APPLICATION

Study field "Environmental Protection" for assessment

Study field	*Environmental Protection*
Title of the higher education institution	*Daugavpils Universitāte*
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Self-evaluation report

Study field "Environmental Protection"

Daugavpils University

Table of content

1. Information on the Higher Education Institution/College

1.1. Basic information on the higher education institution/ college and its strategic development fields,.

Brief characteristics of Daugavpils University

Daugavpils University (henceforth – DU) is a significant centre of science and education in Daugavpils and East Latvia. DU is a modern science-based university that offers high quality education, prepares highly qualified specialists and professionals, greatly contributes to science innovation and transfer of scientific ideas to broader public and national economy. DU is the only university in Latgale that performs the functions of the driving force for the development of the region of East Latvia and its adjacent territories, it concentrates major intellectual and technical resources in the region. DU has gained international recognition by joining the European University Association, European International Studies Association, European Union Universities of Small States Association, and European Science Events Association.

Daugavpils University mission and vision

DU mission: to contribute to the development of sustainable future society by implementing scientific research on an international level and ensuring high quality education in the fields of natural, engineering, education, health, humanities and social sciences, thus promoting the sustainable development of Latgale region and the whole country.

DU vision: In 2030 DU is a modern scientific university that offers high quality education and conducts important scientific work. The quality of the University work and its reputation in Latvia and all over the world has provided the basis for its growth and stability. DU has become a driving force of the educational, scientific, innovation and business development in Eastern Latvia. DU functions as an excellence centre in the fields of mathematics, physics, nano-materials, material engineering, biology, regional studies, literature, art, and education science. DU accumulates, preserves, and maintains regional knowledge and contributes greatly to the regional development.

Main objectives of DU activity:

1. to act as a regional university in the spheres of natural sciences, humanities, education and social sciences creating opportunities for diversified high quality studies and research;
2. to provide high quality study programmes and conduct research in compliance with the dynamics of labour market demands and needs of the community;
3. to create opportunities for enhancing the professional mobility of the population by developing further education;
4. to develop personality capable of analytical thinking, critical perception, and creative processing of information, who can, due to the acquired education, contribute to the development of the state and region of Latvia and the welfare of the population;
5. to preserve and develop Latvian national identity and culture legacy, simultaneously entering international integration;
6. to implement interior quality provision systems that build policy and procedures for the provision of the higher education quality.

DU strategic areas of specialization

According to the order of the Cabinet of Ministers of June 21, 2022 no. 449 "On strategic

specialization of state universities" (in Latvian only: https://likumi.lv/ta/id/333471-par-valsts-augstskolu-strategisko-specializaciju), three areas of strategic specialization are defined in DU:

- natural sciences;
- social Sciences;
- humanities and artistic sciences.

DU, implementing its studies and research activities in accordance with the areas of strategic specialization defined for it in paragraph 1 of this order, implements interdisciplinary studies, research and innovations, as well as cooperation with the business sector.

The university has the right to implement study programs and research activities also outside the initial areas of strategic specialization specified in this order, in accordance with Article 4 of the Law on Universities.

Implemented study directions and the number of study programmes within them

Study process at DU is implemented in 15 study directions: "Education, pedagogy, and sports" (6 study programmes), "Art" (5 study programmes), "History and philosophy " (3 study programmes), "Language and culture studies, native language studies and language programmes " (5 study programmes), "Psychology" (3 study programmes), "Economics" (3 study programmes), "Management, administration, and real estate management" (3 study programmes), "Law" (3 study programmes), "Life sciences" (3 study programmes), " Chemistry, Chemical Technologies and Biotechnologies" (2 study programmes), "Physics, material science, mathematics, and statistics" (3 study programmes), "Information technologies, computer technology, electronics, telecommunications, computer management, and computer science" (3 study programmes), "Health care" (2 study programme), "Environment protection" (2 study programmes), " Internal Security and Civil Protection " (3 study programmes).

The dynamics of student number at Daugavpils University in the period of assessment

In accordance with the Ministry of Education and Science “Survey of higher education in Latvia in 2021” (in Latvian only: https://www.izm.gov.lv/lv/media/18744/download?attachment), DU occupies 5th place among Latvian higher education institutions as to the number of students. DU provides higher education not only to East Latvia region represented by the majority of DU students but to other regions of Latvia and labour market of foreign countries.

Assessment of the dynamics of the student number in the time period from 2017 to 2023 (Figure 1) leads to a conclusion that the number of students at DU has remained steady and even increased in 2021, despite the long-term decline and emigration of the population in Latgale and Latvia. According to the informative material “Summary: Economic and labor market trends”, in the following years the number of the population of Latvia will keep diminishing (https://prognozes.em.gov.lv/en). The main reasons of this process include aging of the society, durably low birth rate and emigration of the population (in Latvian only: https://www.em.gov.lv/lv/media/598/download). Due to economic reasons, more and more secondary school leavers choose to study or get employed outside Latvia, therefore state funded budget places are not filled and the fall of the number of students concerns almost all higher education institutions.

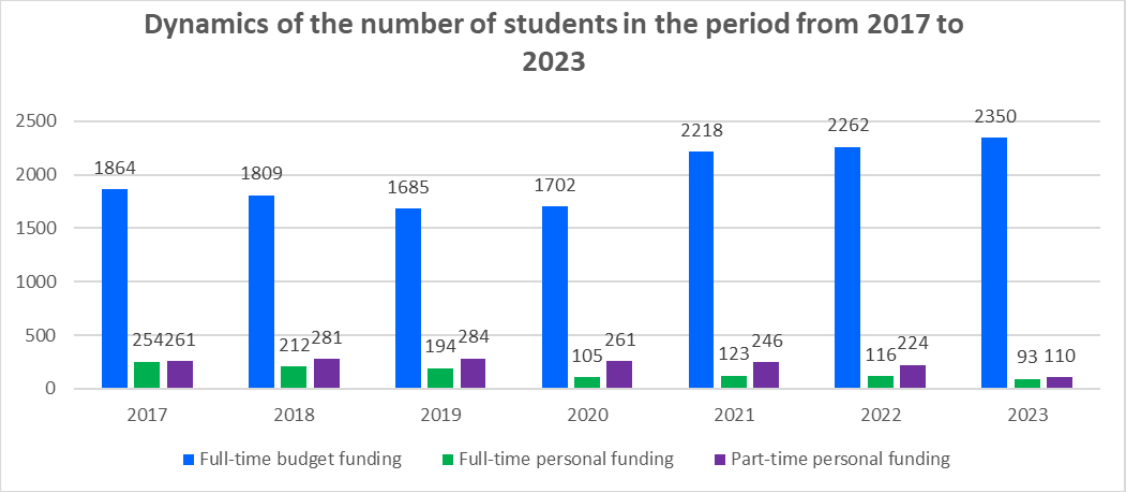


Figure 1. Dynamics of the number of students in the period from 2017 to 2023. Displayed data for October 1 of the respective year.

In order to attract students in the current conditions, Daugavpils University is developing new competitive study programmes, for example, in 2021, one of such study programmes was the professional Bachelor's study programme "Nursing", in turn, in 2022 – professional Master's study programme "Economic security".

Enlarging of the number of foreign students is one of the priority goals of DU. For the purpose of internationalization of studies, 19 study programmes are offered in English. In the time period from 2017 to 2023, there were 775 students from abroad at DU. Most of foreign students at DU are citizens of Russia, Uzbekistan, Kazakhstan, Tajikistan, Belarus, China, USA, Israel, Finland, Italy, Ukraine, Philippines and Indonesia.

Daugavpils University development strategy major goals and activity directions

DU development goals are envisaged by "Daugavpils University development strategy for 2022-2028" (henceforth – Strategy, available in Latvian).

Based on letter No. 4-10e/21/99 "On Development Strategies of Institutions" issued by the Ministry of Education and Science on 11.01.2021, for the implementation of nationally mutually harmonized education and science policy and successful implementation of the ongoing reforms, by the decision of the DU Senate (Protocol No.1 of the DU Senate meeting of January 25, 2021) the period of "Daugavpils University Development Strategy 2015-2020" has been extended until the start of a new approved strategy (2023). At the time of submission of the evaluation application for the study direction, the new DU Strategy ("Daugavpils University Development Strategy for 2022-2028") is under approval by the Ministry of Education and Science.

Strategy general goal is developing Daugavpils University as academic traditions based, modern, and competitive study, scientific, and innovation centre.

Strategy determines the medium-term goals:

1. To provide high quality education that corresponds with future challenges and is based on theoretical knowledge and acquiring of research skills, preparing internationally competitive specialists, developing their abilities and encouraging life-long learning.
2. To develop scientific and creative work on an international level, deepening integration of scientific research in the study process, facilitating technology transfer and development of innovations and contributing to public understanding of the science.
3. To increase the role of Daugavpils University as a consolidator of scientific educational institutions in Eastern Latvia and a driving force of the development, as well as to promote

the reputation of the University in Latvia and all over the world.
4. To ensure united and efficient work of organizational structure and to introduce a quality management system.
5. To develop a modern, environmentally friendly infrastructure, safe and supporting working environment.

1.2. Description of the management structure of the higher education institution/ college, the main institutions involved in the decision-making process, their composition (percentage depending on the position, for instance, the academic staff, administrative staff members, students), and the powers of these institutions.

DU is a derived public person. DU is state founded and acts as an autonomous self-governing institution. Decision about reorganization or liquidation of DU is made by the Cabinet of Ministers on the proposal of the Minister of education and science.

DU self-governing is based on the rights and opportunities of the staff to engage in academic and scientific, administrative, and economic decision-making. DU acts on the basis of the Constitution of the Republic of Latvia, Law on Education, Law on Scientific Activity, Law on Higher Education Institutions, DU Constitution, and other laws and regulations.

DU major decision-making institutions are: Daugavpils University Council, Constitutional Assembly, Senate, rector, Academic Court of Arbitration.

In 2022, the **Daugavpils University Council** was approved – the highest decision-making body of the University, which is responsible for the sustainable development, strategic and financial supervision of the University, as well as supervises the activities of the Rector of the University and ensures the University's activities in accordance with the goals set in its development strategy. The Council is established in the composition of 7 (seven) members, of which 3 (three) members of the Council are nominated by the University Senate, 3 (three) are nominated by the Cabinet of Ministers of the Republic of Latvia, and 1 (one) by the President of the Republic of Latvia. The Council operates in accordance with the regulations of the Daugavpils University Council (in Latvian only: https://du.lv/wp-content/uploads/2022/09/Padomes-nolikums_25.08.2022..pdf).

DU Constitutional Assembly (Satversmes sapulce) is the academic, general staff and student representative body of DU, which is elected for three years by secret ballot, from professors and other academic staff - 35 representatives (70%), students - 10 representatives (20%), and general staff - 5 representatives (10%). The Constitutional Assembly decides on the adoption, amendment, or repeal of the Constitution (Satversme); The Constitutional Assembly adopts and makes amendments to the Regulation of the Senate, elects the Senate, calls off the members of the Senate; elects the rector to the position and can initiate the removal of the rector from the position, listens to the rector's report; elects the Academic Arbitration Court and approves its regulation. The Constituent Assembly has the right to accept for examination and decision also other conceptual issues of operation and development of Daugavpils University.

DU Senate is a collegial higher academic decision-making body, which is responsible for the excellence, development and compliance of DU with internationally recognized quality standards of education, research, creative activity. The Senate regulates the academic, creative, and scientific spheres of DU. The Senate operates in accordance with the procedures established in the DU Constitution and the regulations approved by the Senate. Within the autonomy of the university,

the Senate protects and ensures the academic freedom of the academic staff and students. The Senate is elected by the Constituent Assembly for three years. The Senate consists of 15 members - 11 representatives from the academic staff of DU elected by the Constitutional Assembly, 3 student representatives elected by the student self-government and approved by the Senate, as well as the rector in accordance with the position held and in accordance with the Act on Higher Education Institutions. The students represented in the Senate of DU have the delaying veto right in matters related to the interests of the students.

The highest official of DU is the **rector**. Candidates for the post of rector are selected within an open international competition by the university Council and elected by DU Constitutional Assembly. The rector administrates the university and is responsible for the achievement of the goals set in the university development strategy, as well as efficient and lawful use of the university's financial resources in accordance with the law, other regulatory enactments, as well as the university's Constitution, the decisions of the Council and the Senate. The rector carries out representative functions of the university, performs other activities to ensure successful operation of the university and represents the university in cooperation with other institutions and private individuals, within the scope of rector’s competence bearing responsibility for the compliance of the university's activities with the Act of HEI and other regulatory acts.

The Academic Arbitration Court examines applications by DU students and academic staff regarding restrictions or violations of academic freedom and rights stipulated in the DU Constitution; examines disputes between DU officials, as well as administrative institutions of DU structural units, which are in a subordinate relationship; examines, in the cases specified in the Act on HEI, submissions on challenging administrative acts or actual actions and makes relevant decisions on them, as well as performs other tasks provided for in the DU Constitution. The Academic Arbitration Court is elected for three years in the composition of seven people, including four representatives from among the academic staff by secret ballot by the Constitutional Assembly, three student representatives by the student self-government.

Council of Studies is a management authority that supervises issues of study planning, organizing, and coordinating, provides the necessary conditions for the academic work at faculties and departments. Council of Studies includes vice rector for studies, faculty deans, and the head of the Department of Studies. Main duties of the Council of Studies are coordinating the elaboration and execution of bachelor, master, and professional study programmes, elaboration of the scheme of studies, its analysis and determining the main directions of its improvement and development, organizing the investigation and implementation of foreign countries’ experience.

Council of Science is an institution of representation of branches and sub-branches of science that coordinates the scientific work at the university. Main functions of DU Council of Science are supervising the elaboration and implementation of DU strategy, science development process, allocation of funds for science, execution of promotion, and the work of professor councils. DU Council of Science consists of vice rector for science, head of the Department of Science, representatives delegated from each scientific institute council, a representative from professors delegated by faculty in case the faculty has no institute or no institute council, DU Young Scientist Association representative.

Faculty council supervises the study, scientific and/or artistic work and economic activity of the faculty. The configuration of council corresponds to the requirements of the promotion council in the respective branch or sub-branch of science and no less than a half of its members must be professors, associate professors, senior researchers, and experts approved by Latvian Council of Science. The council is formed of the chairperson of the council, deputy chairperson of the council, and council members. The council includes the dean; deputy dean/s and/or education

methodologist; heads of departments, institutes, centres and other faculty structural units; it may include study programme directors, representatives of the academic staff from the structural units; student representatives that are delegated by the faculty student self-governance (20% of the council members).

Study direction council is formed upon the recommendation of DU Council of Studies and approved by DU Senate. The members of the Study direction council are approved by DU Council of Studies. Study direction council includes study direction programme directors, the academic staff, students (at least one representative from 1st level professional education programme, bachelor, master, and doctoral study programmes) and representatives of employers. Functions of the council are: to elaborate the study programme/s of the study direction; execute the direction study programme self-assessment and implementation analysis; analyze students' academic performance; analyze the academic work of the academic staff involved in the study direction; facilitate the integration of scientific work in the study programme.

1.3. Description of the mechanism for the implementation of the quality policy and the procedures for the assurance of the quality of higher education. Description of the stakeholders involved in the development and improvement of the quality assurance system and their role in these processes.

Quality ensuring policy is part of Daugavpils University Development Strategy for 2022-2028.

DU study quality management system observes the compliance with ISO 9001:2017 quality standard. Compliance with this standard testifies to the fact that DU tends for the quality of its education services by maintaining the quality management system (QMS), periodically passing accreditation and verifying the efficiency of the system. QMS testifies that DU makes an effort to make out the preferences of the potential students, tends to maintain constantly good quality of studies and governance and ensure systematic and transparent processes as well as incessantly improve cooperation with cooperation partners and community.

The outcomes of DU implemented ESF project "Daugavpils University governance and management competence improvement" (No. 8.2.3.0/18/A/010) are – adjust DU study and governance quality systems and receive ISO 9001 certificate that is an internationally recognized organization quality mark.

DU Council of Studies and DU Centre of Study Quality Assessment (henceforth – CSQA) introduces quality provision systems on the basis of "DU study internal quality assurance policy" (https://du.lv/en/about-us/documents/). The policy has been elaborated in accordance with *The Standards and guidelines for quality assurance in the European Higher Education Area* (ESG) and observing legal acts of the Republic of Latvia (Law on Higher Education Institutions, Higher education standards, etc.), DU normative acts and "Daugavpils University development strategy for 2015 – 2020".

To ensure the improvement of the existing normative documents and procedures at DU and compliance with the student centered and sustainable higher education, especially assessing and updating quality policy implementation mechanisms, the study quality system is being updated within ESF project "Daugavpils University governance and management competence improvement" (No. 8.2.3.0/18/A/010). Within the framework of the project, in 2021, the new normative acts for the internal study quality assurance were drawn up, which were approved by rector's ordinance, for

example, “DU Study Internal Quality Assurance Policy”, “DU Study Quality Policy and Study Quality Monitoring Strategies (see “Other Annexes”), “Procedures for Ensuring the Effectiveness of DU Study Internal Quality Assurance System” (see in Latvian only “Other Annexes”), etc. (see “Other Annexes”), which are aligned with the content of the newly developed "DU Quality Policy" and "Quality Management System Manual". All these documents are available from the DU internal network in Latvian.

Mechanisms of the study process quality provision

Study quality maintaining aims at monitoring and improving the study programme implementation and facilitating prerequisites for reaching study programme outcomes. Quality monitoring is constant: during enrolment, recruiting the academic staff, improving the study programmes, reviewing the activity of structural units and their heads according to the academic and research work outcomes.

Higher education internal and external quality provision proceeds in cooperation between DU and the Ministry of Education and Science (in distribution of State budget funded places, execution of conceptual decisions), Higher Education Council (dealing with strategic issues, drawing statements), and Academic Information Centre (study programme licensing, study direction assessment, recognition of students’ prior education).

The main forms of quality assessment are as follows:

External assessment – licencing, accreditation, and assessment of independent experts. It is ensured by the quality ensuring agency listed in the European higher education quality ensuring register (in Latvia – Higher Education Quality Agency). It is coordinated by heads of study directions along with CSQA and vice-rector for studies.

Internal assessment – constantly performed by DU study direction councils elaborating self-assessment reports. Internal assessment is implemented and coordinated by DU CSQA approved by the Senate. In accordance with DU study internal quality ensuring policy there is systematic assessment of study directions and programmes in order to make sure how the programme objectives and study outcomes are reached, the compliance of the programme with the current developments of national economy and labour market demands.

The internal quality of studies is ensured by the following measures:

Quality ensuring instrument	Implementation procedure
Strategic planning of the process of studies	Implemented by the study programme director in cooperation with the academic staff and members of the study direction council; Analyzing the shortcomings, risks, development opportunities of the study direction and study programmes wherein.

Examining the issues related to the process of studies	Study direction councils assess the process of studies within a programme, its outcomes, and proposes to the head of the study direction and study programme directors measures for the programme improvement and integration of recent ideas in the study content and process. The respective structural units discuss the submitted proposals and initiate changes in the study course amount, their content and calendar arrangements in semesters. Each semester, departments, taking into consideration the results of student surveys, formal indicators of students' academic performance as well as the professional indicators of the academic staff members in respective spheres (participation in conferences, research and other projects, applied projects, publications, etc.), analyze in detail the content of each course and the quality of its delivery. After that proposals as to changes in the study courses or study programme are discussed in faculty councils and after their support are addressed to DU Council of Studies that examines the justification of changes proposed. In case of a positive decision taken by the Council of Studies, the changes are implemented.
Surveys	At the end of each academic year surveys of students (in Latvian only -https://aptaujas.du.lv/index.php/526982/lang-lv) are carried out. Surveys of employers (in Latvian only - https://aptaujas.du.lv/index.php/544412) and alumni (in Latvian only - https://aptaujas.du.lv/index.php/764263/lang-lv) are carried out every two years. Based on the survey results, the study programme content is reviewed and improved within study direction councils executed by study programme directors. All justified opinions, proposals, and reprimands are examined by the study programme director, in case of necessity discussing the issues in study direction councils. CSQA upon necessity carry out express surveys in order to clarify students' opinion on current issues concerning the process of studies.
Self-assessment of the study direction and preparation of the self-assessment report	The head of the study direction organizes meetings of the study direction council in order to discuss the main trends of programme development and management. For examining debatable issues (assessment of examinations, ignoring the regulations of DU by students and/or academic staff members, etc.) student representatives are invited. Once a year the head of the study direction along with programme directors prepare the self-assessment report of the study direction on the previous academic year that is examined by CSQA and approved by the Council of Studies and the Senate.
E-study environment improvement	DU e-study environment Moodle is used to provide information on the courses acquired during the semester. For each course students have access to the following information: study course description, criteria of assessment, materials for student independent work, etc.

Characteristics of the parties involved in the elaboration and improvement of quality ensuring system and their role.

Efficient results are reached by means of understanding and support of the administration,

purposeful DU strategy and policy implemented by successful participation of the academic staff as well as full partnership, resource saving approach, and process governance.

Party involved	Characteristics of the role
DU administration	- elaborates DU development strategy and implements its objectives; - facilitates the development and professional growth of the staff, elaborates and implements various motivation and support mechanisms (e.g. research activity facilitation, involvement in ERASMUS+ programmes for experience exchange and good practice); - cooperates with deans, heads of study directions, provides support for the solution of governance and financial issues.
Academic and research staff	- ensures high quality studies; - performs scientific research and integrates it into the study content; - participates in professional updating events, international mobility and experience exchange activities; - cooperates with external experts, employers, alumni, facilitates their involvement in the study direction improvement.
Administrative staff	- ensures high quality study programme governance; - provides support for students and the academic staff involved in study programmes; - tends to the updating of the material and technical base for studies.
Employers, social partners, and external experts	- provide the expertise for the study programme content and proposals for the improvement of the study content and methods; - provide opportunities for practical placement and internship, facilitating working environment-based study principles in professional study programmes.
Alumni	- use the acquired knowledge, skills, and competences in their professional activity; - provide proposals for the improvement of the study content.
Students	- provide feedback for the study quality improvement.

