but also persons in charge like Rector and his closest associates in vice-Rectors positions. The quality management system is based on the fundamental principles and requirements of the international standard of excellence “Investors in Excellence”. Moreover, the study has been implemented in 3 respected Faculties which are: the Faculty of Engineering, Faculty of Forestry and Faculty of Food Technology. Each mentioned Institution is covering and managing its own Study programmes under the same Study Field. There is a wide area of work and responsibility for each of the Academic staff members and is mostly well carried out, also participating in the implementation of the Development Plan (2020-2024). Nevertheless, there are some minor shortcomings that need to be pointed out. Namely, the real path for the collaboration between the Departments and the future employers regarding students is not sufficiently detailed but just mentioned as an option.

Each teacher is responsible for the quality of content and realisation of study courses, research activities and professional development. Academic staff are offered the opportunity to develop their professional skills (English courses). Students' duties and rights are laid down in study contracts, an opportunity to express their experience in the course evaluation. Ensuring feedback on employers' opinions is episodic, closer cooperation is with students and graduates.

The expert team observed that academic staff were enthusiastic and seemed personally very involved in the implementation of the study field, creating a pleasant and friendly learning environment. Unfortunately, there is no specific cooperation plan with employers, ensuring annual feedback.

1.3. There is a clear system for the admission of the students. There are clear admissions criteria and information is available within the LLU web page thus well-formulated (“Admission Regulations ...”). The contacts are clearly stated on the mentioned web page for any required information which might not be provided in the basic rules for admission. It is effective. Furthermore, there is a responsible person appointed for the recognition of the skills not included in the formal education. The LLU defines the Director of the Study programme and teaching commission of the particular Faculty to put into practice this important task. However, wider inclusion of senior students should be considered to assist the mentioned person (director) and body (teaching commission) in this significant task. The recognition of knowledge, skills and competences acquired outside formal education or professional experience, in accordance with the by-law, is performed by the director of the study programme committee of the faculty. In addition to full and part-time masters and students in basic studies, the procedures for the commencement of studies at the later stages of study shall be specified, the preparation of documents and the meeting of the teaching commission of the faculty is initiated by the director.

1.4. The plagiarism issues are seriously taken into account by the LLU. Mechanisms to prevent plagiarism these days are versatile and the LLU has a specific Code of Ethics coupled with other relevant mechanisms to prevent/stop this activity. An effective commercial tool is provided on the web and is recognizing the unwanted copied text placed within the thesis works. Also, a Rector regulation on Academic Integrity Violations in Student`s Thesis/Doctoral Thesis, stipulates that a computerized plagiarism control system allows a maximum of 10% identical text to other/other works available in the system or the Internet. Beyond the specified criterion, further procedures for the evaluation of works, which vary depending on the level of study, are described. The automatic student works plagiarism testing system is integrated into the e-learning platform (Moodle system), by automatically verifying any work submitted by students, including documents.

1.5. The information about all important data considering the Study Field is comprehensive and with many details for the students who are enrolling in the Latvian language. The information published on the homepage of the LLU regarding the field of the studies in question corresponds to the information available in the official registers. The gap exists when it goes to the information in English. The information on programmes carried out in the Latvian language is not translated into

English. In addition, there is inconsistency when comparing information of the courses in English compared with those in the Latvian language since the programmes in the domestic language have a significantly higher amount of information. The information in Latvian and English is different, it is not synchronous.

Conclusions. Strengths and weaknesses

1. The study field is executed and systematically updated following both national and international strategic directions and overall plans governing the policy and development of the study field "Manufacture and Processing". The defined objectives of the course correspond to the main areas of strategic development of the LLU, which play an important role in the development of the national economy and the needs of society. The stated objectives are achievable.
2. The established management structure, the basic components of which are interlinked and functioning according to the "Investors in Excellence" standard, is effective. Academic staff have sufficient academic freedom and at the same time available support to raise professional experience.
3. There is a relevant system for the admission of the students with clear admissions criteria and information is available within the LLU web page thus well-formulated. The contacts are clearly stated on the mentioned web page for any required information which might not be provided in the basic rules for admission. The recognition procedures of knowledge, skills and competencies acquired outside formal education or professional experience, in accordance with the by-law, shall be performed by the director of the study programme and the teaching commission of the faculty.. The system is efficient and logical.
4. In order to prevent violations of academic ethics, the LLU has developed the Code of Ethics, the Academic Integrity Regulation, and also a Rector regulation on Academic Integrity Violations in Student`s Thesis/Doctoral Thesis. The online learning platform e-system (Moodle) has an integrated automatic plagiarism control system. The system works automatically and effectively, all students have been informed about the procedures and potential adverse effects of testing.
5. The information published on the homepage of the LLU regarding the field of the studies in question corresponds to the information available in the official registers. There is inconsistency when comparing information of the courses in English compared with those in the Latvian language since the programmes in the domestic language have a significantly higher amount of information.

Strengths:

1. Clear vision and strategy for the Study Field. The Study Field is effectively managed.
2. The Study Field is in compliance with the National strategy of the high institutions.
3. Clear overall vision and strategy in study programmes.
4. The high reputation of the LLU, even abroad and not just in Latvia.
5. The admission for the students is clear and visible within the Institutions web pages.
6. Plagiarism issues are strongly considered with evident mechanisms to avoid them.

Weaknesses:

1. Lack of a specific plan tied to employers.
2. There is a difference in information for the programmes enrolled in Latvian and English languages. The programmes in the English language are with basic information only.

2. Efficiency of the Internal Quality Assurance System

Analysis

2.1. The LLU sets out a Quality Policy and a Framework designed as a model of excellence and, at the same time, a roadmap for excellence to meet each need and expectation. The quality management policy of the LLU is aimed at ensuring modern quality development and excellence-oriented studies and research work, covering the entire Baltic region, as well as extending its scope beyond the Baltic States in the future. In order to implement quality policy, the LLU develops its human resources and university intellectual capacity, maintains a responsible financial management policy and continuously works on the development of the University Management System, the study process and research work.

The operational planning, organisation management and performance management system of the LLU shall be based on the conditions arising from the “organisation hierarchy” and the “document hierarchy” and shall, as a consequence, consist of interlinked subsystems, the operational planning and organisation management system and the Performance Management System. The core of the operational planning system in the LLU is composed of the organisation's development strategy (priorities and objectives). Organisation management includes the definition, implementation and change management of processes – actions and sub-actions, their sequence and performers, etc. Both operational planning and its management are based on the organisational structure of the LLU, defining what the sequential actions should be, their sub-actions, their performers, the required resources, the type of execution, the deadlines, the interplay, which, in general, constitutes a comprehensive process structure that determines how the organizational units work and interact. The management system for the performance of the work of the scientific institution shall be based on the use of the processes already developed in practice, control, analysis and motivation mechanisms, i.e. the execution of works is organised in accordance with the processes already developed and described, taking into account the delegation of rights and obligations to the persons responsible for the operation of the process and the results to be achieved.

2.2. The procedures for developing and reviewing study programmes are very well defined, logical and effective. The Senate approved the arrangements for developing, approving and changing study programmes, while the Rector has approved the procedures for developing study courses/practice programmes. The established rules govern the procedure for the development and approval of a new study programme, the principles to be taken into account when drawing up a new study programme and the evaluation of study programmes in the case of new study programmes, the content of the programme and the effectiveness of the implementation. Certain differentiated requirements for applying for a course/practice, depending on whether the course is a compulsory or free course, the form of the application is strictly regulated.

It is understood that the review of study programmes and the application of new courses is a time-consuming and complicated process, and therefore the motivation system for the academic staff of the LLU is to be welcomed - the calculation of salary takes into account the development of new study courses.

However, it should be noted that procedures are too complicated, so it is not always possible to implement in real life what is written in the documents. For example, although the procedures for updating the descriptions of study courses are clear, the results obtained are not satisfactory. More simple procedures may be needed.

2.3. The number of students is analysed in annual evaluations (available at LLU webpage), a more detailed analysis is included in the analysis of each study programme. The indicators are analysed by describing the dynamics of the number of students enrolled in the study years, the dynamics of

the number of graduates, the drop-out of students, including the reasons. In addition, information regarding the breakdown of the number of students is compiled, depending on the source of funding (budget, private financing) and students from foreign countries. An analysis of the dynamics of the number of students is taken into account in order to improve the content of study programmes, the need for modernisation, the use of research grants or the support of patrons. Increasing the number of students is believed to be possible by offering studies in English.

2.4. Overall 10 (ten) ESG standards are integrated into the internal quality assurance of the study field. While it is noted that the implementation of all standards focuses on the importance of the implementation of student-centred learning, the implementation of a material base appropriate to the scientific level, the enhancement of qualifications for academic staff and the implementation of research. According to the information provided by the SAR and as observed during the expert visit, monitoring of the implementation of such principles - "Survey and regular inspection of programmes" (SDG 1.9) could be problematic, as surveys are voluntary and frequency with a 2-year period is too extensive. Also, the principle of "Study resources and support for students" (SDG 1.6) is less easily addressed, due to low state funding support (low scholarships).

Conclusions. Strengths and weaknesses

The quality management policy of the LLU is aimed at ensuring modern quality development and excellence-oriented studies and research work. It sets out differentiated requirements and sets out regulated forms for the development of study courses. Understanding that the review of courses/programs and the development of new courses are a time-consuming and complex process, the motivation system for the academic staff of the LLU is highly valued. Ten (10) ESG standards have been successfully implemented, with an increased focus on pedagogical methods, the provision of a material base and the enhancement of qualifications.

Strengths

1. High involvement of teaching staff in improving the programmes, facilitated by the developed motivation system.

Weaknesses

1. The algorithms used so far in assessing the effects of the number of students have not been effective.
2. The misconception that offering study courses in English automatically provides a higher number of students. There is no justification (research) that potential students complain about the insufficient number of studies in English.

3. Resources and Provision of the Study Field

Analysis

3.1. According to the information provided in the self-assessment report, LLU has developed a financing system in accordance with state legislation and internal regulations. The budget with the revenue and expenditure parts is approved by the Senate of the LLU. Deans of faculties participate in the budgeting process, and faculties can operatively review certain expenditure items. The general budget in 2020 was supplemented by the following sections, among others: science base funding, performance funding, various science projects, ERASMUS+, etc. According to the self-assessment report, the available funding, in general, allows for the implementation of the study field and the respective study programmes, including the provision and improvement of material and technical equipment. As the study costs per student are higher than tuition fees (self-assessment

report, page 96), it should also be noted that the number of students paying for their studies makes only a fraction of the overall number of students. Therefore it can be concluded that the study field financially is self-sufficient.

3.2. During the visit, it could be seen that the faculties, where the study field is being implemented, have the necessary infrastructure and a wide range of technical provisions - laboratories, equipment, etc. Many infrastructure and provision units acquired, successfully realized EU project funding. The situation is also objectively presented in the self-assessment report.

The situation is especially positive at the Faculty of Food Technology, where the study process takes place in a modern building, equipped with laboratories and pilot plants for research on various topics, and equipment for the production and testing of various food products, both for the processing and analytical purposes. Every food group even has a laboratory of its own. LLU has also microbiology labs for work with bacterial cultures with up to date equipment, and sterile work areas. The Department of Woodworking of Forest Faculty has a wide range of tools and machines for carrying out practical study courses or prototyping and equipment for testing various material parameters. As a result of close cooperation between the Forest Faculty and the Forest and Wood Products Research and Development Institute (MeKA), a highly developed technical provision is available for the study process and research. Near completion is a new laboratory building that will significantly improve the infrastructure for the study process and research.

At the Faculty of Engineering, where the study programme Design and Crafts is being implemented, suitable infrastructure and provision are available for the study process and research. Some premises of faculty building are morally outdated, but this does not have a significant negative impact on the study process and research, as the necessary equipment is available and fully functional. The faculty has its own library, however, it offers mainly pedagogical printed materials from the previous stage of development of the faculty.

LLU has the necessary IT equipment and licensed software for the study field implementation, but it is recommended to find the solution for students to use software by the remote study process (that software that does not have a students' version or those that do not have full functionality in the student version). Research is also supported by external institutions as a result of cooperation with the LLU, for example, between the Forest Faculty and the Institute of Wood Chemistry. Students are not always well informed about the possibilities of using equipment located in other faculties. LLU has a well-stocked library with access to local and main international databases, but it is recommended to improve the efficiency of using these opportunities by encouraging students to use them more intensively during the study process. LLU has developed a good infrastructure for the remote study process: an e-learning environment on the Moodle platform, IT equipment and peripherals, the necessary IT support, as well as training courses in the use of Moodle.

3.3. According to the information provided in the self-assessment report, LLU has developed a procedure for the selection of teaching staff and the election of academic staff. Vacancy statements are published on the LLU website and/or in the state official newspaper "Latvijas Vēstnesis". The procedure for the selection of teaching staff and election of academic staff is specified in internal regulatory documents in accordance with national legislation. Due to the uniqueness of study programmes, the sustainability of teaching staff availability is negatively affected by the small number of students in master's and PhD study programmes, especially in the study programmes of Forest Faculty. It is also due to the high value of study programme students and alumni in a labor market, that students are more inclined to work in the enterprise rather than stay and pursue an academic career. According to the self-assessment report, currently, the teaching staff is sufficient to provide the study field. In recent years, several new PhD students have been involved in teaching in the study field. A: PhD students are also heavily employed as reviewers for student graduation works but are not receiving pay for that. Although allowed to review works, they are very rarely

offered the opportunity to supervise bachelor's level works, which technically could be allowed as they already have a master's degree. LLU has a system that motivates the academic staff to carry out research work and publications, which is linked to the salary system. In many cases, research projects are carried out (incl. according to industry needs) and teaching staff are actively involved in them. Although there is a 6-month academic break for research work outside the university, this option is used minimally (only one teacher). At LLU available training courses for improving pedagogical and didactic skills, but this opportunity is available only to elected academic staff, but not to PhD students involved in teaching (as it was clarified during the visit), which would be useful. A course for improving English is also available and is used effectively - compared to the situation during the previous accreditation, the English skills of the teaching staff have improved. Almost 40 % of the teaching staff have participated in outgoing mobility activities during the period, which can be further improved. Incoming mobility level is low. It is recommended to develop an action plan and incentives to increase incoming mobility. Possibly increasing contacts with Samarkand Institute of Veterinary Medicine, in regards to joining the study programme would be a good stepping stone. It should also be noted that mobility activities have been negatively affected by the Covid-19 pandemic in recent years.

3.4. According to the information provided in the self-assessment report, LLU students have access to informative support (news, documents, etc. published on the LLU website, intranet, e-learning platform), career support (thematic events, etc.), psychological support (LLU Students self-government mentor program), etc. LLU Student self-government and students' organizations involve students in leisure and entertainment activities. As clarified during the visit, the LLU Student self-government also cooperates with foreign students, providing them with the necessary support and information. In bachelor studies, curators (tutors) are attached to the students for supporting activities. PhD students admitted in an interview that they feel a lot of support from their supervisors. In some cases, the information about different opportunities does not reach the students, it may be necessary to improve the information channels.

It should also be noted that LLU has started working on creating a business incubator, which is created with great support from students and alumni of LLU as well. During the interviews, it was mentioned that successful students also have opportunities to participate there.

Conclusions. Strengths and weaknesses

The resources and provision for the study field are adequate. The available funding, in general, allows the implementation of the study field and the respective study programmes. Appropriate infrastructure and a well-provided environment for the study process and research are available at the faculties involved in the implementation of the study field. LLU has developed a good infrastructure and system for the remote study process.

There is a system for the selection of teaching staff and the election of academic staff. Currently, the teaching staff is sufficient for the implementation of the study field, but it is necessary to consider sustainability in unique specific study courses. This problem could be addressed by including PhD students in teaching and supervising more, offering them more pedagogical experience. LLU has a system that motivates the academic staff to carry out research work and publications. Outgoing mobility activities occur and can be strengthened, but the incoming mobility level is low. LLU students have access to various support and information.

Strengths:

1. Highly developed material and technical provision for the study process and research.
2. Successful cooperation with external institutes, which provides an opportunity to use the

equipment for the study process and research.

3. Motivation system for teaching staff for research and publications A: and support mechanism for PhD students to prepare publications and participate in conferences.

4. Efficient remote studying infrastructure.

5. Well-stocked library with access to various databases.

Weaknesses:

1. The sustainability of teaching staff in specific study courses is endangered.

2. During remote studying, students have difficulty accessing licensed software and/or full functionality of them.

3. Low mobility rates, especially for incoming mobility.

4. PhD students could be more fully included in the academic processes of supervising study works.

4. Scientific Research and Artistic Creation

Analysis

4.1. In the study field, scientific research and artistic creativity are carried out by academic staff and students from three faculties: the Faculty of Food Technology, the Forest Faculty and the Faculty of Engineering. Students from 4 undergraduate study programmes, 2 master study programmes and 2 doctoral study programmes are participating in the implementation of research projects, developing bachelor's, master's thesis and doctoral thesis. The artistic activities and thematic exhibitions are reported by the lecturers and students of the professional bachelor's study programme "Design and Crafts".

The main research topics could be grouped into two categories of multidisciplinary research topics: wood research topics and food research topics. Both research directions are defined in the LLU strategy and are relevant to the study field and relevant to the industry. The wood processing sector brings a share of 20% of the country's total exports and integrated food production, including the processing of by-products and residues into value-added products, is one of the key challenges of the European Green Deal.

The doctoral study programmes "Food Science" and "Wood Materials and Technology" are unique in this field in Latvia and the topics of the developed doctoral theses correspond to the topics and sub-themes defined in the priority research field Engineering of LLU Strategy.

4.2. Students at all levels participate in the implementation of research projects, developing bachelor's, master's thesis and doctoral thesis. The competencies acquired in project development are the basis for the offered topics of bachelor's, master's thesis and doctoral thesis. Several projects developed in the frame of the state research programmes or with the support of Forest and Wood Products Research Institute allowed the development of doctoral thesis, master's thesis, and diploma projects in the study field or give the lecturers opportunities to improve the curricula of study courses.

Several periodical events are organized by the academic staff of the faculties where students have the opportunity to present reports regarding the research work done and developed during the study course(s), events such as the international scientific conference "Nutrition and health", the Baltic Food Science and Technology Conference, the annual international food exhibition "Riga FOOD", the international scientific conference "Rural Environment, Education, Personality", the international scientific conference "Science and Practice for Forest Industry Development", the "Forest Days" event, the annual event "European Researchers' Night", the student scientific conferences in Latvian, the international student scientific conference "Students on their way to science" etc.

4.3. According to the self-assessment report, academic staff:

- participates in various international organizations as members or experts;
- are included in the realization of different projects such as FP7, Horizon2020, COST etc.;
- are involved in research and science popularization in the international area and national scale;
- are members in the editorial boards of international scientific journals;
- are experts in the evaluation of national and international projects.

Also, LLU has a number of 50 cooperation agreements with different institutions from Latvia or/and abroad (higher education institutions/ colleges, employers, employers' organisations, municipalities, non-governmental organisations, scientific institutes, etc.) within the study field.

The list of the cooperation agreement is in the annexes of the self-assessment report, the file named: "Annex 2. List of cooperation agreements _LLU.pdf"

We do not have evidence of practical implementation, except for cooperation with Samarkand Institute of Veterinary Medicine, of which we were informed by SAR and also meetings with the management and graduate representatives.

4.4. According to the self-assessment report, during the reporting period, the numbers of achievements in scientific research and/or artistic creation are as follows: 1314 scientific publications from which 704 works were published in prestigious reviews in the field and indexes in SCOPUS and/or WoS databases, 80 creative art activities, 2 patents applications and 19 patents, participation in at least 15 national and international research projects. The research activities of the academic staff are related to the study courses taught, scientific interests and current events in the field of food and wood materials, and artistic creativity in the field of design. LLU remunerates the scientific performance following an evaluation of the performance of the researchers and leading researchers. The number of academic staff publications seems to be double the minimum required by Latvian regulations.

4.5. Students of the study programmes of all levels are involved in research as an integral part of the study process.

In undergraduate study programmes, the involvement in the scientific research and/or artistic creation is different for each study programme analysed (academic bachelor's, professional bachelor's or 2nd level professional higher education study programmes). For the academic bachelor's study programme "Food Quality and Innovations", the development of the thesis is the result of a project (contract). Students have to include in the bachelor's thesis a research part which consists of the presentation of the product development organization, chosen methods of analysis, a study of the properties, a study of the shelf-life of products, etc. For the professional bachelor's study programme "Wood Processing", the practical implementation of the research is supported by the Forest and Wood Processing Research and Development Institute. Students are invited to choose from ERDF projects, projects implemented by the Forest and Wood Processing Research and Development Institute, contract research agreements with companies or the implementation of projects financed by the European Agricultural Fund for Rural Development.

