

JOINT REPORT BY THE EXPERTS ON THE INCLUSION OF A LICENSED STUDY
PROGRAMME ON THE ACCREDITATION FORM

Latvia University of Life Sciences and Technologies

STUDY FIELD

Architecture and Construction

PROFESSIONAL BACHELOR STUDY PROGRAMME

Geoinformatics and Remote Sensing

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I. Summary of the Assessment

The study programme meets the majority of the accreditation standards, demonstrating compliance with the set academic, structural, and quality requirements. However, some areas need improvement to fully meet international benchmarks and emerging industry trends.

Positive Aspects:

1. **Curriculum Design and Content:**

- The curriculum is comprehensive and aligns well with the programme's learning outcomes.
- The course content covers essential theoretical knowledge and practical skills, adequately preparing students for professional roles in the field.

2. **Faculty Qualifications:**

- The faculty members have strong academic backgrounds and industry experience, which enhances the learning experience.
- Continuous professional development of staff is in place to maintain high teaching standards.

3. **Learning Resources and Infrastructure:**

- The programme has access to modern facilities, such as well-equipped laboratories, libraries, and digital platforms, supporting student learning.
- Online learning resources are accessible and adequately support the blended learning approach.

4. **Industry Engagement and Employability:**

- The programme has established strong partnerships with industry stakeholders, offering internships and practical experiences that boost student employability.
- Alumni success and industry feedback suggest the programme aligns with current job market needs.

5. **Student Support Systems:**

- Comprehensive academic advising and student support services are in place, including career guidance and counseling.
- The university offers extracurricular opportunities that contribute to student development.

Negative Aspects:

1. **Curriculum Modernization:**

- The curriculum, while solid, requires more frequent updates to reflect the latest industry innovations and emerging technologies.
- Certain elective courses could be more varied to allow students greater flexibility in pursuing specialized interests.

2. **Assessment and Evaluation:**

- Assessment methods are somewhat traditional, relying heavily on exams and assignments. A broader range of assessment types, such as project-based

evaluations or real-world case studies, could be introduced to address diverse learning styles.

3. Internationalization:

- There are limited opportunities for students to participate in international exchange programmes or collaborate with foreign institutions, which may hinder the global exposure needed for certain fields.

4. Feedback Mechanisms:

- While student feedback is collected, the processes for incorporating this feedback into programme improvements need to be more structured and transparent. There is a perceived delay in implementing changes based on student suggestions.

In conclusion, while the study programme is fundamentally strong and complies with most accreditation requirements, addressing the highlighted areas for improvement will further enhance its quality and global competitiveness.

II. Description of the study programme

1. Indicators describing the Study Programme

1.	Name of the higher education institution/college	Latvia University of Life Sciences and Technologies
2.	Name of the study field corresponding to the study programme	Architecture and Construction
3.	Name of the study programme	Geoinformatics and Remote Sensing
4.	Code of the study programme in accordance with the Latvian Education Classification	42581
5.	Language of study programme implementation	Latvian and English
6.	Amount, duration, form and type of the study programme (also distance-learning)	240 CP, 4 years full time, 5 years part time,
7.	Admission requirements	Secondary education. For English language studies, a student shall also have at least B2 level of English
8.	Address of the study programme implementation, indicating whether the study programme is implemented in the branches of the higher education institution / college	Faculty of Forest and Environmental Sciences, Akadēmijas street 19, Jelgava, LV-3001, Latvia
9.	Degree, professional qualification or degree and professional qualification to be awarded	Professional Bachelor Degree in Geoinformatics and Remote Sensing, Professional qualification – Geoinformatics engineer
10.	Date of study programme licensing	29.06.2022.
11.	Date of starting the implementation of the study programme	01.09.2022.
12.	Accreditation term of the study field	27.10.2028.