Appendix 1.*3_List of Regulations for internal quality assurance* contains a list of DU regulatory acts, which is available from the DU internal network.

1.4. Fill in the table on the compliance of the internal quality assurance system of the higher education institution/ college with the provisions of Section 5, Paragraph 2(1) of the Law on Higher Education Institutions by providing a justification for the given statement. In addition, it is also possible to refer to the respective chapter of the Self-Assessment Report, where the provided information serves as justification.

1.	The higher education institution/ college has established a policy and procedures for assuring the quality of higher education.	Complies DU is being implemented “DU study internal quality ensuring policy” (https://du.lv/en/about-us/documents/) that facilitate and ensure the quality of higher education. To ensure the improvement of the existing normative documents and procedures at DU and compliance with the student centered and sustainable higher education, especially assessing and updating quality policy implementation mechanisms, the study quality system is being updated within ESF project “Daugavpils University governance and management competence improvement” (No. 8.2.3.0/18/A/010) (see section 1.3).
2.	A mechanism for the creation 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.	Complies In accordance with the “Regulation on Studies at Daugavpils University” (https://du.lv/wp-content/uploads/2022/06/ENG-NOLIKUMS_PAR_STUDIJAM_DU_2018-1-1.pdf) and “Regulations on Opening and Managing Daugavpils University Study Directions and Study Programmes” (https://du.lv/en/about-us/documents/) there are established mechanisms for the development, internal approving of study programmes, their monitoring and periodic examination.
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.	Complies “Regulation on Studies at Daugavpils University” (https://du.lv/wp-content/uploads/2022/06/ENG-NOLIKUMS_PAR_STUDIJAM_DU_2018-1-1.pdf) and study course descriptions of each study programme state the criteria, conditions, and procedures of the assessment of students’ academic performance that attests to reaching the envisaged outcomes of studies. The Regulation and study course descriptions are freely available to students. Students have an opportunity of giving proposals for the criteria, conditions, and procedures of the assessment of students’ academic performance in surveys.
4.	Internal procedures and mechanisms for assuring the qualifications of the academic staff and the work quality have been developed.	Complies DU has elaborated internal normative acts and mechanisms that regulate the ensuring of the qualification and work quality of the academic staff: “Regulation on elections to academic positions in Daugavpils University” (in Latvian only: https://du.lv/wp-content/uploads/2021/12/Nolikums-par-velesanam-akademiskajos-amatos-DU_APSTIPRINATAIS.pdf) and “Procedure for evaluation of scientific work effectiveness of Daugavpils University academic staff” (see "Other attachments"). Self-assessment reports include the results of surveys and measures of implementing students’ proposals and averting criticism.
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.	Complies Surveys of students are organized every year. Surveys of employers and graduates are organized every two years. CSQA carries out express surveys to learn students’ opinion on current issues related to the process of studies and academic staff work efficiency. There is regular cooperation with the Student Council, exchange of opinions, examination of proposals. Program directors collect, analyze and discuss information about student progress in Study direction Councils. Necessary changes in study programs are reviewed and accepted by the Council of Studies. Every year, the scientific efficiency of the academic staff is evaluated by the Council of Science. Information on available study funds and their costs is collected in the Finance and Accounting section, while decisions related to finances are made by the Budget Commission of DU.

6.	The higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study field whilst implementing their quality assurance systems.	Complies DU study quality management system observes the compliance with ISO 9001:2017 quality standard. Compliance with this standard testifies to the fact that DU tends for the quality of its education services by maintaining the quality management system (QMS), periodically passing accreditation and verifying the efficiency of the system. QMS testifies that DU makes an effort to make out the preferences of the potential students, tends to maintain constantly good quality of studies and governance and ensure systematic and transparent processes as well as incessantly improve cooperation with cooperation partners and community.

2.1. Management of the Study Field

2.1.1. Aims of the study field and their compliance with the scope of activities of the higher education institution/ college, the strategic development fields, as well as the development needs of the society and the national economy. The assessment of the interrelation of the study field and the study programmes included in it.

Aim and purpose of the study direction "Environmental protection" implemented by the Daugavpils Universitāte (DU) is to prepare qualified, internationally competitive environmental specialists during the implementation of basic studies and higher level programs, who are able to independently plan and conduct research and are competent to work in environmental protection institutions and research in environmental science and its sub-sectors. The implementation of the programs provides students with the acquisition of theoretical knowledge, research skills and competence in environmental science, its sub-branches and related sciences, and develops the skills and abilities of scientific-research work, thereby ensuring the acquisition of higher academic education, the opportunity to continue studies in master's and doctoral studies, as well as to successfully start the process in the labour market of Latvia and the European Union.

The study direction "Environmental protection" realized by the DU is an essential forming part of the strategic specialization direction determined by DU in the field of natural sciences, in accordance with the order of the Cabinet of Ministers *[Ministru kabinets]* of June 21, 2022 No. 449 "On strategic specialization of state universities"[1]. The course of study has been developed, realized and its development is planned based on the development strategy developed by DU (Daugavpils University Development Strategy for 2015-2022)[2]. The implementation of the study programs included in the study direction will contribute to the implementation of the mid-term goals included in the DU development strategy: "*Providing quality education that meets the challenges of the future and is based on the acquisition of theoretical knowledge and research skills, preparing specialists who are competitive in the international labour market, developing their abilities and motivating lifelong learning*", as well as "*Developing scientific and creative activity of an international level, deepening the integration of scientific research in the study process,*

engaging in international, national and sectoral research programs, promoting technology transfer and the development of innovations and promoting public understanding of science".

The realization of the study programs of the field of study is also directly related to one of the most important tasks of DU – creation of an innovation environment at Daugavpils University and integration of scientific achievements in the study process, as well as a closer connection of science with the economy, social and cultural life in the region and the country as a whole.

At the national level, the field of study "Environmental protection" is strategically very important for the implementation of such state-level planning documents as "Latvia's sustainable development strategy until 2030"[3], "National Development Plan 2021-2027"[4], "Environmental policy guidelines 2021–2027"[5] and the "Latvia's climate change adaptation plan for the period up to 2030"[6]. Thus, for example, the need and prospects for the development of the field of study "Environmental protection" directly derive from the principles contained in the main document of national development planning "National Development Plan for 2021-2027 (NAP2027)". Namely, the preparation of environmental specialists and ensuring the acquisition of the appropriate competences resonates with the most important directions of action of the NAP2027 priority "Quality living environment and development of territories", including, "Nature and environment – "Green Deal"", and the goals of these directions, for example, "Reduction of greenhouse gas emissions", "Mitigation of the effects of climate change", "Achieving an increase in the proportion of high and good quality surface and underground water bodies", "Improving the biological diversity protection system", *etc.*

At the same time, the development prospects of the "Environmental protection" study direction are based on and closely related to the European Commission's plan "European Green Deal"[7]. Among other things, this plan emphasizes the need to develop "green" production, "green" transport, "green" consumption and pollution prevention in order to reduce greenhouse gas emissions, preserve Europe's natural capital and invest in research and innovation, and thus face the climate changes. All EU member states have developed their own plans for the implementation of the "European Green Deal". Latvia's path to climate neutrality is outlined in the Latvian National Energy and Climate Plan, adopted in 2020.[8]

The fight against climate change is a top priority of the European Commission. Achieving the international and national environmental protection goals formulated in the aforementioned EU and national planning documents requires highly academically and professionally trained specialists, which will be able to implement both the listed tasks and the Agenda 2030 action program and for achieving the sustainable development goals defined by the UN[9]. It is exactly the environmental science and environmental planning studies in the country that ensure the preparation of specialists of this nature, as well as opportunities to develop and practically implement the balanced and sustainable development concepts of the country. Thus, it once again confirms the strategic importance and necessity of the "Environmental protection" study direction both at DU and in the country.

For the real performance of the mentioned tasks in our country in general and in the Latgale region in particular, there is still a lack of academically and professionally educated specialists who are capable of comprehensive analysis of environmental problems. Theoretical and practical knowledge, which is necessary for the performance of this kind of work, is provided by the realization of the field of Environmental Protection studies.

At the regional level, the future development strategy of the field of environmental protection studies is aimed at equalizing the differences in the availability of quality education between the existing dominant region – Riga and the Latgale region, thus promoting the socio-economic development of the region. At the same time, the implementation of this strategy goal is aimed at

solving environmental problems in the Latgale planning region and local governments.

Among the study directions implemented by Daugavpils University, the "Environmental Protection" study direction plays a decisive role in developing civic awareness of nature and environmental protection and involving society in solving these issues. The involvement of society in the process of nature protection and environmental preservation, as well as in the implementation of the basic principles of sustainable development in the regional, national and EU context, can be done through education and raising people's awareness of the importance of the mentioned issues for the future existence of humanity. Therefore, the implementation of Environmental Protection study programs at DU and activities in the field of environmental education and upbringing are, in a strategic sense, directly focused on the preservation of our planet for future generations, which is considered the global goal of the development strategy of the study field.

The implementation of study programs of the study direction "Environment protection" is interconnected and successive. Currently, this DU study direction includes two study programs – the academic bachelor's study program "Environmental Science" and the professional master's study program "Environmental Planning" (refer to Table 2.1.1.1.).

Table No. 2.1.1.1. Study programs to be implemented in the direction of studies "Environment protection"

Program name	**Academic Bachelor's study program "Environmental science"**	**Professional Master's study programme "Environmental science"**
Education classification code (ECC)	43431	47431
Programme volume	120 CP (180 ECTS)	80 CP (120 CP)
Way and form of program implementation	Full time in-class studies	Full time in-class studies
Duration of programme implementation	3 years	2 years

Requirements for starting studies	Secondary education	• first-cycle higher education (or equivalent higher education) in environmental science, natural sciences, engineering, agricultural sciences or forestry • first-cycle higher education in the case of the equivalent thematic area, if the applicant has at least 2 years of work experience in the field of environmental management, which the educational certificate from the workplace, or the employer has determined the need to obtain a qualification in the field of environmental management to fulfill the duties of the position.
Degree to be obtained	Bachelor of Science in Environmental Science	Professional master's degree in environmental planning
Professional qualification	Not envisioned	Environmental management specialist (PS 0268)
Place of programme implementation	Daugavpils University *[Daugavpils Universitāte]*	Daugavpils University *[Daugavpils Universitāte]*
Programme director	dr. geol., assoc. prof. Juris Soms *[Juris Soms]*	mg. env. sc., lecturer Dainis Lazdans *[Dainis Lazdāns]*

[1] The Cabinet of Ministers June 21, 2022 Order No. 449 "On the strategic specialization of state universities". Available in latvian only: https://likumi.lv/ta/id/333471-par-valsts-augstskolu-strategisko-specializaciju [viewed 01.02.2024]

[2] Summary of DU development strategy 2015-2020 for the year. Available: https://du.lv/wp-content/uploads/2022/09/DU-Strategy-summary-1.pdf [viewed 03.02.2024]

[3] Strategy for sustainable development of Latvia until 2030. Available in Latvian only: https://www.varam.gov.lv/lv/latvijas-ilgtspejigas-attistibas-strategiju-lidz-2030gadam-latvija2030?utm_source=https%3A%2F%2Fwww.google.com%2F [viewed 03.02.2024]

[4] National development plan for the year2021-2027. Available: https://www.mk.gov.lv/en/media/15165/download?attachment [viewed 03.02.2024]

[5] Environmental Policy Guidelines for the year 2021-2027. Available in Latvian only: https://www.varam.gov.lv/lv/vides-politikas-pamatnostadnes-2021-2027-gadam [viewed 03.02.2024]

[6] Latvia's climate change adaptation plan for the period up to 2030. Available in Latvian only: http://polsis.mk.gov.lv/documents/6507 [viewed 03.02.2024]

[7] The European Green Deal. Available: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en [viewed 03.02.2024]

[8] Latvian National Energy and Climate Plan. Available in Latvian only: https://www.em.gov.lv/lv/nacionalais-energetikas-un-klimata-plans [viewed 03.02.2024]

[9] The 2030 Agenda for Sustainable Development. Available: https://sdgs.un.org/2030agenda and https://sdgs.un.org/goals [viewed 03.02.2024]

2.1.2. SWOT analysis of the study field with regard to the set aims by providing explanations on how the higher education institution/ college expects to eliminate/ improve weaknesses, prevent threats, and avail themselves of the given opportunities, etc. The assessment of the plan for the development of the study field for the next six years and the procedure of the elaboration thereof. In case there is no development plan elaborated or the aims/ objectives are set for a shorter period of time, information on the elaboration of the plan for the development of the study field for the next assessment period shall be provided.

In order to ensure the quality of the study field, a self-evaluation report of study field is prepared every year, which is evaluated by an expert appointed by the Vice-Rector of Studies at the Centre for Quality Assessment of Studies at DU. The report to be approved by the DU Senate. An integral part of the report is the consideration of SWOT analysis issues, which allows to show the achievements in a concentrated manner and highlight the problems. It is an essential tool for achieving the goals of the study field.

Also, when preparing the self-assessment report for the accreditation of the study field, the study field council conducted a SWOT analysis, based on the analysis of the formal indicators of the implementation of study programs and taking into account the results of student surveys, as well as evaluating the direction and dynamics of the development of external factors (refer to Table No. 2.1.2.1.). This allows to highlight the strengths, weaknesses, opportunities and potential threats in the implementation of the study field in order to predict the future development of the study programs and ensure their improvement.

Evaluating the current development, current situation and perspectives of the study field "Environmental Protection", the study field council evaluates both the content of study programs in general and the content and provision of individual study courses, analyses the organization of the study process and resolves issues related to program development planning.

Table No. 2.1.2.1. SWOT analysis of the study field "Environmental protection"

Strengths	Weaknesses
Study field	

· Clear goal, tasks and strategy of the study field; · Academic personnel involved in the realization of the study field have a high scientific qualification and extensive academic and scientific work experience; · Integrative and interdisciplinary approach to the creation of program content, which is ensured by the involvement of specialists from environmental science, geography, earth sciences, chemistry, ecology, biology and other branches of science in conducting courses; · Cooperation with employers and environmental protection institutions; · Most of the graduates of the program work in Latvian state and private companies; · High-quality study infrastructure and scientific-technical support; · Good cooperation with DU structural units, Latvian and foreign educational and scientific research institutions; · Cooperation between teaching staff and students, regular evaluation of study program development; · Personnel experience in attracting project financing and project implementation.	· Insufficient marketing and financing of the study field; · Insufficient recognition among environmental science study programs implemented in the EU; · The non-competitive remuneration of academic staff weakens the competitiveness of state-funded higher education institutions in the labour market and has a negative impact on the motivation of lecturers involved in studies; · The inadequately high academic load of lecturers reduces the opportunities to work on methodical issues and greatly complicates scientific-research activity; · Unclear government policy in the field of higher education, the "surplus" principle in the field of financing education and science; · Insufficient state funding for scientific institutions, which reduces students' opportunities to engage in research; · Part of the academic staff has insufficient knowledge of foreign languages, which reduces the potential of the study field in attracting foreign students; · Some of the students have insufficient knowledge of foreign languages and insufficient participation in exchange programs.

Study process

· Provided the opportunity to obtain a full-fledged education in the field of environmental science; · Integration of studies and scientific research work; · High-quality material-technical and research base and provision of qualified teaching staff; · The opportunity to acquire systematized, in-depth knowledge and get acquainted with the latest findings in environmental science and its related sciences; · The use of diverse study forms and methods in the implementation of the study programs; · Constant improvement of study content, search and implementation of new forms of study and teaching, balanced theory and practice; · The study process is oriented towards understanding, using knowledge to solve problem situations and developing analytical skills, rather than learning a large amount of factual material; · the opportunity to practically learn modern, *up-to-date* field and camera (facility-based) research methods in environmental science, incl. geomatics methods; · Students are involved in the scientific research work of structural units, their research is approved in the academic environment; · Wide opportunities to use international databases of peer-reviewed scientific publications and scientific periodicals.	· High-quality material-technical and research base at the same time lack of human resources, *i.e.*, a small number of researchers conducting research with this hardware or equipment; · Numerically insufficient supply of the latest textbooks and scientific periodicals; · A small number of foreign guest lecturers in the study programs implemented in the study field; · The low number of foreign students in the study field. · Insufficient implementation of the module system; · Distance learning and e-study opportunities are underutilized; · Cancelling the control methods of students' independent study work (colloquiums, test papers, individual consultations, *etc.*) as a form of academic work, leaving the provision of this work direction to the enthusiasm of lecturers.
Students	

· High motivation to study in the chosen specialty; · Good contact with study program lecturers; · Involvement in the evaluation of the quality of the study course and improvement of the content; · High awareness of the need to solve environmental problems, high awareness of environmental care (*Environmental awareness*); · Students' interest in presenting and approving their research results at scientific forums and conferences.	· Relatively low brand awareness of one's university and study field; · The different level of knowledge of students enrolled in the program in natural sciences after graduating from high school; · Insufficient knowledge of a foreign language; · Relatively little activity in using opportunities of international exchange programs. · Weak involvement in the academic and social life of the university, lack of academic and student traditions.
Personnel	
· High scientific and academic qualifications in accordance with the requirements of the Law on Higher Education Institutions *[Augstskolu likums]*; · In terms of the average age of teaching staff, the program is one of the "youngest" in the entire DU; · Mutual cooperation, respect for the principles of collegiality and tolerance; · Improving the academic and professional competences by participating in research projects, publishing their research results and presenting them to the scientific community at international conferences; · Good contact with students; · The ability to assess and recognize shortcomings in taught courses and to look for ways to improve the quality of studies.	· Disproportion in the proportion of the study courses to be implemented and the amount of research work (in the current situation, the amount of contact lessons for the academic staff is too large, which, according to the current regulations of DU, the lecturer must implement in order to fulfill the academic load; this, in turn, reduces the research activity of the lecturers); · Inadequate and uncompetitive existing remuneration system for DU's elected staff; · Uncompetitive remuneration in the amount with a high academic load creates risks for the renewal of the academic staff; · Non-competitive existing remuneration system for attracting Latvian and foreign high-level guest lecturers; · Insufficient use of international academic and scientific exchange programs and post-doctoral study opportunities; · Insufficient cooperation with foreign educational and scientific research institutions and scientists.
Other factors	

· Optimum number of students in the academic groups, which ensures the connection between the lecturer and the student, and also allows the use of an individual approach. · Rotation of students according to the results of each session and competition for state budget places, which increases student motivation and success rate; · Connection with potential employers.	· The development of infrastructure and especially human resources, based only on the funding attracted within the project, does not give an opportunity to objectively plan the study and scientific research process; · The existing DU internal program funding calculation and allocation system, which does not allow for a clear assessment of the part of the state grant necessary for the implementation of the direction in proportion to the thematic coefficient of the study field.
Opportunities	**Threats**
Study field	
· Independent improvement of the development strategy of the study field, taking into account changes in the labour market and the most important development trends in the world, introduction of new study programs; · Attraction of funds from EU financial instruments and structural funds, improvement of study environment and quality, especially in the context of the "European Green Deal"; · Expansion of cooperation with other Latvian higher education institutions, where environmental science study programs are implemented; · Wider involvement of lecturers and students in exchange programs (*e.g.* Erasmus+ and other mobility programmes); · Providing study courses in foreign languages, attracting foreign students to the study field; · Creation of a joint doctoral program (Latvian University (LU) and Daugavpils University (DU)), taking into account the existing master's program "Environmental Planning", is a prerequisite and a necessary necessity to ensure the possibilities of higher education at DU at all levels of environmental science; · Attraction of qualified guest lecturers; · Opening of new academic staff and support staff positions, election of new lecturers along with program development, creation of new programs and expansion of scientific infrastructure.	· The risk of a decrease in the number of students due to the unfavorable demographic situation in the country; · Fall in the standard of living and the deterioration of the material situation in the country as a whole and in the region, the decrease in the solvency of the population and the inability of students to cover the costs related to their studies; · Outflow of potential students to foreign countries; · Decrease in the competitiveness of academic staff remuneration; · Ageing of the personnel; · Unpredictability of the future under the influence of the emerging geopolitical security situation in the world, possible pandemics and global climate change and its consequences.

Evaluating the current study field "Environmental protection", it should be concluded that it is a good basis for future professional and academic work. The study field has specific development opportunities that can be realized by choosing and using a suitable strategy (refer to Table No. 2.1.2.2.).

Table No. 2.1.2.2. SWOT analysis matrix for choosing strategies for exploiting strengths and minimizing weaknesses and threats:

	Development opportunities	**Threats**
Strengths	**Strategies for using strengths to get the most out of the opportunities offered**	**Strategies for using strengths to minimize the threats**
	· Preserving and developing traditions of academic and lecturer-student collegiality, improving staff potential; · Permanent cooperation with regional companies and municipal and state institutions, establishment of business contacts; · Development of new study courses; · Improving the content of study courses, provision of study courses in foreign languages; · Involvement of academic staff and students in scientific research projects.	· Transformation of educational content and specialist preparation structure according to demands of the labour market; · Active use of the potential of students and graduates of the field to develop contacts with potential employers and advertise the study field; · Search, analysis and use of opportunities for students and teachers to participate in various competitions, grants, projects, contractual works; · Development and implementation of new learning technologies (*e.g.*, the virtual reality/VR) and active learning methods.