In Master's study programmes and Doctoral studies, students are involved in research projects financed by:

- LLU (applied research projects, fundamental research projects, doctoral grants);
- the Forest and Wood Processing Research and Development Institute;
- the Forest Sector Competence Centre Ltd.;
- the National Research Programme;
- the European Agricultural Fund for Rural Development;
- the European Maritime and Fisheries Fund;
- the Latvian Food Competence Centre;

- the 7th European Framework Programme.

The involvement of students in research is confirmed by the status of their co-authors in scientific publications.

4.6. Essential for pandemic activities, LLU uses microblogging platforms, various social networks, photo and video sharing applications, YouTube, etc. to address applicants and inform students. Also, the Moodle platform is used for the organization of e-studies. LLU Information System has a unified database of students and lecturers which allows the digitization of several processes and document processing (certificates, orders, study agreements, amendments, preparation of diplomas, input of grades – learning outcomes, collection of statistical data). The Information System is integrated with e-environment and personal account, which provides students with information on progress, finances, obtained CP, application for free choice courses, assessment of lecturers, uploading the final theses, the account is aligned with the plagiarism tool for evaluation of the final thesis. LLU Fundamental Library could be used by lecturers to see the timetable, lists of students, review final theses, etc.

Conclusions. Strengths and weaknesses

The directions of scientific research in the study field, which are Wood research and Food research, are defined in the LLU strategy and are relevant to the study field and relevant to the industry. Both doctoral study programmes are unique in this field in Latvia and the topics of the developed doctoral theses correspond to the topics defined in the priority research field Engineering of LLU Strategy.

The outcomes of the scientific research and/or artistic creation are integrated into the study process in the study programmes of all levels.

In the study field, teaching staff reported a large number of achievements in scientific research and/or artistic creation. LLU has developed mechanisms for the involvement and remunerations of the scientific performance of the teaching staff.

The students of all levels are involved in scientific research and/or artistic creation as an integral part of the study process. The mechanisms used are well-functioning and efficient. The involvement is confirmed by the status of the student's co-authorship in scientific publications.

During the reported period and the pandemic environment, LLU used various forms of innovation in marketing activities, in the LLU processes and also in product development courses for the students. The Moodle platform, the LLU Information System and personal accounts are efficient and used by entire academic staff and students.

Strengths

1. LLU possesses an efficient mechanism to motivate Academic staff to conduct research and has a support system to sustain the results of research;
2. LLU supports PhD student research and provides them with financing for publishing and conference attendance necessities. All the PhD students are involved in different collaborative projects;
3. Students acknowledge the high number of possibilities offered by the LLU and the support provided with their cooperation and research initiatives.

Weaknesses

None

5. Cooperation and Internationalisation

Analysis

5.1. Since 2015, LLU has developed an Internationalisation Plan for establishing priorities and cooperation with similar institutions from the EU and other countries. LLU signed several cooperation agreements (50) within the study field with higher education institutions/ colleges, employers, employers' organisations, municipalities, non-governmental organisations, scientific institutes, etc. from Latvia and 14 other countries (Russia, Kazakhstan, Uzbekistan, Tajikistan, Sweden, Poland, Belorussia, Italy, Georgia, Lithuania, Netherland, Turkey, Armenia, Moldova). Cooperation partners are selected according to the profile of the study field - foodstuffs, wood materials/technologies, design. The cooperation consists of common project participation, development of regulatory documents, teaching courses or their part, organisation of international scientific conferences, external evaluation of the study programmes, their performance and identification of weaknesses, employment of graduates, etc.

Employers are actively involved as experts in the examination of the study programmes, participation in giving lectures, providing resources for the study process, including the development of the final work, review of the final work, recommendation of the topics of the final work, surveys and sponsors in the organisation of scientific conferences.

It should also be noted that employers also provide possibilities for study visits in their production facilities, which are highly acknowledged by students. Unfortunately, the number of such visits has dropped significantly because of Covid-19 restrictions, but as it was revealed during interviews, there are plans on how to make up for that. It was mentioned that more visits than the previous year are planned for the next study year.

5.2. According to the self-assessment report, during the reported period, 5 foreign lecturers and 20 foreign students participated in the study field. Also, 151 students from the analysed study field benefited from outgoing mobility.

To attract foreign students, LLU provides online information on the study programmes offered in English, have the support of different recruitment agents, participate in international education fairs, agent forums and participate in organized events as a member of the Latvian Higher Education Export Association (AIEA). The number of foreign students will increase in the next academic year as a result of the cooperation agreement with the Samarkand Institute of Veterinary Medicine (Uzbekistan), which envisages educating the students of this university in the academic bachelor's programme "Food Quality and Innovations" in English in a form of a joint programme.

To attract foreign professors, LLU participates in the ERASMUS+ mobility programme and also implements the ERDF project "Improvement of LLU academic staff" (2019-2022).

5.3. The provision of traineeships and the organisation thereof respects the LLU Internship Regulations. Several types of internships are regulated: study (didactic), professional (production), and research.

The study (didactic) internship is organised in accordance with the study plan.

For professional (production) internships, in accordance with the study plan, students are allocated based on the concluded tripartite agreement on the implementation of the internship. According to the self-assessment report, 16 cooperation agreements for the provision of internships with different partners or companies are signed. The International Cooperation Centre of the LLU supports the organization of the internship within the framework of the ERASMUS+ programme.

The research internship is organized according to a tripartite agreement that is concluded between the LLU, the student, and the internship provider.

5.4. There is no joint study programme implemented at the moment.

As LLU aims to be one of the competing science universities in Latvia, international cooperation is undoubtedly important. HEI has considered its possible markets and has decided on opening a joint programme with Samarkand University in Uzbekistan, which overlaps with “Food Quality and Innovations”. HEI is still in communication stages with the partner university, but plans for the organization of the programme were made clear during an interview (foreign student attends 2 years in Samarkand University and two years in LLU, defending their thesis in both universities). The joint programme mostly will benefit students from Uzbekistan, letting them improve their bachelor’s level knowledge here, in English providing them with the opportunity to get a joint degree.

Although there is a way to go in the development of this programme, at the moment the process looks promising, as the LLU management plans to send their teaching staff to Samarkand university for mobility and also in order to monitor the study quality there as well.

Conclusions. Strengths and weaknesses

LLU has been very active in creating new cooperation possibilities locally and internationally. It is clear that LLU sees its potential in higher education export, therefore working on expanding its possibilities in Europe and Central Asia. While there are plans to make a joint programme with Samarkand University in Uzbekistan, they are still in communication stages with their partners and the first students in English flow of “Food Quality and Innovations” should be expected only after a year. Unfortunately, Erasmus+ related mobility in the study field is quite low and could be encouraged.

HEI’s cooperation with employers is very strong as the study programmes in this field are of a very practical nature. Employers help with providing excursions in their own facilities, final work topic recommendations, resource provision.

Strengths

1. Most of the topics chosen by the students (final thesis, dissertation, PhD) are proposed through the collaboration mechanisms of LLU with some companies and employers.
2. Employers are involved in activities and offer financial support.

Weaknesses

1. According to the self-assessment report, during the reported period, 5 foreign lecturers and 20 foreign students participated in the study field, which represent a low level of incoming mobility. Also, 151 students from the analysed study direction benefited from outgoing mobility.

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

Analysis

Previous accreditation of the study field was carried out in 2012, describing the list of strengths and weaknesses, making recommendations:

- I. Increase the number of foreign students – while extending the languages for the implementation of individual study programmes (“Food Quality and Innovation” academic study programme and the academic master’s study programme “Food Science” will also be implemented in English), it is not possible to make sure about this, because the offer to study in English does not automatically provide more foreign resources e.g. the number of students. In the course of the survey period, the only study programme acquired by full-time foreign students was the “Food Science” academic

master study programme, however, it should be acknowledged that the information provided in Annex 5 to the description of the study programme is contradictory, in particular, in Table 2 (breakdown of the number of students by course) and Figure 1 (foreign students), not similar information is provided. If it could be considered that the study programme was successful in implementing the expert recommendation, the other programmes have failed to implement it.

II. Increase the proportion of practical training in study programmes: a reference (self-assessment report) to each of the revised study programmes, but clearly to make sure that the volume of practical activities is increased, is not possible. For example, in the case of the “Food Technology” professional bachelor's degree programme, it is noted that in part-time studies (2014/2015), training practices have been reduced by 2 KP (page 73 of the report, in Latvian), and in 2016/2017, although changes in the structure of practices have been introduced to complement training practices with a volume of 2 KP, there is a total reduction, however, since three are three production practices have reduced the volume of 4 KP (page 73 of the report, in Latvian).

III. to increase the use of e-studies: the recommendation has been implemented successfully and its implementation has been promoted by the epidemiological situation in the world.

IV. strengthening the skills of the teaching English language – the recommendation has been implemented successfully, and in some programmes English language skills have been improved for all those who have been teaching. During the study visit, it has been established that such professional development agreements are not offered to guest lecturers.

v. increasing the number of international publications – the indicator for the implementation of the Recommendation is a specific number of publications compared to the previous period, included in the report in excerpts; Annex 5 summarises the “Publications, Patent List and academic staff” for teachers of the “Manufacture and Processing” direction of artistic innovation activities, materials and publications; unfortunately, such maintenance does not provide full information to assess the implementation of the Recommendation.

VI. development of sustainable study programmes in a changing economic situation: implementation has been successfully realized within the ERAF and ESF projects; this should be continued in the improvement of programmes whose sustainability is at risk.

VII. enhance foreign funding: is being implemented by increasing the number of foreign students and by ERAF/ESF funding to modernise the study and research base. The performance of this indicator is also measurable, which would allow an understanding of progress in implementation, but wasn't clearly stated in the report.

VIII. Promoting international cooperation, projects, mobility: successful, closed-up cooperation projects and increasing mobility for academic staff. There is an increase in outgoing mobility, but the incoming mobility level is low.

IX. The age structure of academic personnel, improvements are being implemented gradually and continuously, with a significant increase in the number of young doctors in the “Wood processing” study programme.

x. insufficient study funding that interferes with the recruitment of young doctors, knowing that public funding has not changed, unfortunately, there are no solutions to raise other types of funding to attract young doctors. A solution has been found to improve the technical base but,

unfortunately, other sources of funding are not identified, nor is the issue included in the Study field form and development plan (2020-2024).

Conclusions. Strengths and weaknesses

The previous accreditation resulted in ten (10) recommendations in 2012 related to internationalisation, raising the qualifications of academic staff and enhancing additional funding. The explanations provided by the LLU regarding the implementation of the recommendations partly reflect progress, since the indicators for the implementation of the expert recommendations are not explained quantitatively. Overall, there is a positive trend in the implementation of the recommendations.

Strengths

1. Activities have been introduced to increase the competence of academic staff.
2. The Increased amount of practical work, and increased use of the e-studies platform.
3. Positive progress in outgoing mobility, increasing the number of scientific publications.

Weaknesses

1. There is no plan (case-by-case or random practice) for additional funds. This issue is not covered by the Improvement and Development Plan (2020-2024).
2. Very low incoming mobility.

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 set out a Quality Policy and a Framework designed as a model of excellence, has a clear methodology for evaluation of study results, has methods and principles for gathering feedback from students, employers and alumni. The results of the surveys currently obtained show a shortcoming in their implementation: they are voluntary, not carried out frequently enough, and not in all cases the views of employers, which are very important. Mechanisms for approval of changes to the study fields are mostly functioning properly, but some shortcomings were identified, especially in feedback methodology.

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

Assessment of compliance: Fully compliant

The LLU has set out policies and quality principles within the quality management system which is freely available on the university website (https://www.llu.lv/sites/default/files/2016-10/KV_cepure_4_1.pdf). Also, 10 (ten) ESG standards are integrated into the internal quality management system with an emphasis on pedagogical practices and qualification improvement. Most challenges from LLU are connected with student-centred learning methods while in expert opinion qualitative feedback obtaining system and also sufficient student support mechanisms intervention is more challenging.

- 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: Partially compliant

The internal quality control of the study field is supervised and managed by the directors of the study programs, the director of the study field, deans, board of studies, studies centre are also involved. The academic staff and other personnel of LLU also are involved in the quality management system; the coordinating body of the quality management system is the Administrative Centre of LLU, which is subordinate to the Rector. However, the internal quality system of the study programmes needs to be improved.

- 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

Procedure for the organization of examinations of study courses at the LLU is set out and available publicly. Methods and procedures for evaluation of student results are clearly set, also achievable goals and outcomes were described. The criteria for evaluating performance are also described in the study course descriptions, in addition to which students are presented before each course is started.

- 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

Procedures and regulations (approved by the Senate) to guarantee the qualifications and work quality of academic staff are set incl. Regulations on Academic Positions, Regulation regarding the Calculation of Academic Workload, Motivation System for LLU Academic Staff. Classes for students are scheduled in accordance with the procedures approved by the Rector: classes are scheduled in a centralized way for full-time studies, while for part-time studies it is done by each Faculty. The schedules are publicly available two weeks before the beginning of a semester.

- 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: Partially compliant

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), unfortunately, this survey is optional. Surveys of employers and alumni aren't conducted regularly/annually.

- 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

The annual self-assessment reports, reviewed by the Board of Studies and approved by the Senate, analyse the results of the previous year of study and are used in the development of programmes.

- 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

The group of cooperation partners is wide: governmental institutions, non-governmental and professional organisations, scientific institutes and other universities, employers. For the purpose in order to cooperate in study and research fields, bilateral agreements were conducted with 33 universities abroad.

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

Assessment of compliance: Fully compliant

International scientific conferences were organized regularly, research results are also demonstrated at the annual event "European Researchers' Night", all involved faculties also organise student scientific conferences. International research activities of the academic staff are within COST, FP7, Horizon2020, Nordplus et al. projects. LLU applies various forms of innovation - marketing innovations, organizational innovations, process innovations and product innovations.

- 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: Partially compliant

The shortcomings identified in the previous assessment of the study field have been addressed, but in expert opinion, only partially.

8. Recommendations for the Study Field**Short-term recommendations**

- | |
|---|
| 8.1. To review procedures for conducting student, graduate and employer surveys. The participation of students in course assessment evaluation should be 100% (mandatory participation), while surveys of graduates and employers should be carried out annually. |
| 8.2. Improve the university's website by offering analogue/synchronous information in Latvian and English at the same time. |
| 8.3. The students' involvement in scientific research and teaching (for PhD students) is moderate. Therefore, LLU should find ways of endorsing greater engagement and developing a motivation system for students' involvement in scientific research activities or stimulating students to participate. |
| 8.4. Review the availability of students to licences for specific computer programs during remote studies, such as the possibility of using a Virtual Private Network (VPN). |
| 8.5. Improve the efficiency of using the library with access to databases by encouraging students to use them more intensively during the study process. |
| 8.6. Allow access to pedagogical and didactic, language, etc. skills development courses also for non-elected teaching staff and PhD students involved in teaching. |

Long-term recommendations

8.7. Preparing a detailed study on the potential for developing the field of studies in English, clarifying what study programs and courses would be offered in English to increase the number of students in programs where it is critically low. It may be worth considering creating joint study programmes with other universities. Also, at least a few initiatives should be implemented till the next accreditation.

8.8. Developing a strategic plan with specific actions to increase mobility.

8.9. Review the improvement and development plan for the study field (at the moment in force 2020-2024), specifying the responsible structural unit, deadlines and annually measurable indicators in order to assess the evaluation of the performance programme.

8.10. Diversify information channels for students about different opportunities at the LLU (study courses of other faculties, mobility activities, available support, etc.) so that information reaches students wider.

8.11. Due to the uniqueness of the study programmes and study courses, and the low popularity of higher-level studies (especially in the study programmes of the Forest Faculty), to develop an action plan for the sustainability of the respective teaching staff.

II. "Food Technology" ASSESSMENT

II. "Food Technology" ASSESSMENT

1. Indicators Describing the Study Programme

Analysis

The name of the study programme "Food Technology" is compliant with the obtainable qualification "Food and Beverage Technologist". It should be noted that experts found that in the Self-evaluation report (SAR, p.75) study programme is called the "professional bachelor study programme", although in annexes and further documents it is referred to as "2nd level professional higher education study programme". Experts have noticed that this is a mistake, acknowledged it as a technical error and treated the programme as a second-level professional higher education programme and this error did not affect the expert assessment. As the study programme is heavily practical, its aims are formulated very precisely and can be met with the proposed study plan. Study objectives are compliant with the professional standard for the Food production specialist profession.

Learning outcomes are formulated to consist of two parts - skills obtained by students and competencies of Food and beverage technologists. Both are compliant with the aims of the study programme and the aforementioned professional standard.

Admission requirement of Secondary General Education is sufficient, but as the study programme is heavily based on organic chemistry, it could be advised that yearly/final mark in Natural Sciences or/and chemistry will be taken into account during the admission because it could also help to lessen the possible confusion with "obligatory centralised exam or yearly mark from attestation in chemistry or natural sciences" in future (<https://www.llu.lv/lv/pamatstudijas/partikas-produktu-tehnologija>)

As the 2nd level professional study programme "Food technology" is professional, not academic, State examination and Diploma project are sufficient for obtaining the qualification at the end of studies.

Conclusions by specifying the strengths and weaknesses

The name of the study programme fully reflects its content and is compliant with the qualification “Food and Beverage Technologist” to be obtained. Aims, objectives and outcomes in the particular study programme are interrelated very closely and in accordance with the professional standard for food production specialists.

2nd level professional study programme Food technology has a lot of practical work, which requires a strong understanding of organic chemistry and biological processes. Right now looking at admission requirements, it is possible for students to enrol also without taking centralized exams in biology or chemistry. The formulation about the necessity of this requirement also is quite unclear on the website of LLU.

Strengths

1. Very well formulated aims and study objectives, which are in compliance with the professional standard.

Weaknesses

None

2. The Content of Studies and Implementation Thereof

Analysis

2.1. The regulatory enactments have been introduced during the module course via the Internet to all the members of the accreditation body. Reference literature in diploma works and subject essays have been approved since the last accreditation. Most scientific publications are allowed to be referred to. The content of each study course is relevant and complimentary, and it complies with the aims of the study programme, ensures the achievement of the learning outcomes, and meets the needs of the relevant industry and the scientific trends. The involvement of the students in different scientific grants and industrial projects was well seen. Learning outcomes follow the principles of the EHEA /European Higher Education Area/ and Bologna Process. All the study levels represented in the accreditation process have been very well linked together taking into account both flexibility and continuous enhancement of specific knowledge.

The content of the study programme is developed in accordance with the requirements of the “Food and Beverage Technologist” professional standard, and manufacturing practices are an essential part of the study process. It appears that the title of the study programme, the professional qualifications to be obtained, the objectives, the tasks and the results of the studies are closely and logically interlinked. At first, students undertake general education courses, then professional specialisation courses in the related field. The study programme is designed to enable graduates to work successfully as food and beverage technologists, both in Latvia, in Europe and in the world's top-level food companies, as professionals in the industry, as well as in the ability to manage, plan, organize and control processes. In the knowledge of current developments in this area, the study process also focuses heavily on different certification schemes (e.g. ISO 22000, BRC, etc.).

2.2. The study implementation methods, including the evaluation methods, contribute to the achievement of the aims and learning outcomes of the study courses and the study programme. A

credit point system should be recommended to change for better comparison with other European Universities.

Attendance of the stakeholders in diploma defence commissions was highly represented. Student-centred learning and teaching principles are taken into account. During the laboratory visits and also during the meeting with the teaching staff we definitely recognised a very good attitude which follows the principle - Don't teach, inspire!

Students' knowledge is measured by two indicators, qualitative (10 point scale or Pass/Fail) and quantitative indicator, when assessing the credit points obtained. There are various forms of student control: laboratory work, quizzes, reports, study works, thesis defending, exams allowing to evaluate the knowledge and skills of students in various ways. The specifics of the evaluation belongs to the specifics of the study course, the choice of which is determined by the academic staff involved in the course. The studies conclude with a developed, reviewed and defended diploma project.

The total volume for practices is 23 KP (see SAR Annex "9_annex_study course plan_PPT_full_part time_NG.docx.") correspondingly 14.4% of the programme volume. In accordance with the Regulation of the Cabinet Ministers, No 512/2014 on the second level professional higher education state standard, the practices must be at least 20 KP in the professional higher education programmes.

2.3. The outcomes of the survey conducted among the students, employers, and graduates are used to improve the quality of studies. During the meeting with the students, it also became obvious that study courses have been modified on the basis of student recommendations. During the conducted survey there were also students who had a break in their studies and now continue their education. Would be recommended to apply the system APEL – Accreditation of Prior and Experiential Learning. It is worth introducing also for industrial people who do not yet have the university certificate to use a compilation called STARR /Situation, Task, Action, Result, Reflection/ techniques for their needed portfolio.