Analysis

1. Compliance of the study programme with the study field.

The Professional Bachelor's Study Programme "Geoinformatics and Remote Sensing" ensures the fulfilment of the goals included in the LBTU strategy as, for example, directly promoting the digitization plan, competences and promotes modern education that meets the requirements of the future labour market. The development of competencies, entrepreneurship and creativity necessary for the implementation of the priorities of the Smart Specialization Strategy of Latvia. The field of study plays an important role in the overall development of the Latvian economy, as it includes specialisations and fields closely related to sustainable land management, geoinformation and planning, etc. All these aspects are highlighted in a number of international

strategies of relevance today, such as the UN General Assembly resolution of 25 September 2015 “Transforming Our World: the 2030 Agenda for Sustainable Development”. It is the first global document to provide for universal and comprehensive action. This resolution sets out well known 17 sustainable development goals. This is reflected in many other United Nations documents, such as the Global Geodetic Observation System (GGOS) documents, which are constantly being improved. These initiatives are also related to the provision of biodiversity, ecosystem services, development of climate-smart solutions (EU Biodiversity Strategy; EU Green Infrastructure Strategy, etc.). Also, the objective of the Geospatial Information Law (2010) justifies the need to establish an institutional framework in the field of geospatial information, including the conditions for the production, use, exchange and maintenance of geospatial information (including geodetic and cartographic master data) in order to create a geospatial information infrastructure in the Republic of Latvia. Likewise, work continues with the mentioned law, improving a comprehensive concept and framework for future joint work. Similar findings and objectives are also included in the Land Management Law (2015). Detailed descriptions are available on the portal www.likumi.lv.

Experts agree that the new Faculty of Forest and Environmental Sciences of LBTU has historically accumulated many years of experience in the implementation of sub-sectors and programmes in the field of study "Architecture and Construction".

The study programme Geoinformatics and Remote Sensing aligns well with the Architecture and Construction field due to its focus on spatial data analysis, geomatics, and GIS technologies. These are fundamental areas of study within urban planning, infrastructure development, and environmental management, all of which are crucial for the construction and architectural industries. The study programme integrates geospatial technologies and remote sensing applications, ensuring that students are equipped with the skills needed to solve real-world problems related to land use, environmental monitoring, and urban development. The undergraduate study programme lays a strong foundation in geomatics, surveying, and GIS, introducing students to the basics of data collection, spatial analysis, and geospatial software tools. Several faculties are involved in the realization of the study programme, which diversifies it by including elements of data science, geoinformation, engineering, environmental management, geodesy, ensuring its wide applicability in current topics (expert interviews with lecturers and employers). This is essential for future roles in fields such as land surveying, construction planning, and environmental consulting. It also emphasizes research, pushing students to engage with current trends in spatial analysis and urban planning technologies (LBTU report for the professional bachelor, page 3).

The study programme’s close connection to industry trends is another key factor. Strong focus on geospatial technologies and remote sensing that are directly applicable to architecture and construction works. By collaborating with industry representatives from the European Space Agency and local enterprises, the study programme ensures that students gain practical knowledge of the latest tools and methodologies. The study programme is highly interdisciplinary, incorporating elements of data science, engineering, forestry and environmental management, ensuring broad career applicability (expert interviews with

lecturers and employers). Moreover, an informal advisory board, which includes both local and international experts, helps keep the study programme updated with the latest developments in geoinformatics and remote sensing (LBTU report for the professional bachelor, page 17).

2. Compliance between the title of the study programme, the degree to be awarded and the qualification (if applicable).

The title of the study programme, Geoinformatics and Remote Sensing, accurately represents the core areas of study. The focus on geoinformatics, which includes spatial analysis, mapping, and data visualization, combined with the use of remote sensing technologies, ensures that students are equipped with the skills to analyze geospatial data, which is essential for the development of infrastructure, environmental protection, and construction projects. The Professional Bachelor's degree offers students a comprehensive understanding of geospatial technologies and their application in environmental management, urban planning, and surveying. The qualifications gained at this level provide entry into the job market as GIS specialists, surveyors, and remote sensing analysts. The degree and qualification titles reflect the skills and knowledge areas that students acquire during the study programme. The transition from undergraduate to graduate study represents a progression from practical skills development to advanced research capabilities, aligning well with both academic and professional standards (LBTU report for the professional bachelor, pages 3, 4). The study programme's title clearly reflects its core focus areas: geoinformatics and remote sensing, ensuring transparency in what students can expect to learn (LBTU report for the professional bachelor, page 6).