Weaknesses	Weakness minimization strategies using the offered options	Weakness and threat minimization strategies
	· Raising awareness of graduates of the DU study field "Environmental protection", emphasizing the quality and efficiency of specialist training; · Increasing the scientific and methodical potential of lecturers; · To the extent possible, improving the material and technical base with equipment that meets modern requirements; · Activating student involvement in international exchange programs; · More widely involvement employers' specialists in the field of nature protection and environmental management in the study process.	· Expansion of non-material incentives for lecturers who actively participate in scientific research, projects and contractual works, reduction of disproportions in the distribution of workloads and bonuses; · Increasing the interest of the department employees in improving their qualifications and obtaining scientific degrees; · Improvement of the monitoring system of students' attitude towards the content, forms, structure and teaching methods of the program; · Further work in the creation and modernization of the new generation of methodical materials (mainly based in the digital realm), which perform not only informative functions, but also guide students' cognitive activity.

Measures to prevent weaknesses and threats of the study field are reflected in the summary of the development plan of the study field (available at the attachment *2.1.2. Summary of the study field development plan*). The study field development plan for the next six years envisages activities in three directions: Studies, Research and Material and technical support. Special attention is paid to the even closer integration of studies and research, providing measures for renewal of academic staff, capacity building, and even closer involvement of students in research. Emphasis is also placed on the internationalization of the study field, providing for ERASMUS+ mobility, concluding cooperation agreements with foreign partner institutions, creating international research groups *etc.* Much attention is devoted to digitization of study programs, incl. placing study materials in the e-environment. A big challenge is definitely popularizing study programs and attracting students, incl. students from abroad.

2.1.3. The structure of the management of the study field and the relevant study programmes, and the analysis and assessment of the efficiency thereof, including the assessment of the role of the head of the study field and the heads of the study programmes, their responsibilities, and the cooperation with other heads of the study programmes, as well as the assessment of the support by the administrative and technical staff of the higher education institution/ college provided within the study field.

The aim and tasks of the study field are determined by the purpose and tasks of the study program, which are aligned with the new trends in the education system in the European Union, with the requirements of related regulations in the legislation, the DU Constitution and with the strategy-defined priority research directions of Daugavpils University (DU). In the current version, the study programs are intended to provide students with a scientific basis for professional activity,

developing the abilities of scientific analysis and the ability to solve problems independently, as well as prepare for future scientific research work.

One of the essential prerequisites for the successful realization of the study field and its programs is the creation of a program management (management) system at DU and ensuring its functioning. The aim of the system of ensuring the management of the study field and corresponding bachelor's and master's study programs is to guarantee the compliance of the program content with the requirements existing in higher education, as well as with the requirements of the labor market of Latvia and the European Union.

The management of the study field "Environment protection" is carried out in accordance with the "Regulations on opening and management of study fields and study programs of Daugavpils University"[1]. The study process is organized in accordance with the DU Constitution[2], the Law on Higher Education Institutions *[Augstskolu likums]*[3] and other legislative enactments. See the diagram of the management structure of the "Environmental protection" field of study at DU in the appendix (*2.1.3. Management structure of the field of study*).

The study field council evaluates the progress and results of the study process and recommends measures to improve the programs and integrate the latest knowledge into the study content and process. The study field council approves proposals for changes in the scope of study courses, in their content and calendar arrangement by semesters, taking into account the results of student and employer surveys (the results thereof) and student achievements, as well as the indicators of the professional performance of lecturers. Proposals for changes in study courses or study programs presented by the study field council are discussed in the Council of the Faculty of Natural Sciences and Health Care (DVAF) and forwarded to the DU Study Council.

The head of the study field, in cooperation with the program directors, organizes and coordinates the study process in the study programs included in the direction, constantly monitoring the quality of studies. The head of the study field is responsible for conceptual changes in the study field, convenes meetings of the study field council if necessary, prepares the annual study field self-evaluation report in cooperation with profiling structural units and study program directors, collects and analyses the information to be included in it.

The director of the study program cooperates with the directors of other programs and the academic staff to ensure the continuity and mutual connection of the study process. At the end of each study year, the heads of the programmes plan the workload for the next study year and send requests to structural units. The heads of the relevant structural units are responsible for appointing a lecturer to teach the relevant study course. Directors of study programs communicate with students and employers, make improvements in study programs, coordinating them with the head of the study field. If necessary, topical issues are considered by the study field council and the Faculty Council.

It should be noted that the DU Student Service Centre (SSC) operates at DU, which develops and circulates documents binding to study programs, informs DU students about current issues, and provides consultations. The work of the SSC provides great support for the organization of the study process within the study field. Key functions of the SSC are:

- issuing certificates to students (to the bank, the State Revenue Service *[Valsts ieņēmumu dienests]* and other institutions that the person is studying at DU, as well as certificates about study leaves, the development and defence of bachelor's and master's theses,);
- issuing concluded study contracts to students;
- advissing students on issues related to the study process, extracurricular activities and service hotels;

- participating in organizing informative events (career days, educational exhibitions,);
- listening to, collecting students' proposals and passing them on to the appropriate structural units.

[1] " Daugavpils University regulations on the opening and management of study fields and study programs". Available: https://du.lv/wp-content/uploads/2024/06/REGULATIONS-FOR-THE-OPENING-AND-MANAGEMENT-OF-STUDY-FIELDS-AND-STUDY-PROGRAMS-OF-DAUGAVPILS-UNIVERSITY-1.pdf [viewed 20.02.2024]

[2] DU Constitution. Available in Latvian only: https://du.lv/wp-content/uploads/2022/09/DU-Satversme_17.06.2022.pdf [viewed 20.02.2024]

[3] Law on Higher Education Institutions. Available in latvian only: https://likumi.lv/ta/id/37967-augstskolu-likums [viewed 20.02.2024]

2.1.4. Description and assessment of the requirements and the system for the admission of students by specifying, inter alia, the regulatory framework of the admission procedures and requirements. The assessment of options for the students to have their study period, professional experience, and the previously acquired formal and non-formal education recognised within the study field by providing specific examples of the application of these procedures.

Admission to the DU study field "Environment protection" and its Academic Bachelor's Study Program (ABSP) "Environmental science" is provided in accordance with the "Daugavpils University admission rules for full-time and part-time undergraduate studies", admission to the Professional Master's Study Program (PMSP) "Environmental planning" takes place in accordance with the "Daugavpils University admission rules for full-time and part-time higher level studies." Admission rules are approved annually by the DU Senate. Admission rules are updated every academic year in accordance with Law on Higher Education Institutions *[Augstskolu likums]*, the October 10, 2006 Cabinet of Ministers *[Ministru kabinets]* Regulations No. 846 "Rules on requirements, criteria and procedures for admission to study programs" and in accordance with the decision of the DU Study Council. Admission rules at DU have been developed according to different levels of studies, "Admission rules for full-time studies for foreigners" are available separately. Detailed information on admission, as well as links to admission rules, are available on the DU website[1].

The admission process is additionally regulated and "Full and part-time study opportunities", "DU admission process", registration fee, study fee in programs, number of study places for admission are approved by the decision of the DU Senate before the start thereof. The Senate approves the deadlines for the competition and announces admission.

"DU Admission Rules" and "Study Opportunities" determine the requirements for persons who wish to study at DU, the university's and the mutual rights and obligations of this person in the admission process; documents contain information about the study programs and study forms of a specific academic year, about additional requirements for applicants' previous education, preparation or special suitability for the specific studies, about the evaluation criteria of the competition. Admission to DU study programs includes the registration of applicants for studies, the conduct of the competition for study places, the announcement of the results of the competition, the conclusion of the study contract and registration in the list of students (matriculation).

Citizens of Latvia and non-citizens, citizens of the European Union, citizens of the European Economic Area or citizens of the Swiss Confederation and independent residents of the European Community who have a valid residence permit have the same right to study at DU (including applying for study places financed by the state budget).

Admission to the undergraduate program (ABSP "Environmental Science") is competitive, based on the results of centralized examinations (CE) as well as examination marks in the secondary education document, excluding persons who obtained secondary education before 2004, as well as persons who obtained secondary education abroad, or persons with special needs, or persons who have been exempted from taking centralized exams in accordance with the procedures laid down in regulatory acts. Persons who have obtained secondary education, starting from 2013, participate in the competition with percentages of CE evaluations. If the study opportunities in full-time and part-time basic studies are not defined differently, then the sum of points in the competition is formed according to the relationship:

- CE level coefficient x CE in Latvian x coefficient x 10 + CE level factor x CE in first foreign language or International test x factor x 10 + CE level quotient x CE Maths (average of all parts) x quotient x 10 + 0.15 x the average value of all CE totals (taking into account the coefficient of each CE level) + additionally CE in the specified subject /exam grade in the secondary education document x coefficient x 10.

Outside the competition for full-time studies on budget financing in the BSP "Environmental Science", if the admission requirements for the relevant study program have been met, the following students are matriculated: The Republic of Latvia and International academic olympiads, their first to third place winners, laureates of the students' scientific and creative works competition in the group of high school classes, DU students' open scientific and creative works competition laureates of first to third places from the years from 2022 to 2024; as well as persons who voluntarily applied for the national defence service and completed it by applying for studies no later than two years after the end of the term of service and in the retirement reserve.

Daugavpils University offers the opportunity to register for studies in the professional master's study program "Environmental Planning" in accordance with the DU Admission Rules: students with previously obtained first-cycle higher education are enrolled in the master's program in environmental science or geography or biology or chemistry or agricultural sciences or forestry or environmental engineering or equivalent education. Enrollment of students in the study program for full studies takes place by competition, based on the results of the final/national final exams (average grade). For studies taking place in English: Knowledge of the English language at least at B2 level.

The DU Admission Commission can review applications for studies and make a decision on matriculation for applicants with previously acquired first-cycle higher education in certain other thematic areas of education in the event, if the applicant has at least 2 years of work experience in the field of nature protection or environmental management, which is confirmed by a certificate from the workplace, or the employer has determined the need to obtain a qualification in the field of nature protection or environmental management in order to perform the duties of the position. In such cases, in order to ensure the necessary amount of knowledge in the study courses of environmental science, the student, after coordinating the individual study plan with the director of the master's program, additionally takes study courses up to 10 credit points (CP) per the first study year.

Admission to DU study programs is ensured by the Secretariat of the DU Admission Commission. The admission commission determines and approves the results of the competition. The Admissions Committee can also approve and redistribute Admission Places. The responsibilities of the

Admissions Commission and the Secretariat of the Admissions Commission are defined in the document "Mutual obligations and rights of a person and DU in the admission process"[2].

The decision of the DU Admission Commission on the results of the competition can be challenged in accordance with the "Procedure in which a person can challenge and appeal decisions related to admission to a study program at Daugavpils University" developed by DU[3].

The DU admission procedure and information about it are implemented efficiently and transparently. During admission, information boards are placed in the DU foyer on the 1st floor, consultations are provided in person, by phone and via e-mail. It should be noted that most potential students communicate about admission issues through DU social media accounts.

In the study programs implemented in the "Environmental Science" study field, students can also be enrolled in the later stages of their studies, students in the later stages of their studies are also matriculated in accordance with the "Procedure for starting studies in later stages of studies at Daugavpils University", taking into account the applicants' professional experience, previously acquired formal and informal education recognition opportunities (Regulation on recognition of competences acquired outside of formal education or professional experience and study results achieved in previous education at Daugavpils University).[4][5] During the last six years, 7 students (ABSP "Environmental Science") resumed their studies in the later stages of their studies in the field of "Environmental protection", most of whom resumed their studies at DU after a break in their studies.

DU has concluded an agreement with LU, which confirms that LU students will be provided with opportunities to continue their education at LU, if the implementation of study programs at DU is stopped (*2.1.4. Agreement for the LU DU ABSP Environmental Science* and *2.1.4. Agreement for the LU DU PMSP Environmental planning*) Standard sample of the study contract is available in the appendix *2.1.4. Contract for studies DU sample*.

[1] DU admission rules. Available: https://du.lv/gribu-studet/uznemsana/ [viewed 01.03.2024]

[2] “Mutual responsibilities and rights of a person and DU in the admission process”. Available in Latvian only: https://du.lv/gribu-studet/uznemsana/ [viewed 01.03.2024]

[3] “The procedure by which a person can dispute and appeal decisions related to admission to a study program at Daugavpils University”. Available in Latvian only: https://du.lv/wp-content/uploads/2024/04/Kartiba_kada_persona_var_apstridet_un_parsudzet_ar_uznemsanu_saistitus_lemumus.pdf [viewed 01.03.2024]

[4] “Procedure for starting studies in later stages of studies at Daugavpils University”. Available: https://du.lv/wp-content/uploads/2022/06/ENG_Procedure-for-the-initiation-of-studies-in-subsequent-study-stages-1.pdf [viewed 01.03.2024]

[5] Regulations on the recognition of competencies acquired outside of formal education or professional experience and study results achieved in previous education at Daugavpils University. Available: https://du.lv/wp-content/uploads/2022/06/ENG_Regulations-for-the-recognition-of-study-results-2.pdf [viewed 01.03.2024]

2.1.5. Assessment of the methods and procedures for the evaluation of students’ achievements, as well as the principles of their selection and the analysis of the

compliance of the evaluation methods and procedures with the aims of the study programmes and the needs of the students.

According to the Standards and guidelines for quality assurance in the European higher education area adopted in 2015 (Standard No. 1.3), universities must ensure that the study programs are implemented in such a way as to encourage students to actively participate in the formation of the study process, and that the assessment of student performance is consistent with this approach. Evaluation in study programs of the "Environmental protection" study direction is carried out based on the following principles:

- the evaluation criteria are clear and understandable, are previously published and available;
- evaluators are familiar with testing and examination methods;
- assessment gives students the opportunity to show to what extent they have achieved the expected learning outcomes;
- students receive feedback that, if necessary, provides advice related to the learning process;
- assessment is consistent, fair, suitable for all students and is carried out in accordance with approved procedures and legislative enactments;
- there is a procedure for examining student appeals.

The knowledge, skills, competences acquired in the basic courses of the industry are tested with tests, colloquiums, exams, presentations and other assessment methods. In course of the learning, in addition to theoretical lessons, the dominant forms of program implementation are laboratory work and practical lessons, and the study courses assess students' knowledge and practical skills

Depending on the teaching form and methods, the lecturer chooses the assessment forms and criteria. A large part of the study results require the student not only to demonstrate knowledge, but also to practically analyze the learned material, connecting it to everyday life and existing experience. Therefore, laboratory work, practical classes and seminars play an important role. In the lab works and the practical lessons, during individual or group work presentations, students express their opinion, improve their research and analytical skills. Acting in this way, a constant dialogue is maintained with surrounding partners – students are aware of the diversity of existing opinions and enrich each other's experience. Special attention is paid to the development of integrative reflection for the acquisition of practical skills and competencies in the study courses. Reflection contributes to the stabilization of students' acquisition of professional skills, as well as promotes self-awareness and self-actualization. Therefore, in these cases, the formative evaluation of study results has a particularly motivating importance in the study process. It is within the framework of formative assessment that students understand the mistakes made and improve the acquired competence, because formative assessment provides students with feedback on how knowledge is acquired.

In addition to formative assessment, lecturers also use summative assessment. Summative assessment is formed in the case of the posting of mid-examination grades. At the end of the study course, there is a test with a grade or an exam. Final exams (defence of theses) take place by presenting the results of your research, participating in a scientific discussion and answering questions.

Students can familiarize themselves with the evaluation criteria, conditions and binding procedures in the study programme course descriptions. The methods used in the assessment are diverse and depend on the study results of each study course in the form of knowledge, skills and competence. These methods include mid-term tests in the form of written tests or tests in an e-learning

environment, evaluation of the results of laboratory works and practical works, preparation of presentations, oral presentations and participation in seminars, *etc.*

The evaluation principles and criteria are described in the description of each study course, which are available in the DU e-environment. Teaching staff, when starting work with students at the beginning of the semester, shall introduce students to the requirements of the study course and the summary evaluation system of knowledge and skills. The main advantage of the summative evaluation system is that the final grade is formed from several components. Therefore, while still doing study work and completing tasks during the semester, students already influence their final grade. The evaluation criteria of study courses and individual works have been published in the DU e-environment. The assessment of laboratory works, practical works, homework, tests, exams, presentations and other works carried out during the semester is given a certain proportion in the final grade of the course. The exam grade must not reach the amount of 100% from the final grade. Teaching staff can also take into account and evaluate individual activity in classes. The evaluation structure for their study course is determined by the teaching staff themselves. When choosing criteria and methods for evaluating study achievements, the specifics of each study course and the results to be achieved are taken into account.

In order to analyze the conformity of assessment methods and procedures to the achievement of study program goals and students' needs, the results of student surveys, formal student success indicators are characterized, the content of each study course and the quality of its delivery are examined in detail. If inconsistencies in assessment methods are found, then a decision is made on the necessary changes in the content of the study courses or in the organization of the study process, if necessary, considering issues at the meeting of the study direction council. After that, proposals for changes in study courses or the study program are discussed in the Council of the Faculty of Natural Sciences and Health Care (DVAF), and after its acceptance, they are forwarded to the Study Council of DU, which evaluates the need for changes. In case of a positive decision of the Board of Studies, the changes are approved.

Evaluation of study results is described in detail in the "Regulations on studies at Daugavpils University"[1].

[1] Regulations on studies at Daugavpils University. Available: https://du.lv/wp-content/uploads/2022/06/ENG-NOLIKUMS_PAR_STUDIJAM_DU_2018-1-1.pdf [viewed 02.03.2024]

2.1.6. Description and assessment of the academic integrity principles, the mechanisms for compliance with these principles, and the way in which the stakeholders are informed. Specify the plagiarism detection tools used by providing examples of the use of these tools and mechanisms.

The guidelines for the ethical behaviour of DU employees and students are determined by the "Ethical Code of Daugavpils University Employees and Students"[1]. The Code stipulates that students support and maintain academic and professional honesty, do not allow plagiarism, copying, other unfair use of intellectual property or cheating, on the other hand, the academic staff evaluates student work in a timely, honest and fair manner, supports and maintains academic and professional honesty, without creating conditions for manifestations of academic dishonesty, monitors the development process of students' work, does not allow plagiarism, copying, other unfair use of intellectual property or other types of cheating.

In implementing the principles of academic integrity, DU follows the "General Guidelines for Academic Integrity"[2], which help to create a common understanding of fairness issues in science and business. The study programs of the study field follow the principles of academic honesty in accordance with the Regulations on studies at Daugavpils University [3]. For example, if students use unauthorized aids in the test or whose final work shows signs of plagiarism, they will be suspended from the test as having failed the test and an appropriate entry will be made in the test protocol.

DU has developed and follows the procedure for submitting final theses for plagiarism control at Daugavpils University[4], which provides for mandatory submission and storage of electronic versions of final theses in the DU Information System and provides an opportunity to compare students' final theses with the set of theses defended in previous years. All final works of DU studies, incl. The bachelor's and master's theses of students of the study field "Environmental protection" are checked before the defence using the plagiarism control system PlagLV (plag.lv). If signs of plagiarism are detected in the process of comparing the final theses, the Expert Commission established by the dean of the Council of the Faculty of Natural Sciences and Health Care (DVAF) and approved by order evaluates the work and decides on the detection of plagiarism in the work. The expert commission examines the report within three working days and submits proposals on the responsibility of the student to the dean of the faculty.

During the reporting period, the commission of experts for the assessment of students' responsibility for possible plagiarism has received two papers from the study field "Environmental protection" (master's thesis in 2018 and bachelor's thesis in 2022). In both cases, signs of plagiarism were found in the theoretical part of the works, i.e. in the literature review, in the description of standardized research methods in the used materials and methods department, as well as in the list of used literature and information sources. In both cases, the Commission instructed to eliminate the signs of plagiarism, observing the principles of citing sources and inserting correct references, and recommended submitting works for repeated plagiarism control and defense in accordance with the deadlines set in DU regulatory documents.

The content of several study courses of the study programs implemented by the study field "Environmental protection" includes topics related to the basic principles of academic honesty, and students are informed about the possible consequences that may arise in the event of their violation.

[1] Code of ethics for employees and students of Daugavpils University. Available in Latvian only: https://du.lv/wp-content/uploads/2021/12/Etikas-kodekss.pdf [viewed 02.03.2024]

[2] “General Guidelines for Academic Integrity”. Available in Latvian only:https://ebooks.rtu.lv/product/akademiska-godiguma-terminu-vardnica-akademiska-godiguma-visparejas-vadlinijas/ [viewed 02.03.2024]

[3] Regulations on studies at Daugavpils University. Available: https://du.lv/wp-content/uploads/2022/06/ENG-NOLIKUMS_PAR_STUDIJAM_DU_2018-1-1.pdf [viewed 02.03.2024]

[4] Procedure for submitting theses for plagiarism control at Daugavpils University. Available: https://du.lv/wp-content/uploads/2022/09/Procedure-of-thesis-submission-for-plagiarism-control.pdf [viewed 02.03.2024]

2.2. Efficiency of the Internal Quality Assurance System

2.2.1. Assessment of the efficiency of the internal quality assurance system within the study field by specifying the measures undertaken to achieve the aims and outcomes of the study programmes and to ensure continuous improvement, development, and efficient performance of the study field and the relevant study programmes.

Assessment of the effectiveness of the internal quality assurance system within the field of study

An important role in the implementation of the study process is played by the direction administration and the quality assurance system, the functioning of which is coordinated by the DU Study Council and the DU Study Quality Assessment Centre (SKNC). The purpose of ensuring the quality of the study process and the management system is to guarantee the compliance of the program content with the standard of higher education, the quality of science, as well as with the requirements of the labour market of Latvia and the European Union.

Study quality assessment is carried out with the aim of controlling the execution of study programs and planning development in order to fully achieve the goals set in the programs and fulfill the defined tasks. Quality control takes place continuously: admitting students, hiring academic staff, evaluating and improving study programs, evaluating the operation of structural units, their leaders and staff according to scientific efficiency and academic work results.

DU has developed a structured quality management system model that sets guidelines for achieving excellence. This model of excellence is binding on every DU employee. It includes nine criteria (refer to Figure No. 1). Five of them cover contributing factors, the other four cover outcomes and results. Contributing factors (facilitating criteria) reflect what DU does and how it is done, while outcome (result) criteria reflect the achievements obtained.