2.4. Students in the study programme have the possibility to go to the study mobility (ERASMUS+) at any stage to the 12 countries with which cooperation agreements have been concluded, of which universities in Turkey, Slovenia and Greece are the most popular among students. On average, every year, 3 students take advantage of student mobility opportunities. In practical terms, the mobility of study practices, mainly used by students in later stages of studies, in the years 3 and 4, are also used to an equivalent extent. The number of incoming mobility students varies from 1 student to 6 students per year since 2013, with a total of 19 students from 8 different countries. It should be noted that according to given statistics in the report incoming and outgoing mobility numbers are quite low, while a positive indicator for mobility is the popularity of mobility praxis.

Conclusions by specifying the strengths and weaknesses

The study programme Food Technology is aimed to provide very practical specific education in the field of food processing although not all the food processing areas are covered. Obviously, the programme leaders have taken into account the needs and requirements of the Latvian Food Industry. Nevertheless, the programme is compiled very tightly and the experts have seen that many teachers are involved in teaching at different levels providing the content of study subjects a continuous development.

Unfortunately from this study programme, the experts did not meet the students who had external mobility visits to the European food enterprises.

Strengths

1. This programme consists of different specific subjects that would compile a so-called special module for the industrial people or for exmatriculated students to continue their studies.
2. This programme also enables the faculty to organize many specific courses in different subjects needed for industry or food premises.

Weaknesses

1. The high dropout after the first study year reached even 74%. Therefore the experts would recommend the above-mentioned system APEL to apply because there are potential students amongst them who broke their studies.

3. Resources and Provision of the Study Programme

Analysis

3.1. During the site visit expert team saw that provision of the Study Programme Food Technology is of very good quality. There are versatile Processing/Pilot Plants (2) and Laboratories (7) with contemporary equipment where some are very recently purchased and represent state of the art for scientific equipment. In addition, among equipment, both processing and analytical ones are benchmarked. With this approach supported by trained personnel, the students will be able to obtain abundant knowledge which can be implemented in Industry. In this manner, the learning outcomes are fostered to get high quality for the study process in future.

3.2. Not applicable.

Conclusions by specifying the strengths and weaknesses

The study programmes quality is very good. In general, the above mentioned material and technical provision coupled with excellently equipped facilities enables strategies that ensure a high-quality study process in the future. It is created and designed to prepare specialists to work in the food industry primarily in Latvia but also abroad. Considering very modern facilities coupled with trained personnel such a strategy is enabled. Furthermore, there is a versatile choice of orientation while preparing diploma works (grain, milk, meat, fruits and vegetables and beverages). Such a strategy enables the industrial sector with various specialists and it is a strong feature of the programme.

Strengths

1. Very good quality of the study programme in general.
2. Well-equipped facilities for training of the specialists.

Weaknesses

None

4. Teaching Staff

Analysis

4.1. In the self-assessment report it is indicated that the staff composition has not been significantly changed during the last 5 years. Some of the Associate professors and Assistant professors were promoted thus the number of professors and associate professors increased but actually, the cumulative number of the staff remains the same. In addition, an encouraging aspect is that about 80% of the professors and associate professors are involved in specialized courses of the Study.

4.2. The staff involved in teaching is dedicated to complying with the national legislation on desired education and the practical applications as well. Although the programme is professional bachelor study the number of the Academic staff is large and it is positive. The number of lecturers is also large and balanced with Professors. Such distribution of the positions enables the very good achievement of the aims and outcomes of the Study. The staff is additionally educated in English courses and is well suited for the outcomes of the study.

4.3. Not applicable.

4.4. The teaching staff participated in various projects funded by national and international bodies. With this obtained participation versatile knowledge might be used for the purposes of the study programme. Namely, nine real applications were listed as examples that might serve in the Study programme. Moreover, the participation of the staff in the networking projects such as COST, TEMPUS and INTERREG create additional knowledge in self-education which can then be transferred into the Study programme.

4.5. The mechanism of the mutual collaboration between teaching staff is presented but in too brief form. Actually, only general information of what should be the matter of the collaboration in the future is stated but not implemented thus it is a shortcoming. Nevertheless, the teachers are collaborating when it is required to be a part of the defence commissions for the diploma work. It is a positive aspect.

Conclusions by specifying the strengths and weaknesses

During the last five Academic years, the number of teaching staff has not changed since the study plan was well optimized. The overall mechanism is that Academic staff (Assistant, Associate and Full professors) are involved in lecturing but also in supervising the diploma work while lecturers and assistants are in charge of laboratory work. Such allocation of tasks is well-suited. In addition, this kind of duties allocation is in compliance with national legislation.

Strengths

1. Well balanced teaching staff
2. Teaching Academic Staff is supervising diploma works among many are assistant professors
3. Academic staff in large amount participate in specialized courses of the Study
4. Academic staff additionally educated in many activities

Weaknesses

1. Insufficient collaboration of the teaching staff. Only brief explanatory information is provided.

5. Assessment of the Compliance of the Study Programme "Food Technology"

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

The sample of the diploma provided by the SAR (Annex: 2_professional higher education_diploma_annex_Food and Beverage Technologist.pdf; 2_lim_prof_Partikas un dzerienu tehnologs_dipl_pielikums_LV.pdf is prepared according to regulations on Latvian state-recognized issuance of higher education documents (Cabinet Regulation No. 512 Regulations on

the second level professional higher education standard (26.08.2015) - <https://likumi.lv/ta/id/268761-noteikumi-par-otra-limena-profesionalas-augstakas-izglitiba-valsts-standartu>)

- 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

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx; LLU_apliecinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that if the delivery of the study programme is terminated, the students of the second-level professional higher education programme "Food Technology" are provided with opportunities to enrol in LLU academic bachelor study programme "Food Quality and Innovations".

- 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

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx; LLU_apliecinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that if the second-level professional higher educational programme "Food Technology are discontinued and students do not wish to continue their studies at LLU or Riga Technical University, they are reimbursed their tuition fees.

- 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

LLU confirmation concerning the study field Production and processing (No 2.4.-6.2/44 from 26.08.2021.; point 8) states that the official language proficiency of the teaching staff involved in the implementation of the relevant study programmes complies 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.

- 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

Not applicable

- 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

Not applicable

- 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

Not applicable

- 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

The study agreement (18_Studiju_ligums.pdf and 18_Study_Agreement_LV_EN_2020.pdf) complies with the requirements of the Cabinet Regulation No. 70 of 23.01.2007 "Regulations to be included in the Study Agreement" (<https://m.likumi.lv/doc.php?id=152072>)

- 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

The descriptions of all study courses carried out in the study programme are prepared in the relevant language. The descriptions of study courses include all necessary information, in accordance with the requirements of the Law on Higher Education (56.1, 56.2) - requirements for the commencement of the course, implementation objectives and study results, the content of the course, the calendar plan and information resources, the amount of own-initiative work and the evaluation criteria. However, the content of course descriptions could be improved and more often updated, particularly literature information update should be done.

- 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: Fully compliant

Document confirming that the study programme is in compliance with the professional standard is provided in Annex "7_annex_professional standard_PPT_ENG.docx". The mapping of study results shows that the acquired knowledge, skills and competencies fully meet the requirements of the professional 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

Not applicable

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

Assessment of compliance: Fully compliant

Document confirming that the study programme is in compliance with the higher education standard is provided in the Annex "6_annex_standard_PPT_ENG.docx". The mapping of study results shows that the acquired knowledge, skills and competencies fully meet the requirements of the 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

Not applicable

- 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

Referring to the teaching staff publications (Annex 5. pielikums. Publikāciju, patentu un mākslinieciskās jaunrades saraksts RP.pdf) each member of the teaching staff has at least one relevant and up to date publication or at least 5 years experience of practical work in the field related to the study programme.

- 15 R5 - Overall rating

Assessment of compliance: Fully compliant

The study programme complies with the legal requirements specified in the Law on Higher Education Institutions and other regulatory enactments. But it is recommended to improve the methodology/ praxis of the course description review process.

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

According to the self-assessment report and the findings at the expert visit, the provision (informative, material and technical) of the study programme is very satisfactory. The available funding, in general, allows the implementation of the study programme.

- 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

According to the information provided (Annexes: "Macibspeku_saraksts.xlsx" and "Mācībspēku_CV.rar"), all teaching staff complies with the conditions of the study program implementation and the requirements of regulatory enactments.

- 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

Conclusions by specifying the strengths and weaknesses

Overall the study programme reflects its content and is compliant with the qualification "Food and Beverage Technologist" to be obtained. All structural components (aims, objectives, outcomes) are interrelated and belong to a professional standard. The study programme is strongly praxis based, although not all food processing areas are covered. It should be noted that material and technical provision coupled with excellently equipped facilities offers high-quality studies also with strong cooperation with industry.

Strengths

1. Very well formulated aims and study objectives, which are in compliance with the professional standard.
2. Very good quality of the Study in general.
3. Well-equipped facilities for training of the specialists.
4. Very well compiled the practical study programme for future food technologists.
5. Well balanced teaching staff.
6. Teaching Academic Staff is supervising diploma works among many are assistant professors.
7. Academic staff in large amounts participate in specialized courses of the study programme.
8. Academic staff additionally educated in many activities.

Weaknesses

1. The necessity for centralised examination in chemistry and biology in admission requirements, is unclear, in the context of the requirement of the average mark from attestation during the previous academic year.
2. Insufficient collaboration of the teaching staff.

Evaluation of the study programme "Food Technology"

Evaluation of the study programme:

Good

6. Recommendations for the Study Programme "Food Technology"

Short-term recommendations

If possible to enhance the number of practical classes and industrial visits.

To start with the application of the APEL system, to make a survey about out dropped students during recent years.

Review or clarify the admission rules for students published on the LLU webpage.

Increase internal cooperation between teaching staff.

The renewal and development of all sections of study courses should play a more important role in preventing students from being asked about the appropriateness and implementation of the volume, as referred to in the SAR.

Long-term recommendations

To change the credit point system following Bologna process recommendations.

To introduce the APEL system with the consultancy on STARR techniques for the portfolio.

Prepare a plan (with a list of responsible persons), or a system for preventive work with students, to address problems with study leaving in the early phases.

As the SAR states that study leaving often involves financial reasons, it would be necessary to introduce additional scholarships, other support mechanisms, industry grants to support students.

Students' incoming and outgoing mobility is quite stable but still low, so an appropriate plan would be needed, possibly additional seminars to promote it.

II. "Wood Processing" ASSESSMENT

II. "Wood Processing" ASSESSMENT

1. Indicators Describing the Study Programme

Analysis

The "Wood-processing" professional bachelor's study programme offers full-time (4 years) and part-time (5 years) studies in Latvian at 160 KP (240 ECTS). The degree to be obtained – professional bachelor's degree in woodworking technologies and qualification – Engineer of Wood Processing. The "Wood-processing" higher education study programme complies with the requirements of the fifth qualification standard in the State of higher education, as defined by Regulation No 512 of the Cabinet of Ministers 26.08.2014 (Regulations regarding the higher education standard), as well as the professional standard (profession code 214112, available: <https://registri.visc.gov.lv/profizglitiba/dokumenti/standarti/ps0236.pdf>): by offering training courses to acquire skills, practice and knowledge for the basic tasks of professional activity.

The objectives, tasks and results to be achieved are closely linked to the requirements of the professional standard and comply with the requirements of the national standard of higher education at the specified level. Compliance with objectives and results are ensured within the framework of the internal quality management system.

The admission procedures are sufficiently explained, available on the LLU website. Additional information from LLU graduates and recommendations for further studies after graduation from this study programme is provided.

Conclusions by specifying the strengths and weaknesses

The relationship between the study programme analysed, its name, degrees, professional qualifications, objectives, learning outcomes and admission requirements are interrelated and adequately described.

Strengths:

1. Objectives, aims are closely linked to labour market requirements, comprehensive theoretical and professional knowledge is acquired, and also work skills needed in manufacturing.
2. Admission requirements are clearly stated and freely available.

Weaknesses

None

2. The Content of Studies and Implementation Thereof

Analysis

2.1. The professional study programme in woodworking technologies is a 4-year full-time study programme or a 5-year part-time study programme (160 KP, 240 ECTS). The study plan includes general courses of 20 KP (13 %), specific theoretical background courses of 37 KP (23 %), professional specialisation courses of 65 KP (41 %), practice of 24 KP (15%), the final thesis of 12 KP (8 %) and free elective courses of 6 KP (4 %). The structure of the programme is appropriate and complies with the professional standard. Significant changes to the development of the study programme took place over the period 2016-2018, several courses on a consolidated basis in order to reduce fragmentation, part of the theoretical study courses being included in the professional specialisation course field. Analysis and mapping of course descriptions show that study courses are in line with the objectives of the programme, ensuring that learning outcomes are achieved to prepare students in line with industry needs and scientific trends.

The course descriptions are prepared and sufficiently detailed describing the expected results, the study plan prepared gives an idea of the continuity of the course. The analysis of study courses shows that there is no systematic review of course descriptions, part of the courses were reviewed in 2021, but part was last updated in 2015 (e.g. Metrology and standardisation; Machine elements, etc.) and obligatory literature have not always been updated, for example, in the study course Applied Mechanics suggested obligatory literature is 18 years old.

2.2. The results of studies are assessed by two indicators: in points and credit scores (KP or ECTS) or progress of students are evaluated in the number of credit points and a mark for the course, the student should collect a determined amount of credit points, the evaluation is also used – PASS/FAIL; the score of 4 points is the lowest successful score, with the exception of the lowest successful score of 5 points in case of defending the final thesis. At the beginning of the course, the academic staff presents students with the conditions for completing the course, information on the consultation times is provided. A system of accumulating evaluation is often used, which is highly valued by students. A variety of training methods are used: group works, opportunities offered by remote studies, e-study environment, participating teachers have learned the latest pedagogical and presentation methods to organise a competence-based study process. The methods of implementing studies stem from the specifics of the course, the teacher of each course is a professional in his field and chooses the appropriate implementing method, while the appropriateness of the choice of the method is observed in the performance of studies (evaluation) and in the student surveys. While the number of students is rather low, student-centred learning and teaching are introduced in the study process naturally, also the academic staff is available for students during consultation hours.

2.3. In annual surveys, students give an assessment of study courses, the teacher is evaluated on a number of criteria: professionalism with the course to be learned, establishing and maintaining good contact with students, evaluating objectively, having a reasoned structure and extent, have good orator skills, etc. The survey is conducted by an independent group of LLU Sociological Studies using the LLU information system LLU IS. Results of the academic staff survey are analyzed by the dean of the faculty, the head of the department, the director of the study programme and the course representative himself. The results of the survey are taken into account in academic elections and have been evaluated in determining the need for the development of the study course. In the course of the study process, the views of graduates on the provision of the study process, knowledge

gained, skills and competencies in studies are of valuable importance. 70% of graduate studies have been evaluated very well, ranging from 7 to 10 points. Nearly 79% of graduates have noted that academic staff are professional and qualified. However, a large percentage of graduates pointed out that there are courses whose quality of presentation needs to be improved. Graduates describe their knowledge very differently in special courses within 6-9 points, i.e. from nearly good to excellent. 44% of graduates think their knowledge is valued as very good. Graduates also believe that there are too few special courses and too many general education courses in the study plan. In analyzing whether graduates have problems finding jobs in the industry, nearly 85% of those surveyed said there were no problems. Starting in 2018/2019, in the course of the study year, the study process is closely developed together with employers - experts from the Latvian Federation of Wood Industry with associations included therein: Latvian Association of Wood Processing Entrepreneurs and Exporters, Association "Latvijas Koks", Association of Latvian Wood Producers, Association "Latvijas Furniture Association", Latvian Wood Construction Cluster.

2.4. Students are offered the opportunity to study abroad under the Erasmus + programme, which was used by 31 LLU students during the reporting period, while 19 students from abroad have used the possibility of studying at LLU. For students, successfully passing study courses abroad, it is possible to equate them to 100%. Both outgoing and incoming mobility remain stable annually

Conclusions by specifying the strengths and weaknesses

Overall, the structure of the programme is appropriate and conforms to the professional standard and higher education standard, is periodically reviewed and updated, and branch professionals and employers actively participate in this process. Feedback from students, alumni and employers are very good, students have no problems finding jobs in the industry. Mobility rates are stable.

Strengths

1. A well-balanced and attractive study programme for Latvian and foreign students.
2. Employers are involved in the development of the study programme ensuring that study programme content closely belongs to industrial needs at the same time ensuring legislation requirements.
3. The methods of implementing studies are student-centred, the study process is developed sequentially to improve and reinforce the knowledge acquired in practice.
4. There is a growing participation of professionals/employers, including abroad, as guest lecturers.

Weaknesses

1. SAR states that course descriptions are reviewed and revised every year, but the course description analysis proves that this procedure sometimes is formal.

3. Resources and Provision of the Study Programme

Analysis

3.1. As mentioned above in the analysis of the study field, the provision of the study programme is very satisfactory. LLU has a well-stocked library with access to local and main international databases. The visit showed a wide range of tools and machines here for carrying out practical study courses or prototyping, and equipment for testing various material parameters. As a result of close cooperation between the Forest Faculty and the MeKA Institute, a highly developed technical provision is available for the study process and research. A new laboratory building is in the process, which will significantly improve the material and technical base for the implementation of the study programme. This may increase the popularity of higher-level studies in the future. According to the

self-assessment report, the available funding, in general, allows for the implementation of the study programme.

3.2. Not applicable.

Conclusions by specifying the strengths and weaknesses

The provision of the study programme is very satisfactory, including the well-stocked library, material and technical provision and equipment available for the study process in cooperation with external institutes. Near completion is a new laboratory building that will significantly improve the provision. The available funding, in general, allows for the implementation of the study programme.

Strengths:

1. Highly developed material and technical provision and successful cooperation with external institutes, which provides an opportunity to use the equipment for the study process.
2. Infrastructure is being developed to significantly improve provision.

Weaknesses:

None

4. Teaching Staff

Analysis

4.1. According to the self-assessment report, the study plan is being optimized (increasing the volume of study courses and decreasing the number of study courses), as a result of which the number of teaching staff has decreased in recent years compared to the beginning of the period, given the low popularity of higher-level studies in the field of wood-, attention needs to be paid to sustainability. The total number of academic staff involved in the study programme decreased from 39, in the academic year 2014/2015 to 26 in 2019/2020. Also, the total number of study courses increased in the whole programme. A review of the annexes to the self-assessment report shows that a significant part of the teaching staff is related to the industry or works in scientific institutions related to the industry, thus ensuring the transfer of knowledge. PhD students are involved in the teaching. The joining of some former PhD students allowed for partial renewal of the teaching staff.

4.2. The teaching staff complies with the requirements of national legislation specified in Article 39 of the Law on Higher Education Institutions (<https://likumi.lv/ta/en/en/id/37967-law-on-higher-education-institutions>) on required education or relevant practical experience. A review of the annexes to the self-assessment report shows that a very large part of the teaching staff involved in the study programme has a PhD degree. A large part of the teaching staff, involved in the study programme, in parallel with teaching works at the MeKA Institute directly dealing with topical research issues. Also, the development of the academic staff is related to the performance of various activities, such as the preparation of textbooks and publications, participation in projects or organizations such as the European Cooperation in Science and Technology (COST) organisation, the European Group of Organisations for Fire Testing, Inspection and Certification (EGOLF), the professional association InnovaWood, the Technical committee 'Timber' of the Latvian National Centre of Standardisation.

4.3. Not applicable.

4.4. According to the self-assessment report, most of the teaching staff is involved in research work in the framework of various projects and/or preparation of publications or participation in conferences, which are motivated through the salary system. A significant part of teachers' publications is published in international sources, in some cases as a result of international cooperation. Also, the lecturers have given several lecture courses at Aleksandras Stulginskis University (Lithuania), now Vytautas Magnus University, students. The academic staff is also involved in the review of doctoral theses of the doctoral students from the Estonian University of Life Sciences (Estonia), Vilnius Academy of Arts (Lithuania), etc. or served as peer-reviewer for scientific articles in various scientific journals, such as the European Journal of Wood and Wood Products, Drvna industrija, Baltic Forestry, Agronomy Research, and others.

4.5. According to the self-assessment report, after the optimization of the study plan, several study courses are implemented under the guidance of several teachers, which requires active cooperation and coordination. The study programme takes place in several faculties, it requires mutual coordination. From the interviews during the visit, it can be concluded that there is active communication and close cooperation between the teaching staff of the relevant faculties.