3. Compliance of the study programme indicators (study programme code, amount, implementation duration) with the learning outcomes defined for it.

The study programme indicators, including the code, amount of credits, and implementation duration, are fully compliant with Latvian higher education standards. These indicators are designed to ensure that students achieve the necessary learning outcomes, which are centered around spatial data analysis, remote sensing, surveying and the use of geoinformatics technologies. The bachelor study programme has an appropriate duration and credit structure, allowing students to build foundational knowledge in geospatial technologies, geomatics, and GIS applications. The credits are well-distributed across theoretical courses, practical exercises, and fieldwork, as we see it in detail in Annex 1 of the LBTU report, ensuring that students develop both academic knowledge and practical skills (LBTU report for the professional bachelor, page 6).

The study programme duration and credits are sufficient for students to achieve the learning outcomes, which include proficiency in remote sensing, GIS software such as ArcGIS and MicroStation, spatial data analysis, etc. The graduation thesis of the professional bachelor's study programme allows students to develop advanced practical skills and provide new

knowledge in the field of geoinformatics and geomatics (LBTU report for the professional bachelor - Annex 1).

Conclusions, strengths and weaknesses

The Geoinformatics and Remote Sensing program at LBTU is highly compliant with both national educational standards and the needs of the architecture and construction field. It provides students with relevant skills to engage in both research and professional activities in the fields of spatial data analysis, urban planning, forestry, geomatics and environmental monitoring. The study programme provides students with the skills and knowledge required to succeed in geospatial professions while maintaining a strong emphasis on practical applications and research. The study programme is well-structured in terms of its duration, credit load, and content, ensuring that students gain the necessary skills and knowledge for careers in geoinformatics and remote sensing.

Strengths:

1. The study programme's title clearly reflects its core focus areas: geoinformatics and remote sensing. At the same time, it is also attractive and fashionable.
2. Clear alignment between the study programme title, degree awarded, and the skills students acquire, ensuring both academic and professional recognition.
3. The study programme is highly interdisciplinary, incorporating elements of data science, engineering, forestry, geomatics and environmental management.
4. Balanced distribution of study courses between theoretical and practical components, duration of studies, ensuring students achieve effective learning results - corresponding to the demand of the labour market.

Weaknesses: None identified

2. Topicality of the study programme

Analysis

1. The topicality of the study programme and the compliance of the content with the tendencies of the industry (area), the changes made since the licensing of the study programme.

The Professional Bachelor study programme “Geoinformatics and Remote Sensing” remains aligned with current industry needs, focusing on geomatics and remote sensing technologies. For instance, the programme integrates the use of GIS systems and drones, which are widely employed in industries such as agriculture, forestry, and urban planning. Additionally, using real-time geospatial data gives students hands-on experience with the tools and technologies

used in the industry. The study programme's content is built on regulatory standards for engineers in geomatics, ensuring that graduates are equipped with the skills needed for roles in land surveying, spatial data analysis, and remote sensing, which are in demand in various industries. Modern technologies, including drones and GIS systems, have been integrated into the curriculum through courses such as Geospatial Data Processing and Remote Sensing Technologies, reflecting the latest technological advancements in the field (LBTU report for the professional bachelor, page 18).

Since the study programme's licensing, additional updates have been made, such as the planned construction of a new drone laboratory to enhance practical training (LBTU report for the professional bachelor, page 17). Also, the study programme was converted to European credit point system (ECTS) by adapting the study work hours (LBTU report for the professional bachelor, page 9). Efforts to increase the study programme's international visibility are ongoing, with partnerships through Erasmus and collaborations with universities in Lithuania and Estonia. There are also plans to create a European university alliance to attract more foreign students (LBTU report for the professional bachelor, page 18). However, greater industry involvement in curriculum development and decision-making processes could improve the study programme further, ensuring that it remains closely aligned with evolving industry needs.