The results are achieved thanks to the contributing factors, whereas the contributing factors are improved retrospectively based on the results achieved. Effective results can be achieved with the management's understanding and support, purposefully directed DU strategy and policy, which in turn is implemented with the successful participation of the staff, as well as with the help of a full-fledged partnership, a resource-saving approach and effective management of all the processes. The arrows shown in the figure show the dynamic improvement nature of the model of excellence – the importance of creativity, innovation and education in the improvement of promoters, which in turn ensures the achievement of better results. The model of excellence makes it possible to understand the cause-and-effect relationships between the activities that DU implements and the results it achieves (DU development strategy).

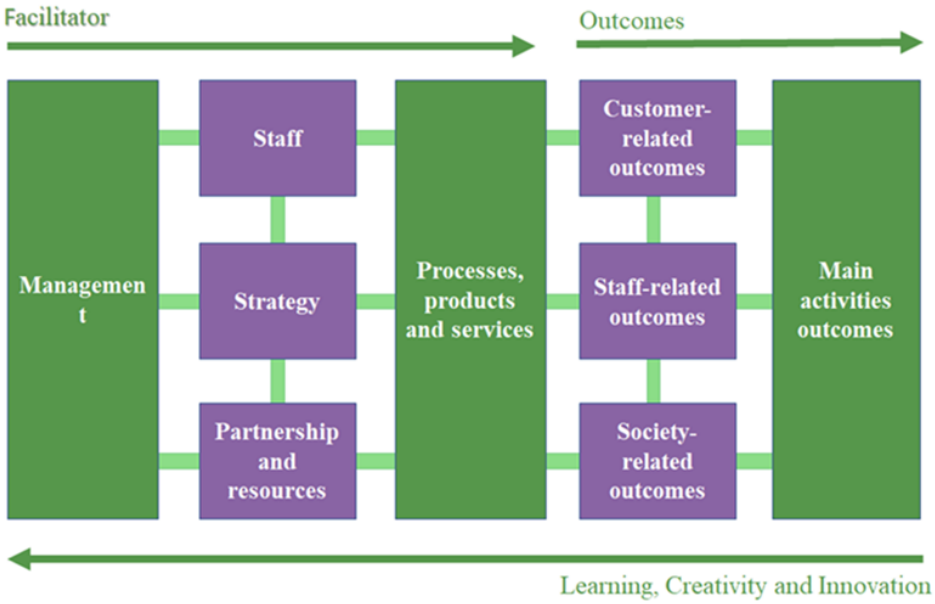


Figure 2.2.1.1. A quality management system model that sets guidelines for achieving excellence in DU

Evaluation of the quality of study programs and the study process at DU is carried out in order to control the execution of study programs in accordance with accreditation documents, improve its content and plan its development. In general, this system is aimed at achieving the goals set by the study program and fulfilling the tasks set in it. Quality control is organized at the University level and is carried out at all stages, i.e. matriculating students, hiring academic staff, evaluating and improving the content of the study program, evaluating the activity of structural units and their lecturers according to the results of scientific and academic work.

Surveys of students, graduates and employers are regularly organized at Daugavpils University; their results are used to make operational decisions, to improve the quality of study courses, to improve the quality of programs, to improve the work of teaching staff. The performance of the programs is assessed at the meetings of the study field "Environmental Protection" Council. Proposals for changes in study programs are considered at Faculty of Natural Sciences and Health Care (DVAF) council meetings.

It should be emphasized the preparation of the annual self-assessment report of the study field in the internal quality control system. Namely, at the end of each study year, a study course report is prepared and after its discussion and approval by the study course Council and DVAF Council, it is submitted to the Study Quality Assessment Center and after approval by the DU Senate, it is published and is available from the DU internal network.

Lecturers regularly revise the descriptions of study courses and supplement them with current topics and the latest literature. At the end of the study year, lecturers update their data in the internal information system (DUIS) and discuss the year's results and directions for improvement in discussions with the director of the study program. Strategic planning of the study process is constantly carried out, analyzing study program weaknesses, risks, development opportunities and other related aspects. DU e-study environment MOODLE contains information about the courses to be studied in the semester - the following information is available to students: description of the study course, tasks set for independent work, lecture materials, laboratory work and practical work performance materials, study resources and free access learning tools and other additional materials. In order to ensure the exchange of information and to make decisions about the study process, management and staff meetings are organized, in which the personnel involved in the provision of the program participate.

The internal quality assurance system of the study field "Environmental protection" is implemented in accordance with the practice implemented by DU. The system can be evaluated as effective, transparent and coordinated with the goals and implementation process of the study field "Environmental protection".

For the effective implementation of the internal quality assurance system of the studies, the following measures are taken within the study field "Environmental protection":

- The internal quality control of the "Environmental protection" study field is carried out by the Study field Council, program directors, teaching staff of the profiling structural units (departments). Discussion and evaluation of the development plan of the course and measures to improve the quality of studies take place at the end of each study year or as necessary at the meeting of the study field "Environmental Protection" council.
- Once a study year, the head of the study field "Environmental protection" in cooperation with the program directors prepares a self-evaluation report of the study field for the previous study year.
- Lecturers regularly revise the descriptions of study courses, update the course content, supplement it with the latest literature, as well as with forms of practical lessons.
- In the course of the implementation of the major study programs, there is a regular survey of the opinions of the lecturers - industry professionals involved in the programs, as well as the trainees and the employers of the program graduates (surveys, expertise of individual program components, involvement of employers and university graduates in the study field council), which allows closer coordination of the programs content with the needs of the labour market. The quality of study work is promoted by the intensive participation of graduates in the study process of the university, both by teaching guest lectures and by providing practices and work places. The exchange of opinions between the academic environment and employers also takes place regularly at scientific-practical conferences and professional seminars.
- There is a regular comparison of study program content, academic and scientific work with study programs in the field of environmental sciences implemented in other Latvian universities.
- While improving the skills to work remotely, the lecturers of the "Environmental protection" study stream regularly participate in trainings to ensure the full use of the MOODLE opportunities of the e-study environment (for example, in the frame of the ESF project "Reducing the fragmentation of study programs and strengthening the sharing of resources at Daugavpils University", No. 8.2.1.0/ 18/A/019, seminars were organized for the development and integration of study course support materials necessary for lecturers into the study process).
- Integration of the study process and research work is consistently implemented, considering it as an essential part of the quality assurance system.
- Strategic planning of the study process is constantly carried out, analyzing study program weaknesses, risks, development opportunities and other related aspects.
- The academic staff of the study field "Environmental protection" participates in academic and methodical conferences, seminars and qualification improvement courses as lecturers or listeners, regularly improving study courses with innovative study forms and modern methods.

It is also very important to promote the motivation of the lecturers involved in the realization of the study field for the internal quality assurance and the improvement and development of the corresponding study programs (see table 2.2.1.1)

Table 2.2.1.1. Activities to promote the motivation of teaching staff at DU and within the study field

Activities of academic staff	Motivation
Lecturers are given the opportunity to supplement and expand their knowledge and professionalism, within the framework of ERASMUS+, etc. mobility programs.	Gains foreign experience by doing internships and conducting lectures in foreign universities/organizations.
Participation in conferences, development of scientific publications, organization of science communication activities, etc.	For the scientific performance of the previous period, the lecturers are granted funding for the scientific activities of the next period. At the end of each calendar year, DU lecturers in the Science Department submit a report on achievements in scientific work, work projects, participation in scientific seminars and conferences, publications in accordance with the procedure for evaluating the scientific activity of academic staff of Daugavpils University (available from the internal network of DU).
Preparation and publication of scientific articles included in Web of Science and SCOPUS indexed editions.	Lecturers receive reimbursement for expenses related to publication preparation (editing of scientific texts in English (proofreading) and publication fees).
Increasing the Hirsch index	Within the framework of funding in the DU budget, the academic staff of DU receives compensation for the Hirsch index characterizing citation in SCOPUS and/or Web of Science databases.
Payment of expenses for scientific business trips	DU pays for business trips related to participation in scientific events and conducting scientific research.
The Daugavpils University research project competition is organized at DU	As a result of the DU research project competition, current and qualitatively developed projects are awarded funding for the promotion of the research growth of DU academic, scientific staff and doctoral students.

All the above-mentioned actions and measures help to improve the study programs corresponding to the study field. For example, teaching staff involved in the study field began to take advantage of opportunities to participate in scientific conferences more actively, the involvement of students in research projects increased, etc. which positively affects the quality of studies in the study field "Environmental protection".

2.2.2. Analysis and assessment of the system and the procedures for the development and review of the study programmes by providing specific examples of the review of the study programmes, the aims, and regularity, as well as the stakeholders and their responsibilities. If, during the reporting period, new study programmes have been developed within the study field, describe the procedures of their development (including the process of the approval of study programmes).

The principles of opening and management of new study fields and study programs are determined by the "Regulations on opening and management of study fields and study programs of Daugavpils University"[1]. Its purpose is to determine the principles, content and implementation requirements for the opening and management of the DU study field and study program, in accordance with the Law on Universities, etc. binding regulatory acts of the Republic of Latvia, DU Constitution, etc. binding DU regulatory documents. The regulations determine the procedure for opening, management, development and quality assurance of DU study fields and study programs, the procedure for closing study fields and study programs, the principles of the study field council, as well as the duties, rights and qualification requirements of the head of study field and study program directors.

The development of a new study program is started in accordance with the DU strategy or other strategic and study process regulatory documents at least one study year before the start of the study program implementation. The course of development of the new study program is monitored by the Study field Council, calling meetings of the Study field Council, if necessary, to discuss the study program content, provision, etc. issues related to the development of the study program. The person responsible for the development of the study program prepares the description of the study program and all its appendices in accordance with the regulations of the MC of December 11, 2018 No. 795 "Study program licensing regulations"[2]. The person responsible for developing the study program, in consultation with the head of the Study Department, prepares the structure of the study plan and, in consultation with the head of the Secretariat of the Admissions Commission, prepares the admission requirements. The person responsible for the development of the study program in cooperation with the dean of the faculty, representatives of the profiling structural unit and representatives of the structural units involved in the implementation of the study program prepares the study plan of the newly created program and proposals for the author/s of the study courses, which are submitted to the faculty council for approval. After the study plan and study course authors have been agreed in the faculty council, study course authors develop study course descriptions.

The study field (as well as all programs included in the direction) is evaluated in accordance with the accreditation schedule of the study fields of the Ministry of Education and Science of the Republic of Latvia, which is determined in Clause 48 of Chapter XII of the Law on Higher Education Institutions. The preparation of documents and annexes necessary for the evaluation of the study field is carried out in accordance with the "Guidelines for the development of the self-evaluation report of the study field" developed by the Higher Education Quality Agency of the Academic Information Center.[3].

Each year, the study field submits a self-assessment report for the academic year to the Study Quality Assessment Centre (SKNC) of Daugavpils University. The self-evaluation includes the description of the direction and the evaluation of each program. The self-assessment report is prepared by the head of the study field. Self-evaluation includes mandatory annual surveys

(surveys of students, graduates, employers), which allow to evaluate the strengths and weaknesses of the programs depending on the situation. At the same time, as mentioned above in in the subsection 2.2.1., analysis and revision of study programs and course content can be done more often. For example, during the COVID-19 pandemic, the frequency of revision of the way programs and courses are implemented and study outcomes are achieved increased. At this stage, program directors regularly (1-2 times per semester) conducted written and oral surveys of students to find out their attitudes and define problems. The DU Student Council also conducts a student survey every semester with the aim of evaluating the quality of studies. The results and recommendations of the survey are compiled and submitted to the faculties, as well as discussed in the Study field Council.

In preparation for the accreditation process of the study field "Environmental protection" programs, the content of the study programs has been reviewed and changed, changing the study courses, their content and scope, emphasizing the achievable study results and emphasizing the necessary and current knowledge and skills for further studies, scientific activity and the labour market and competencies. In the process of developing and revising study programs, the latest trends in the environmental policy of the European Union and Latvia have been taken into account, involving teaching staff and listening to the opinions of students and employers. In the development of the new content of the study programs, the study on human resource development forecasts in the field of STEM and the study of DU studies, commissioned as part of the project "Improving Daugavpils University Management and Management Competencies" (agreement No. 8.2.3.0/18/A/010) and implemented by the Latvian Institute of Hydroecology research about program compliance analysis, recommendations contained in the development needs of science branches (environmental science, hydrobiology, chemistry) was also taken into account.

During the reporting period, no new study programs were created in the study field "Environmental protection".

[1] Daugavpils University regulations on the opening and management of study fields and study programs. Available: https://du.lv/wp-content/uploads/2024/06/REGULATIONS-FOR-THE-OPENING-AND-MANAGEMENT-OF-STUDY-FIELDS-AND-STUDY-PROGRAMS-OF-DAUGAVPILS-UNIVERSITY-1.pdf [viewed 04.03.2024]

[2] Regulations of the Cabinet of Ministers of December 11, 2018 No. 795 "Regulations for Licensing Study Programs". Available in Latvian only: https://likumi.lv/ta/id/303957 [viewed 04.03.2024]

[3] Guidelines for the development of the self-assessment report of the study field field . Available in Latvian only: https://www.aika.lv/wp-content/uploads/2019/05/Studiju-virziena-pasnovertejuma-zinojuma-izstrades-vadlinijas_2019.pdf [viewed 04.03.2024]

2.2.3. Description of the procedures and/or systems according to which the students are expected to submit complaints and proposals (except for the surveys to be conducted among the students). Specify whether and how the students have access to the information on the possibilities to submit complaints and proposals and how the outcomes of the examination of the complaints and proposals and the improvements of the study field and the relevant study programmes are communicated by providing the respective examples.

Submitting and examining student complaints and proposals is an essential component of the study quality system. In order to ensure the improvement of the quality of studies, it is necessary to analyze the processes, obtain a clear statement of the reasons for the complaints and provide feedback to the person who submitted the complaint or proposal.

Procedures and systems for submitting student complaints and proposals

Students have the opportunity to submit complaints or proposals to the Study Quality Assessment Center, the Study Council, the vice-dean or dean of the Faculty of Natural Sciences and Health Care, the Department of Environment and Technology, study program directors, vice-rectors and the rector. Complaints and proposals, depending on their importance, are accepted orally, in writing and electronically.

Complaints and proposals are accepted individually or collectively, publicly (by identifying identity) and anonymously. Forming and acceptance of submissions to DU is carried out in accordance with the procedures set out in the " Law on Submissions"[1]. Submissions on possible violations of the norms of the "DU Code of Ethics"[2], including actions or behavior outside the DU, if the prestige of the DU has been affected, can be submitted by the academic, administrative and general staff of the DU, as well as students. The application can be submitted on behalf of students by the Student Council, which can act as the student's representative during the examination of the complaint.

Students of the major prefer to solve problems within the structural units of the faculty or with study program directors. For example, the head of the department or the program director receives complaints about communication problems with guest lecturers. Officially, according to the law, the head of the structural unit or program has the right to respond to a written complaint (students are informed about it). During distance studies, several proposals were received from the students regarding the organization of the study process: the schedule of classes, the proportion of independent work, the choice of an e-platform. When organizing the state/final exams during the pandemic, the students' opinion about the form of the exams was taken into account.

Submissions of students and academic staff regarding restrictions and violations of academic freedom and rights stipulated in the Constitution are considered by the Academic Arbitration Court of DU.

Submission of open complaints and proposals

DU students can submit open complaints and proposals in free form or in accordance with the procedures established in DU's internal regulatory acts.

Submission of anonymous complaints and suggestions

DU has the following complaint tools available:

- The SKNC section available on the DU website, where anyone can anonymously submit a complaint/proposal to the SKNC [3]
- Confidence questionnaire created by the Student Council [4]

Anonymous complaints are received electronically, after examination and analysis of the content of the complaint, SKNC conducts negotiations with the involved parties and, if necessary, implements study quality monitoring. In the current practice, SKNC closely cooperates with the Student Council in examining anonymous complaints, conducting a situation study and taking the necessary measures to improve the quality of studies, because according to the "Daugavpils University Student Council Regulations" the Student Council has the right to request and receive information

from any DU structural unit on all issues within its competence, which affects the interests of students.

In order to consider admission-related complaints, DU operates the "Procedure in which a person can dispute and appeal decisions related to admission to a study program at Daugavpils University", according to which a person can dispute the decision of the Admissions Commission on the results of the competition by submitting an application to the rector of DU within seven working days after publication of competition results.

According to the "Regulations on studies at Daugavpils University"[5], students have the right to submit a motivated appeal to the dean of the faculty regarding the exam results within one working day after they are announced. The appeal is examined within three working days by a commission established by the dean's decision, with the participation of the examiner and the head of the relevant department.

Information accessibility

All interior administrative acts, in accordance with which students may submit complaints and proposals are publicly available from DU website. Students may receive information by addressing the study programme director, dean, SKNC, and the Student Council.

Feedback in examining complaints and proposals

SKNC coordinates the examination of students' complaints and proposals and, if needed, organizes express surveys, executes study quality monitoring by attending classes and talking with students and the academic staff in order to ensure full bodied analysis of the conflict or problem.

During the implementation of the remote study process in 2019/2020 spring semester, there was organized a survey of DU students on the quality of the implementation of the remote learning process, as a result of which the offer of the library services was improved, as well as the methods and tools for organizing remote learning were diversified for all the university students including the students of the study field "Environmental protection". During the implementation of the remote study process in the academic years 2019/2020, 2020/2021 and 2021/2022, the head of the study field and the directors of the study programmes regularly communicate with the students of all levels, monitoring the study process of the study programmes of the direction.

Since 2013, SKNC has not received any oral or written complaints about the quality of studies in the programs of the field of study "Environmental protection". However, complaints received in other study programs have been examined, for example, regarding the requirements for obtaining credit points specified in the study course description and the inadequacy of the students' knowledge and skills test forms in the implementation of the study process, proposals for compiling a list of lessons, communication problems, etc. questions. In these cases, all complaints and proposals are always discussed with the parties involved. The director of the study program and, if necessary, the head of the study area and the Vice-Rector of Studies participate in the examination of complaints and proposals. After analyzing the situation, possible solutions are found, students are always informed about the implementation of complaints and/or proposals, SKNC provides consultations on study quality issues.

It is worth noting that the University regularly (once a month) holds meetings of the management and the head of the SKNC with the Student Council, where students' problems, complaints and recommendations for improving the quality of studies are identified and discussed.

[1] Law on Submissions. Available: https://likumi.lv/ta/en/en/id/164501-law-on-submissions [viewed

06.03.2024]

[2] „DU Code of Ethics". Available in Latvian only: https://du.lv/wp-content/uploads/2021/12/Etikas-kodekss.pdf [viewed 06.03.2024]

[3] Study Quality Assessment Center. Available: https://du.lv/en/about-us/study-quality-assessment-centre/ [viewed 06.03.2024]

[4] Trust questionnaire created by the Student Council. Available in Latvian only: https://du.lv/studentu-padome/uzticibas-anketa/ [viewed 06.03.2024]

[5] "Regulations on studies at Daugavpils University". Available: https://du.lv/wp-content/uploads/2022/06/ENG-NOLIKUMS_PAR_STUDIJAM_DU_2018-1-1.pdf [viewed 09.03.2024]

2.2.4. Provide information on the mechanism for collecting the statistical data, as developed by the higher education institution/ college. Specify the type of data to be collected, the regularity of collection, and the way the information is used to improve the study field. Describe the mechanism for obtaining and providing feedback, including with regard to the work with the students, graduates, and employers.

When collecting physical person data, DU collects and processes person data for concrete, clear, and lawful reasons and exclusively according to the procedure and amount stated in the normative acts.

DU operates informative system DUIS, that holds statistical data and information on study programmes, students, and academic staff members. The system is accessible from DU inner network. Data are entered into DUIS by study programme directors, faculty records managers; they are summarized and verified by the Department of Studies. At the end of each month the data from DUIS system are exported to State Education Information System (SEIS). Data export is executed in accordance with the regulations of the Cabinet of Ministers No. 276 of 25 June 2019 "Terms of State Education Information System"[1]. SEIS data export entails person data of DU students, information of students' status (matriculated and ex-matriculated student number, their status changes, e.g. semester of studies, students being in an academic withdraw, etc.) and other binding information.

One of the main instruments contributing to the improvement of the study directions is student survey that is announced by the Centre of Study Quality Assessment 2 times a year – for the first year students 2 months after beginning the studies, at the end of the study year. In particular study programmes student surveys are organized at the end of each semester. Based on the data and information provided in the surveys, in case of need CSQA carries out lecture auditing and individual student group surveys as well as organizes interviews with the academic staff concerning the measures of the study quality improvement.

The data gained in surveys are collected in DU survey system (Open Source Project LimeSurvey), data are analyzed and their results are reflected in the study direction self-assessment reports.

DU organizes also alumni and employer surveys. Alumni survey [2] data contain the information on the trends of alumni's employment, assessment of the acquired study programmes and proposals for their improvement. Employer surveys [3] are executed and their data are summarized by the study programme directors. Their aim is obtaining proposals for the improvement and development of DU study content.

The analysis and interpretation of the data systematically obtained are used for the improvement of the study direction. The data of students and employers' surveys ensure the compliance of the aims and tasks of the study direction programmes with the requirements of the market and society, allowing for tracking and evaluating the quality of each study course, its compliance with the aims and tasks of the programme.

Much attention is paid to the satisfaction of students with the teaching quality of the major programs and study courses. The results of surveys are discussed at the meetings of the study direction council and also at the meetings of the Department of Environment and Technology. The obtained information is transferred to study program directors and lecturers working in study programs. Based on the results of the surveys and evaluating the quality of the study program and individual study courses from the point of view of students and employers, it is decided on the necessary changes in the content of the study courses or the organization of the study process, thus integrating the results of the surveys into the improvement of the study quality. The sessions discuss the possibilities of responding to students' constructive opinions and proposals expressed in the comments of the questionnaire (regarding the use of electronic learning materials, free access learning resources, organization of the study process, etc.).