Conclusions by specifying the strengths and weaknesses

In recent years, the number of teaching staff has significantly decreased as a result of the optimization of the study plan. Although some former PhD students have joined the faculty in recent years, given the low popularity of higher-level studies in the field of wood-, attention needs to be paid to sustainability. Current teaching staff complies with national legislation on education or work experience requirements. At the same time, a significant number of teaching staff works in industry-related research organizations (MeKA Institute). In synergy with the study process, it ensures active research and publications.

Strengths

1. A very large part of the teaching staff involved in the study programme has a PhD degree.
2. A significant part of the teaching staff is involved in research projects and/or works at the MeKA (industry-related) institute, which facilitates the transfer of current industry/ research topics to the study process.
3. The study courses implemented by several teachers promote active collaboration and improvement of study courses.

Weaknesses

1. In recent years, the number of teaching staff has significantly decreased (as a result of the optimization of the study plan), given the low popularity of higher-level studies in the field of wood-, this can affect sustainability.

5. Assessment of the Compliance of the Study Programme "Wood Processing"

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

The sample of the diploma provided by the SAR (Annex: Diploms_kokapstrade_bak_LV.pdf; Diploms_kokapstrade_bak_EN.pdf) is prepared according to regulations on Latvian state-recognized issuance of higher education documents (Cabinet Regulation No. 202-14.04.2013;

Annex 4).

- 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: Non-compliant

The document is signed by the study vice-rector on the possibility to continue studies in the study programme "Production and processing" of the Riga Technical University (Annex: Vienosanās_LLU un RTU_Razosana_parstrade.edoc). But, it should be noted that in the above-mentioned document this Woodworking professional bachelor programme is not included and alternatives for the Wood Processing programme is very different from studies in LLU, e.g. in RTU are offered such programmes "Clothing and textile technology" and "Material technology and design". None of these programmes is close to Wood Processing.

- 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 confirmation concerning the study programme "Production and processing" (No 2.4.-6.2/44 from 26.08.2021.; point 3) proves that in case of study programme discontinuity and students do not wish to continue their studies at LLU or RTU, they are reimbursed their tuition fees.

- 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

LLU confirmation concerning the study field Production and processing (No 2.4.-6.2/44 from 26.08.2021.; point 8) states that the official language proficiency of the teaching staff involved in the implementation of the relevant study programmes complies 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.

- 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

Not applicable

- 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

Not applicable

- 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

Not applicable

- 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

The study agreement (Appendix 18_Studiju_ligums.pdf) complies with the requirements of the Cabinet Regulation No. 70 of 23.01.2007 "Regulations to be included in the Study Agreement" (<https://m.likumi.lv/doc.php?id=152072>).

- 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 course descriptions comply with the Law on Institutions of Higher Education (<https://likumi.lv/ta/en/en/id/37967>) Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education. However, the scope, focus and content of course descriptions could be improved and more often updated.

- 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: Fully compliant

Document confirming that the study programme is in compliance with the professional standard is provided in the Annex

"Annex_7_The_compliance_of_the_study_programme_WOOD_PROCESSING_with_profesional_standard_v2.pdf".

- 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

Not applicable

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

Assessment of compliance: Fully compliant

Document confirming that the study programme is in compliance with the higher education standard is provided in the Annex

"Annex_6_WOOD_PROCESSING_compliance_with_the_state_education_standart_v3.pdf".

- 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

Not applicable

- 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

Referring to the teaching staff publications (Annex 5. pielikums. Publikāciju, patentu un mākslinieciskās jaunrades saraksts RP.pdf) each member of the teaching staff have either relevant and up to date publications or at least 5 years experience of practical work in the field unrelated to implement the study programme.

- 15 R5 - Overall rating

Assessment of compliance: Partially compliant

The study programme overall complies with the legal requirements specified in the Law on Higher Education Institutions and other regulatory enactments. But documents confirming that the higher education institution will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution document is provided and it signed by the study prorektor on the possibility to continue studies in the study programme "Production and processing" of the Riga Technical University (Annex: Vienosanās_LLU un RTU_Razosana_parstrade.edoc). But, it should be noted that in the above-mentioned document this Woodworking professional bachelor programme is not included and alternatives for the Wood Processing programme is very different from studies in LLU, e.g. in RTU are offered such programmes "Clothing and textile technology" and "Material technology and design". None of these programmes is close to Wood Processing. Additionally, it is recommended to improve the methodology/ praxis of the course description review process.

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

According to the self-assessment report and the findings at the expert visit, the provision (informative, material and technical) of the study programme is very satisfactory. The available funding, in general, allows the implementation of the study programme.

- 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

According to the information provided (Annexes: "Macibspeku_saraksts.xlsx" and "Mācībspēku_CV.rar"), all teaching staff complies with the conditions of the study programme

implementation and the requirements of regulatory enactments.

- 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

Conclusions by specifying the strengths and weaknesses

Overall study programme complies with the requirements of regulatory rules and the standard of the profession. Highly-qualified academic staff is involved in the implementation of the study programmes, which promotes active scientific and research activities. Learning outcomes are a well-formulated and student-centred approach successfully approbated as good practice. The management of the study programme is appropriate, however, the application of the internal quality assurance system of the programme still could be improved.

Strengths

1. The study programme is realized in very strong cooperation with employers and labour needs.
2. Very good technical provision and successful cooperation with external partners (e.g. Institutes).
3. Highly qualified and scientifically active academic staff; also involved in the industry.

Weaknesses

1. The formal procedure of study course review.
2. The decreasing number of teaching staff due to optimization.
3. Limited student mobility and involvement in science.

Evaluation of the study programme "Wood Processing"

Evaluation of the study programme:

Good

6. Recommendations for the Study Programme "Wood Processing"

Short-term recommendations

The programme is recommended to review and improve study course description update procedures.

It would be necessary to provide official documents approving the possibility to continue studies in another programme in case of discontinuation of this programme.

Develop and schedule preventive activities (specifying the responsible persons) to reduce the drop-out of students.

Long-term recommendations

Considering the small size of the study programme it is recommended to develop a strategic vision for funding and closely monitor corresponding indicators.

A strategic plan to increase the number of students in part-time studies should be developed to ensure the sustainability of the programme. There is a need for solutions to raise mobility indicators.

Due to the uniqueness of some study courses, and the low popularity of higher-level studies, to develop an action plan for the sustainability of the respective teaching staff.

A strategic assessment and improvement of the study programme in cooperation with industry would be needed, as the SAR report says that the impact of the reduction in the number of students has been met by the low industry demand due to automation.

II. "Design and Crafts" ASSESSMENT

II. "Design and Crafts" ASSESSMENT

1. Indicators Describing the Study Programme

Analysis

The professional bachelor's studies programme "Design and Crafts" offers full-time (4 years) and part-time (5 years) studies in Latvian at 160 KP (240 ECTS). The degree to be obtained – professional bachelor's degree in product technologies and design and qualification – product designer. The content of the study programme is based on the knowledge, skills and competencies included in the product designer's professional standard (profession code 2163 04, available at <https://registri.visc.gov.lv/profizglitiba/dokumenti/standarti/ps0360.pdf>). In addition, the content of the study programme is not only related to the professional standard, but also to the Cabinet Regulation No. 512-26.08.2014 (available at <https://likumi.lv/ta/id/268761-rules-on-the-second-year-professionalised-development-country-standard>).

The admission procedure is described in detail, available on the LLU website. Additional information from LLU graduates and recommendations for further training after graduation from this study programme is available.

Conclusions by specifying the strengths and weaknesses

The relationship between the study programme analysed, - name, degree, professional qualification, objectives, learning outcomes and labour market needs are closely related and described accordingly.

Strengths

1. The parameters of the study programme are closely interlinked; they complement each other successively.
2. The results of the studies demonstrate the relevant knowledge, skills and competencies that will need to be achieved when the programmes are completed in order to be fully operational in the field chosen by them.
3. Many students are starting their own business during their studies, demonstrating the sustainability of the study programme. The role of design knowledge can be seen prominently in student practices when practice companies engage students with an interest in developing their businesses or products.

Weaknesses

None

2. The Content of Studies and Implementation Thereof

Analysis

2.1. A professional bachelor's degree in design and crafts is a 4-year full-time study programme or a 5-year part-time study programme (160 KP, 240 ECTS). The study plan includes general education courses of 23 KP (14%), specific theoretical courses and information technology courses of 36 KP (23%), professional specialisation courses of 63 KP (39%), praxis at 20 KP (13%), diploma work of 12 KP (8%) and free choice courses of 6 KP (4%). The structure of the programme is appropriate and complies with the professional standard. There have been no major changes to the study programme since its launch in 2016. Analysis and mapping of course descriptions show that study courses are in line with the objectives of the programme, ensuring that learning outcomes are achieved to prepare students for industry needs.

2.2. The course descriptions are prepared and sufficiently detailed describing the expected results, the study plan prepared gives an idea of the continuity of the course. Analysis of study courses shows that there is no systematic review of course descriptions, in some courses literature internet links are inactive (for example, in the course "Material knowledge (textiles)", a source included in the list of compulsory literature with a reference to http://www.rtu.lv/component/option,com_docman/task,doc_download/gid,5070/tekstilmateriali_rtu.pdf is not available, since such a link no longer exists or in the course "Applied electrical engineering" materials in the http://www.viskipv.lv/files/userfiles/files/Elektrotehnika%20lekc%20konsp_2012.pdf link not available). Although the descriptions of study courses have a uniform form, the information contained in them is not unified, there is no common approach in listing the sources of the literature, the evaluation criteria. Different methods are used to implement studies, their choice is the competence of teaching staff, in addition to lectures, practical works, seminars, laboratory works use the opportunities offered by the e-study environment, including WhatsApp, Zoom and other platforms. Students are asked to do a lot of creative jobs, and in some courses, there is an additional assessment (extra points) of innovation in job performance. It's possible for students to dispute the evaluation, get additional explanations and comments from academic staff. The methods of implementing studies stem from the course specifics, the teacher of each course is a professional in his field and chooses the appropriate implementing method, while the appropriateness of the choice of the method is observed in the performance of studies (evaluation) and in the student surveys.

2.3. In the programme, the first graduates (6 students) were in the 2019/2020 year, of which only one works in a design-related field, the others are continuing in a master's degree and/or working in a non-design field. All students plan their future directly to start their business. There are students who have already started it during their studies and have their own company. About 30% of students' plans also include continuing their design studies at a higher level, while the majority nevertheless intends to add knowledge in related spheres, such as business. Part-time students express satisfaction with the distribution of sessions because it is easy to connect to work. Remote studies, particularly in the acquisition of practical works, are mentioned as problematic. In parallel to specially designed surveys, every semester after completing courses in a given semester, students have the opportunity to evaluate courses. Unfortunately, not all students express their opinions, the average score ranges from 4 to 4.25 (a maximum of 5 points). Keeping in mind that the study programme is new, and there are only the first 6 graduates, only 8 employers (companies) were surveyed in which students had internships. Most employers (91%) point out that students are very interested and proactive, and are able to adapt quickly.

2.4. Students are offered the opportunity to study abroad under the Erasmus+ programme, and students have used both mobility studies and mobility practices. In the area of the design of the LLU, a number of cooperation agreements have been concluded with partner high schools: Ireland, Turkey and Lithuania. Since 2018, 4 students have used mobility opportunities, there has been no incoming mobility.

Conclusions by specifying the strengths and weaknesses

Remembering that the study programme started in 2018, the programme is promising, and the overall structure of the programme is appropriate and is in line with the professional standard. It is typical that students see themselves as employers (own business) in the future. Feedback from students, alumni and employers are very good.

Strengths

1. A very modern study programme with high potential.
2. The study programme is well balanced, with most knowledge and skills being acquired in specialised branch courses.

Weaknesses

1. Although the report states that courses should be reviewed annually, the course descriptions show that this procedure is not followed.
2. Students' surveys are only optional.
3. Limited mobility opportunities, contracts with 3 universities.

3. Resources and Provision of the Study Programme

Analysis

3.1. As mentioned above in the analysis of the study field, the provision of the study programme is very satisfactory. LLU has a well-stocked library with access to local and main international databases. The Faculty of Engineering, where the study programme Design and Crafts is being implemented, has its own library, but as the visit showed, it offers mainly pedagogical books from the previous stage of development of the faculty. The visit showed a wide range of tools and machines here, especially in the textile and metal processing field. Students have access to up-to-date equipment such as 3D printing and CNC machines. Some premises of faculty building are morally outdated, but this does not have a significant negative impact on the study process. Students have access to special licensed design and layout software, however, the interview revealed that they are not always available in full functionality by the remote studying process. According to the self-assessment report, the available funding, in general, allows for the implementation of the study programme.

3.2. Not applicable.

Conclusions by specifying the strengths and weaknesses

The provision of the study programme is very satisfactory, including the well-stocked library, material and technical provision, and special software, but they are not always available in full functionality by the remote studying process. The available funding, in general, allows for the implementation of the study programme.

Strengths:

1. Highly developed material and technical provision.

2. Students have access to up-to-date equipment such as 3D printing and CNC machines.

Weaknesses:

1. Some special software isn't available in full functionality by the remote studying process.

4. Teaching Staff

Analysis

4.1. According to the self-assessment report, the number of teaching staff involved in the study programme has been increasing in recent years, from 19, in the academic year 2016/2017 to 42 in 2019/2020. A review of the annexes to the self-assessment report shows that the majority of the teaching staff are lecturers, who are involved in the implementation of the study programme at the same time as the representatives of the respective industry, thus facilitating the transfer of actual industry topics.

4.2. The teaching staff complies with the requirements of national legislation on required education (The Law of Higher Schools of the Republic of Latvia and LLU Regulation on Academic) or relevant practical experience. The professional development of each teaching staff member is annually evaluated by the LLU Motivation System of Academic Staff (Decision No 2.4.-13/8 (29/11/2017) by the Council of Studies). According to the self-assessment report, almost half of the teaching staff involved in the study programme have guest status, a significant part of whom are related to the industry in parallel with their teaching work. It allows the transfer of actual topics from industry to the study process. More than half of the teaching staff involved in the study programme have a PhD degree.

4.3. Not applicable.

4.4. According to the self-assessment report, a significant part of the teaching staff is guest status, who are less involved in research, but the elected teaching staff actively participates in research processes, a significant part of the teaching staff actively participates in conferences and prepares publications, which is motivated through the salary system, as the interviewees acknowledged during the visit. In-service training is available for elected teaching staff - a pedagogical and didactic skills development course and an in-service English training course. A significant part of the teaching staff related to design and arts shows artistic creation by participating in the activities of external organisations related to arts, as well as in exhibitions and thematic conferences, as mentioned in their CVs. An exhibition room is available on the 1st floor of the Faculty of Engineering, where works are also exhibited involving students in the preparation of exhibitions.

4.5. Teaching staff from different faculties of the LLU are involved in the implementation of the study programmes, it requires mutual coordination. According to the self-assessment report, the collaboration between teaching staff from different faculties needs to be improved, while teaching staff from the IMI Institute of the Faculty of Engineering actively collaborate, communicate and coordinate overlapping study topics. It is positive that students' study works are often continued in other study courses, later also prototyped and also used as thesis topics, thus involving the teachers of the respective study courses in such mutual collaboration, which is also emphasised in the self-assessment report.

Conclusions by specifying the strengths and weaknesses

Current teaching staff complies with national legislation on education or work experience

requirements. The majority of the teaching staff are lecturers who at the same time represent the respective industries, facilitating the transfer of actual topics to the study process. Elected teaching staff actively participates in research and publication processes, also skills development courses are available for elected teaching staff. A significant part of the teaching staff related to design and arts shows artistic creation. Collaboration between teaching staff from different faculties needs to be improved while teaching staff from the Faculty of Engineering actively collaborate, including ensuring the continuity of students' work between study courses.

Strengths:

1. The majority of the teaching staff at the same time represent the respective industries, facilitating the transfer of actual topics to the study process.
2. Teaching staff actively collaborate, including ensuring the continuity of students' work between study courses.

Weaknesses:

1. A significant part of the teaching staff is guest status, which does not encourage research and artistic creation processes at the faculty.

5. Assessment of the Compliance of the Study Programme "Design and Crafts"

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

The sample of the diploma provided by the SAR (Annex: DA_diploms_pielikums_LV.zip; DA_diploma_supplement_ENG.zip) is prepared according to regulations on Latvian state-recognized issuance of higher education documents (Cabinet Regulation No. 202-14.04.2013; Annex 4).

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

The document is signed by the study prorector on the possibility to continue studies in the study programme "Production and processing" of the Riga Technical University (Annex:vienosanas_LLU_RTU_LV.rar) in professional bachelor study programmes "Clothing and Textile Technologies", "Fabric Technologies and Design".

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 confirmation concerning the study programme Production and processing" (No 2.4.-6.2/44 from 26.08.2021.; point 3) proves that in case of study programme discontinuity and students do not wish to continue their studies at LLU or RTU, they are reimbursed their tuition fees.

- 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

LLU confirmation concerning the study field Production and processing (No 2.4.-6.2/44 from 26.08.2021.; point 8) states that the official language proficiency of the teaching staff involved in the implementation of the relevant study programmes complies 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.

- 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

The study agreement (Studiju_ligums.pdf) complies with the requirements of the Cabinet Regulation No. 70 of 23.01.2007 "Regulations to be included in the Study Agreement" (<https://m.likumi.lv/doc.php?id=152072>).

- 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 course descriptions comply with the Law on Institutions of Higher Education (<https://likumi.lv/ta/en/en/id/37967>) Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education. However, the scope, focus and content of course descriptions could be improved and more often updated.

- 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: Fully compliant

Document confirming that the study programme is in compliance with the professional standard is provided in the Annex "7_annex_DA_compliance_with_profession_standart.docx".

- 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

Document confirming that the study programme is in compliance with the higher education standard is provided in the Annex "6_annex_DA_compliance_with_the_standard.docx".

- 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

Referring to the teaching staff publications (Annex 5. pielikums. Publikāciju, patentu un mākslinieciskās jaunrades saraksts RP.pdf) each member of the teaching staff have either relevant and up to date publications or at least 5 years experience of practical work in the field unrelated to implement the study programme.

- 15 R5 - Overall rating

Assessment of compliance: Fully compliant

The study programme fully complies with the legal requirements specified in the Law on Higher Education Institutions and other regulatory enactments.

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

According to the self-assessment report and the findings at the expert visit, the provision (informative, material and technical) of the study programme is very satisfactory. The available funding, in general, allows the implementation of the study programme.

- 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

According to the information provided (Annexes: "Macibspeku_saraksts.xlsx" and "Mācībspēku_CV.rar"), teaching staff complies with the conditions of the study programme implementation and the requirements of regulatory enactments, at the same time, two teachers do not directly indicate a relevant education and/or experience in their CV, which testifies competence in the study course they are teaching.

- 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

In general professional bachelor study programme "Design and Crafts" complies with the requirements defined in professional standards and higher education standards and the structure of the study programme (plan) is appropriate, - study courses are in line with the objectives, ensuring learning outcomes. The course descriptions are enough detailed, but unfortunately reviewing process is very formal. Study methods are very diverse and the best suitable study methods usually are chosen by academic staff belonging to their competency. Student opinion about the study process is fragmented as not all students answered in surveys, but feedback from alumni and employers are very good. Also, students have outgoing mobility possibilities within the Erasmus+ programme, since 2018 only 4 students have used this opportunity. But it should be noted that the study programme is quite new and only a few agreements between universities exist. The provision (including library, material and technical provision) of the study programme is very satisfactory, only some resources (specific software) weren't available for students during the remote study process. Teaching staff activities quite often cover education and industry interests at the same time, allowing to implement actual research topics in the study process.

Strengths

In general very good-balanced (relevant knowledge, skills and competencies), a very modern, popular study programme with high potential.

Very good technical and informative provision of studies.

Highly qualified and scientifically active academic staff; also involved in the industry.

Weaknesses

The formal procedure of study course review.

Limited remote access to digital resources (software) and lack of information turnover.

Limited student mobility due to a small number of international agreements.

Evaluation of the study programme "Design and Crafts"

Evaluation of the study programme:

Good

6. Recommendations for the Study Programme "Design and Crafts"

Short-term recommendations

It is necessary to identify new partners/universities abroad, conclude cooperation agreements and promote incoming and outgoing mobility.

Estimate the content of the student study works in a remote studying process, taking into account the availability of the specific licensed software (design/layout, etc.) or functionality of them in open or limited access versions if there is no ability to provide for students remote access to the full-functionality software for free.

Review and improve student engagement in the survey on the conduct of studies. Student engagement would have to reach 100%.

Long-term recommendations

As a significant part of teaching staff is quest status, a strategic plan to attract academic staff in this field is essential in order to ensure scientific research and artistic creation potential e.g. balance between the above-mentioned staff is needed.