2. Dynamics of the student number and prospects of employment for graduates.

Student enrolment remains low, with only 5 new students enrolling in 2022 and 4 students in 2023, highlighting a need for more effective recruitment strategies (LBTU report for the professional bachelor, page 18). Based on the information, received during the site visit interviews, industry representatives have shown strong interest in supporting the study programme, offering potential collaboration through guest lectures, internships, and scholarships. These partnerships, though, need to be more structured and formalised. Graduates from the study programme are well-positioned for employment, as there is a high demand for geoinformatics professionals in sectors such as agriculture, transport logistics, and land management. The study programme's unique focus and the interdisciplinary nature of the curriculum ensure that graduates are competitive both locally and internationally.

Conclusions, strengths and weaknesses

The study programme is relevant and meets industry demand, with its content being aligned with current trends in geomatics and remote sensing technologies. Modern technologies such as drones and GIS systems are integrated into the curriculum, ensuring students are trained in up-to-date skills. However, stronger and more consistent collaboration with industry is needed, alongside efforts to boost student enrolment.

Strengths:

1. The study programme is interdisciplinary and addresses a well-documented need in the geoinformatics field.

2. Industry representatives are eager to collaborate with the university and support the study programme.
3. Graduates have strong employment prospects due to the high demand for geoinformatics professionals.

Weaknesses:

1. Low student enrolment, particularly among foreign students.
2. Limited industry involvement in curriculum development, invited lectures, and excursions to companies.

3. Resources and provision

Requirement [R1]: Compliance of the study base, science base (if applicable), information base (including library), material and technical base and financial base with the conditions for the implementation of the study programme and for ensuring the achievement of learning outcomes.

Analysis

The material and technical base for the study programme is currently sufficient, with the GIS Competence Centre and survey laboratories providing essential tools and software for student learning (LBTU report for the professional bachelor, page 16). The university is also constructing a new drone laboratory, which will further enhance students' practical experience once completed (LBTU report for the professional bachelor, page 17). However, some of the existing equipment is ageing, and maintaining up-to-date tools and resources could present financial challenges in the future, particularly as technology advances rapidly. Industry collaboration could play a significant role in helping to provide resources and access to updated technology. The current technical infrastructure, including high-performance workstations and modern GIS software such as MicroStation and ArcGIS, is regularly maintained and upgraded with the support of project funding (LBTU report for the professional bachelor, page 17). However, continued investment will be needed to sustain this level of support in the long term.

In terms of library resources, students have access to both digital and physical materials, including key databases such as EBSCO and ScienceDirect, which provide comprehensive access to academic journals and geospatial research materials (LBTU report for the professional bachelor, page 16). However, there is a need to continue expanding printed materials in niche areas like remote sensing to better support students' research needs. Regarding the financial provision, the study programme benefits from adequate state funding, which supports both the acquisition of new equipment and the maintenance of existing resources. However, as the demand for advanced technology increases, additional funding and industry collaboration may be needed to ensure that resources remain competitive and relevant to industry standards (LBTU report for the professional bachelor, page 17).

Conclusions, strengths and weaknesses

The study programme is well-supported by existing resources, with the addition of the new drone laboratory further improving practical training. However, keeping equipment and tools up to industry standards could become challenging without additional financial support or increased industry collaboration.

Strengths:

1. The imminent opening of the drone laboratory will provide students with valuable hands-on experience.
2. GIS software and existing technical equipment currently meet student needs and support the curriculum.
3. The GIS Competence Centre and technical infrastructure provide a solid foundation for student learning.

Weaknesses:

1. Maintaining up-to-date equipment may become financially challenging in the future as technology evolves.

Evaluation of the requirement [R1]:

Requirement	Compliance			Justification
	Fully compliant	Partially compliant	Non-compliant	
Compliance of the study provision, science provision (if applicable), information provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and for ensuring the achievement of learning outcomes.	X			Adequate technical resources, including the GIS Competence Centre and survey labs, with planned enhancements like the drone laboratory. Comprehensive access to library resources and sufficient financial support to maintain and upgrade equipment.