Mechanism of receiving and providing feedback (working with students, alumni, employers)

For the study programme elaboration to be compatible with the labour market demands, special significance is attributed to the feedback received from students and alumni. Students and alumni assess the proceeding of the study programme as well as the applicability of the acquired knowledge, skills, and competences in professional activity, thus the feedback becomes a valuable element of the study process improvement.

The SQAC at the end of each academic year organizes a student survey the results whereof provide information on the assessment of the study quality and related aspects. Student survey is available in e-environment. Alumni and employer survey questionnaires are elaborated as well. The results of student surveys are taken into account when planning the next academic year, assessing the pedagogical and professional competences of the lecturers, the availability of the study materials and sources, the involvement of foreign teaching staff, and other related issues.

Graduate student and employer surveys are conducted by representative sampling. Employers are surveyed after internships, the survey of employers not involved in internship provision takes place every two years on average. Questionnaires or interviews of graduates are organized both immediately after graduation and several times after graduation (after six months, a year, three years). After processing the obtained data and reviewing the results, changes are introduced into the content of the study programme. The director of the study programme informs all involved parties (students, teaching staff, employers, graduates) about the changes introduced, thus providing feedback. The recommendations or reprimands mentioned in the surveys and the prevention mechanisms are discussed in meetings with both the teaching staff and the students of the study direction, as well as in consultations with the representatives of the sector. Student representatives participate in the direction councils and in the development of solutions to the comments provided in the surveys.

Student, alumni, and employer survey results are used to review and improve the study programme content. The study programme director reacts to all justified opinions, proposals, and reprimands expressed in the survey questionnaires, and upon necessity they are discussed by the study direction council. After introducing the changes in the study programme content, the study programme director informs all the parties involved (students, academic staff members, employers, alumni), thus providing a feedback.

As an example, the appendix includes a summary of student, graduate and employer survey results (*2.2.4.ABSP Environmental Science student survey analysis*; *2.2.4.ABSP Environmental Science graduate survey analysis*; *2.2.4.PMSP Environmental Planning student survey analysis*; *2.2.4.PMSP Environmental planning survey analysis*; *2.2.4.Employer survey analysis*).

[1] The regulations of the Cabinet of Ministers of June 25, 2019 No. 276 "Rules of the State Education Information System". Available in Latvian: https://likumi.lv/ta/id/307796 [viewed 09.03.2024]

[2] Absolventu aptauja. Available in Latvian: https://aptaujas.du.lv/index.php/764263/lang-lv [viewed 09.03.2024]

[3] Darba devēju aptauja. Available in Latvian: https://aptaujas.du.lv/index.php/544412 [viewed 09.03.2024]

2.2.5. Specify the websites (e.g., the homepage) on which the information on the study field and the relevant study programmes is published (in all languages in which the study programmes are implemented) by indicating the persons responsible for the compliance of the information available on the website with the information published in the official registers (State Education Information System (VIIS), E-platform).

All necessary information on studies, the faculty, study direction and and study programmes in Latvian and English is available on DU website and is accessible to students. DU website section "Studies"[1] contains information about DU faculties, implemented study programmes, opportunities of auditing study courses, as well as further education opportunities provided by DU life long education centre. DU website section "Study programmes"[2] contains information on all study programmes implemented at DU, including ABSP "Environmental science"[3] un PMSP "Environmental planning"[4]. The website provides information about admission requirements for each study programme, study courses to learn (including study course descriptions in Latvian and English), opportunities after graduating as well as contact information of the study programme director.

The International and Public Relations Department is responsible for the compliance of the information on the DU study fields available on the DU website with the information available in the official registers. In turn, the Study Department is responsible for regular and timely provision of information about students (SEIS).

[1] DU Studijas. Available: https://du.lv/en/studies/ [viewed 06.03.2024]

[2] DU Studiju programmas. Available: https://du.lv/en/studies/study-programmes/ [viewed 06.03.2024]

[3] Informācija par ABSP "Vides zinātne". Pieejama: https://du.lv/en/studies/study-programmes/academic-bachelors-study-programmes/environmental-science/ [viewed 06.03.2024]

[4] Informācija par PMSP "Vides plānošana". Pieejama: https://du.lv/en/studies/study-programmes/professional-master-study-programmes/environmental-planning/ [viewed 06.03.2024]

2.3. Resources and Provision of the Study Field

2.3.1. Provide information on the system developed by the higher education institution/ college for determining and redistribution of the financial resources required for the implementation of the study field and the relevant study programmes. Provide data on the available funding for the scientific research and/or artistic creation activities, its sources and its use for the development of the study field.

The study field “Environmental protection” is funded from the state budget financing for studies (subsidy) and tuition fees. The cost calculation for one student in the programmes of the study field was made at the Department of Finance and Accounting of DU, including the salary fund and the employer’s SSIA, the costs of business trips, materials, energy resources and inventory costs, the costs of purchasing books, equipment and investments, as well as the costs for social security of students.

The main source of funding for study programmes is the state budget. It is also possible to learn in the study programme for a fee. Students have the opportunity to apply for tuition fee discounts. More information about tuition fees and discounts [1].

For the development of science in the DU, funds are allocated from the Ministry of Education and Science. The study field obtains the funds intended for the development of science on the basis of the scientific achievements and indicators of the lecturers for the previous year, which are evaluated by the DU Department of Science.The assessment of the efficiency of the scientific work of the academic staff of DU is carried out in accordance with the “Procedure for evaluating the effectiveness of the scientific work of the academic staff of the University of Daugavpils" (available from the internal network of DU).

The funds for scientific development within the budget of DU are allocated to faculties and scientific institutes by the decision of the Scientific Council of DU on the basis of the scientific activity reports submitted by the departments. The further distribution of the allocated scientific development funds to the faculties/scholarly institutes is decided by the Council of Faculties or the Scientific Council of the scholarly institutes. The funds may be used for scientific missions, organisation of scientific events, purchase of materials for scientific research, purchase of scientific and educational literature, support of science communication activities, support of students' scientific activities. Within the existing funding in the DU budget, rewards are foreseen for the promotion and support of scientific activities.

DU academic staff (assistants, lecturers, docents, associate professors, professors, research assistants, researchers, leading researchers) have the right to receive within the available DU budget financing royalties for scientific publications indexed in the Web of Science and/or SCOPUS databases, and scientific monographs. Payment for scientific publications is made in accordance with the “Procedure in which scientific publications and monographs of academic staff of Daugavpils University are paid” developed by DU (available from the internal network of DU).

DU academic staff (assistants, lecturers, assistant professors, associate professors, professors, research assistants, researchers and leading researchers) within the available DU budget financing have the right to receive remuneration for the citation characterizing Hirsch index in SCOPUS and/or Web of Science (hereinafter referred to as WoS) databases. The amount of compensation is calculated according to the “Procedure in which the academic staff of Daugavpils University receives remuneration for the Hirsch index”.

DU academic staff have the opportunity to participate in the annual Daugavpils University research project competition and receive funding for the implementation of scientific research [2]. The general goals of the research project competition are to ensure the development of DU's scientific activity and scientific excellence; promote the research growth of DU academic, scientific staff and students; promote the practical applicability of research results, cooperation with the private sector and attraction of additional external funding; to form innovative interdisciplinary research groups for the implementation of current research topics. The right to submit individual or research group projects to the competition is granted to representatives of the academic and scientific staff working on the basis of an employment contract: professors, associate professors, docents, leading researchers, researchers, lecturers, assistants, research assistants, doctoral students and applicants for a doctoral degree. The total funding amount of the project competition for the current year is determined by the DU Budget Commission. The allocated project tender fund for 2023 was EUR 51,000.00. The maximum allowable amount of funding for one research project is EUR 3000.00.

Students of DU study programmes are eligible for applying to student research project competition[3]. The general goals of the research project competition are to ensure the development of DU's scientific activity and scientific excellence; promote the research growth of DU students; promote the practical applicability of scientific results, cooperation with the private sector and attraction of additional external funding; to form innovative interdisciplinary research groups for the implementation of current research topics; involve DU bachelor and Master students in scientific activity; promote the increase in the number of publications indexed in the Web of Science and/or SCOPUS databases at DU. The right to submit projects to the student research project competition is granted to academically successful students in DU bachelor and Master study programmes who are enrolled in the respective level study programme for the first time. If the student terminates studies, the scholarship payment is stopped starting from the following month. During the implementation of the project, it is planned to publish at least one publication in editions indexed in the Web of Science and/or SCOPUS databases. For the project implementation, bachelor and Master students receive a scholarship of EUR 200.00 per month for annual 10 months duration. The maximum available amount of funding for one research project and the total amount of funding for the project competition for the given year are determined by the DU Budget Commission. The project tender fund in 2023 was EUR 24,000.00, while the maximum allowable amount of funding for one research project was EUR 2,000.00.

Funding for the improvement of the educational material and technical base (additional improvement of auditoriums and laboratories, purchase of educational literature and modern research equipment, purchase of visual aids and software, etc.) is mainly provided from various projects (e.g. ERDF, ESF) or for contractual research ordered by legal entities (for example, studies financed by the association "Daugava Union").

[1] DU Studiju maksa un atlaides. Available in Latvian: https://du.lv/gribu-studet/studiju-maksa-un-atlaides/ [viewed 06.03.2024]

[2] DU research project competition for 2023 (in Latvian). Available in Latvian: https://du.lv/aktualitates/daugavpils-universitate-izsludinats-ieksejo-petniecibas-projektu-konkurss-2023-gadam/ [viewed 20.02.2023]

[3] DU student research project competition for 2023 (in Latvian). Available in Latvian: https://du.lv/aktualitates/daugavpils-universitate-izsludinats-studejoso-petniecibas-projektu-konkurs-2023-gadam/ [viewed 20.02.2023]

2.3.2. Provide information on the infrastructure and the material and technical provisions required for the implementation of the study field and the relevant study programmes. Specify whether the required provision is available to the higher education institution/ college, available to the students, and the teaching staff.

The implementation of the study programs included in the "Environmental protection" study direction is ensured by several study and research units of DU – mainly the Faculty of Natural Sciences and Health Care and the Institute of Life Sciences and Technologies.

In the "Environmental Protection" field of study, the study process basically takes place in the DU study buildings at Parades iela 1 and Parades iela 1a, where the DU Laboratory Building is located, as well as the Department of Environment and Technology and the lecturers involved in the study program work on a daily basis. Auditoriums and laboratories at Parades iela 1a meet the needs of the study process, they have the necessary technical equipment for the implementation of study programs (computers, video projectors, laboratory equipment), which is used both during laboratory work and also in classrooms to demonstrate lecture and seminar materials and provide practical lessons. Multi-seat auditoriums (approx. 100 seats) are used for stream lectures, as well as classrooms specially equipped for learning foreign languages in the DU study building at Vienības iela 13.

In order to ensure the study process and conduct scientific research, students are provided with more than 20 specialized offices and teaching or scientific research laboratories at the Faculty of Natural Sciences and Health Care (at the Department of Environment and Technology) and the Institute of Life Sciences and Technologies (at the Department of Ecology, Department of Technology (incl. at the Center of Innovative Microscopy), at the Department of Biotechnology (Department of Applied Chemistry, *etc.*). See the appendix for the most important equipment available in scientific and teaching laboratories (*2.3.2. Infrastructure and material and technical support*). The field courses provided in the bachelor's study program "Environmental Science" take place in the "Ilgas" Study and Research Centre of Daugavpils University (DU). DU agency "Latvijas Hydroecology Institute" (LHEI) offers students to use the institute's scientific laboratories (as well as other equipment) for carrying out specialized research in hydroecology and assessing the state of the water environment. For students whose bachelor's or master's theses require the implementation of field research, extensive field research equipment of the Department of Environment and Technology of DU and the Institute of Life Sciences and Technology of DU is available.

Within the last 10 years, DU has purposefully invested in the modernization of the study and research infrastructure, as a result of which students have access to modern teaching and research laboratories equipped with the necessary laboratory and field research equipment to ensure the study and the research process. Infrastructure modernization projects implemented by DU, within the framework of which the study and research opportunities for the students of the study field “Health Care” have been improved, are the following ones:

- ERDF project “Modernization of STEM, health care and art study programmes at Daugavpils University” (agreement No. 8.1.1.0/17/I/005, project implementation time: 2017 – 2020, DU total costs: 1 425 138.00 EUR). Within the framework of the project, the material and the technical base of study programmes has been developed, equipment, laboratory materials, inventory and tools have been purchased, as well as library collections have been supplemented and information technology equipment has been developed to offer high-quality education that meets international standards and is competitive.

- ERDF project “Development of research infrastructure in the fields of smart specialization and strengthening of institutional capacity at Daugavpils University” (agreement No. 1.1.1.4/17/I/008”, project implementation time: 2017 – 2020, DU total costs: 3,069,684, 21 EUR). Within the framework of the project, infrastructure has been developed by purchasing new equipment in the priority development areas defined in the internationally recognized research programmes: mathematics, physics, nanomaterials, materials engineering, biology.
- ERDF project “Improvement of the quality of Daugavpils University study programmes and ensuring the environment accessibility” (agreement No. 2010/0115/3DP/3.1.2.1.1/09/IPIA/VIAA/021, project implementation time: 2010 – 2015, DU total cost: EUR 16 715 991). Within the framework of the project, the auditoriums of the study building at 1 Parādes Street were renovated and adapted for people with functional disorders, their energy efficiency was increased, as well as the equipment, tools, facilities and information technologies were modernized. The building of the DU Life Sciences and Technology was attached to the existing building of DU; it has study and scientific laboratories that are fitted up with modern equipment within the project. In the DU Study and Research Centre “Ilgas”, the building of Ilgas manor was renovated; the building has study and scientific laboratories, study auditoriums and collection storage rooms. The DU library, equipped with new equipment and furniture, was also modernized. Within the project, in all the modernized premises, access to people with various functional disorders is provided.

All DU students are provided not only with modern study environment, but also with modern living infrastructure – renovated dormitories, a sports complex with a swimming pool, etc. The study and the research processes are provided in sufficient quantities with the necessary photocopying equipment, visual presentation equipment, video filming and video reproduction equipment, modern photo equipment and audio equipment.

The students and the lecturers have constant access to the Internet and the Internet connection of the local DU network, e-learning environment Moodle, as well as the opportunity to use e-mail and teleconferencing, various online platforms, such as ZOOM.

2.3.3. Provide information on the system and procedures for the improvement and purchase of the methodological and informative provision. Description and assessment of the availability of the library and the databases to the students (including in digital environment) and their compliance with the needs of the study field by specifying whether the opening times of the library are appropriate for the students, as well as the number/ area of the premises, their suitability for individual studies and research work, the services provided by the library, the available literature for the implementation of the study field, the databases available for the students in the respective field, the statistical data on their use, the procedures for the replenishment of the library stock, as well as the procedures and possibilities for the subscription to the databases.

Replenishment of the library collection and subscription of databases take place at the request of the lecturers of the faculties. Applications for the purchase of books are regularly (every academic year) reviewed and approved by the DU Budget Commission, thus implementing a mechanism for purchasing the latest publications for the DU library. The library does not digitize the collection, but the final theses of the DU students are uploaded to the library’s information system. The library regularly informs the faculties about the latest literature, database trials and subscription options, so that the faculty lecturers and students can get acquainted with new offers.

In accordance with the DU development strategy, the library purposefully increases the share of e-resources and develops remote access to e-resources in order to provide users with the opportunity to use resources remotely. Within the framework of the funding allocated to the library, the number of databases is purposefully evaluated. The use of the subscribed databases is analyzed every year.

Daugavpils University Library is included in the Library Register of the Ministry of Culture (BLB0524) In its operation, the library uses the integrated information system ALISE (Advanced Library Information Service).

The lecturers and the students have access to the services offered by the DU Library – the library's electronic catalogue, ordering, reserving and renewing books on the Internet, automated service provide to the user, as well as access to electronic databases. The library users have the opportunity to use the open access reading room with 60 workstations, incl. 15 Computerized, Subscription, Bibliography and Information Sectors. The total area of the library is 1,000 m^2, including premises to service the users – 400 m^2. The library collection consists of 267,655 items, incl. books – 233,868, periodicals – 20,322, other editions – 13,465. The number of books which are used within the evaluated study direction and study programs (please see in the report), i.e. in environmental science, its sub-fields, geomatics, earth sciences and communication sciences are 8808, incl. 706 in English.

Access to many subscribed electronic databases of scientific periodicals and publications is provided in the DU computer network and outside the web [1] (refer to Table 2.3.3.1.), bearing in mind that these databases are widely used (refer to Table 2.3.3.2.).

Table No. 2.3.3.1. Electronic databases of the DU library:

Nosaukums	Raksturojums	Pieejamības vieta
Science Direct	Multidisciplinary database from which full texts of about 380 journal titles are available (including environmental sciences, earth sciences and geography, chemistry and biology) in English	On and off the DU computer network
Scopus	Database of bibliographic and citation information of multidisciplinary scientific publications (including environmental sciences, earth sciences and geography, chemistry and biology) in English.	On and off the DU computer network
Web of Science	Multidisciplinary database. The database offers extensive options for searching, selecting and analyzing results (including environmental sciences, earth sciences and geography, chemistry and biology) in English.	On and off the DU computer network

Cambridge Journals Online	Full-text database of multidisciplinary e-journals from Cambridge University Press. Thematic coverage: applied sciences, environment and its conservation, agriculture, neurosciences and biomedicine, interdisciplinary studies, full-text database (including environmental sciences, earth sciences and geography, chemistry and biology) in English.	On and off the DU computer network
EBSCO	A multidisciplinary database consisting of several full-text and review databases (it includes 8 databases: Academic Search Elite, Business Source Premier, MasterFILE Priemer, Newspaper Source, ERIC, Business Wire News, MEDLINE, Health Source – Consumer Edition, Agrikola); about 10,000 scientific journals in several fields of science (including environmental science, biology and chemistry) are available in English.	On and off the DU computer network
Latvijas standarts	More than 46 thousand Latvian standards: national, adapted European (EN) and international (ISO, IEC)	In the reading room (no more than two users at the same time).
LETAs arhīvs	Resources of the National News Agency	On and off the DU computer network
Letonika	Reference and translation database with encyclopedias, dictionaries, image, audio and video collections. Internet library of Latvian literature, where full-text works of Latvian authors are available	On and off the DU computer network
LURSOFT	Newspaper library	On the DU computer network
NOZARE.LV	Current information in the most important Latvian business sectors	On and off the DU computer network

Table 2.3.3.2. Statistics of the use of electronic databases of the DU library in the period from 2020. until 2023

The name of the databases	**2020**	**2021**	**2022**	**2023**

EBSCO	Database sessions	13230	13277	10964	EBSCO
	Total number of full text requests	3792	7831	2704	
ScienceDirect	Total number of full text requests	5885	3901	8193	ScienceDirect
Scopus	Database sessions	4461	5268	5611	Scopus
Web of Science	The library does not have administrator rights, so the statistics are unknown				

Students also have access to the scientific libraries of the DU laboratories with more than 50 regularly supplemented foreign scientific journals. The development of studies and bachelor's theses, as well as the creation of teaching aids, are offered in the computer classrooms of the Faculty of Natural Sciences and Health Care, incl. The computers in the geomatics laboratory equipped with the relevant software.

The DU library has collected free access Internet resources, e-books and e-journals (section "Exact and natural sciences") that are used by both lecturers and students.[2] Also in the e-study environment, lecturers have placed open-access teaching aids, e-books and e-journals in the MOODLE study course sections.

The library's working hours are suitable for students' needs. After the complaints received during the previous certification/accreditation period from students about the short working hours of the library on weekdays and the unavailability on Saturdays, the working hours of the DU library have been changed since the fall semester of 2018 (Workdays: from 9:00 to 20:00, Saturdays: from 10:00 to 16:00), for which the students gave a positive assessment.

[1] DU library databases. Available in Latvian: https://du.lv/par-mums/struktura/biblioteka/datubazes/ [viewed 09.03.2024]

[2] Open access Internet resources of the DU library. Available in Latvian: https://du.lv/par-mums/struktura/biblioteka/brivpieejas-interneta-resursi/ [viewed 09.03.2024]

2.3.4. Provide a description and assessment of information and communication technology solutions used in the study process (e.g., MOODLE). If the study programmes within the study field are implemented in distance learning, the tools specially adapted for this form of study must also be indicated.

DU has developed an e-learning environment (Moodle), as a result of providing direct communication (e-mail, consultations) information is available in each study course. DU lecturers systematically use the e-learning environment Moodle[1]) and place various study materials in it: materials for lectures, seminars and practical classes, which support students' independent work. At the same time, e-learning reduces the risk of students dropping out in cases where it is not possible to attend all study courses in full due to their work or health conditions. Activation of the e-learning environment is an important step in promoting the possibility to keep the critical mass of students, thus ensuring the training of specialists not only for the region of Eastern Latvia, which is

represented by the majority of the DU students but also for other regions of Latvia and abroad.

The study programs of the field of study "Environmental protection" are not implemented in distance learning. However, taking into account the regulations of the Cabinet of Ministers No. 111 "Procedures for the organization and implementation of distance learning"[2] and the regulations therein, in several study courses, remote study methods are used in the ZOOM video platform for theoretical lessons (lectures). It is mainly offered to visiting lecturers to reduce transport or accommodation expenses. However, remote studies are not used in the performance of laboratory work and practical work, where the acquisition of skills and competence in person is very important.

The study courses also include sending homework and tests via e-mail or adding them to the e-learning environment Moodle, receiving work evaluations and reviews by e-mail, consultations in the e-environment, the opportunity to use library and Internet resources. Thus, by integrating a variety of modern IT solutions (e-mail, Moodle, ZOOM, Skype, Facebook), the programme offers more flexible conditions for e-learning.

The e-learning environment Moodle is synchronized with the DU information system DUIS, which facilitates students' access to study courses created in the e-learning environment without additional registration. Students can get technical support at the Student Service Center and the deans of faculties.