A plan is needed to focus students in the industry since only 16% (1 in 6) of first graduates work in the sector.

II. "Food Quality and Innovations" ASSESSMENT

II. "Food Quality and Innovations" ASSESSMENT

1. Indicators Describing the Study Programme

Analysis

The name of the study programme "Food Quality and Innovations" is compliant with the obtainable degree "Bachelor Degree of Engineering in Food and Beverages Technologies", although it should be noted that name of the degree does not correspond with Cabinet of ministers regulation No. 240, point 12, because of Cabinet of ministers regulation No. 322. 2. annex. Therefore it is recommended to change the name of the degree to "Bachelor Degree in Engineering of Food Production Technology"

The study programme is heavily practical and even with internship (<https://www.llu.lv/lv/pamatstudijas/partikas-kvalitate-un-inovacijas>), its aims are formulated with the study process in mind, making them more academic than for 2nd level professional study programme. Although the studies are mainly practice-based the scientific component has not been lost. Study objectives are compliant with the requirements for an academic study programme.

Learning outcomes formulated are in accordance with the aims of the study programme.

Admission requirement of Secondary General Education is sufficient, but as the study programme is heavily based on organic chemistry, it could be advised that centralized exams in chemistry or biology can be revised in requirements on regular basis, as it is possible that centralized examination and yearly mark do not represent enrolling student's level of knowledge equally, as the evaluations are done by very different organization evaluators. It could also help to lessen the possible confusion with "obligatory centralized exam or yearly mark from attestation in chemistry or natural sciences" (<https://www.llu.lv/lv/pamatstudijas/partikas-produktu-tehnologija>) in the future. As the bachelor's study programme "Food Quality and Innovations" is an academic study

programme, a bachelor's thesis is sufficient for obtaining the degree.

Conclusions by specifying the strengths and weaknesses

The name of the study programme reflects its content and is compliant with the academic bachelor's degree of engineering of Food and Beverages technologies to be obtained, but a new name for the degree should be considered, according to Cabinet of Ministers Regulations. Aims, objectives and outcomes in the particular study programme are interrelated very closely and in accordance with the academic nature of the study programme, despite the practical work emphasis.

The study programme "Food Quality and Innovations" has a lot of practical work, which requires a strong understanding of organic chemistry and biological processes. Right now looking at admission requirements, it is possible for students to enrol also without taking centralized exams in biology or chemistry. The formulation about the necessity of this requirement also is quite unclear on the website of LLU.

Strengths

1. Very well formulated aims and study objectives, which clearly underline the academic nature of a very practice-orientated academic study programme.

Weakness

2. The current name of the degree does not fully comply with the Cabinet of ministers regulation No. 240, point 12.

2. The Content of Studies and Implementation Thereof

Analysis

2.1. The study courses included in the study plan are logically sequenced, general study courses are initially learned and, at later stages, specialised study courses are offered as modules, such as the study module of animal raw material and study module of plant material. The study courses to be studied are complementary, consistent with the objectives of the programme and ensure that the results of the studies are achieved, as well as meeting the needs of the sector and scientific trends. Most of the up-to-date subjects are involved in studies, for example, new EU regulations and directives connected with the membership in the EU, and their delegations into Latvian Food Law design. Students undertake compulsory (77%), restricted elective (19%) and elective (4%) courses, according to the requirements of academic studies. No less important part of studies is the praxis included in the restricted elective courses part. Because of the practical need of the food enterprises, even the name of the programme includes a very significant item for food technology - innovations, and, moreover, the Food Sensory Analysis is also a compulsory part of the Food studies. Typically, this discipline invites industrial people to keep closer contact with the teaching staff engaged in that area.

The content of study courses is updated every semester, including information on sectoral and scientific topics, in line with labour market requirements. The teacher of each course is responsible for this review process. The course descriptions are sufficiently detailed, have a specified form, and the requirements for the final thesis are sufficiently detailed and supportive of the requirements of the regulatory enactments.

2.2. The study implementation methods, including the evaluation methods, contribute to the

achievement of the aims and learning outcomes of the study courses and the study programme. Every single specific discipline has a part of reviewing and representing some kind of topic in the form of essays by every student. Student-centred learning and teaching principles are taken into account and they are well theory-based and linked to practical technologies. The study programme uses a wide variety of learning methods, the programme is based on knowledge and competence, specific skills (critical thinking, problem-solving, collaborative practices) are practised in practical works. Every year, more and more seminars are included in the study process, addressing the challenges of the sector in the form of discussions. The use of the e-study platform has increased significantly during the remote study process (by 75%). In order to ensure high-quality learning, it is planned to introduce simulation games, video materials.

2.3. Student surveys are conducted only 1 time in 2 years, the results obtained are used to improve the quality of studies. Students have the opportunity to make proposals, recommendations, including constructive and subjective criticisms. Students have well evaluated (7-9 points) the content and organization of the studies, and the proportion of practical and theoretical courses. However, nearly half of those questioned (43%) would like a higher proportion of praxis. Similarly, the work and communication of teaching staff, the availability of methodical materials and laboratories is highly evaluated. It should be noted that 17% of respondents considered that technical materials were out of date. The assessment of graduates and employers about the study programme is high, with graduates mostly working in the corresponding industry. Employers have expressed their willingness to cooperate more closely in research projects in order to better prepare students for the labour market.

2.4. Cooperation agreements have been concluded with 27 universities in 11 European countries to ensure the mobility and cooperation process. Since 2013, 2 to 5 students have participated in outgoing mobility (studies and praxis) annually. During mobility, students are required to study courses of 30 ECTS, corresponding on average to a one-semester load. When returning from studies abroad, the study courses acquired are credited according to the academic recognition process. The assessment of incoming mobility shows that 2-3 students are enrolled annually, as the exception is 2016/2017 when 7 students arrived. It's currently discussed that virtual mobility opportunities by offering students courses remotely could be developed.

Conclusions by specifying the strengths and weaknesses

Very well organised study programme but obviously, the graduates are not ready to work as innovation technologists without continuing education in that field. The study programme "Food Quality and Innovation" graduates have a possibility to continue studies in various Master's study programmes.

Strengths

1. Study programme Food Quality and Innovations meets nowadays requirements of food processing area, the new parts of the food quality, food safety and food innovations are included.

Weaknesses

1. The weakness of the study programme is the lack of study time to prepare very good specialists by the end of the study.
2. Relatively low mobility rates.

3. Resources and Provision of the Study Programme

Analysis

3.1. The study is implemented in a sufficient manner with a very credible organisation coordinated by the director of the study programme, the methodological commission and the Dean. The facilities used for the Study programme are modern and serve comprehensively to both Academic staff and students enrolling in the programme. The Laboratories consist of contemporary equipment for both processing and analytical purposes. The Library provides a huge amount of the available Journals, books and other materials necessary for the programme. The LLU seriously considered e-learning but also e-library services which are of high importance in a pandemic situation. All mostly used databases are at the disposal of the users (Staff and Students) within the study programme. The HEI also provides hotel services for visiting professors and students. The overall infrastructure is not in one place which is a minor shortcoming. Financial issues are relevant and follow the national rules of financing.

3.2. Not applicable.

Conclusions by specifying the strengths and weaknesses

The Study programme's main goal is to teach students how to work in food production and quality and innovation. For the mentioned purpose, the overall technical Institutional organisation is very good. Namely, the HEI is organized with educational units as follows: 9 Laboratories and 1 Pilot plant. These facilities are fully equipped in order to serve the main goals of the programme. In addition, the HEI provides excellent Library service and accommodation for the visiting professors and students. The financing of the Study is well explained and is in coherence with national rules and legislation. The study premises are located in different buildings. The study process is organised in such a way that lectures/practical works or laboratory works are in the same building during the day.

Strengths

1. Well supported facilities such as Laboratories, Library and Hotel.
2. Organization of the study in compliance with domestic rules.
3. The financing ensured by the government and scholarships.
4. Tuition Fee for Latvian students acceptable per year of the study.

Weaknesses

None

4. Teaching Staff

Analysis

4.1. From the self-assessment report, it is observed how the composition of the teaching staff is mostly well balanced. The teaching staff is constantly working on their own education and especially on raising their knowledge of the English language. On average, 41 teachers are involved in the implementation of the study programme, with at least 5 professors and associated professors participating in the implementation of compulsory and restricted courses. As the study programme is implemented in Latvian and English, at least the B2 level of knowledge of the English language is required for teachers involved in the implementation of the programme. In order to ensure a high-quality and continuous development of the study process, the renewal and growth of personnel are monitored, and the development of the educational process is mainly carried out by staff elected in academic positions (72%). Training staff are offered courses to develop continuously. Every teacher participating in the study process shall, every six years, undertake a teaching development programme "Innovation in Higher Education".

4.2. The staff involved in teaching is dedicated to complying with the national legislation on desired education and the practical applications as well. Professional growth of the teaching staff is seriously considered. The SAR contains non-harmonised information on the academic staff involved in the study programme, section 4.1 states that the study process is provided by 41 academic personnel, while section 4.2 states that it is provided by 38. The qualifications of the teaching staff involved are appropriate, 95% of all teachers are doctors. In addition to professional development and English courses, teaching staff attend various industry-related courses (latest trends, packaging materials, raw materials, etc.). The positive fact that academic and technical staff participate annually in the Erasmus mobility programme (in Italy, Austria and France) is on average 10-12 persons per year. Moreover, respected scientists and professionals came to Latvia and held presentations for additional education of the teaching staff.

4.4. The Academic staff is dedicated to the research and to the date of accreditation were involved in many national and international projects and it is very positive. Most of the National projects were supported by the state research programmes but also the HEI grants. There is also significant participation in international projects whether these were bilateral or with respectable international grants funded. Furthermore, part of the staff is involved in the COST programme which represents an extraordinary opportunity to connect with scientists from other Countries. However, participation in the COST programme is not wide, thus it is a shortcoming.

4.5. The mechanism of the mutual collaboration between teaching staff is presented but in too brief form. Actually, only general information of what should be the matter of the collaboration in the future is stated but not implemented thus it is a shortcoming. However, some of the issues are fully covered, especially those tied to the lectures where lecturers from other departments held classes on other modules. For example, by improving the study programme, it is possible to develop study courses involving teachers from different departments, as well, study courses are offered, in which 4 - 6 teachers from several departments work together.

Conclusions by specifying the strengths and weaknesses

The teachers are enrolling allocated duties in a very good manner. There is coverage with the Professors and Associate professors but without Assistant professors. Professional education coupled with the same growth is convincingly integrated for the staff. Moreover, the staff is very much involved in both National and International projects and programmes. Nevertheless, the collaboration between Academic staff within the Study programme is given in too brief manner with exception of the lecturing which is positive.

Strengths:

1. Teaching staff is fully dedicated to the outcomes of the study programme.
2. Teaching staff is fostering their own additional education in versatile forms and means.
3. Participation of the staff is significant in both National and international projects.

Weaknesses

1. Just 1 involvement in the COST programme which is one of the best networking mechanisms of networking supported by the EC. It is easy to become a part of the COST project.
2. There are no publications mentioned as outcomes of the project. At least the overall number would be important.
3. Collaboration of the teaching staff is not sufficiently detailed.

5. Assessment of the Compliance of the Study Programme "Food Quality and Innovations"

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: Partially compliant

The name of the study programme “Food Quality and Innovations” is compliant with the obtainable degree “Bachelor Degree of Engineering in Food and Beverages Technologies”, although it should be noted that name of the degree does not correspond with Cabinet of ministers regulation No. 240, point 12, because of Cabinet of ministers regulation No. 322. 2. annex. Therefore it is recommended to change the name of the degree to “Bachelor Degree in Engineering of Food Production Technology”.

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

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx; LLU_apliecinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that if the delivery of the study programme is terminated students of the academic bachelor study programme “Food Quality and Innovations” are provided with opportunities to enrol in LLU second level professional higher educational programme “Food Technology”.

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

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx; LLU_apliecinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that if the academic bachelor study programme “Food Quality and Innovations” are discontinued and students do not wish to continue their studies at LLU or Riga Technical University, they are reimbursed their tuition fees.

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

LLU confirmation concerning the study field Production and processing (No 2.4.-6.2/44 from 26.08.2021.; point 8) states that the official language proficiency of the teaching staff involved in the implementation of the relevant study programme complies 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.

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

As the study programme is implemented in Latvian and English, at least the B2 level of knowledge of the English language is required for teachers involved in the implementation of the programme. In order to fulfil this requirement, English study courses with Person tests for teaching staff is provided since 2019.

- 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

Not applicable

- 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

In accordance with Section 55 of the Law on Higher Education, the establishment of a list of the academic staff involved in the implementation of the programme must describe its qualifications and the duties provided for. No less than five professors and associated professors, who have been elected to academic positions at the relevant university, shall participate in the implementation of the compulsory part of academic programmes and the limited portion of the choice. According to "LLU_apliecinajumi_Razosana_parstrade_EN.docx", the LLU declares that the above requirements are fulfilled.

- 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

The study agreement (Studiju_ligums.pdf) complies with the requirements of the Cabinet Regulation No. 70 of 23.01.2007 "Regulations to be included in the Study Agreement" (<https://m.likumi.lv/doc.php?id=152072>).

- 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 course descriptions comply with the Law on Institutions of Higher Education (<https://likumi.lv/ta/en/en/id/37967>) Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education. However, the scope, focus and content of course descriptions could be improved and more often updated.

- 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

Not applicable

- 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

Document issued from COUNCIL OF HIGHER EDUCATION (No 1.10/22-23.04.2020) proving to support the implementation of the academic bachelor programme Food Quality and Innovations with less than 250 full-time students by Latvia University of Life Sciences and Technologies.

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

Assessment of compliance: Fully compliant

Document confirming that the study programme is in compliance with the education standard can be found in the SAR Annex "Annex No6.docx".

- 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

Not applicable

- 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

Referring to the teaching staff publications (Annex 5. pielikums. Publikāciju, patentu un mākslinieciskās jaunrades saraksts RP.pdf) each member of the teaching staff have either relevant and up to date publications or at least 5 years experience of practical work in the field unrelated to implement the study programme.

- 15 R5 - Overall rating

Assessment of compliance: Fully compliant

The study programme fully complies with the legal requirements specified in the Law on Higher Education Institutions and other regulatory enactments.

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

According to the information included in SAR and the findings during the expert visit, the provision (informative, material and technical) of the study programme is very satisfactory. The

available funding, in general, allows the implementation of the study programme.

- 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

According to the information provided (Annexes: "Macibspeku_saraksts.xlsx" and "Mācībspēku_CV.rar"), teaching staff complies with the conditions of the study programme implementation and the requirements of regulatory enactments.

- 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

Conclusions by specifying the strengths and weaknesses

The study programme is well-defined in terms of purpose and objectives, combining academic and professional approaches. The areas covered by the programme are very essential today. High-level multi-lateral support (equipment, facilities, information resources) that can successfully achieve the objective. Academical freedom makes it possible to develop the latest teaching methods to achieve the stated objectives. However, the name of the bachelor's degree to be obtained would be clarified, and academic staff should also be given attention because the lack of associate professors is indicative of future problems (provision of succession). The involvement of academic staff in networking programs such as COST should be increased.

Strengths

1. Very well formulated aims and study objectives, which clearly underline the academic nature of a very practice-orientated academic study programme.
2. Study programme Food Quality and Innovations meets nowadays requirements of food processing area, the new parts of the food quality, food safety and food innovations are included.
3. Well supported facilities such as Laboratories, Library and Hotel.
4. Organization of the study in compliance with domestic rules.
5. The financing ensured by the government and scholarships.
6. Tuition Fee for Latvian students acceptable per year of the study.
7. Teaching staff is fully dedicated to the outcomes of the study programme, fostering their own additional education in versatile forms and means.
8. Participation of the staff is significant in both National and international projects

Weaknesses

1. The current name of the degree does not fully comply with the rule determined by the Cabinet of ministers.
2. The necessity for centralised examination in chemistry and biology in admission requirements, is unclear, in the context of the requirement of the year mark from attestation.
3. The weakness of the study programme is the lack of study time to prepare very good specialists by the end of the study.
4. The premises of the Programme are not in one place
5. There are no assistant professors involved in the Study programme thus vision for the future work from this point of view remains unclear

6. Just 1 involvement in COST programme which is one of the best networking mechanisms of networking supported by the EC. It is easy to become a part of the COST project.
7. There are no publications mentioned as outcomes of the project. At least the overall number would be important.
8. Collaboration of the teaching staff is not sufficiently detailed.

Evaluation of the study programme "Food Quality and Innovations"

Evaluation of the study programme:

Good

6. Recommendations for the Study Programme "Food Quality and Innovations"

Short-term recommendations

The name of the degree should be changed, in accordance with Cabinet of ministers regulation No. 240, point 12, and Cabinet of ministers regulation No. 322., annex 2.

It is necessary to review the practical organisation of studies so that, as far as possible, activities (lectures, practical works) are organised in a single place for students and not in the different geographically separated buildings.

It would be necessary to clarify admissions requirements.

Organise student surveys more frequently, as it is apparent that conducting surveys every 2 years, as the SAR says, does not reflect changing circumstances and situations in general.

Long-term recommendations

The renewal of academic staff requires a plan to provide teachers at different levels, also the collaboration between teaching staff should be improved.

A strategy plan for the participation of academic personnel in international networking programmes (e.g. COST) is needed, as well as strengthening the internal cooperation model.

Although cooperation agreements have been concluded with 27 partner high schools, the mobility of students is very low, and in recent years the mobility of practice has also decreased. This requires a plan with concrete actions to promote mobility.

II. "Food Science" ASSESSMENT

II. "Food Science" ASSESSMENT

1. Indicators Describing the Study Programme

Analysis

The name of the study programme "Food Science" is compliant with the obtainable degree "Master Degree of Engineering in Food and Beverages Technologies", although it should be noted that name of the degree does not correspond with Cabinet of ministers regulation No. 240, point 22, because of Cabinet of ministers regulation No. 322. 2. annex. Therefore it is recommended to change the name of the degree to "Master Degree in Engineering of Food Production Technology".

The study programme is quite practical, having several courses with laboratory works, but its aims are formulated with the study process in mind, making them more academic than the bachelor's study programme "Food Quality and Innovations". There is a bigger emphasis on developing soft skills than in other programmes. Study objectives are compliant with the requirements for an academic study programme. Learning outcomes formulated are in accordance with the aims of the study programme.

Admission requirements are adequate for enrolling in the programme.

As the academic master's study programme "Food Science" is academic, a master's thesis is sufficient for obtaining the degree.

Conclusions by specifying the strengths and weaknesses

The name of the study programme reflects its content and is compliant with the academic master's degree of engineering of Food and Beverages technologies to be obtained, but a new name for the degree should be considered, according to Cabinet of Ministers Regulations. Aims, objectives and outcomes in the particular study programme are interrelated very closely and in accordance with the academic nature of the study programme.

Strengths

1. Very well formulated aims and study objectives, which clearly underline the academic nature of a very practice-orientated academic study programme.

Weakness

1. The current name of the degree does not fully comply with the Cabinet of Ministers regulation No. 240, point 22.

2. The Content of Studies and Implementation Thereof

Analysis

2.1. The Master study programme Food Science complies very well with the aims of the programme and ensures the achievement of the learning outcomes. In addition to that this Master's study programme by its content meets the needs of food enterprises and different catering premises. Quite a big part of the study programme is dedicated to scientific investigations and practical scientific work during the study years. Each year, the teaching staff involved in the study programme shall review not only the content of the study courses but also the content of their own works, the evaluation methods and the bibliography list. In general, the descriptions of study courses have been developed in a qualitative and sufficiently detailed manner and have special forms. In defending master's work, awarding an academic master's degree is based on the achievements of the food and beverage technology science industry and on innovative solutions. Each master's work defines innovation as well as the contribution to the industry, particularly where the development of the master's work has been carried out in cooperation with the industry.

The modules included in the study programme plan are designed for the logical structuring of the study programme, for the continuity of the content of the courses contained therein and for closer links to the achievement of the objectives of the study programme and for the fulfilment of the results of studies. The study process is carried out in several modules - general study courses, food chemistry module, product development module, food quality and safety module, while the final semester is dedicated to the development of master's work.

2.2. Implementing study methods incl the assignments contributes to the achievement of the proposed aims and learning outcomes of different courses and the whole study programme. The process of implementing the study programme takes into account and respects student opinion and diversity of needs, creates appropriate learning pathways, uses different models for the implementation of the programme, uses diverse pedagogical methods, promotes students' willingness to study independently, promotes mutual respect for student and teaching relationships, and is developed appropriately appropriate procedures for dealing with student complaints.