Requirement [R2]: Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements of the laws and regulations.

Analysis:

The Geoinformatics and Remote Sensing study programme at LBTU is delivered by a qualified team of academic and visiting staff whose expertise aligns with both national regulations and the study programme's objectives. The mix of professors, associate professors, lecturers, and visiting academic staff brings a well-rounded balance of academic strength and industry relevance. The qualifications and engagement of these staff members are key persons to ensuring the study programme's effective implementation and the achievement of its learning outcomes. In total, 29 teaching staff members, including 5 professors, 6 associate professors, 4 assistant professors, 2 elected lecturers, 12 visiting lecturers, are involved in the implementation of the study programme (LBTU report for the professional bachelor - Annex 4).

1. **Compliance with National Qualification Requirements:** Latvian regulations mandate that higher education institutions have a minimum number of academic staff holding doctoral degrees involved in the delivery of study programmes (LBTU report for the professional bachelor - Annex 4). Many of the professors involved in the study programme hold PhDs in geospatial sciences and have substantial academic credentials. Their research expertise spans crucial areas such as geospatial data analysis, urban planning, surveying technologies, and drone-based remote sensing. This ensures that the curriculum is delivered by professionals who are not only well-versed in theoretical concepts but are also active contributors to advancements in the field.
2. **Visiting Professors and Lecturers:** The involvement of visiting professors and lecturers further enriches the study programme by adding expertise from international institutions and industry leaders. These visiting academics bring specialized knowledge and practical insights into emerging trends. Visiting lecturers frequently conduct workshops, guest lectures, and seminars, which provide students with exposure to real-world applications and new technological advancements. Their inclusion broadens the educational scope by ensuring students gain an understanding of global practices in geoinformatics and industry-specific applications, contributing to a more comprehensive learning experience. These professionals bring practical examples and case studies from the field, thus enhancing the curriculum by linking theoretical concepts to practical, real-world challenges. By structuring or planning their input and formalizing their role in curriculum development could further improve the programme's relevance to industry trends and strengthen its practical aspects.

3. Language Proficiency and International Competency: As the study programme is also offered in foreign language (English), it complies with the national regulation that all academic staff must demonstrate at least B2-level proficiency in the language of instruction. This is crucial for delivering courses to a diverse, international environment of students (LBTU report for the professional bachelor - Annex 4 and letter LBTU_confirmation_prof_bak_programmai_EN). All conversations and interviews with the teaching staff during the visit were conducted in English, which gives the expert confidence that the requirements are successfully met.
4. The compliance with language requirements ensures that students can engage with the material effectively, regardless of whether it is delivered in Latvian or English, thus enhancing the study programme's appeal to international students and supporting LBTU's broader goal of internationalization.

Faculty members with extensive research experience guide students in developing independent research projects, ensuring that the study programme's graduates are well-prepared to contribute to the field of geoinformatics professionally.

Conclusions, strengths and weaknesses

The qualifications and experience of the academic and visiting staff fully comply with the legal requirements and the conditions for implementing the Geoinformatics and Remote Sensing study programme. The study programme benefits from a diverse and highly qualified faculty who bring a blend of academic expertise, practical experience, and research capabilities. This ensures that students receive a comprehensive education that meets both national educational standards and international industry demands. Undoubtedly, guest lecturers provide significant value to the study process. Structuring or planning their input and formalizing their role in curriculum development could further improve the study programme's relevance to industry trends and strengthen its practical aspects.

Strengths:

1. Highly qualified academic staff: Professors and associate professors have the required doctoral qualifications and are recognized for their contributions to geoinformatics and remote sensing research.
2. International and industry exposure: The study programme's inclusion of visiting professors and guest lecturers enhances the learning experience.

Weaknesses:

1. Lack of systemic approach of involving guest lecturers in revising and updating the course curriculum, ensuring development of latest achievements in this field.