DU regularly organizes professional development courses for the lecturers, for example, development of study courses in the e-learning environment Moodle, use of the e-learning environment MOODLE in the distance learning process, assessment in the e-learning environment MOODLE. If necessary, the lecturers are provided with individual consultations. The students can receive technical support at the Student Service Centre and the Dean's Offices of the faculties.

In the e-learning environment Moodle, lecturers can also post their lectures in video format. The filming process of video lectures is carried out by the Multimedia Centre of the Department of Informatics and the Information and Communication Technologies Department. In the auditorium at DU, 1a Parādes Street, DU, modern equipment is available, which allows to create educational, informative and advertising video materials, as well as provides live webcasts of conferences. Video lectures are stored on the DU server and are available in the Moodle environment for each corresponding study course.

DU has an information system DUIS that contains descriptions of all study courses, a timetable of classes, and a student can see his/her progress and individual orders related to the study process in his/her profile.

DU Council of the Faculty of Natural Sciences and Health Care (DVAF) Department of Environment and Technology has available the necessary methodological support for the realization of the study direction "Environment protection": methodological indications for the development of studies, bachelor's and master's theses[3].

[1] E-learning environment Moodle. Available: https://estudijas.du.lv/login/index.php?lang=en [viewed 09.03.2024]

[2] Regulations of the Cabinet of Ministers of February 8, 2022 No. 111 "Procedures for the organization and implementation of distance learning". Available in Latvian: https://likumi.lv/ta/id/329849 [viewed 09.03.2024]

[3] Methodological instructions for the development of studies, bachelor's and master's theses. Available in Latvian: https://du.lv/studentiem/metodiskie-noradijumi-studiju-bakalaura-un-magistra-darbu-izstradei/ [viewed 09.03.2024]

2.3.5. Provide information on the procedures for attracting and/or employing the teaching staff (including the call for vacancies, employment, election procedure, etc.), and the assessment of their transparency.

Election to an academic position takes place in accordance with the requirements of “Regulations on elections to academic positions at Daugavpils University”[1]. According to the regulations, academic positions at DU are professor, associate professor, leading researcher, docent/assistant professor, lecturer, researcher, assistant, research assistant.

The number of positions of assistants, lecturers, docents is determined by the Rector according to the amount of the study work to be performed, upon the proposal of the Faculty Council. The number of positions of researchers, leading researchers and scientific assistants is determined by the Rector according to the need and funding possibilities, upon the proposal of the Institute/Scientific Council. The number of associate professor positions in the relevant science or art subfields is determined by the rector according to the need and funding opportunities after approval by the DU Senate.

Information about vacancies for academic positions and competition announcements are published on the DU website [2] and/or in the official publication of the Republic of Latvia “Latvijas Vēstnesis”, thus giving an opportunity to any interested person to apply for a job at DU within a month after the announcement of the competition.

DU can elect both citizens of the Republic of Latvia and foreign citizens whose academic education and professional qualifications meet the requirements of the science or art branch, study and research work at DU, and who are proficient in the national language and professional English.

Elections of docents, leading researchers, lecturers, researchers, assistants and research assistants, by open voting, take place in the Councils of faculties or Scientific Councils of scientific institutes no later than within three months from the date of the announcement of the competition. When electing docents and leading researchers, the qualifications of members of the Faculty Council or the scientific institute Council must meet the requirements of the Doctoral Council. The results of the elections of docents and leading researchers are confirmed at the DU Senate meeting.

Elections of professors and associate professors, by open voting, take place in the council of professors of the relevant branch of science.

Full-time or elected lecturers have an employment contract for six years, and their workload includes a wider range of duties than visiting lecturers. Visiting lecturers are invited to implement a specific study course, the company contract is concluded with them for one study year or study semester. Visiting lecturers mostly have additional qualifications or practical experience in the field of activity related to the study course to be implemented.

The procedure for attracting teaching staff is open, as open tenders for vacant positions are announced. Voting for election to the academic position is open. Both DU teaching staff and other interested parties can apply for the vacant teaching positions, subject to the requirements set for the position.

[1] “Regulations on elections in academic positions at Daugavpils University". Available in Latvian: https://du.lv/wp-content/uploads/2021/12/Nolikums-par-velesanam-akademiskajos-amatos-DU_APST

IPRINATAIS.pdf [viewed 09.03.2024]

[2] Vacancies DU. Available: https://du.lv/en/about-us/vacancies/ [viewed 09.03.2024]

2.3.6. Specify whether there are common procedures for ensuring the qualification of the academic staff members and the work quality in place and provide the respective assessment thereof. Specify the options for all teaching staff members to improve their qualifications (including the information on the involvement of the teaching staff in different activities, the incentives for their involvement, etc.). Provide the respective examples and specify the way the added value of the possibilities used for the implementation of the study process and the improvement of the study quality is evaluated.

DU developed internal regulatory enactments and mechanisms that regulate the qualification and quality assurance of academic staff:

- Regulations on elections to academic positions at Daugavpils University [1];
- Procedure for evaluation of the scientific activity of the Daugavpils University academic staff [2];
- Student's surveys.

In order to ensure high-quality and innovative implementation of study direction "*Environmental protection*" study programs, it is essential to attract highly qualified teaching staff – recognized and well-respected specialists who have innovative capacity, including the ability to use modern work methods, and leadership competence. The rector of DU approves the job descriptions of teaching staff, which determine the requirements of academic, research, organizational work and the education, knowledge and skills necessary to perform the duties of the respective position.

For the selection of teaching staff to be involved in the ABSP "Environmental science" and PMSP "Environmental planning", compliance of the qualification of the teaching staff with the requirements set by the regulatory acts, as well as the knowledge of the national language and foreign languages is assessed.

The following basic criteria are set in the evaluation system of the academic staff:

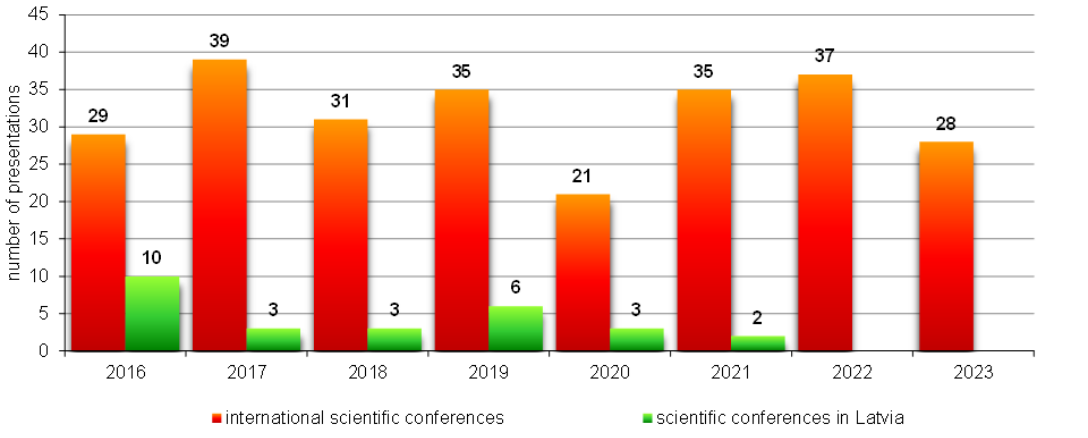
- Excellence – sustainable and continuous development, ensuring process and resource management;
- ability to effectively use academic freedom – to freely choose the directions and methods of academic activity, to create and publish new knowledge, to openly discuss its content, to look for opportunities to implement it in practice;
- academic culture – collegial cooperation with students and other academic staff based on the principles of academic ethics, mutual respect, demandingness, interest and support;
- responsibility for one's work in front of the public and the state in accordance with the DU quality management system and quality culture.

The qualifications of the academic staff meet the requirements of the University Law, as all lecturers have a master's degree or a doctorate in science. Study courses can be delivered only by lecturers that hold a Master's degree – both the elected lectures and guest lecturers.

According to the regulations of the Cabinet of Ministers of the Republic of Lithuania no. 569 "Rules on the necessary education and professional qualification for pedagogues and the procedure for

improving the professional competence of pedagogues, professional development"[3] professional qualification improvement may include international mobility corresponding to the goals of professional development, participation in projects and participation in conferences and seminars, which is confirmed by issued documents.

The lecturers involved in the course of study do not limit themselves to integrating their research work into the study process, at the same time they regularly present the scientific community with the results of their research, participating in scientific conferences, symposia, congresses in Latvia and abroad. In the past period since 2016, participation has been taken in 72 conferences, 64 of which were of an international nature, 288 papers were read at the conferences, including 261 scientific reports – at international conferences where the working language was English (refer to Figure 2.3.6.1).



2.3.6.1. Participation of the academic staff involved in the implementation of the study direction "Environmental protection" in scientific conferences since 2016.

In order to improve the professional competence of DU academic staff, DU regularly provides training. In the period from 2020-2022, within the ESF project "Strengthening the professional competence of the academic staff of the strategic specialization areas of Daugavpils University" (No. 8.2.2.0/18/A/022), as part of improving the professional qualifications of lecturers, several professional development programs were offered at DU, such as "Interaction and communication skills", "ABC of leadership", "Leadership in coaching style", "Interaction", "Emotional intelligence in education", "Fundamentals of developing e-study materials and virtual study platforms", "Trends in the use of educational technologies in the 21st century" *etc.* Within the framework of the mentioned project, self-development lectures on commercialization of inventions, nutrition, body health, personality charisma and prevention of burnout risks were also organized for the academic staff, as well as anti-stress days, 24-hour camps for promoting professional efficiency, experience-based training and visits to companies according to the subject of study directions in Latvia. By participating in seminars, academic staff have the opportunity to improve their professional competence and develop learning skills.

Within the framework of the ESF project "Reducing the fragmentation of study programs and strengthening the sharing of resources at Daugavpils University" No. 8.2.1.0/18/A/019, seminars were organized for the development and integration of study course support materials necessary for lecturers into the study process.

DU academic staff also use the opportunities offered by the "ERASMUS+" program to improve their professional skills - DU lecturers regularly visit foreign partner universities as part of the program or participate in staff training, improving professional competences, ensuring participation in training, work observation at a foreign partner university or an industry organization.

Foreign mobility gives DU lecturers and staff the opportunity to gain knowledge and specific skills by learning from the experience and good practices of foreign partners, as well as to improve practical skills, which are necessary for work at DU and professional development. Participation in the mobility program encourages the academic staff to expand and improve the range and content of the offered study courses, and also allows students who do not have the opportunity to participate in the mobility program, to benefit from the knowledge and experience provided by the academic staff of universities of other European countries and foreign guest lecturers, promotes the exchange of knowledge and experience of pedagogical methods between European higher education institutions. Lecturers in the field of study improve their qualifications by doing internships abroad and lecturing in foreign educational institutions (*2.5.3. Inward and outward labor mobility Environmental protection*).

Most of the teaching staff involved in the implementation of the study program participate in various scientific and academic activities, thus developing new skills and promoting professional development. Compilation of quantitative data on scientific and/or applied research corresponding to the field of study and other activities during the reporting period (academic staff publications, participation in conferences, science and study program promotion activities, participation in projects and other activities), refer to appendix No. 2.4.4.

Improving the professional competence of teaching staff involved in the realization of the study direction by participating in trainings, international mobility programs, actively engaging in scientific activity, project implementation and other scientific and academic activities, which provides significant added value for the overall improvement of the study process and improvement of study quality.

[1] “Regulations on elections in academic positions at Daugavpils University". Available in Latvian: https://du.lv/wp-content/uploads/2021/12/Nolikums-par-velesanam-akademiskajos-amatos-DU_APSTIPRINATAIS.pdf [viewed 09.03.2024]

[2] The procedure for evaluating the scientific activity of the academic staff of Daugavpils University. Available in Latvian: https://old.du.lv/wp-content/uploads/2016/01/zinatniskas-_aktivitates_vertesanas_kartiba.pdf [viewed 09.03.2024]

[3] Regulations of the Cabinet of Ministers of September 11, 2018 No. 569 "Regulations on education and professional qualifications necessary for pedagogues and procedures for improving the professional competence of pedagogues". Available in Latvian: https://likumi.lv/ta/id/301572 [viewed 09.03.2024]

2.3.7. Provide information on the number of the teaching staff members involved in the implementation of the relevant study programmes of the study field, as well as the analysis and assessment of the academic, administrative (if applicable) and research workload.

One of the most important quality assurance factors in the study field "*Environmental protection*" is the teaching staff. A total of 37 teaching staff are involved in ensuring the realization of the study field. Of these, 12 are involved in the implementation of both Academic Bachelor's Study Program (ABSP) "Environmental Science" and Professional Master's Study Program (PMSP) "Environmental Planning", 17 only in the implementation of ABSP "Environmental Science" and 8 of them – only in

the implementation of PMSP "Environmental Planning". However, depending on the academic year and what specific free-choice study courses the students have chosen, for example, in the ABSP "Environmental Science", the number of lecturers may be 4 less.

A total of 28 lecturers are involved in the implementation of ABSP "Environmental Science". Of them, 2 are professors, 4 associate professors, 10 assistant professors, 2 leading researchers, 2 researchers, 7 lecturers and 1 assistant (refer to figure 2.3.7.1.). For 23 lecturers, the main place of election is DU and 5 are guest lecturers. Out of 28 lecturers, 20 lecturers or 71.4% of the total number of lecturers in the study program have a doctor's degree, the rest have a master's degree (refer to figure 2.3.7.2.).

A total of 20 lecturers are involved in the implementation of PMSP "Environmental Planning". Among them, 1 is a professor, 1 is an associate professor, 5 are assistant professors, 1 is a leading researcher, 1 researcher and 11 lecturers (refer to Figure 2.3.7.3). For 14 lecturers, the main place of election is DU and 6 are guest lecturers. 9 lecturers (45 %) have a doctoral degree (refer to figure 2.3.7.4.).

In PMSP "Environmental Planning", the higher proportion of lecturers with a master's degree among the lecturers can be explained by the professional content of the program. In order to ensure that students acquire skills and competences based on work experience, guest lecturers – industry professionals from state and local government institutions are invited to implement individual study courses.

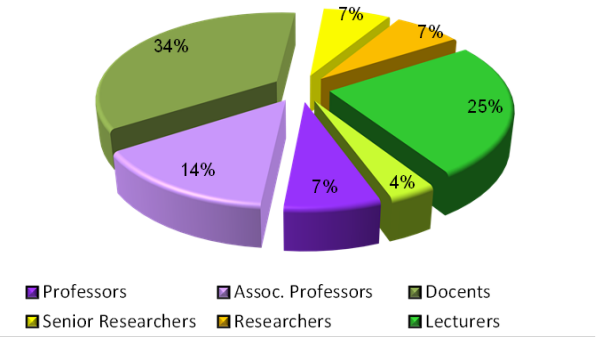


Figure 2.3.7.1. The academic staff involved in the implementation of ABSP "Environmental Science".

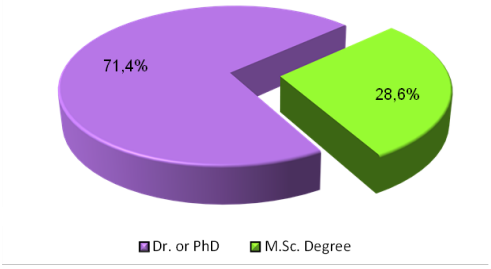


Figure 2.3.7.2. The personnel involved in the implementation of ABSP "Environmental Science" which have doctor's and master's degrees

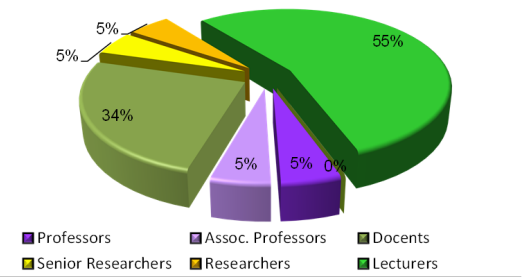


Figure 2.3.7.3. The academic composition of the staff involved in PMSP "Environmental Planning".

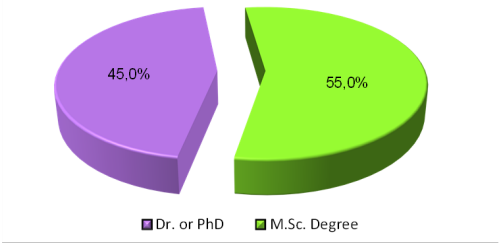


Figure 2.3.7.4. The personnel involved in the implementation of PMSP "Environmental Planning" which have doctor's and master's degrees

The knowledge of the national language of the academic staff employed in the implementation of the study program "Environmental Protection" complies with the regulations on the amount of knowledge of the national language and the procedure for testing the knowledge of the national language for the performance of professional and official duties, in other words, this knowledge allows any study field of the program to be fully taught in the national (official state) language.

The workload of lecturers is determined in accordance with the "Regulations for recording the workload of academic staff at Daugavpils University" (available from the DU internal network). If the lecturer's study work is more than 1000 hours in the academic year, then overtime is calculated only for the study work, for which the company contract for the performance of the academic work is concluded, in accordance with the procedures specified in the legislation. Unfortunately, as a result of the application of such a procedure, lecturers have to lead a large number of study courses in order to ensure the workload and, accordingly, the salary. In addition, only contact hours are generally included in the official workload of lecturers. Consequently, the inadequately high academic load of lecturers reduces the opportunities to work on methodical issues and greatly complicates scientific-research activity;

The number of academic positions and the stability of persons, equal distribution of workloads, the involvement of industry professionals in the study process is encouraged in order to ensure the high-quality implementation of professional programs. The recruitment of lecturers with doctoral degrees is being intensified in order to implement high-quality study programs in accordance with regulatory enactments.

The results of the academic staff's scientific activity are collected once a year, in accordance with the "Procedure for evaluating the effectiveness of the scientific work of the academic staff of DU". Based on the evaluation of the effectiveness of the scientific work, the Science Department can make a decision to recommend to the DU Science Council and the Senate to evaluate the scientific activity of the structural units of the DU and/or the amount and relevance of academic staff remuneration to the position held.

Basic information about the teaching staff involved in the implementation of the study course (enclosed attachment *2.3.7. Basic information about the teaching staff involved in the implementation of the study course*), as well as biographies of the teaching staff (*2..3.7. Teaching Staff CV*).

The report's attachment No. 2.3.7. (*2.3.7. Certificate of proficiency in the national language)* includes a certificate signed by the Rector of the University that the knowledge of the national language of the teaching staff involved in the implementation of the study programs corresponding to the study field complies with the regulations on the amount of knowledge of the national

language and the procedure for testing the national language proficiency for the performance of professional and official duties, whereas attachment No. 2.3.7. (*2.3.7. Certificate of foreign language proficiency*) includes a certificate from the university about the relevant foreign language skills of the teaching staff involved in the implementation of the study program at least at B2 level according to the assessment levels of European language skills, if the study program or part of it is implemented in a foreign language.

2.3.8. Assessment of the support available for the students, including the support provided during the study process, as well as career and psychological support by specifying the support to be provided to specific student groups (for instance, students from abroad, part-time students, distance-learning students, students with special needs, etc.).

DU students are supported in matters related to the organization of the study process by the Student Service Center, the staff of faculty deanships and profiling departments (dean, vice-dean, department head, study program directors). Within each study course, as well as in the development of studies, qualifications, bachelor's and master's theses, students have the opportunity to receive both support and individual advice from lecturers.

If during the semester it is observed that a student has problems related to the study process (class attendance, academic debts), this student is invited to a one-on-one meeting with the program director to discuss the best possible options for solving the problem. Communication for solving problems also takes place using social networks and online communication service options. If there have been discussions and ways to solve the problems have been sought, after a month the students are invited to the meeting again to discuss the progress of their studies together and to make sure that the situation has improved.

The DU Student Service Center (SSC) operates at DU and its main task is to inform DU students about current issues, as well as to provide consultations and services. Key features of SSC are as follows:

- issue certificates to students (to the bank, the State Revenue Service and other institutions, as well as certificates about study leaves, elaboration and defense of bachelor and Master’s theses, etc.);

- issue the signed study contracts to students;

- advise students on issues related to the study process, extracurricular activities and dormitories;

- participate in organizing informative events (career days, educational exhibitions, etc.);

- listen to, collect students’ proposals and submit them to the appropriate structural units.

DU infrastructure has been modernized and adapted to improve the accessibility of the environment for people with disabilities (movement, vision, hearing impairment), as well as there have been opened children’s rooms for students, who are young parents, so that they could to change and feed their babies and a playroom to entertain the students’ children while they are at their classes[1].

In 2016, the Latvian Association of Disabled People and their Friends “APEIRONS” awarded Daugavpils University a prize in the nomination “Education for All” on the grounds that “Daugavpils

University, as a higher education institution, had done the most in ensuring accessibility of the environment. DU became accessible to people with special needs – the students have ideal conditions to attend full-time studies". DU modernized its premises and buildings not only for people with disabilities, but also for the visually impaired people, which is especially noted by the evaluators of the environmental accessibility competition, noting that "the building is easy to navigate and move around for everyone[2].

The students can use DU in various ways: computer classes and auditoriums – for consultations, meetings, library premises – for literature analysis, preparation of independent and research work, as well as specially equipped premises – for conferences, study and extracurricular activities (DU Sports Complex).

The lecturers and the students can receive medical support in a certified health office, where first aid in case of various illnesses is provided by a doctor's assistant (feldsher).

The Psychological Support Center (PSC) operates at DU, which provides psychological support to DU students and employees in solving various daily problems in personal, work related, or educational matters. PSC psychologists provide up to three free consultations per person. If necessary, the number of consultations can be increased. Counseling is organized on the premises of DU in person or remotely (online format) after prior agreement on the counseling time. PSC psychologists do not advise close colleagues and students they educate to avoid multiple relationships. PSC operates in accordance with the "Regulations of the Daugavpils University Psychological Support Center"[3].