The study process for full-time master`s students is organised for two days a week (Fridays and Saturdays), taking into account the recommendations, lectures, laboratory works and the schedule of works. Study methods include lectures, seminars, discussions, presentations, practical and laboratory work, also Moodle e-study environment is used. Studies are carried out at the premises of the LLU (contact hours: lectures, practical and laboratory works, seminars, research work), outside the LLU (projects, research laboratories, conferences, courses, development of master's work in a food company), own-initiative work (papers, presentations, etc.), research work.

2.3. The improvement of the study programme quality as a whole is being carried on continuously with some exceptions. Only once every two years shall a survey of students be conducted, with the aim of exploring the student's views on what has been learned in the previous semester. Unfortunately, participation in the survey is optional. The survey, which took place in the spring of 2020 (representing the opinion of 78% of students), found that the majority (57%) of students were very satisfied with their studies. The majority (78%) of students assess material-technical provision as sufficient and adequate, while 100% of students are satisfied with the teaching staff. The students pointed out that some literature is not available. The majority of graduates, according to the survey, acknowledged that they were working in an appropriate industry, which had a positive effect on their professional growth. Employers highly valued graduates' readiness for the labour market (71%) and acknowledged that they themselves stimulate employees to learn and get higher education (82%).

2.4. The information contained in the SAR shows that student mobility is low, only 1-2 students per year choose to undertake study courses in universities abroad. In selecting a particular institution of higher education, the student shall, together with the director of the study programme, analyze the offer of study courses with a view to assimilating them after returning the student to Latvia. The amount of study courses comparable to the return of students is close to 100%.

Foreign students (on average 1 student per year) also choose the acquisition of study courses. The particularly active incoming mobility of students was in 2019./2020 when 5 students from the Czech Republic were studying.

Conclusions by specifying the strengths and weaknesses

The Master's study programme Food Science /45541/ is directed to get very good food specialists both for food enterprises and also for continuing PhD studies at the University.

There are very close contacts between the teaching staff, students, and stakeholders, especially the representatives of the Latvian Food Industry Association. The industrial people take a very well part in the defence processes, both as the members of the examination commission, and the supervisors of the student diploma work.

Strengths

1. Very well scientifically food-oriented study programme, graduates become very good food

specialists having already practical experiences in most cases.

2. Master students are kind of young supervisors for the bachelor students in different grants and research projects.

Weaknesses

1. The weakness of this Master's study programme Food Science is for the previous students' graduates 10-12 years ago to continue their study on the Master's level. Application of the APEL system should make it easier to be successful in continuing their educational level.

3. Resources and Provision of the Study Programme

Analysis

3.1. The study provision and the other support required for the successful implementation of the study programme is of high quality. On-site resources include teaching halls and laboratories; equipment, teaching/learning tools and demonstration equipment; methodological and other teaching/learning materials available in teaching halls and laboratories, laboratories, offices for the Academic and teacher's staff, library with internet access and available computers. Mentioned facilities and services are used in accordance with the mission, yet there is still space for improvement in the acquisition of modern equipment but it is not a shortcoming since the Laboratories are equipped already with modern devices (both processing and analytical ones). The HEI also provides hotel services for visiting professors and students. In this pandemic era, it should be mentioned how e-library services are comprehensive. The students and staff are encouraged to use various databases for scientific purposes. These databases are comprehensive and are most relevant for scientific improvements (Agris, Scopus, WoS, Willey and others). In addition, there are also various other e-services available such as. Library collections, internet resources, Information portals and e-books make the scientific work smooth and plausible. The sources for the financing of the Study programme are well explained and are in line with national rules and legislation. The overall infrastructure is not in one place which is a minor shortcoming. Research and training facilities are placed in 10 units and are covering necessary workstations coupled with equipment to both educate students and create space for scientific work.

3.2. Not applicable.

Conclusions by specifying the strengths and weaknesses

The Study programme's main goal is to teach students how to work in food science mostly in Latvia but also in other countries. The LLU provides the necessary services and equipment for the successful implementation of the programme. The services for the users are comprehensive, well explained with provided information on the web page of the Institution thus highly effective. In addition, the HEI provides excellent Library service and accommodation for the visiting professors and students. The financing of the Study is well explained and is in coherence with national rules and legislation.

Strengths:

1. Well supported facilities such as Laboratories, Library and Hotel.
2. Organization of the study in compliance with domestic rules.
3. The financing ensured by the government and scholarships.

Weaknesses:

1. The premises of the Programme are not located in one building.

4. Teaching Staff

Analysis

4.1. The composition of the teaching staff is reasonable and well balanced between Professors, Associate professors and Assistant professors. An increase in the number of the teaching staff has been noticed in 3 Academic years (2014/2015, 2015/2016 and 2017/2018) but it is convincingly integrated considering modification of the programme for the mentioned periods.

4.2. The Academic staff involved in lecturing and other means of teaching is fully committed to in-service training modes. Various means of additional training are organized with severe influence on Staff professional growth and it is the strong feature of the Staff activity. Each of the education is presented in detail and is comprehensive. For example, the outgoing mobility of the staff within Erasmus mobility is very good even during the pandemic time. Visiting various Countries gives an opportunity to the Academic staff to create and enhance their knowledge and professional growth. This newly created knowledge serve to a high extent to the aims and outcomes of the Study programme by bringing novelties into the teaching process thus is excellent. The very promising part is the involvement of the staff in various educations from the last accreditation period up to these days. Each Academic year it was increased with the exception of the last year which is understandable regarding the pandemic crisis.

4.4. The information on the involvement of the Academic staff in scientific research at both domestic and international levels is broadly presented. There is very little relevant information about participation in National projects but without significant attendance in International projects. Moreover, the data collected is just expressed as a percentage of participation without some particular involvement such as bilateral projects, HORIZON 2020, FP7, COST or some other type of grants thus it represents weakness. Staff involved in the study programme have participated very actively in the implementation of international projects (around 50% of all staff), the National Research Programme (including around 50% of all staff), various projects funded by ministries, European Aid Funds and the LLU, as well as operational programmes (more than 30%) in project activities related to the development of the technology transfer system, cooperation with industry. It is positive that project realisations involve master's students participating not only in routine activities but in cooperation with the industry, in developing their masters' thesis. In this way, the symbiosis of scientific research with industry is very successful. SAR provides an inventory of the master's thesis defended as a result of this kind of collaboration. The new knowledge acquired in such collaborative projects is integrated into study courses.

4.5. The cooperation of the teaching staff involved in the implementation of the study programme shall be implemented in the development and updating of the content of study courses, in the development of methodological work, in the implementation and integration of scientific achievements in the study process, in the sharing of practical experience. Teaching staff regularly share experiences with each other, finding solutions for improving the content of the study programme and courses. Although there are no specific examples in SAR, the study course descriptions show a successful collaboration between teaching staff. The mechanism of the mutual collaboration between teaching staff is presented but in too brief form, actually, only general information of what should be the matter of the collaboration in the future is stated but not implemented thus it is a shortcoming.

Conclusions by specifying the strengths and weaknesses

There is well-balanced coverage of Academic positions within the study programme. The number of

the staff is increased on account of the changes in the Study programme and it is proven. The Academic staff is permanently working on their professional education and it is very well-identified. The final outcome of their additional education serves in a great manner to the outcomes and aims of the study programme. However, the participation of the Academic staff in international and national projects is not sufficiently detailed but expressed as a percentage only. Furthermore, the mutual collaboration of the Academic staff is not adequately explained since no real examples of such activities are deployed.

Strengths

1. Teaching staff is fully dedicated to the outcomes of the study programme. The number of teaching staff increased considering newly involved courses.
2. Teaching staff is fostering their own additional education in versatile forms and means. This serves very well for the outcomes of the study programme.

Weaknesses

1. Participation of the staff is not clear in both National and International projects.
2. There are no publications mentioned as outcomes of the project. At least the overall number would be important.
2. Collaboration of the teaching staff is not sufficiently detailed.

5. Assessment of the Compliance of the Study Programme "Food 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: Partially compliant

The name of the study programme "Food Science" is compliant with the obtainable degree "Master Degree of Engineering in Food and Beverages Technologies", although it should be noted that name of the degree does not correspond with Cabinet of ministers regulation No. 240, point 22, because of Cabinet of ministers regulation No. 322. 2. annex. Therefore it is recommended to change the name of the degree to "Master Degree in Engineering of Food Production Technology".

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

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx; LLU_apliecinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that if the delivery of the study programme is terminated students of the academic master programme "Food Science" are provided with opportunities to enrol in LLU academic master study programme "Nutrition Science".

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

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx; LLU_apliecinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that if the academic master programme "Food Science" is discontinued and students do not wish to continue their studies at LLU or Riga Technical University, they are reimbursed their tuition fees.

- 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

LLU confirmation concerning the study field Production and processing (No 2.4.-6.2/44 from 26.08.2021.; point 8) states that the official language proficiency of the teaching staff involved in the implementation of the relevant study programme complies 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.

- 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

In accordance with Section 55 of the Law on Higher Education, the establishment of a list of the academic staff involved in the implementation of the programme must describe its qualifications and the duties provided for. No less than five professors and associated professors, who have been elected to academic positions at the relevant university, shall participate in the implementation of the compulsory part of academic programmes and the limited portion of the choice. According to "LLU_apliecinajumi_Razosana_parstrade_EN.docx", the LLU declares that the above requirements are fulfilled.

- 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

The study agreement (18_Study_Agreement_LV_EN_2021.pdf) complies with the requirements of the Cabinet Regulation No. 70 of 23.01.2007 "Regulations to be included in the Study Agreement" (<https://m.likumi.lv/doc.php?id=152072>).

- 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 course descriptions comply with the Law on Institutions of Higher Education (<https://likumi.lv/ta/en/en/id/37967>) Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education. However, the scope, focus and content of course descriptions could be improved and more often updated.

- 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

Document issued from COUNCIL OF HIGHER EDUCATION (No 1.10/23-23.04.2020) proving to support the implementation of the academic master programme Food Science with less than 250 full-time students by Latvia University of Life Sciences and Technologies.

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

Assessment of compliance: Partially compliant

Document confirming that the study programme is in compliance with the education standard can be found in the Annex: "SV - Annex_NO_9.docx". It should be noted that in the Higher Education Law (Section 55, paragraph 2) is written that academic programmes should include "compulsory, restricted and optional courses". In this case, optional courses are missing/not offered.

- 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

Referring to the teaching staff publications (Annex 5. pielikums. Publikāciju, patentu un mākslinieciskās jaunrades saraksts RP.pdf) each member of the teaching staff have either relevant and up to date publications or at least 5 years experience of practical work in the field unrelated to implement the study programme.

- 15 R5 - Overall rating

Assessment of compliance: Partially compliant

The study programme mainly complies with the legal requirements specified in the Law on Higher Education Institutions and other regulatory enactments. But it should be noted that optional courses should be offered within the study programme.

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

According to the information included in SAR and the findings during the expert visit, the provision (informative, material and technical) of the study programme is very satisfactory. The available funding, in general, allows the implementation of the study programme.

- 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

According to the information provided (Annexes: "Macibspeku_saraksts.xlsx" and "Mācībspēku_CV.rar"), teaching staff complies with the conditions of the study programme implementation and the requirements of regulatory enactments.

- 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

Study programme offering high-quality education in food science, the content of study courses is subordinated to the current field, e.g. Food Allergy, Emerging technologies et al. for the development trends of the food industry and science industry.

Conclusions by specifying the strengths and weaknesses

An academic programme with a great practical focus, bringing together essential practical skills. The programme's aim, objectives and achievements are well defined. There is a typical increase in the number of staff associated with an increase in specialised courses. However, it is necessary to clarify the name of the acquired academic degree, including the involvement of academic personnel in projects at different levels should be increased.

Strengths

1. Very well formulated aims and study objectives, which clearly underline the academic nature of a very practice-orientated academic study programme.
2. Very well scientifically food-oriented study programme, graduates become very good food specialists having already practical experiences in most cases.
3. Master students are kind of young supervisors for the bachelor students in different grants and research projects.
4. Well supported facilities such as Laboratories, Library and Hotel.
5. Organization of the study in compliance with domestic rules.
6. The financing ensured by the government and scholarships.

7. Teaching staff is fully dedicated to the outcomes of the study programme. The number of teaching staff increased considering newly involved courses.
8. Teaching staff is fostering their own additional education in versatile forms and means. This serves very well for the outcomes of the study programme.

Weaknesses

1. The name of the degree should be changed, in accordance with Latvian legislation.
2. The weakness of this Master's study programme Food Science is for the previous students' graduates 10-12 years ago to continue their study on the Master's level.
3. Application of the APEL system should make it easier to be successful in continuing their educational level.
4. Collaboration of the teaching staff is not sufficiently detailed.

Evaluation of the study programme "Food Science"

Evaluation of the study programme:

Good

6. Recommendations for the Study Programme "Food Science"

Short-term recommendations

The name of the degree should be changed, in accordance with Cabinet of ministers regulation No. 240, point 22 and Cabinet of ministers regulation No. 322. 2nd Annex.

To create a link between the bachelor and master studies meaning an additional short module to pass before enrolment. It is important for the students not graduated from food studies.

It is necessary to review the study programme in order to offer compulsory, restricted and free courses in accordance with the requirements of the Law on Higher Education (Section 55, paragraph 2).

Long-term recommendations

Introduction of the APEL system. It also helps to enhance the student load on the Master's level.

Students' drop-outs are extremely high, so a plan should be drawn up and implemented to already work proactively with students before a decision on leaving studies is made.

Although student mobility rates are increasing slightly, employers also point to the need for students to be involved in exchange programmes, it would be necessary to establish a framework, or a collaborative model, which would encourage more student involvement in these activities, particularly in the implementation of Erasmus practices.

II. "Wood Materials and Technology" ASSESSMENT

II. "Wood Materials and Technology" ASSESSMENT

1. Indicators Describing the Study Programme

Analysis

The "Wood Materials and Technology" academic master's study programme offers full-time (2 years)

studies in Latvian at 80 KP (120 ECTS). The degree to be obtained — Master's degree of Engineering in Wood processing Technologies. The study programme complies with a national academic education standard of a certain level, its content is designed to prepare highly qualified professionals with creative and independent decision-making ability, which would contribute to the further development of the sector through scientific, pedagogical and managerial professional activities. The LLU home page states that the programme director is one person, while in the report is another person. Master's study programme Wood Materials and Technology is directly related to the objective, tasks, content and developed plan effectively ensures achievement of learning outcomes.

Admission requirements for the study program: bachelor's degree or second level professional higher education in Wood Processing, forest industry, construction, architecture, and design. Although students who have graduated not only from the bachelor's level study programme Wood Processing but also other related study programmes can enter the study programme, because general study courses are also provided, within which students can equalise the level of knowledge on topics such as wood science and the value of the forest, as well as to renew knowledge corresponding to the academic level, the study courses included in the study plan are too specific to be fully mastered without prior knowledge. The admission conditions are explained in detail, available on the LLU website.

Conclusions by specifying the strengths and weaknesses

The goal, tasks and results of the study programme are logically interlinked. The admission requirements are described in detail and are sufficiently clear.

Strengths

1. The study programme is open to a broad range of students, not only those who have acquired basic knowledge in woodworking in bachelor's studies. They are offered additional study courses to obtain the necessary knowledge.
2. A very important and unique study programme for the development of the sector, in which very high-skilled professionals are prepared.

Weaknesses

None

2. The Content of Studies and Implementation Thereof

Analysis

2.1. The “Wood Materials and Technology” academic master's study programme is a 2-year full-time study programme (80 KP, 120 ECTS). The study plan includes compulsory study courses of 32 KP (40%), limited-choice study courses of 23 KP (29%), final work at 25 KP (31%). According to the Law on Higher Education (02.11.1995) according to Article 55, the study programme must include mandatory, limited-choice and optional courses, in this case, no part of the optional courses is available (non-compliance). The study programme is systematically reviewed, new study courses are being developed, existing courses are being combined, and balancing courses are also offered to help students who have not previously graduated from the “Woodworking” professional bachelor's study programme. The content of the study programme corresponds to the field of materials science, representing sub-fields of science: materials physics, intelligent materials and structures, wood materials and technology, polymers and composite materials, biomaterials, and fully complies with aims ensuring successful achievement of the learning outcomes. Latvian Forest Industry

Federation is a long-term supporter of this field of study and in close collaboration study programme also supports the industry preparing specialists in their field with qualifications, skills and competencies corresponding to the requirements of the industry.

2.2. The course descriptions are prepared and sufficiently detailed describing the expected results, the study plan prepared gives an idea of the continuity of the course. An analysis of study courses shows that the obligatory literature for students has not been updated and 18-year-old materials are recommended for learning (e.g. Study Methodology, MežZ6001). However, compulsory Polish literature is not considered to be a successful solution, such as the DREWNO journal (ISSN 1644-3985), at the latest in the sector, MatZ5033. The evaluation criteria presented in the course descriptions are not always sufficiently detailed, in some cases, a valuation scale is not specified. Although the descriptions of study courses have a uniform form, the information contained in them is not unified, there is no common approach in the design of the sources of the literature. The choice of teaching methods is the competence of the course teacher, but due to a small number of students, and regardless of the type of method chosen, the student-centred training method is used very frequently, which provides good results: the study objectives are successfully achieved.

The number of students is relatively small, so special course studies take the form of counselling and seminars with the teacher of each study course. The programme uses a wide variety of teaching methods: lectures, seminars, tests, reports, conferences, but based on individual and group work. For the development of the study process, teachers have prepared lectures and working materials that are available to magistrates and are also distributed with electronic data carriers. Students are required to have humanities and general education courses, specialising starts with the choice of general and special courses, theoretical courses account for nearly half of the total amount of the study programme, while the rest is research practice, the development and defence of master's work. Research and academic activities are carried out in close cooperation with the Research and Development Institute for Forest and Wood Products Ltd, using the technical and scientific capacity of the Institute, a modern laboratory complex and a specific scientific and technical literature available to students, and they are involved in the performance of ongoing industry-commissioned, applied research.

2.3. In a survey conducted in 2013 and 2014 for the purposes of evaluating the study programme, students indicated that they were generally satisfied with the offer of study courses, but also issued recommendations for changes. Following the changes in the survey of students in 2018, it appears that their evaluation has increased, with the possibility of developing masters' work in the framework of research projects highly appreciated. Graduates' views on the study programme have been assessed on the basis of employers' feedback since these employers are mostly graduates of the relevant study programme. In general, graduates highly appreciate both theoretical and practical knowledge acquired by studying. Employers recognise the level of preparedness for Forest Faculty graduates as a good one, stressing that practical thinking and disposal, including from an economic point of view, should be integrated into theoretical knowledge. After a short period of adaptation, the acquired knowledge allows graduates to work successfully in different positions in the woodworking industry.

2.4. Students are offered the opportunity to study abroad under the Erasmus + programme, cooperation agreements have been concluded with universities in France, the Czech Republic, Romania and this opportunity is used by 1-3 students per year. Incoming mobility is 1-2 students a year. Study courses that students undertake during mobility shall be selected taking into account both the expectations of students and the appropriateness of study courses. The recognised study courses must be consistent, also depending on the content compared to the equivalent study courses, so that students do not have to undertake additional study courses.

Conclusions by specifying the strengths and weaknesses

A modern study programme, realized in close cooperation with higher education, employers and scientific research. Unfortunately, student numbers are declining and there are no visible proactive measures to solve this situation. Feedback from students, alumni and employers are very good.

Strengths

1. A modern study programme, which is implemented in close cooperation with research and employers, has a high potential for development.
2. By means of close cooperation with research, the possibility of a Master`s Thesis in the framework of cooperation.

Weaknesses

1. Sustainability is at risk due to the low number of students, and mobility indicators are therefore low.
2. Structure of the programme does not comply with the requirements of the Higher Education Law (Paragraf 55), e.g. optional courses not offered.
3. There is no procedure for systematic (annual) surveys, it is not mandatory for students to provide an evaluation of studies, so it is not possible to obtain an opinion.

3. Resources and Provision of the Study Programme

Analysis

3.1. As mentioned above in the analysis of the study field, the provision of the study programme is very satisfactory. LLU has a well-stocked library with access to local and main international databases. The visit showed a wide range of tools and machines here for carrying out practical study courses, and equipment for testing various material parameters. As a result of close cooperation between the Forest Faculty and the MeKA Institute, a highly developed technical provision is available for the study process and research. A new laboratory building is in the process, which will significantly improve the material and technical base for the implementation of the study programme. This may increase the popularity of higher-level studies in the future. According to the self-assessment report, the available funding, in general, allows for the implementation of the study programme.