Evaluation of the requirement [R2]:

Requirement	Compliance			Justification
	Fully compliant	Partially compliant	Non-compliant	
Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements of the laws and regulations.	X			The academic and visiting staff meet the national regulations for qualifications, language proficiency, and research involvement. The study programme benefits from the contributions of well-qualified professors and industry professionals, ensuring a high level of academic relevance and alignment with industry standards. Furthermore, their engagement in international cooperation and language proficiency ensures the study programme's global relevance and accessibility to international students (LBTU report for the professional bachelor, page 17).

Requirement [R3]: The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or artistic creation (if applicable).

Analysis

Not applicable

Conclusions, strengths and weaknesses

Not applicable

Evaluation of the requirement [R3]:

Requirement	Compliance			Justification
The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or artistic creation (if applicable).	Fully compliant	Partially compliant	Non-compliant	Not applicable

Requirement [R4]: Compliance of the study programme with the requirements of the Law on Higher Education Institutions and other laws and regulations.

To ensure that the **Geoinformatics and Remote Sensing** study programme at **LBTU** adheres to Latvian national regulations and aligns with the European higher education framework, it must comply with various laws and standards, primarily the **Law on Higher Education Institutions** in Latvia and related regulations. The evaluation of compliance in different areas is detailed below.

No.	Requirement	Fully compliant	Partially compliant	Non-compliant	Justification
1.	The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard, including the minimum requirements for the content of the compulsory civil protection course and the content of civil protection training for employees specified for the implementation of the study programme. The study courses of the professional study programmes include a module for the	X			The Geoinformatics and Remote Sensing study programme adheres to the required education standards for professional bachelor's. There are essential study courses "Labor and civil protection", "Environmental protection and sustainable development". The study programme includes the required number of credit points (ECTS), appropriate duration, and coverage of

	development of professional competence of entrepreneurship in the amount of at least 6 CP, if it has not been acquired in the previous professional study programme or is not included in the theoretical basic courses of the study programme branch (field of professional activity).				core areas such as spatial data analysis, remote sensing, and GIS technologies, which are essential for achieving the learning outcomes (<i>LBTU report for the professional bachelor, page 16</i>). The study programme also integrates entrepreneurship modules, as required for professional study programmes, ensuring that students develop professional competence (<i>LBTU report for the professional bachelor - Annex 1</i>).
2.	The study programme complies with a valid professional (occupational) standard, or with the requirements of professional qualification (if it is not necessary to develop a professional standard for the profession), if a professional qualification is awarded after acquisition of the study programme	X			The study programme complies with the standards set for the professional qualification for geoinformatics engineer (https://registri.visc.gov.lv/p/rofizglitiba/dokumenti/standarti/2017/PS-105.pdf). The professional bachelor's study programme aligns with national standards and industry requirements for surveyors, GIS specialists, and remote sensing analysts (<i>LBTU report for the professional bachelor - Annex 3</i>).
3.	The code of the study programme complies with the Cabinet regulations on the Latvian Education Classification	X			The Geoinformatics and Remote Sensing study programme has a valid study code, and its structure, content, and scope are consistent with the Latvian higher education classification system (<i>LBTU report for the professional bachelor - Annex 2</i>).

4.	The qualification of the teaching staff ¹ complies with the conditions and requirements set for the implementation of the study programme, which are specified in the regulatory enactments in the field of education including the participation in the implementation of an academic study programme of at least five professors and associate professors together who have been elected to academic positions in the respective higher education institution, except in the cases provided for in Section 55, Part two of the Law on Higher Education Institutions.	X			The study programme has sixteen professors and associate professors with doctoral degrees in geoinformatics, remote sensing, and related fields. These staff members meet the qualification criteria outlined in Latvian Education Law, ensuring high-quality teaching and research supervision (<i>LBTU report for the professional bachelor, page 17 & Annex 4</i>).
5.	Confirmation of the higher education institution/college that 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, according to the European Language Proficiency Assessment levels (the division of levels is available on the website www.europass.lv), if the study programme or any part thereof is to be implemented in a foreign language or proficiency of the Latvian language at least on the B2 level, if the study programme or a part thereof is intended to be implemented in the Latvian language and the lecturer has not acquired secondary or higher education in the Latvian language.	X			The academic staff involved in delivering the study programme in foreign languages (English) meet the B2-level proficiency standard, ensuring that international students can fully engage with the curriculum. For courses delivered in Latvian, staff proficiency in the Latvian language is also ensured, meeting the national regulatory requirements (<i>LBTU report for the professional bachelor - Annex 4 and personal communication during experts visit</i>).