DU has an active DU Student Social Support Program[4], the purpose whereof is to support academically successful DU full-time study programme students who reside in DU dormitories and have grave social and material conditions. The program provides 50% support to cover the monthly rent for one academic semester. The amount of the program support is up to 10% of the total number of students living in the dormitories.

DU has an active Career and Initiative Support Centre (KIAC)[5] aimed at promoting career development service, voluntary work and supporting intiatives facilitating the wellbeing of Latgale region residents enhancing their professional capacity, competitiveness, cooperation, and involvement. The Centre sets objectives of creating and providing education and initiative support environment for Latgale region residents; facilitating cooperation with state and non-government organizations in spheres of research, project management and professional recruiting; cooperating with Latvian and foreign education institutions, enterprises in education and practical placement provision; organizing forums, conferences, seminars for updating competences, involving DU academic staff; providing career counselling and education psychologist's services; providing consultations on conducting voluntary work. The Centre operates according to "Regulations of Daugavpils University Career and Initiative Support Centre".

DU operates the ERASMUS+ student exchange program, within the framework of which foreign students are assigned a responsible person from the corresponding study program/faculty, with which progress will be discussed at least once a month regarding the mobility activity plan and the progress of the mobility process itself. A volunteer "buddy" from the student environment will be assigned to each student in order to integrate him/her more easily into university life. The students meet monthly with the ERASMUS+ project coordinator to guarantee the student's safety and prevent risks that may arise during the semester. The project coordinator informs foreign students about social and non-academic developments at the university, as well as introduces them to the activities of student self-governments. Free Latvian language courses are offered to foreign students.

The DU Department of International and Public Relations provides support functions for foreign

students studying at DU.

[1] Availability of DU environment: https://du.lv/en/about-us/environmental-accessibility/ [viewed 09.03.2024]

[2] “APEIRONS” annual award. Available in Latvian: https://www.la.lv/ne-tikai-ieklut-eka-bet-ari-parvietoties-invalidu-apvieniba-apbalvo-labakos-vides-pieejamibas-veicinatajus [viewed 09.03.2024]

[3] Regulations of the Psychological Support Center of Daugavpils University. Available in Latvian: https://du.lv/wp-content/uploads/2023/02/Psihologiska-atbalsta-centra-nolikums.pdf [viewed 09.03.2024]

[4] Regulations of the DU student social support program. Available in Latvian: https://du.lv/studentu-padome/dokumenti/[viewed 09.03.2024]

[5] DU Career and Initiative Support Center. Available in Latvian: https://du.lv/karjeras-un-iniciativu-atbalsta-centrs/ [pārlūkots 20.02.2023]

2.4. Scientific Research and Artistic Creation

2.4.1. Description and assessment of the fields of scientific research and/or artistic creation in the study field, their compliance with the aims of the higher education institution/ college and the study field, and the development level of scientific research and artistic creation (provide a separate description of the role of the doctoral study programmes, if applicable).

The directions of scientific and applied research of the field of study are consistent with the goals of DU and the field of study. According to the collected data, the teaching staff and guest (visiting) lecturers purposefully and regularly engage in various professional development activities in the fields corresponding to their scientific interests, both at DU and also at foreign universities.

The directions of the research work of the academic staff involved in the study programs are oriented towards the successful implementation of the study program and in most cases they are related to the lecturers' specialization within the programs (but not only). Lecturers prepare scientific articles, including in internationally peer-reviewed journals, participate in conferences, training, practice facilities/internships and various scientific events, including developing methodical materials, participating in international and national research projects.

The directions of specific scientific research of the field of study include many areas of environmental science and its branches, Earth sciences and communication sciences:

- hydrological, hydrochemical, hydrobiological, hydroecological and geomorphological research of the complex of surface water objects;
- synthesis of luminophore compounds and investigation of their properties for fluorescent analysis, including environmental pollution detection and biomedical purposes;
- analytical chemistry, application of environmental chemistry and bioindication methods in air quality and environmental pollution control studies;

- applied research in the chemistry of renewable resources;
- studies of Quaternary environment and relief, study of the regularities of the interrelationship of modern exogenous geological processes and the state of the environment;
- monitoring of specially protected natural areas, development of management and nature protection plans;
- underground water quality research and monitoring;
- environmental condition assessment, environmental impact risk assessment;
- invasive plant species distribution studies;
- deciphering and classification of remote sensing data for the determination of environmental and vegetation changes, creation and development of a database of regional geographic information systems;
- biodiversity research and assessment;
- problems of protection of habitats, flora and fauna according to the EU Species and Habitats Directives;
- forest management planning and resource assessment.

The students of ABSP "Environmental Science" and PMSP "Environmental Planning" are also involved in the scientific and applied research carried out by the lecturers of the field of study, thereby providing them with the opportunity to gain unique research work experience and acquire relevant skills and competence. This directly corresponds to the position defined in the DU strategy regarding the integration of scientific achievements and research into the study process.

The research carried out by the academic staff is an important contribution to the development of the branch they represent, as well as to the development of the study program, improvement and updating of the study content. The researches cover both theoretical aspects and industry topicalities and novelties, which are used in lecturers' study courses, thus promoting the interaction of the research and study process and significantly improving the quality of the study process. Student participation in scientific and practical conferences and seminars is constantly stimulated, not only as listeners, but also by presenting reports on the results of their research.

The level of research in the direction of study to the level of scientific development is confirmed by the level of scientific publications, the expert rights of the teaching staff allocated to them by the Latvian Science Council *[Latvijas Zinātnes padome]*. Out of the 37 lecturers involved in the realization of the study direction, 12 are experts approved by the Latvian Science Council.

In addition to the academic work at the university, the teaching staff has practical experience in the implementation of scientific projects and contract work related to environmental protection and its branches. This type of activity contributes to a comprehensive understanding of the specifics of the industry, thus also ensuring a direct unity of theory and practice during the study process.

2.4.2. The relation between scientific research and/or artistic creation and the study process, including the description and assessment of the use of the outcomes in the study process.

Within the framework of the study process, the latest current events in the field are constantly followed – the academic staff participates in projects, the results are used to update the content of the study courses. Lecturers actively participate in the approbation and dissemination of the research results by speaking at scientific and practical conferences and seminars. The information obtained in scientific events is used in the management of study courses and works, as well as in

the preparation of teaching aids. The research and creative activity of the academic staff is closely related to the study process, promoting students' understanding of the relationship between the innovation sector and the needs of the real organization. The staff of the programme consists of lecturers who regularly cooperate in the improvement of study processes, thus achieving interdisciplinarity in the development of students' knowledge and skills.

Compilation of quantitative data on scientific and applied research activities corresponding to the study field during the reporting period - academic staff publications, participation in conferences, participation in projects, etc. see 2.4.4. in the appendix (*2.4.4. List of scientific publications Environmental protection*; *2.4.4. Participation in environmental protection projects*; *2.4.4. Compilation of quantitative data Environmental protection*).

It is very important that the staff involved in the field provide an innovative study environment and professional experience for the students in the study programmes of the field. It should be noted that currently a great deal of emphasis in knowledge transfer is placed on the interaction of study work with research and training of students based on scientific achievements. The interdisciplinary aspect of the given aspect and the inclusion of different study programmes and students of different levels (including study field "Environmental protection") in solving current problems of science and thus society as a whole are significant.

The research carried out by the academic staff is an important contribution to the development of the branch they represent, as well as to the development of the study field "Environmental protection", improvement and updating of study content. The researches cover both theoretical aspects and industry topicalities and novelties, which are used in lecturers' study courses, thus promoting the interaction of the research and study process and significantly improving the quality of the study process. For example, research results in floodplain hydrology and ecology, soil erosion, remote sensing, luminophore development, etc. are integrated into the relevant study courses - Hydrology and Freshwater Ecology, Environmental Geomorphology, Introduction to Environmental Remote Sensing, Environmental Pollution and its Analysis Methods, etc.

Scientific communication plays an important role in the development of society. Scientists of the field are very active in this area, participating in the events of Daugavpils Science Festival, Scientists' Night, DU School of Science, providing training, lectures, interactive events for different age groups, as well as participating in consulting and evaluation of scientific research. DU is a member of the international associations active in the field of scientific communication (EUSEA[1]).

[1] European Science Engagement Association. Available: https://eusea.info/ [viewed 09.03.2024]

2.4.3. Description and assessment of the international cooperation in the field of scientific research and/or artistic creation by specifying any joint projects, researches, etc. Specify those study programmes, which benefit from this cooperation. Specify the future plans for the development of international cooperation in the field of scientific research and/or artistic creation.

The scientific staff of the DU Institute of Life Sciences and Technologies, as well as the Latvian Institute of Hydroecology, a DU agency, are involved in the realization of the study programs included in the study field "Environemntal protection", which ensures a high scientific capacity of the study field. Students are provided with access to the scientific laboratories and scientific

equipment of the mentioned scientific institutions. The quality of the research carried out in the two mentioned scientific institutions is confirmed by the results of the international assessment of Latvian scientific institutions for the period from 2013 to 2018, published in 2021. The international assessment was performed by Technopolis Group Eesti OÜ upon the order of Ministry of Education and Science. In compliance with the international assessment results[1] the priority research direction at DU “Biology” implemented at DU Institute of Life Sciences and Technologies, as well as research programmes implemented at Latvian Institute of Hydroecology received the assessment “3”, that testifies to the fact that both scientific institutions in the branch of biology are “strong national scale actors with certain international recognition and the significance of the research performed by these institutions is not doubted in the expert opinion”.

In cooperation with other scientific institutions in Latvia and abroad, the lecturers of the study field “Environemntal protection” are involved in the implementation of many research projects (t.sk. HORIZON 2020, LIFE, ESF, ERAF, Twinning, TechPlast u.c.) and contractual works, participate in international scientific networks and consortia (European Geosciences Union, ProGEO) and publish their research results in internationally indexed scientific publications. A more detailed summary of the research activities of the academic staff involved in the realization of the study field can be found in the appendix (*2.4.4. Participation in environmental protection projects; 2.5.1. Cooperation partners*).

Cooperation with social partners and state institutions and municipalities, such as the State Environmental Service, Nature Protection Board, AS 'Latvijas valsts meži', Environmental Solutions Institute, etc., is very important (appendix *2.5.1. Cooperation partners*), who are involved both in the management of the study field and in quality assurance, and offer applied research topics, such as the development of nature protection plans, assessments of the state of the environment, etc. Lecturers and students of the study field "Environmental protection" are involved in these studies. These are concrete benefits for the successful realization of the study programs of the study field, as they allow the interaction of study work with research and the integration of research results into the training of students.

Detailed information on cooperation and projects related to the field of study "Environmental Science" is provided in Appendix *2.4.4. Participation in Environmental protection projects*, of which the most significant benefits for the successful implementation of bachelor's and master's study programs are the 2020-2025 Horizon 2020 project: "Optimal strategies to retain and re-use water and nutrients in small agricultural catchments across different soil-climatic regions in Europe" (OPTAIN), as well as a series of projects financed by the Latvian Science Council, ESF, ERDF and the LIFE program.

In the implementation of various international cooperation activities, students in the study programs implemented in the field of studies are also involved. For example, in the DU activities (as a partner institution of the international scientific project "Sustainable Technical Solutions for Plastic Waste Management during Activities Controlled by Municipalities (TechPlastControll)") and the research therein, were part-taken also by the students in the master's study programs implemented within the study field.

The competence of DU academic staff is developed by participating in mobility within the framework of the European Union support program in the field of education, training, youth and sports "ERASMUS +". Cooperation agreements have been concluded with more than 90 higher education institutions in 22 countries. Cooperation partners, which are more directly related to the realization of the study field "Environmental protection", are 52 academic and scientific institutions, state institutions and private companies. This gives the teachers and students of the direction the opportunity not only to participate in mobility projects, but also to conduct joint scientific research

and prepare publications, and participate in scientific projects and conferences.

"ERASMUS +" program supports teaching - DU lecturers go to one of the foreign co-operation universities or participate in staff training, improving professional competencies, ensuring participation in training, observing work at a foreign co-operation university or other appropriate organization. The goals of learning mobility enable DU lecturers and staff to gain knowledge and specific skills by learning from the experience and good practice of foreign partners, as well as to improve the practical skills required for work at DU and professional development, to encourage academic staff to expand and improve the range and content of courses , enables students who do not have the opportunity to participate in a mobility program to benefit from the knowledge and experience provided by academic staff and foreign guest lecturers from other European universities, and promotes the exchange of knowledge and teaching experience between European higher education institutions.

The following plans for the development of co-operation in scientific research should be noted: increasing the scientific capacity of the teaching staff of the study field by becoming more actively involved in the international movement (international projects, conferences, publications in SCOPUS/WoS); conclusion of cooperation agreements and implementation of joint projects with foreign educational and research institutions.

[1] International assessment of the activity of scientific institutions (in English). Available: https://www.izm.gov.lv/lv/media/10705/download?attachment [viewed 09.03.2024]

2.4.4. Specify the way how the higher education institution/ college promotes the involvement of the teaching staff in scientific research and/or artistic creation. Provide the description and assessment of the activities carried out by the academic staff in the field of scientific research and/or artistic creation relevant to the study field by providing examples.

DU promotes the development and improvement of the academic staff by moving towards a competent staff. Most lecturers have experience in the field, which confirms their suitability for work in the program. The scientific capacity of the teaching staff is confirmed by the final work supervised by the publications indexed in the Web of Science and SCOPUS databases, incl. doctoral theses) and research in the implementation of which the lecturers of the study program participate. DU evaluates the scientific activity of the teaching staff every year, within the framework of which the results of research work, activity in projects, as well as pedagogical and organizational work are evaluated. Within the framework of the study process, the latest current events in the field are constantly followed - the academic staff participates in projects, the results are used to update the content of study courses. Lecturers actively participate in the approbation and dissemination of research results by speaking at scientific and practical conferences and seminars. The information obtained in scientific events is used in the management of study courses and works, as well as in the preparation of teaching aids.

The research and creative activity of the academic staff is closely related to the study process, promoting students' understanding of the relationship between the innovation sector and the needs of the real organization. The staff of the program consists of lecturers who regularly cooperate in the improvement of study processes, thus achieving interdisciplinarity in the development of

students' knowledge and skills.

It is important to note that every teaching staff involved in the implementation of the study program is an active scientist, providing science-based studies. The involvement of teaching staff in scientific research is ensured and promoted in accordance with the "Daugavpils University procedure for paying the expenses of preparing scientific publications" (accessible from the DU internal network), in accordance with the "Procedure in which scientific publications and monographs of the academic staff of Daugavpils University are paid for" (accessible from the DU internal network), "Daugavpils University procedures for paying the expenses of participation fees for scientific business trips and scientific events" (accessible from the DU internal network), "Procedures of the competition "Daugavpils University research projects"" (accessible from the DU internal network).

The effectiveness of these mechanisms can be evidenced by the increase in publications indexed by SCOPUS in the period from 2016 to 2023. The total number of publications of the lecturers of the field of study "Environmental protection" increased from 17 publications in 2016 to 43 publications in 2023. SCOPUS publications include 11 fields, of which the majority of publications are in the fields of environmental science and agricultural and biological sciences, 30.6% and 39.3%, respectively (refer to Figure 2.4.4.1).

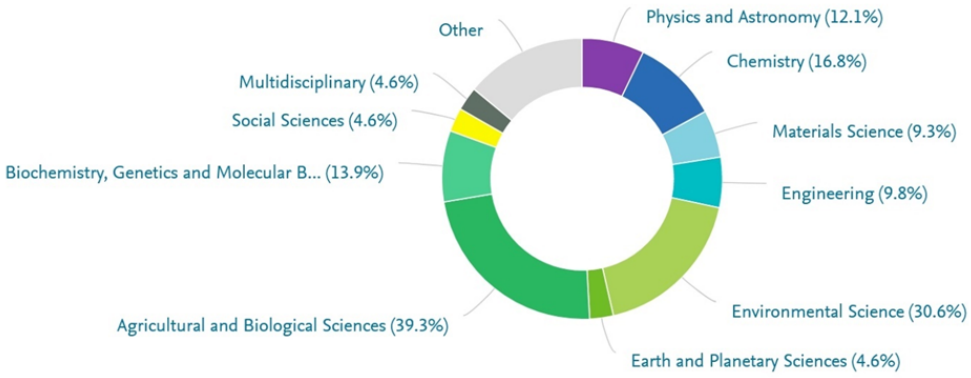


Figure 2.4.4.1. Scientific publications of the personnel involved in the realization of the "Environmental protection" study direction by branches of science (data obtained from the Elsevier "SciVal" database on March 15, 2024).

Information about academic staff publications, participation in conferences and projects is available in the appendix (*2.4.4. List of scientific publications Environmental protection*; *2.4.4. Participation in environmental protection projects*; *2.4.4. Compilation of quantitative data Environmental protection*).

Noting the necessary support to ensure and promote the involvement of teaching staff in scientific and applied research, the review has already been given above in 2.2.1. in the subsection (please see table 2.2.1.1 in the report. Activities to promote the motivation of teaching staff within DU and the field of study).

2.4.5. Specify how the involvement of the students in scientific research and/ or applied research and/or artistic creation activities is promoted. Provide the assessment and description of the involvement of the students of all-level study programmes in the relevant study field in scientific research and/ or applied research and/or artistic creation activities by giving examples of the opportunities offered to and used by the students.

In the study field "Environmental protection", the most widely used way of involving students in scientific and applied research is research within the framework of studies and final theses (bachelor's and master's theses). While developing their studies, bachelor's and master's theses, students in the "Environmental protection" study field at DU conduct research in the scientific laboratories of the Faculty of Natural Sciences and Health Care of DU and the Institute of Life Sciences and Technologies of DU, which are equipped with modern scientific equipment. Taking into account that basically studies, bachelor's and master's theses in the specific study field are led by lecturers who conduct research or scientists from the mentioned scientific institutions or their structural units, students are offered ample opportunities to choose topics of interest in various environmental sciences, its sub-branches, as well as Earth sciences, biology, chemistry and other sub-branches of contact sciences.

In the period from 2017 to 2023, 51 bachelor's and 44 master's theses were defended in the study field. The topics of the defended works correspond directly to the topics of research works of the academic staff involved in the programs of the "Environmental protection" study field (attachments *3.2.6. ABSP Environmental science undergraduate topics with evaluations* and *3.2.6. PMSP Environmental planning master's topics with evaluations*). This will make it possible to integrate the topics of lecturers' research directions into the study process, thus significantly improving the quality of both the management of students' scientific works and the quality of taught study courses.

The topics of study papers, bachelor's and master's theses are coordinated with the supervisors and approved at the meeting of the Department of Environment and Technology, evaluating the topicality of the proposed topics and their relevance to the study program. At the end of the last study semester, the defense of the final theses is organized, in which the quality of the practical research carried out during the development of the work and the compliance of the work with the requirements are evaluated, as well as the admission to the defense of the work is decided. While developing study and final theses, students carry out diverse research activities in environmental science and related sciences. The results are reported during the final and national tests, as well as the research results are approved at conferences.

The scientific-research work of the students is an integral and very important part of the study process of the "Environmental protection" study field, so students and master's students are widely involved in research. Students, working together with lecturers in field conditions or in laboratories and carrying out a research task or program, strengthen the knowledge and skills acquired in theoretical and practical study courses in working with scientific measuring equipment, with modern information technologies used in the field of environmental science (geographical information systems, global positioning systems, data collection and post-processing, *etc.*), and also acquire the professional competences of independence, use of correct scientific methodology and critical evaluation of obtained data, which are so necessary for further academic and professional growth.

In order to promote students' skills in the development of scientific projects and the preparation of publications, students in the bachelor's and master's study programs implemented by DU can apply for an annual student research project competition[1] ir the so-called DU grant competition. During the reporting period, the students of the bachelor study program of the study field "Environmental protection" successfully participated in the competition, received DU funding and implemented several research projects of this type:

During year 2020: project "Investigation of the inland dune massif complex of Dviete forest"

During year 2021: project "Study of the terrain and geological structure of Numerne embankment (Numerne embankment nature park)"

During year 2022: project "Study of the Upper Daugava (Augšdaugava) morphology and structural complex of the terraced slopes of the ancient valley (Daugava valley nature park)"

During year 2023: the project "Research of the inland dune complex of the ancient valley of the Upper Daugava (Augšdaugava) (Daugava valley nature park)"

In order to promote opportunities for students to develop their skills to speak, discuss and present the results of their research to the scientific community, students studying in the "Environmental Protection" study field at DU are offered to approve their research results at international scientific conferences organized by DU (International Scientific Conference of Daugavpils University[2]), which is organized every spring, at the international scientific conferences organized by the University of Warsaw (The International Scientific Conference of the University of Latvia[3]), which is organized every year from January to March, International Conference on Biodiversity Research (ICBR)[4], which is organized once every two years, as well as the international scientific and practical conferences organised by the Rezekne Technology Academy called "ENVIRONMENT. TECHNOLOGY. RESOURCES"[5], which is organised once every two years.

At both at DU's annual international scientific conferences and the international scientific conferences organized by the University of Latvia and Rezekne Academy of Technology, as well as at scientific symposia and conferences abroad, both students and teaching staff present reports on the results of joint research (refer to figure 2.4.5.1.). The teaching staff and students of the study program evaluate the experience of organizing the work of such joint sections of students and teachers very positively.