3.2. Not applicable.

Conclusions by specifying the strengths and weaknesses

The provision of the study programme is very satisfactory, including the well-stocked library, material and technical provision and equipment available for the study process in cooperation with external institutes. Near completion is a new laboratory building that will significantly improve the provision. The available funding, in general, allows for the implementation of the study programme.

Strengths:

1. Highly developed material and technical provision and successful cooperation with external institutes, which provides an opportunity to use the equipment for the study process and research.
2. Infrastructure is being developed to significantly improve provision.

Weaknesses:

None

4. Teaching Staff

Analysis

4.1. According to the self-assessment report, the number of teaching staff involved in the implementation of the study programme is stable and sufficient to provide the study programme and cover all study courses. In the academic year 2020/2021, the study programme has 16 teaching staff members, the same as there are in the academic year 2013/2014. Given the low popularity of higher-level studies in the field of wood processing, sustainability must be taken into account.

4.2. The teaching staff complies with the requirements of national legislation on required education or relevant practical experience. A review of the annexes to the self-assessment report shows that currently, 13 out of 16 teachers involved in the implementation of the study course have a PhD degree, 3 have a master's degree, but all 3 are pursuing PhD studies, as mentioned in the self-assessment report. The high number of teachers with PhD degrees provides considerable preconditions for the promotion of study quality and research.

4.4. According to the self-assessment report, most of the teaching staff is involved in research work in the framework of various projects and/or preparation of publications or participation in conferences, which are motivated through the salary system. A significant part of teachers' publications is published in international sources, in some cases as a result of international cooperation. Several teachers are representatives of international scientific organizations and working groups. Also, the academic staff participated in the frame of the Erasmus+ programme and performed mobilities at the École Supérieure du Bois (France), Poznan University of Technology (Poland), Polytechnic University of Madrid, etc. The academic staff is also involved in the review of foreign scientific monographs – doctoral theses from Estonian University of Life Sciences (Estonia), Vilnius Academy of Arts (Lithuania), etc. or served as reviewers for scientific articles in various scientific journals, such as the European Journal of Wood and Wood Products, Drvna industrija, Baltic Forestry, Agronomy Research etc.

4.5. According to the self-assessment report, there is active communication and collaboration between the teaching staff involved in the study programme in the format of faculty staff meetings, and such meetings are usually attended by the teaching staff providing the bachelor's and PhD study programmes, which allows assessing the correlation of the study content.

Conclusions by specifying the strengths and weaknesses

The number of teaching staff involved in the implementation of the study programme is sufficient to provide the study programme, but given the low popularity of higher-level studies in the field of wood processing, sustainability must be taken into account. The teaching staff complies with the requirements of national legislation. The extra high number of teachers with PhD degrees provides considerable preconditions for the promotion of study quality. Most of the teaching staff is involved in research work in the framework of various projects. There is active collaboration between the teaching staff involved in the study programme.

Strengths:

1. Extra high number of teachers with PhD degrees, which provides considerable preconditions for the promotion of study quality.
2. Most of the teaching staff is involved in research work on various projects, also in the framework of international cooperation.

Weaknesses:

1. Given the low popularity of higher-level studies in the field of wood processing, the sustainability of teaching staff is potentially affected.

5. Assessment of the Compliance of the Study Programme "Wood Materials and Technology"

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

The sample of the diploma provided by the SAR (Annex: Diploms_koksne_mag_EN.pdf; Diploms_koksne_mag_LV.pdf) is prepared according to regulations on Latvian state-recognized issuance of higher education documents (Cabinet Regulations No. 240 of 13 August 2014 Regulations on the state academical education standard and Law of 2 November 1995, Law on Higher Education Institutions <https://likumi.lv/ta/en/en/id/37967-law-on-higher-education-institutions>).

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

In case of discontinuation, LLU and Riga Technical University shall mutually undertake to provide learning opportunities in relevant programmes for students based on their own choices (Annex: Agreement between_LLU and RTU in case of discontinuation.docx; Vienosanās_LLU un RTU_Razosana_parstrade.edoc).

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx ; LLU_apliecinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that if the delivery of the study programme is terminated students of the academic master programme "Wood Materials and Technology" are provided with opportunities to enrol on the Riga Technical University programmes in accordance with the agreement of 15 December 2020.

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

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx; LLU_apliecinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that if the academic master programme "Wood Materials and Technology" are discontinued and students do not wish to continue their studies at LLU or Riga Technical University, they are reimbursed their tuition fees.

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

LLU confirmation concerning the study field Production and processing (No 2.4.-6.2/44 from 26.08.2021.; point 8) states that the official language proficiency of the teaching staff involved in the implementation of the relevant study programme complies 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.

- 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: Fully compliant

LLU confirmation concerning that in the Master's study programme "Wood Materials and Technology" at least five professors and associate professors elected to academic positions at LLU participate in the delivery of compulsory and restricted elective courses (No 2.4.-6.2/44 from 26.08.2021.; point 4).

- 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

LLU confirmation concerning that in the Master's study programme "Wood Materials and Technology" at least five professors and associate professors elected to academic positions at LLU participate in the delivery of compulsory and restricted elective courses (No 2.4.-6.2/44 from 26.08.2021.; point 4).

- 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

The study agreement (Appendix 18_Studiju_ligums.pdf) complies with the requirements of the Cabinet Regulation No. 70 of 23.01.2007 "Regulations to be included in the Study Agreement" (<https://m.likumi.lv/doc.php?id=152072>).

- 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 course descriptions comply with the Law on Institutions of Higher Education (<https://likumi.lv/ta/en/en/id/37967>) Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education. However, the scope, focus and content of course descriptions could be improved and more often updated.

- 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

Document issued from COUNCIL OF HIGHER EDUCATION (No 1.10/25-23.04.2020) proving to support the implementation of the academic master programme Wood Materials and Technology with less than 250 full-time students by Latvia University of Life Sciences and Technologies.

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

Assessment of compliance: Partially compliant

Document confirming that the study programme is in compliance with the education standard can be found in the Annexes: "6_1-Atbilstība_valsts_izglitības_standartam-Koksnes_materiāli_un_tehnoloģija.docx" and "6_2-Compliance_of_study_programme-Wood_materials_and_technology.docx". But it should be noted that in the Higher Education Law (Section 55, paragraph 2) is written that academic programmes should include "compulsory, restricted and optional courses". In this case, Optional courses are missing/not offered.

- 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

Referring to the teaching staff publications (Annex 5. pielikums. Publikāciju, patentu un mākslinieciskās jaunrades saraksts RP.pdf) all of the teaching staff has either relevant and up to date publications or at least 5 years experience of practical work in the field unrelated to implement the study programme.

- 15 R5 - Overall rating

Assessment of compliance: Partially compliant

The study programme partly complies with the legal requirements specified in Law on Higher Education and other regulatory rules. It's necessary to revise the study programme plan in order to prepare it according to the Higher Education Law (Section 55, paragraph 2).

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

According to the self-assessment report and the findings at the expert visit, the provision (informative, material and technical) of the study programme is very satisfactory. The available funding, in general, allows the implementation of the study programme.

- 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

According to the information provided (Annexes: "Macibspeku_saraksts.xlsx" and "Mācībspēku_CV.rar"), all teaching staff complies with the conditions of the study programme implementation and the requirements of regulatory enactments.

- 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 content of the study programme reflects modern trends and challenges in the field of wood materials and technology.

Conclusions by specifying the strengths and weaknesses

The content of the study programme almost complies with the requirements of regulatory enactments. Highly-qualified academic staff is involved in the implementation of the study programme, which develops active scientific and research activities or are experienced professionals in its field. Learning outcomes are formulated in a student-centred approach following generally accepted good practice, integrated into the various learning and assessment methods of the study course, and proportionate to the learning course outcomes. The management of the study programme ensures internal communication within the study programme, however, the application of the internal quality assurance system of the programme still could be improved.

Strengths

1. The study programme is open to a broad range of students, not only those who have acquired basic knowledge in woodworking in bachelor's studies. They are offered additional study courses to obtain the necessary knowledge.
2. A very important and unique study programme for the development of the sector, in which very high-skilled professionals are prepared in close cooperation with research and employers, it has a high potential for development.
3. Highly developed material and technical provision and successful cooperation with external institutes, which provides an opportunity to use the equipment for the study process and research. Infrastructure is being developed to significantly improve provision.
4. The extra high number of teachers with PhD degrees, which provides considerable preconditions for the promotion of study quality.
5. Most of the teaching staff is involved in research work on various projects, also in the framework

of international cooperation.

Weaknesses

1. Sustainability is at risk due to the low number of students, and mobility indicators are therefore low.
2. Structure of the programme does not comply with the requirements of the Higher Education Law (according to Article 55 the study programme must include mandatory, limited-choice and optional courses, Paragraf 55), e.g. optional courses not offered.
3. There is no procedure for systematic (annual) surveys, it is not mandatory for students to provide an evaluation of studies, so it is not possible to obtain an opinion especially when the number of students is so low.
4. Given the low popularity of higher-level studies in the field of wood processing, the sustainability of teaching staff is potentially affected.

Evaluation of the study programme "Wood Materials and Technology"

Evaluation of the study programme:

Good

6. Recommendations for the Study Programme "Wood Materials and Technology"

Short-term recommendations

Emphasize the availability of highly developed provision in external communication for promoting higher-level studies in the study programme.

Revise the structure of the programme that at the moment does not comply with the requirements of the Higher Education Law (according to Article 55 the study programme must include mandatory, limited-choice and optional courses, Paragraf 55), e.g. optional courses not offered.

Long-term recommendations

Prepare effective procedures for systematic (annual) surveys, with emphasis on student responses, they should be mandatory.

Prepare plans for the popularization of the study programme, including specific proactive actions to attract more students, otherwise, consolidation with other programmes should be considered.

As student dropouts are large, equivalent to the number of graduates, a plan for preventive work with students is needed before a decision on leaving students is taken.

Action is needed for the renewal of academic staff, as the number of leading researchers and lecturers is currently declining in the course of studies, no assistants are involved. Often in this form, young doctors start academic careers, but they do not, in the long term the sustainability of the academic staff is at risk.

Erasmus or other mobility incentive plans are needed because mobility rates are generally low.

II. "Food Science" ASSESSMENT

II. "Food Science" ASSESSMENT

1. Indicators Describing the Study Programme

Analysis

The name of the study programme “Food Science” is compliant with the obtainable degree “Doctoral Degree of Engineering in Food and Beverages Technologies”, and is according to Cabinet of Minister's regulation No. 49.

The study programme is heavily academic and research-orientated, which can also be seen in the study plan (Annex 9. Study plan_Food science.pdf). emphasis definitely is made on improving research skills. Study objectives are compliant with the requirements for an academic study programme and proposed aims. Learning outcomes formulated are in accordance with the aims of the study programme as well.

Admission requirements are sufficient for the particular programme.

As the doctoral study programme “Food Science” is academic, a public defence of the doctoral thesis is sufficient for promotion.

Conclusions by specifying the strengths and weaknesses

The name of the study programme reflects its content and is compliant with the obtainable degree “Doctoral Degree of Engineering in Food and Beverages Technologies”, and is according to Cabinet of Ministers Regulation No. 49.

Strengths

1. Very well formulated aims and study objectives, which clearly represent the research emphasis in the doctoral study process.

Weakness

None

2. The Content of Studies and Implementation Thereof

Analysis

2.1. The information contained in study courses (purpose, results to be achieved) is closely related to the purpose, objectives and results of the study programme. The descriptions of the study courses/ modules, the traineeship, and the final thesis are of high quality and comply with the provisions set forth in the regulatory enactments.

The descriptions of study courses are regulated by a specific form. The content of study courses is updated in line with the guidelines of the science sector in food and drink technology, theoretical and practical aspects of science, the latest directions and lessons. Theoretical course teachers systematically update the content of the courses. Updating the content of courses and the content of promotional works to be developed, in line with developments in the science of related field, is promoted by the results of research by academic staff, publications in scientific journals, participation in international conferences and the organisation of international conferences, congress and other scientific events.

In the study programme, it is written research results publication. Obviously, the experimental work during the first 2 years is not usually so intensive that the results of the experimental work could be

published in the high impact factor journals. The content is relevant and complimentary, and it complies with the aims of the study programme, ensures the achievement of the learning outcomes, and meets the needs of the relevant industry and the scientific trends. It is not fully explained, does the study programme allow on the basis of the subject course in the research direction allow to take additional courses from the Master studies, not taken during the Master studies.

2.2. The study implementation methods, including the evaluation methods, contribute to the achievement of the aims and learning outcomes of the study courses and the study programme. Student-centred learning and teaching principles are taken into account. In accordance with the guidelines of the ESG and the internal laws and regulations of the LLU, the updating of courses in the study programme (2019/2020) takes into account the need to implement a study process with high-quality training, which includes innovative training methods, a supportive study environment and individuality, a learning process based on studies and research results, and provides for the purpose of the study process, also interactivity of study content, structures and study processes relevant to the planned results, by selecting appropriate training methods.

Various training methods - lectures, seminars, practical works, discussions during workshops, exchange of experience are used to achieve the results of studies.

The acquisition of study courses is assessed in the 10-point system using two criteria (qualitative and quantitative). For the qualitative criterion, a 10-point scale is used, for the quantitative criterion, the amount of the study course in credits is counted. In the course of the study programme, compulsory assistance in the workshops and practical works is required. It was not clear could the additional courses outside the university or even during the external visits be counted.

2.3. The outcomes of the surveys conducted among the students, employers, and graduates should be used to improve the quality of studies. The students after their mobility grants definitely know much more about studies abroad in other universities. There were no remarks in the self-assessment report concerning their experience and new ideas for the improvement of the quality of the studies.

Student surveys are conducted periodically, and, unfortunately, membership is optional. A survey of students conducted in 2020 involved 13 students candidates (representing only 53% of students) and applicants for a scientific degree (71% of applicants). In general, respondents were satisfied with studies (92%), the quality of theoretical courses (85% of respondents) was good, but students noted the need for knowledge in data processing, the use of statistical methods to enable theoretical courses to be fully learned. When assessing the study process, 24% pointed to insufficient funding for scientific work, a large proportion (48%) indicated that scholarships were very small and only 14% did not see problems. According to the opinion of the SAR and students that scholarships are indeed very symbolic (EUR 113.83) and inappropriate. This issue is to be addressed in the framework of doctoral schools (by 2021), through the granting of research grants. While the majority of students (75%) participate in project implementation, 1/5 of those surveyed have pointed to the insufficient technical provision to be achieved in coordination with other scientific institutions and universality. A large part of students highlights the need for skills development in the preparation of scientific articles, as well as the difficulty of connecting studies with work.

Unfortunately, only 10 respondents (33% of the total) participated in the graduate survey, most of them working in research, and only 17% responded that studies contributed to career growth. Key recommendations for the study programme: more international courses should be organised,

additional funding opportunities for research should be sought and students should be more involved in research projects.

Although employers are often graduates of this programme at the same time, unfortunately, employers' views have not been clarified. It would be important to know this because employers have a different view of the situation, others might also be advising.

2.4. The students avail themselves of the incoming and outgoing mobility opportunities, and the learning outcomes achieved during such mobility are recognised. ERASMUS mobility opportunities have been used by students, both in the short term and in the long term, in France, Spain, the United States. 1-2 students per year have used this opportunity. Incoming mobility is similar. It is positive that in the last two years, the highest mobility rates have been observed. It should be acknowledged that overall mobility rates are not high. Here is the point of improvement because the teaching staff knows much more and is closer to their colleagues all over the world, and may recommend to their students some of them to have contact with.

Conclusions by specifying the strengths and weaknesses

To enhance the quality of the content of doctoral studies and to put higher requirements for the doctoral defence, it seems to have a better longer study time.

Strengths

1. During the study, the students have different opportunities to work under EU grants, local research grants and industrial projects.
2. Participation in those grants and projects give the students additional practical experience in oral or panel presentation their working results /conferences, congresses etc/ and active participation in scientific discussions.

Weaknesses

1. The weakness is a short time for doctoral study to publish the results in good scientific journals.
2. There is no systematic and 100% participation in the reviews, unfortunately, no employers' surveys have been carried out.

3. Resources and Provision of the Study Programme

Analysis

3.1. The study provision and the other support required for the successful implementation of the study programme is very good. Financial provision is enabled as a tripartite agreement and is efficient. Necessary infrastructure is provided for the successful implementation of the teaching process. The material-technical provision is enabled for the Doctoral students and is fully in line with the Study programme. Electronic attendance to the courses is also enabled through the e-environment of the LLU.

3.2. The LLU provides equipment, services and other relevant needs for the Doctoral students for the successful fulfilment of the programme. Furthermore, other relevant players like Institutes and National research centres are involved or were involved in both the preparation and implementation of the study which is in compliance with required terms and conditions.

Conclusions by specifying the strengths and weaknesses

The provision of the Study programme is very good with excellent overall infrastructure. Moreover,

e-services are of high quality and all necessary information is available on the website of HEI. In addition, the e-environment is extremely relevant these days. Other relevant Institutions are involved in the creation and progress of the study programme.

Strengths

1. Very good research environment coupled with excellent e-services. Materials are available on the website of HEI.
2. Collaboration with other important Institutions.

Weaknesses:

None

4. Teaching Staff

Analysis

4.1. The staff responsible for the implementation of the study programme is well balanced. Furthermore, there is a very good mechanism established for the assistant professors to be able to co-supervise PhD thesis alongside experienced Full professors and Associate professors. Such collaborative work on a PhD thesis enables young scientists to obtain important experience as leaders/ co-leaders of the PhD thesis but at the same time to make their independence in the future.

4.2. Each of the academic staff in the moment of the accreditation has a PhD degree and election from Assistant professor, Associate professor and up to Full professor. They all comply with necessary requirements listed in documentation considering education or/and practical experience. Many of the Academic staff are recognized as LSP experts in the field while 3 of them are also LCS experts in other fields of science which is beneficial for the Study programme in terms of interdisciplinary collaboration between various similar programmes.

4.3. The scientific publications of the Academic staff vary from year to year. However, the number is sufficient for each year since such a difference might occur on account of various reasons. In the last year before accreditation (2020) this number is significantly lower than in the year 2019 but only for WoS publications and for Scopus this difference is not so high. Nevertheless, the papers released by the Academic staff are published in highly indexed Journals indexed in WoS (Thomson Reuters). Therefore, such an overall track record serves convincingly in contribution to the implementation of the study programme.

4.4. The information on the involvement of the Academic staff in scientific research at both domestic and international levels is presented and sufficiently detailed. There is relevant and convincing information about participation in National projects and also significant attendance in International projects of various types (COST, FP7, EEA, ERANET and others). The data per project and researcher's involvement is comprehensively stated and is useful for the study process. The participation of PhD students is also clearly pointed out. Furthermore, gained experience in International projects significantly improved the skills of the Latvian Academic staff. Moreover, additional improvements were obtained for the staff in courses of the higher level.

4.5. Academic staff involved in teaching are active in mutual collaboration. Furthermore, the staff is closely collaborating in courses for the students where mutual knowledge is deployed towards students and it is very positive. Moreover, another positive issue is feedback from the students towards teachers after the end of the courses thus it could be re-evaluated and improved if necessary.

Conclusions by specifying the strengths and weaknesses

There is well-balanced coverage of Academic positions within the study programme. The Academic staff is devoted and motivated to fulfil their duties according to the national laws and requirements of the study programme. There are many LSP experts among the Academic staff and some of them are also qualified to serve within other fields of science which is very promising considering the nature of the study programme. The number of publications significantly decreased for the year 2020 and it was almost twice less than in the year 2019. It is the case for published papers in the Web of Science database but for the Scopus database, the difference is not so high. participation of the academic staff in the national and international projects is high and released results from these activities positively influenced on development and improvement of the study programme. In addition, the students were also involved in the projects and such experience is notably important for their future work.

Strengths:

1. Teaching staff is fully dedicated to the outcomes of the study programme. The number of teaching staff is appropriate.
2. Teaching staff is fostering their own additional education in versatile forms and means. This serves very well for the outcomes of the study programme. Many of them are LSP experts.
3. Participation of the staff is clear in both National and International projects.
4. Collaboration of the teaching staff is sufficiently detailed.

Weaknesses:

1. Significant decrease of published papers in the Web of Science database for the year 2020.

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

The sample of the diploma provided by the SAR (Annex: Doktora_diploms_Pārtikas zinātne_EN (2).pdf ; Doktora_diploms_Pārtikas zinātne_LV (1).pdf is prepared according to regulations on Latvian state-recognized issuance of higher education documents (Cabinet Regulations 202).

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

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx; LLU apiecinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that if the delivery of the study programme is terminated students of the doctoral programme "Food Science" are provided with opportunities to enrol in LLU doctoral programme "Agriculture".