¹ As used in this document, the term “teaching staff” refers to the academic staff and visiting professors, visiting associate professors, visiting lecturers, visiting lecturers, and visiting assistants of the corresponding higher education institution / college.

6.	The study programme, which is intended to be implemented in a foreign language, complies with the requirements of Section 56, Part three of the Law on Higher Education Institutions	X			The Geoinformatics and Remote Sensing study programme fulfils the necessary legal requirements for delivering study programme in foreign language. The study programme includes materials that reflect both national and international trends, ensuring it meets Latvian educational objectives while being accessible to international students. (<i>LBTU report for the professional bachelor and Law on Higher Education Institutions, 1995</i>)
7.	The sample of the study agreement complies with the mandatory provisions to be included in the study agreement (if applicable).	X			<i>LBTU report for the professional bachelor - Annex, Example of Study Agreement of the Latvia University of Life Sciences and Technologies.</i>
8.	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 (if applicable).	X			The diploma issued for graduates of the Geoinformatics and Remote Sensing study programme complies with national regulations on higher education diplomas. The qualifications awarded are properly recognized both within Latvia and across European qualification frameworks, enabling graduates to pursue further education or professional roles internationally. (<i>Annex Diploma_annex_prof_bak_</i>

					<i>EN, LBTU report for the professional bachelor</i>)
9.	The higher education institution/ college has confirmed that it 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 (if applicable).	X			LBTU guarantees that, in the event of study programme's discontinuation, students can transfer to another accredited study programme within LBTU according to Study contract, point 7.2. This is ensuring students' academic progress is not disrupted (<i>Annex Study_contract_EN, LBTU report for the professional bachelor</i>).
10.	The higher education institution/ college has confirmed that it 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 omissions) and the student does not wish to continue the studies in another study programme (if applicable).	X			LBTU ensures that students are protected through financial compensation policies in case of programme non-accreditation or the revocation of the study programme's license. This commitment is in line with Latvian Law on Higher Education Institutions. (<i>Annex Study_contract_EN, LBTU report for the professional bachelor</i>).
11.	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 (if applicable).				<i>Not applicable</i>

12.	The scientific and pedagogical qualification of doctors of science complies with the criteria specified in the regulatory enactments regarding the evaluation of the scientific and pedagogical qualification of a candidate for the position of a professor and an associate professor (if applicable).				<i>Not applicable</i>
13.	The joint study programme complies with the requirements prescribed in Section 55 ¹ , of the Law on the Higher Education Institutions (if applicable).				<i>Not applicable</i>

Conclusion:

The **Geoinformatics and Remote Sensing** study programme at LBTU is **fully compliant** with the requirements of the **Law on Higher Education Institutions** and other relevant Latvian regulations. The study programme aligns with the **State Academic Education Standard**, adheres to professional standards, and meets the criteria for academic staff qualifications, diploma issuance, and language proficiency. The institution provides guarantees for study programme continuity and student rights in the case of programme discontinuation or non-accreditation, ensuring full compliance with national regulations.

Evaluation of the requirement [R4]:

Requirement	Compliance			Justification
	Fully compliant	Partially compliant	Non-compliant	
Compliance of the study programme with the requirements of the Law on Higher Education Institutions and other laws and regulations.	X			The study programme meets all necessary legal and regulatory standards, including compliance with the State Academic Education Standard, professional qualifications according professional standard for geoinformatics engineering, and requirements for teaching staff qualifications, language

				<p>proficiency, and diploma issuance. The study programme also provides adequate protection for students in case of study programme changes (LBTU report for the professional bachelor - Annex 2 and 3, Annex Study_contract_EN).</p>
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4. Implementation of the recommendations received during the licensing of the study programme

Assessment of the implementation of the recommendations provided by the licensing experts of the study programme.

Analysis

The university has made strong efforts to implement the recommendations received during the licensing process. Key recommendations from licensing experts included revising the curriculum to align more closely with industry needs, updating technical equipment, enhancing industry collaboration, and expanding resources for international students. However, some notable achievement is the revision of the curriculum, which has been adjusted to better meet industry needs. For example, in the study programme LBTU introduced more practical components through courses such as “Geospatial Data Processing” and “Remote Sensing Technologies,” which integrate the use of drones and GIS systems (LBTU report for the professional bachelor, page 18). Additionally, the university has invested in upgrading technical equipment, such as the procurement of new GIS tools and the construction of the drone laboratory, with plans for further improvements (LBTU report for the professional bachelor, page 27). Although reading lists have been updated, the university has added more English-language literature to support international students, particularly in courses related to advanced remote sensing and geospatial data analysis (LBTU report for the professional bachelor, page 18). However, there is a need to further expand resources for international students and ensure the inclusion of the latest literature in relevant fields. The university is also working on strengthening its industry connections, with ongoing efforts to formalise collaborations that can provide students with more direct access to industry resources and practical learning opportunities (LBTU report for the professional bachelor, page 18).

Conclusions, strengths and weaknesses

The university has successfully revised the curriculum and made significant investments in upgrading equipment, but ongoing efforts are needed to expand the reading lists and improve industry connections. These initiatives are crucial to ensuring that the programme continues to meet both academic and industry standards.

Strengths:

1. The university has revised the curriculum to better align with industry needs.
2. Updated technical equipment, including the development of the drone laboratory, with plans for future upgrades.

Weaknesses:

1. Expansion of reading lists for international students and inclusion of the newest literature is still ongoing.
2. Strengthening industry connections and formalising partnerships remains in progress.

III. Assessment of the study programme

Excellent	Good	Average	Poor
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IV. Recommendations

Experts recommend that the Professional Bachelor study programme “**Geoinformatics and Remote Sensing**” be included in the study field “**Architecture and Construction**”, with the following recommendations to address identified deficiencies and to improve the study programme.

Recommendations for the elimination of the deficiencies identified (on a short-term basis):

- (1) Actively engage industry representatives in curriculum development by inviting them to participate more frequently in study committee meetings and advisory boards.

Implementation deadline: By the end of this academic year.

- (2) Organize more invited lectures and excursions to relevant companies in the geoinformatics field, ensuring students gain practical insights into the industry.

Implementation deadline: Within the next 12 months.

- (3) Implement targeted marketing strategies to attract more students, especially international candidates. Consider showcasing practical aspects of the study programme, such as the use of drones and GIS software, during student recruitment events.

Implementation deadline: Initiate the strategy within the next 6 months.

- (4) Allocate resources to establish a coordinator responsible for overseeing the annual update of module descriptions, with a focus on ensuring the inclusion of the latest literature and international resources. This will ensure that teachers consistently review and refresh reading lists, especially for international students, to keep the study programme current.

Implementation deadline: Coordinator appointed and process implemented within the next academic year.

Recommendations for the improvement of the study programme (on a long-term basis):

- (1) Develop formal partnerships with industry for long-term collaboration. This could include setting up regular internships, scholarships, and co-developed course content.

Implementation deadline: Within the next 2-3 years.

- (2) Strengthen efforts to attract foreign students by collaborating with international universities and improving the visibility of the programme through global platforms. The European university alliance initiative can play a key role here.

Implementation deadline: Within the next 2-3 years.

(3) Implement a financial strategy to ensure the sustainability of the study programme, particularly regarding equipment upgrades and technological advancements.

Implementation deadline: Develop a long-term financial plan within the next 3 years.