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

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx ; LLU_apliecinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that if the doctoral programme "Food Science" is discontinued and students do not wish to continue their studies at LLU or Riga Technical University, they are reimbursed their tuition fees.

- 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

LLU confirmation concerning the study field Production and processing (No 2.4.-6.2/44 from 26.08.2021.; point 8) states that the official language proficiency of the teaching staff involved in the implementation of the relevant study programme complies 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.

- 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

All the teaching personnel participating in the delivery of the doctoral programme "Food Science" in English have a foreign language proficiency level of at least B2 according to the Common European Framework of Reference for Languages, Appendix: "LLU_apliecinajumi_Razosana_parstrade_EN.docx".

- 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: Fully compliant

LLU confirmation (26.08.2021.-2.4.-6.2/44) concerning at least five persons holding a doctoral degree participating in the delivery of the doctoral programme "Food Science", of which at least three are experts in the field of Food and Beverage Technologies approved by the Latvian Council of Science (LZP).

- 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

According to the Annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx, the academic staff of the academic study programme complies with the requirements.

- 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

The study agreement (18_Studiju_ligums.pdf) complies with the requirements of the Cabinet Regulation No. 70 of 23.01.2007 "Regulations to be included in the Study Agreement" (<https://m.likumi.lv/doc.php?id=152072>).

- 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 course descriptions comply with the Law on Institutions of Higher Education (<https://likumi.lv/ta/en/en/id/37967>) Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education. However, the scope, focus and content of course descriptions could be improved and more often updated.

- 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

Document issued from COUNCIL OF HIGHER EDUCATION (No 1.10/24-23.04.2020) proving to support the implementation of the academic doctoral programme Food Science with less than 250 full-time students by Latvia University of Life Sciences and Technologies.

- 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

According to the information provided (Annexes: "Macibspeku_saraksts.xlsx" and "Mācībspēku_CV.rar"), each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions or a five-year practical work experience in accordance with the Law on Institutions of Higher Education.

- 15 R5 - Overall rating

Assessment of compliance: Fully compliant

The study programme fully complies with the legal requirements specified in the Law on Higher Education Institutions and other regulatory enactments.

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

According to the self-assessment report and the findings at the expert visit, the provision (informative, material and technical) of the study programme is satisfactory. The available funding, in general, allows the implementation of the study programme.

- 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

According to the information provided (Annexes: "Macibspeku_saraksts.xlsx" and "Mācībspēku_CV.rar"), all teaching staff complies with the conditions of the 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 content of the study programme is closely linked to priority research directions in the LLU defined in the LLU strategy, among them are reduction and rational use of production by-products and waste, new products from raw materials of plant and animal origin, their nutritional research, research of biologically active substances in food raw materials and products, food safety and risks.

Conclusions by specifying the strengths and weaknesses

The content of the study programme complies with the requirements written in the legislation, involves highly qualified academic staff active in pedagogical, scientific and research activities and experts in their field. Learning outcomes are clearly formulated, student-oriented teaching methods, integrated into all training courses. The planning of study courses is satisfactory, but it is desirable to review them. The management of the study programme ensures internal communication within the framework of the study programme, but the application of the internal quality assurance system of the programme could still be improved.

Strengths

1. Very well formulated aims and study objectives, which clearly represent the research emphasis in the doctoral study process.
2. During the study, the students have different opportunities to work under EU grants, local research grants and industrial projects.
3. Participation in those grants and projects give the students additional practical experience in oral or panel presentation their working results /conferences, congresses etc/ and active participation in scientific discussions.

4. Very good research environment coupled with excellent e-services. Materials are available on the website of HEI.
5. Collaboration with other important Institutions.
6. Teaching staff is fully dedicated to the outcomes of the study programme. The number of teaching staff is appropriate.
7. Teaching staff is fostering their own additional education in versatile forms and means. This serves very well for the outcomes of the study programme. Many of them are LSP experts.
8. Participation of the staff is clear in both National and International projects.
9. Collaboration of the teaching staff is sufficiently detailed.

Weaknesses

1. The weakness is a short time for doctoral study to publish the results in good scientific journals.
2. Significant decrease of published papers in the Web of Science database for the year 2020.
3. Mutual publications with PhD students are not developed.

Evaluation of the study programme "Food Science"

Evaluation of the study programme:

Good

6. Recommendations for the Study Programme "Food Science"

Short-term recommendations

- | |
|--|
| Planning publication of research articles in high indexed scientific journals (for students and academic staff). |
| Activities to encourage mutual publications preparation. |
| Organise a study programme in such a way as to promote the preparation of high-level publications during doctoral studies. |

Long-term recommendations

- | |
|---|
| To prepare for prolonged doctoral study for 4 years. |
| To prepare for the status of industrial PhD student. |
| Develop support mechanisms to promote publicity, including financial ones, which would already work during the preparation of publications. |

II. "Wood Materials and Technology" ASSESSMENT

II. "Wood Materials and Technology" ASSESSMENT

1. Indicators Describing the Study Programme

Analysis

The doctoral study programme "Wood Materials and Technology" offers full-time (3 years) studies in Latvian at 120 KP (180 ECTS). The degree to be obtained - Scientific PhD in Material Science. The scientific degree to be granted has been determined in accordance with MK Regulation No 40-23.01.2018, "Regulations on Science Sectors and Subsectors, Procedures ...", also to MK

Regulation No 1000-27.12.2005 “Regulations regarding the delegation of the right to grant a doctorate (promotion) to universities”. The aim, tasks and results of the study programme are logical and interlinked. The conditions of admission are explained in detail (also in English), available on the LLU website.

Conclusions by specifying the strengths and weaknesses

The aim, tasks and results of the study programme are logically interlinked. The admission requirements are described in detail (also in English) and are sufficiently clear.

Strengths

1. A unique study programme.
2. A very significant programme that promotes the development of the national sector.

Weakness

1. None

2. The Content of Studies and Implementation Thereof

Analysis

2.1. The doctoral programme “Wood Materials and Technology” is a 3-year full-time study programme (120 KP, 180 ECTS). The study plan includes theoretical study courses of 20 KP (17%) and promotion work of 100 KP (83%), which includes both the work on the PhD Thesis and the preparation of publications, participation in conferences.

No structural changes have been made to the study programme. The activities included in the study plan are satisfying, but offering the special course in the last semester of the studies, when the promotion work is nearly completed, is not a successful solution. The mapping of study results shows that study courses fully fit into the study programme, ensure achievement of the objectives, all teaching steps are logical and interrelated, comply with the objectives and tasks of the study programme.

The course descriptions are prepared and sufficiently detailed describing the expected results. Although the descriptions of study courses have a uniform form, the information contained in them is not unified, there is no common approach in the design of the sources of literature. The information contained in study courses (purpose, results to be achieved) is closely related to the purpose, objectives and achievable results of the study programme, with an appropriate description given in the mapping of the results. Key research pathways developed: wood material science, wood handling and recycling technologies, marketing and logistics of wood and wood products. The selected research topics are modern and relevant to developments and are closely related to the so-called European Green Direction development. In order to ensure continuity of staff, the development of scientific works takes into account good practices involving bachelor's and master's level students in the performance of individual promotion tasks.

2.2. The evaluation criteria presented in the course descriptions are not always sufficiently detailed, in some cases, the evaluation system and scale are not specified. Different methods are used to achieve the results of studies: lectures, seminars, practical works, own-initiative work, doctoral debates during workshops, the discussion between candidates, participation of doctoral candidates in conferences and seminars with reports, exchange of experience on foreign research institutions, preparation and presentation of publications, meetings of intermediate results and discussions in the

section meetings. In assessing the results of studies, the evaluation principles set out in Cabinet Regulation No. 240/2014, Regulations on the National Standards for Academic Education, are used: the principle of openness, the principle of reviewing the evaluation, the principle of the mandatory assessment et al. of compliance and the LLU Doctors' Statute (approved by the Senate Decision No 8-201 on 11 November 2015). Since 2019/2020, when study courses were updated and teaching methods were reviewed, a student-centred study process with intensive quality training which includes innovative training methods, supporting study environments and individuals, study and research results based study processes effectively leads to achievements of the learning outcomes.

2.3. A survey of students conducted in 2020 (n = 6) showed that the majority were satisfied with studies, the courses offered were welcomed, the highest study course on scientific writing, while criticism was delegated by the study methodology and English, which were found to be insufficient for the level of doctoral studies. Small scholarships, including the unavailability of research infrastructure and unclear conditions of use, are particularly frustrated. Students have very great difficulty in combining their studies with work and lack information about mobility opportunities. Three (3) graduates were also surveyed, finding answers that future professional activity is taking place in research and science and that graduates would be happy to engage in scientific projects. Unfortunately, employers' surveys haven't been conducted.

2.4. During the reference period, doctoral students have not participated in the ERASMUS mobility programme, just one (1) student has been on science mobility trips. There has been no foreign incoming mobility. And it should be noted, that both mobility rates are very low.

Conclusions by specifying the strengths and weaknesses

An extremely important programme for Latvia's economy, but there are no proactive solutions for its success. There is a perception that communication between students and academic personnel is not successful, there are problems with information available for students. A critically low number of students, mobility numbers are also not high.

Strengths

1. Educational programme unique and vitally important for the Latvian economy

Weakness

1. Sustainability is at risk due to the low number of students.
2. Mobility indicators are critically low.
3. The frequency of surveys and the results obtained are limited, unfortunately, employers' views have not been established at all.

3. Resources and Provision of the Study Programme

Analysis

3.1. As mentioned above in the analysis of the study field, the provision of the study programme is very satisfactory. LLU has a well-stocked library with access to local and main international databases. The visit showed a wide range of equipment for testing various material parameters. As a result of close cooperation between the Forest Faculty and the MeKA Institute, a highly developed technical provision is available for the study process and research. A new laboratory building is in the process, which will significantly improve the material and technical base for the implementation of the study programme. According to the self-assessment report, the available funding, in general, allows for the implementation of the study programme.

3.2. As mentioned above, the provision of the study programme is very satisfactory, including the equipment available for the research. Opportunities for research in external organisations are also available for PhD students due to the close cooperation between Forest Faculty and MeKA Institute and the Latvian State Institute of Wood Chemistry.

Conclusions by specifying the strengths and weaknesses

The provision of the study programme is very satisfactory, including the well-stocked library, material and technical provision and equipment available for the study process in cooperation with external institutes. The available funding, in general, allows for the implementation of the study programme.

Strengths:

1. Highly developed material and technical provision and successful cooperation with external institutes, which provides an opportunity to use the equipment for the study process and research.
2. Infrastructure is being developed to significantly improve provision.

Weaknesses:

None

4. Teaching Staff

Analysis

4.1. According to the self-assessment report, the composition of the teaching staff has been stable during the reporting period, but the number of teachers who can supervise PhD thesis in accordance with the regulatory documents has significantly decreased. Currently, only 4 potential supervisors of PhD thesis are involved in the study programme. There is a need for activities to ensure the sustainability of the study programme.

4.2. The teaching staff complies with the requirements of national legislation on required education or relevant practical experience. The qualifications and number of the teaching staff is in accordance with Section 55 (1) (3) of the Universities Law and respect the LLU "Doctoral Studies Regulations" (approved by Senate Decision No. 8-201 of 11 November 2015). A review of the annexes to the self-assessment report shows that 7 out of 8 teachers have a PhD degree. According to the self-assessment report, currently, the minimum required number (three) of Latvian Council of Science experts in the respective field are attached to the study programme.

4.3. According to the self-assessment report, the teaching staff involved in the study programme actively participates in various research activities within the framework of national and international research programs. The research results are published in international databases (mostly WoS and Scopus; in 2020 there were published 19 papers). PhD students are involved in research activities.

4.4. According to the self-assessment report, the teaching staff involved in the study programme actively participates in various research activities within the framework of national and international research programs, including ERAF-funded projects, etc. Teachers were also involved in the Skilled UP training project as a result of LLU and industry cooperation. Master's students and PhD students also participate in the implementation of projects, including the development of their PhD thesis.

4.5. According to the self-assessment report, there is active communication and collaboration between the teaching staff involved in the study programme in the format of faculty staff meetings,

and such meetings are usually attended by the teaching staff providing the bachelor's and master's study programmes. As the self-assessment report shows, students also indicate in interviews that some theoretical study courses in the PhD study programme are repeated from lower-level studies, however, they have their own specifics. It is possible that some of the theoretical study courses could be optimised.

Conclusions by specifying the strengths and weaknesses

The composition of the teaching staff has been stable during the reporting period, but the number of teachers who can supervise PhD thesis has significantly decreased (currently, 4 potential supervisors of PhD thesis are involved in the study program). The teaching staff complies with the requirements of national legislation, currently, the minimum required number (three) of Latvian Council of Science experts in the respective field are attached to the study programmes. Teachers are actively involved in national and international research activities and prepare publications. Master's students and PhD students also participate in the implementation of projects. There is active collaboration between the teaching staff involved in the study programme in the format of faculty staff meetings.

Strengths:

1. Teaching staff are actively involved in national and international research activities and actively prepare publications in international databases.
2. Master's students and PhD students also participate in the implementation of projects, including the development of their PhD thesis.

Weaknesses:

1. Extra-low number of potential supervisors of PhD thesis and Latvian Council of Science experts of the respective field in the study programme.

5. Assessment of the Compliance of the Study Programme "Wood Materials and Technology"

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

The sample of the diploma provided by the SAR (Annex: Doktora_diploms_Koksnes_mater_tehmol_LV (1); PhD diploma Wood Materials and Technology.pdf is prepared according to regulations on Latvian state-recognized issuance of higher education documents (Cabinet Regulation No. 202).

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

In case of discontinuation, LLU and Riga Technical University shall mutually undertake to provide learning opportunities in relevant programmes for students based on their own choices (Annex: Agreement between_LLU and RTU in case of discontinuation.docx ; Vienosanās_LLU un

- 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

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx ; LLU aplicinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that if the doctoral programme "Wood Materials and Technology" are discontinued and students do not wish to continue their studies at LLU or Riga Technical University, they are reimbursed their tuition fees.

- 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

LLU confirmation concerning the study field Production and processing (No 2.4.-6.2/44 from 26.08.2021.; point 8) states that the official language proficiency of the teaching staff involved in the implementation of the relevant study programmes complies 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.

- 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: Fully compliant

According to the annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx; LLU aplicinajums_Razosanas_parstrades_virzienam.edoc, LLU confirms that at least five persons holding a doctoral degree participate in the delivery of the doctoral programme "Wood Materials and Technology", of which at least three are experts in the field of programmes Materials Engineering approved by the Latvian Council of Science (LZP).

- 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

According to the Annex: LLU_apliecinajumi_Razosana_parstrade_EN.docx, the academic staff of the academic study programme complies with the requirements.

- 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

The study agreement (18_Studiju_ligums.pdf) complies with the requirements of the Cabinet Regulation No. 70 of 23.01.2007 "Regulations to be included in the Study Agreement" (<https://m.likumi.lv/doc.php?id=152072>).

- 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 course descriptions comply with the Law on Institutions of Higher Education (<https://likumi.lv/ta/en/en/id/37967>) Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education. However, the scope, focus and content of course descriptions could be improved and more often updated.

- 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

Document issued from COUNCIL OF HIGHER EDUCATION (No 1.10/26-23.04.2020) proving to support the implementation of the academic doctoral programme Wood Materials and Technology with less than 250 full-time students by Latvia University of Life Sciences and Technologies.

- 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

According to the information provided (Annexes: "Macibspeku_saraksts.xlsx" and "Mācībspēku_CV.rar"), each member of the academic staff has either publications published in

reviewed editions within the last six years, including international editions or a five-year practical work experience in accordance with the Law on Institutions of Higher Education.

15 R5 - Overall rating

Assessment of compliance: Fully compliant

The study programme fully complies with the legal requirements specified in the Law on Higher Education Institutions and other regulatory enactments.

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

According to the self-assessment report and the findings at the expert visit, the provision (informative, material and technical) of the study programme is very satisfactory. The available funding, in general, allows the implementation of the study programme.

- 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

According to the information provided (Annexes: "Macibspeku_saraksts.xlsx" and "Mācībspēku_CV.rar"), all teaching staff complies with the conditions of the study programme implementation and the requirements of regulatory enactments.

- 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 content of the study programme is closely linked to priority research directions in the LLU defined in the LLU strategy, also research directions have been associated with innovations in the wood processing sector (commercialization potential), also the thesis addressing fundamental science providing new knowledge for future development of the material science sector.

Conclusions by specifying the strengths and weaknesses

The content of the study programme complies with the requirements written in the legislation, involves highly qualified academic staff active in pedagogical, scientific and research activities and experts in their field. Learning outcomes are clearly formulated, student-oriented teaching methods, integrated into all training courses. The planning of study courses is satisfactory, but it is desirable to review them. The management of the study programme ensures internal communication within the framework of the study programme, but the application of the internal quality assurance system of the programme could still be improved.

Strengths

1. A unique and vitally important for the Latvian economy.
2. Highly developed material and technical provision and successful cooperation with external

institutes, which provides an opportunity to use the equipment for the study process and research. Infrastructure is being developed to significantly improve provision.

3. Teaching staff are actively involved in national and international research activities and actively prepare publications that are included in international databases.

4. Master's students and PhD students also participate in the implementation of projects, including the development of their PhD thesis.

Weaknesses

1. Sustainability of the study programme is at risk due to the low number of students.

2. Mobility indicators are critically low.

3. Extra-low number of potential supervisors of PhD thesis and Latvian Council of Science experts of the respective field in the study programme.

Evaluation of the study programme "Wood Materials and Technology"

Evaluation of the study programme:

Good

6. Recommendations for the Study Programme "Wood Materials and Technology"

Short-term recommendations

Increase the number of potential supervisors of PhD thesis and Latvian Council of Science experts of respective fields in the study programme.

Organise annual surveys of students, graduates and employers, because currently, according to the SAR, there was a view from students (4 students), graduates (3 people), while the employer's opinion was not clarified. The process of conducting these surveys should be improved.

Long-term recommendations

Develop a plan for increased activities for both incoming and outgoing mobility.

To ensure the continuity of studies and the number of students, prepare student recruitment plans to involve students from both bachelor and master level studies as listeners.

Develop support mechanisms to promote publicity, including financial ones, which would already work during the preparation of publications.

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 set out a Quality Policy and a Framework designed as a model of excellence, has a clear methodology for evaluation of study results, has methods and principles for gathering feedback from students, employers and alumni. The results of the surveys currently obtained show a shortcoming in their implementation: they are voluntary, not carried out frequently enough, and not in all cases the views of employers, which are very important. Mechanisms for approval of changes to the study fields are mostly functioning properly, but some shortcomings were identified, especially in feedback methodology.
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	The group of cooperation partners is wide: governmental institutions, non-governmental and professional organisations, scientific institutes and other universities, employers. For the purpose in order to cooperate in study and research fields, bilateral agreements were conducted with 33 universities abroad.
R3 - Compliance of scientific research and artistic creation with the development level thereof (if applicable).	Fully compliant	International scientific conferences were organized regularly, research results are also demonstrated at the annual event "European Researchers' Night", all involved faculties also organise student scientific conferences. International research activities of the academic staff are within COST, FP7, Horizon2020, Nordplus et al. projects. LLU applies various forms of innovation - marketing innovations, organizational innovations, process innovations and product innovations.

Requirements	Requirement Evaluation			Comment
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.		Partially compliant		The shortcomings identified in the previous assessment of the study field have been addressed, but in expert opinion, only partially.

Assessment of the Requirements for the Relevant Study Programmes of the Study Field

No.	Study programme	R5	R6	R7	R8	Evaluation of the study programme (excellent, good, average, poor)
1	Food Technology (42541)	Fully compliant	Fully compliant	Fully compliant	Not relevant	Good
2	Wood Processing (42543)	Partially compliant	Fully compliant	Fully compliant	Not relevant	Good
3	Design and Crafts (42548)	Fully compliant	Fully compliant	Fully compliant	Not relevant	Good
4	Food Quality and Innovations (43541)	Fully compliant	Fully compliant	Fully compliant	Not relevant	Good
5	Food Science (45541)	Partially compliant	Fully compliant	Fully compliant	Fully compliant	Good
6	Wood Materials and Technology (45543)	Partially compliant	Fully compliant	Fully compliant	Fully compliant	Good
7	Food Science (51541)	Fully compliant	Fully compliant	Fully compliant	Fully compliant	Good

No.	Study programme	R5	R6	R7	R8	Evaluation of the study programme (excellent, good, average, poor)
8	Wood Materials and Technology (51543)	Fully compliant	Fully compliant	Fully compliant	Fully compliant	Good

The Dissenting Opinions of the Experts

None