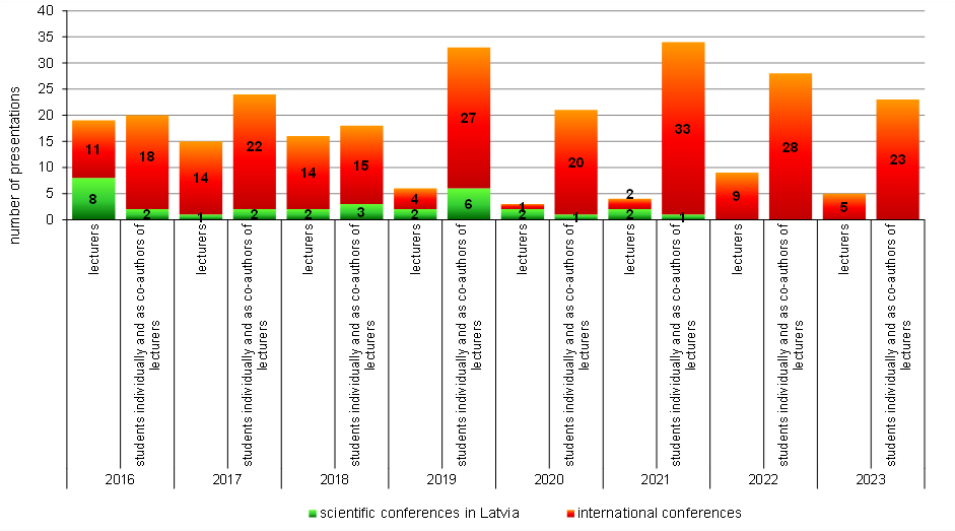


Figure 2.4.5.1. Participation of environmental protection studies students in scientific conferences.

The involvement of students in DU grant competitions, scientific projects and contract work led by lecturers is one of the solutions in the current situation, so that in conditions of limited funding it is possible for them to organize and participate in expeditions and field research, as well as to perform labour-intensive processing of the obtained data and laboratory studies.

Appropriate solutions to ensure and promote students' involvement in scientific and applied research are effective. However, the extent of student involvement could be wider. It is determined by a number of internal and external factors - for example, the number and capacity of lecturers and researchers to prepare projects and grant applications in parallel with academic work in a high-quality and timely manner, as well as to manage a certain number of bachelor theses and master's

theses in a high-quality and responsible manner.

[1] DU internal research project competition for 2023. Available in Latvian: https://du.lv/aktualitates/daugavpils-universitate-izsludinats-ieksejo-petniecibas-projektu-konkurss-2023-gadam/ [viewed 09.03.2024]

[2] DU international scientific conference homepage. Available: https://www.dukonference.lv/en [viewed 09.03.2024]

[3] The International Scientific Conference of the University of Latvia. Available: https://www.lu.lv/en/science/conferences/the-international-scientific-conference-of-the-university-of-latvia/ [viewed 09.03.2024]

[4] International Conference on Biological Biodiversity Research. Available: https://biodiversityconference.biology.lv/ [viewed 09.03.2024]

[5] International Scientific and Practical Conference ENVIRONMENT. TECHNOLOGY. RESOURCES. Available: https://conferences.rta.lv/index.php/ETR/ETR2024 [viewed 09.03.2024]

2.4.6. Provide a brief description and assessment of the forms of innovation (for instance, product, process, marketing, and organisational innovation) generally used in the higher education institution, especially in study field subject to the assessment, by giving the respective examples and assessing their impact on the study process.

In the implementation of the study process, DU provides a wide knowledge base, support for research and innovation, support for the development of students' personality, as well as support for students' employment. In order to achieve the goal, various forms of innovation are applied in the field of study "Environmental protection" and DU.

Produktu inovācija. The specificity of the study programs realized within the direction of studies is related to the close integration of studies and scientific research work. To ensure the study process and conduct scientific research, students have access to specialized classrooms and scientific laboratories at the Faculty of Natural Sciences and Health Care of DU and the Institute of Life Sciences and Technologies of DU**:** Environmental chemistry, Chromatography, Renewable resources, Fluorescent analysis methods, Organic synthesis, Geomatics, Geology and geomorphology, Hydroecology laboratories with specialized laboratory equipment and provision of computer programs. See the appendix for a summary of the educational and research infrastructure available to those studying in the "Environmental Protection" field of study *2.3.2. Infrastructure and material and technical support*. Teaching and scientific laboratories are used for both the study process and research work providing the introduction of innovations in the study process. Laboratories are modern, comfortable, compliant with work safety and ergonomic rules and they function to promote students' competitiveness and ability to use new technologies and sources of information. The study process in the scientific laboratories contributes to updating the content of the study programmes, increasing the quality of the development of research works, by introducing innovative technological, methodological and IT solutions.

Process innovation. Over the last two years, the organization of e-learning has been developed very rapidly using Zoom for conducting online classes; video recordings are recorded; The DU e-learning website (MOODLE) provides descriptions of study courses, necessary study materials, links

to certain information for the study course, colloquia and exams. Lecturers have the opportunity to create a student assessment book and students (individually) can follow the progress of the study course. The administration of the DU e-studies website is well organized, the administrator's advice is available (face-to-face, online or by correspondence), the DU e-studies website has instructions and advice on issues related to the use of e-studies.

Marketing innovations. DU uses certain marketing tools (Open Door Days DU, Night of Scientists, DU Science Festival, DU Science School, School of Young Geographers, lecturers' participation in youth camps, students' scientific research counseling and organization of defense, information about DU in social networks), etc. face-to-face and online format activities in order to promote the interest of future students in the study programs included in the "Environmental protection" study area.

Organizational innovation. DU uses several digitized systems: DUIS (allows to digitize many processes and document processing: certificate, order, study contract, their amendment, preparation of diplomas, input of statistics, collection of statistical data), Namejs (document management system that provides correspondence, order, contract , reference, management of procurement documents, efficiency of the document circulation process), HoP (employee self - service portal, which provides the employee with the opportunity to view information about himself / herself, absences of his / her colleagues, apply for leave, check his / her accrued leave days, etc.).

2.5. Cooperation and Internationalisation

2.5.1. Provide the assessment as to how the cooperation with different institutions from Latvia (higher education institutions/ colleges, employers, employers' organisations, municipalities, non-governmental organisations, scientific institutes, etc.) within the study field contributes to the achievement of the aims and learning outcomes of the study field. Specify the criteria by which the cooperation partners for the study field and the relevant study programmes are selected and how the cooperation is organised by describing the cooperation with employers. In addition, specify the mechanism for the attraction of the cooperation partners.

Cooperation with Latvian institutions is carried out within the framework of the study direction in order to promote the achievement of the objectives of the study direction and study results. The lecturers of the Department of Environment and Technology of DU have established a good cooperation with the lecturers of the University of Latvia in the field of environmental sciences and Earth sciences. Cooperation is both by participating in joint EU co-financed projects, by participating in conferences organized by both universities, and by conducting research and preparing joint publications.

The lecturers involved in the course of study lead individual courses or give lectures at other Latvian universities (University of Latvia and Riga Technical University) and participate in the scientific activities organized by them. Several lecturers of the direction carry out pedagogical activities in Latvian schools (Daugavpils Saskana (Harmony) elementary school, Daugavpils Draudziga aicinajuma (Friendly Invitation) secondary school), which is a real opportunity to create interest in the industry among young people and attract potential students.

DU's potential cooperation partners in Latvia are selected according to the following criteria:

- similar study programs are implemented in the higher education institution (HEI);
- HEI lecturers have common scientific interests and research projects (also, writing and preparation of common scientific publications);
- the possibility of organizing students' participation in joint events;
- implementation of the study process with the support of industry specialists – industry specialists are invited as visiting/guest lecturers in the provision of study courses, in final/state examination commissions, in the organization of practice in professional programs.

Cooperation with Latvian higher education institutions contributes to the achievement of the scientific goals of the field of study, whereas cooperation with employers contributes to the development of students' professional skills and also improves the content of study programs.

The content of the study programs included in the study direction is created and changes are made, taking into account the opinions and requests of employers. By involving the partners of employers and professional organizations, the expansion of the knowledge base and innovation resources in the field of natural sciences has been carried out over several years.

Every year, cooperation with employers expands, improves and expands the forms of cooperation as well. Several important directions can be mentioned in cooperation with employers: improving the quality of study programs and study courses, taking into account employers' recommendations about the content and form of implementation of study courses; involvement in joint activities, for example, organizing scientific and practical conferences, science communication events, *etc.*; employment of students and graduates in companies or scientific institutions.

When implementing study programs, employers are involved both in formulating the knowledge and skills needed by the employee, in evaluating the quality of educational programs, and in strategic planning. Evaluating at the regional level, an important part of the dialogue is DU's cooperation with Latgale regional employers, regional and city municipalities, as well as state and local government institutions. Thus, the programs ensure one of the main basic principles of regional development policy – namely, partnership.

Representatives of employers are involved in the work of the study direction council, participate in solving various important issues related to the implementation and development of the program. In order to ensure the compliance of the study program with the requirements of the labour market, a survey of employers is regularly carried out. Questionnaires for graduates and employers have been developed ("Other attachments", *2.5.1. Sample employer survey* and *2.5.1. Sample graduate survey*). Employers' evaluations and feedback about graduates are important, because these feedbacks and evaluations can contribute to the introduction of certain corrections in the process of implementing the study program. The survey data are analyzed and discussed at the meetings of the structural units involved in the program, at the meetings of the direction council and the Council of the Faculty of Natural Sciences and Health Care (DVAF), thus ensuring feedback in cooperation with graduates and employers. Cooperation with employers is realized also in such forms as:

- periodic targeted survey of employers;
- informal interviews, meetings, discussions;
- conversations with students and graduates about their competence, employment and career development problems;
- the lecturers of the field of study often play an intermediary role, helping employers to recruit suitable employees from among students and graduates, and interested students to find a job.

Within the framework of the implementation of the study programs included in the "Environmental

protection" study direction, successful cooperation has been established and a regular dialogue is held with the state and local government institutions representing the industry, as well as with scientific institutes, other higher education institutions, entrepreneurs, associations, *etc.* (University of Latvia, Riga Technical University, Confederation of Latvian Employers, Nature Protection Board, State Environmental Services, Latgale Zoo, Regional Education Boards and Schools, Daugavpils City Council, Daugavpils County Council, Līvāni County Council, Rural support service, state forestry PLC "Latvijas valsts mezi", LLC (SIA) "Estonian, Latvian & Lithuanian Environment", LLC (SIA) "GeoSurfs", *etc.*). The opinions of cooperation partners are taken into account when making changes to the offer and content of study courses. As a successful platform for communication with existing and potential cooperation partners, the "Environmental Protection" council of the DU study direction can be mentioned, which, if and when necessary, provides consultations with cooperation partners on issues related to the implementation of study programs and improving the quality of study courses. When choosing potential cooperation partners on the scale of Latvia or the region, the most important criterion is the connection of the fields of activity of the specific companies or institutions, such connection being with the field of nature protection or environmental management and/or the potential job market of graduates of the study programs realized within the field of study.

Information on the signed cooperation agreements is available in the appendix (*2.5.1. Cooperation partners*).

During the reporting period, cooperation with Latvian higher education institutions, employers, state institutions and municipalities has actively developed. For example, new agrrements have been concluded with the State Environmental Service, the Nature Protection Board, with companies that develop and research technologies for the production of climate-neutral energy, contracts for research and contract performance with the association "Daugava Union", etc.

Mechanisms for attracting employers are various strategies and measures used by teaching staff and supervisors involved in the implementation of DU and the study field "Environmental protection" to promote cooperation and involvement of employers in the study/research process. Some of the most effective mechanisms:

1. Partnership and cooperation agreements – formal agreements for general, practical or research cooperation;
2. Provision of practice and work opportunities – practice in a specific educational institution, a specific municipality;
3. Guest lectures and seminars, conferences - guest lecturers from the industry.
4. Involvement of company representatives in the study process - examination, final examination commissions. Employers' representatives are in examination commissions to assess students' knowledge and skills;
5. Research and development cooperation - joint research, research projects involving both university researchers and teachers, managers of educational institutions, development of pupils scientific research works.
6. Feedback and continuous communication – surveys and researches, employer surveys and research to clarify needs and expectations from educational institutions.

2.5.2. Provide the assessment as to how the cooperation with different institutions from abroad (higher education institutions/ colleges, employers, employers' organisations, municipalities, non-governmental organisations, scientific institutes, etc.) within the study field contributes to the achievement of the aims and learning outcomes of the study field.

Specify the criteria by which the cooperation partners suitable for the study field and the relevant study programmes are selected and how the cooperation is organised by describing the cooperation with employers. In addition, specify the mechanism for the attraction of the cooperation partners.

During the reporting period, DU has significantly developed its international recognition by integrating into several international scientific networks related to life sciences. So, for example, since 2022, DU has been admitted to the Baltic group of the European Organization for Nuclear Research (CERN)[1]. Although the study programs included in the study field are not directly related to the research carried out by CERN, participation in CERN opens wide opportunities for the environmental science field and other research staff and students of DU to get involved in interdisciplinary research carried out by CERN.

The teaching staff of the "Environmental protection" study field of DU are also involved in the implementation of many international projects, which are implemented in cooperation with other scientific institutions in foreign countries, including DU is a project partner of two HORIZON 2020 program projects OPTAIN[2] and BETTER Life[3] realization, as well as other EC financial instruments (e.g.TWINNING[4], LIFE[5] etc. in programs) in the realization of financed projects.

Student and academic staff internships and development of research topics are possible in more than 90 higher education institutions (22 countries of the world) with which DU has concluded cooperation agreements. In order to promote the incoming mobility of foreign students and teaching staff, at the beginning of the year, the DU Erasmus+ coordinator sends an informative letter to all existing Erasmus+ partners about how foreign students and teaching staff can apply for studies, internships, teaching or professional development. The list of offered study courses is requested from the profiling structural units. The list of study courses is updated every year. The DU Erasmus+ coordinator also visits the international Staff Week several times a year, where there is an opportunity to establish new contacts and conclude inter-university agreements on the exchange of students and teaching staff within the Erasmus+ program.

The lecturers of the course comparatively actively use the Erasmus+ program and have gone to 18 different foreign universities to exchange experience. During the visits, classes were held, and future opportunities for cooperation in the research field were discussed. Cooperation has been established over several years with the University of Gdańsk in Poland, Kaunas University of Technology, Vytauto Didžiojo universitetas university and Vilnius University in Lithuania and Tartu University in Estonia.

The following criteria are taken into account when choosing potential cooperation partners abroad within the study field:

- priority is given to universities that implement similar study programs in the field of environmental science, nature protection or environmental management;
- institutions have common scientific interests and research projects (also, writing and preparation of common scientific publications);
- scientific institutions whose research directions coincide with the priority research directions defined in the DU strategy.

Information on the concluded cooperation agreements with foreign institutions can be found in the appendix (*2.5.1. Cooperation partners*). Within the reporting period, cooperation with various foreign institutions has developed thanks to involvement in international projects (HORIZON 2020; Twinning, etc. - for example project partners Helmholtz Center for Environmental Research (UFZ,

Germany); University of Bern, Center for Development and Environment (UBERN, Switzerland); General Directorate of Water Management (OVF, Norway); Norwegian Institute of Bioeconomy Research (NIBIO) etc. Due to the restrictions of the 19 pandemic, the activity of foreign cooperation had decreased, however, after the lifting of the restrictions, it has recovered and is developing successfully.

[1] Baltic Group of the European Organization for Nuclear Research (CERN) (in English). Available:https://indico.cern.ch/category/10023/ [viewed 10.03.2024]

[2] Horizon 2020 project OPTAIN (in English). Available: https://www.optain.eu/ [viewed 10.03.2024]

[3] Projecs BETTER Life. Available: https://cordis.europa.eu/project/id/101071314 [viewed 10.03.2024]

[4] TWINNING project DU. Available: https://old.du.lv/supporting-inter-sectoral-collaboration-possibilities-between-research-and-industry-2/ [viewed 10.03.2024]

[5] LIFE project DU. Available: https://old.du.lv/projekti/projekti/es-programmu-projekti/life-life-projekti/ [viewed 10.03.2024]

2.5.3. Specify the system or mechanisms, which are used to attract the students and the teaching staff from abroad. Provide the assessment of the incoming and outgoing mobility of the teaching staff in the reporting period, the mobility dynamics, and the issues which the higher education institution/ college faces with regard to the mobility of the teaching staff.

DU actively uses the Erasmus+ program to attract foreign teaching staff and students. In order to attract foreign students, DU provides information about its offer on the website [1]. DU also implements marketing activities: contracts are concluded with recruitment agents, participation in international education fairs and agent forums, *etc.* Also, in the "Environmental protection" study field, funding from Erasmus+ and other mobility programs is used to attract foreign teaching staff and students.

DU within “ERASMUS+” program has concluded cooperation agreements with more than 90 higher education institutions in 22 countries. The “ERASMUS+” program supports academic exchange: DU lecturers visit one of the foreign universities of cooperation or participate in staff training, improving their professional competences, ensuring participation in training, work observation at a foreign university of cooperation or another relevant organization. The goals of academic mobility provide DU academic and general staff with the opportunity to gain knowledge and specific skills by learning from the experience and good practices of foreign partners, as well as improve the practical skills necessary for work at DU and professional development, encourage the academic staff to expand and improve the range and content of the offered study courses, allow students who do not have the opportunity to participate in the mobility program to benefit from the knowledge and experience provided by the academic staff of universities in other European countries and foreign visiting lecturers, promote the exchange of knowledge and experience of teaching methods among European higher education institutions.

During the reporting period, the outgoing mobility of lecturers and employees took place both for professional development and for teaching at cooperation partner universities. Teaching activities

were carried out in Poland at the University of Gdańsk (Uniwersytet Gdański) and the University of Warmia and Masuria in Olsztyn (University of Warmia and Mazury in Olsztyn), Vytautas Magnus University in Lithuania (Vytautas Magnus University), in Israel Ben Guriona university (Ben-Gurion University of the Negev), in North Macedonia Ss. Kiril and Metodia university Skopje (Ss. Cyril and Methodius University in Skopje), in Portugal at the University of Beira (Universidade da Beira Interior) Ko Villana, Greece at the National Technical University of Athens (National Technical University of Athens), in Turkey at the University of the Mediterranean (Akdeniz Üniversitesi). The professional development activities of employees and lecturers were carried out in Poland at the University of Gdańsk (Uniwersytet Gdański), in Finland at the University of Turku (University of Turku), in the Czech Republic at the University of Pardubice (University of Pardubice), in Cyprus at the University of Cyprus (University of Cyprus), as well as at Aarhus University in Denmark (Appendix 2.5.3. *Inward and outward labor mobility Environmental protection*).

DU students and foreign students also actively use the opportunities offered within the Erasmus+ program for studies and practice places (internships)[2]. Data on the incoming and outgoing mobility of students for the reporting period are presented in the appendix (*2.5.3_DU incoming_outgoing_mobility of students*).

During the reporting period, within the framework of the "Learn Russian in European Union" project, six foreign students from the USA studied some of the courses included in the major study program "Environmental Protection". Students of academic bachelor's and professional master's study programs took advantage of the opportunities for outgoing mobility – 6 students participated in study mobility in Poland, 1 – in Lithuania and 2 – in the Czech Republic. In turn, a total of 7 students used the opportunities for internship mobility: 3 people choose the environment management and nature protection institution in Lithuania as the place of practice, 1 – in the Czech Republic (attachment *2.5.3. Statistical data on foreign students and outgoing mobility during the reporting period, Environmental protection*).

Data on the incoming and outgoing mobility of teaching staff for the reporting period are presented in the appendix (*2.5.3. Inward and outward labor mobility Environmental protection*).

Both students and teaching staff are actively involved in the Erasmus+ (KA107) program, which offers new international mobility opportunities for students and staff from/to countries that do not belong to the Erasmus+ program. Daugavpils University offers exchange mobility to partner universities in the USA, Philippines, India, Israel, Jamaica, China, Lesotho, Tajikistan.

In order to attract foreign students, DU provides information about the study programs implemented by DU, which is available in English on the DU website[3], as well as on other websites[4]. DU also implements marketing activities: contracts are concluded with recruitment agents, but also e-marketing, participation in international education fairs and agent forums, *etc.*

Positive dynamics of ERASMUS+ mobility can be observed during the reporting period. It can be predicted that this trend will continue in the next reporting period as well. Students and teaching staff are increasingly motivated to gain international experience abroad. The biggest difficulties that DU faces in the implementation of the mobility of teaching staff are the difficulties of rescheduling lecturers' classes during business trips due to the heavy workload. The difficulty in attracting foreign lecturers is the provision of competitive remuneration.

[1] DU Admission (International Students). Available: https://du.lv/en/studies/admission/ [viewed 10.03.2024]

[2] Opportunities offered within the Erasmus+ program. Available:

https://du.lv/en/news/apply-for-erasmus-studies-and-traineeship-scholarship/ [viewed 10.03.2024]

[3] Information about the study programs implemented by DU on the DU website. Available: https://du.lv/en/studies/study-programmes/ [viewed 10.03.2024]

[4] Information about the study programs implemented by DU. Available: https://www.studyinlatvia.lv/universities/daugavpils-university , https://www.study.eu/university/daugavpils-university [viewed 10.03.2024]

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

2.6.1. Assessment of the fulfilment of the plan regarding the implementation of the recommendations provided by the experts during the previous accreditation of the study field, as well as the assessment of the impact of the given recommendations on the study quality or the improvement of the study process within the study field and the relevant study programmes.

The previous evaluation of the field of study "Environmental protection" (ABSP "Environmental science" and PMSP "Environmental planning") took place in year 2013 and study direction evaluation experts on 2013.06.07. provided an accreditation review and recommendations. Shortly before that, in 2012, a six-person expert commission as part of the project ("Evaluation of higher education study programs and proposals for quality improvement (No. 2011/0012/1DP/1.1.2.2.1/11/IPIA/VIAA/001)") was carried out by all Latvian higher education institutions, including evaluation of the programs implemented at Daugavpils University in the field of study "Environmental protection". Based on the experts' report, the Higher Education Council classified the two study programs – ABSP "Environmental Science" and PMSP "Environmental Planning" into the first group and defined that they are considered sustainable.

The report of the expert commission and the recommendations given by the experts are attached (attachment *2.6.1. 2012.02.19 expert report of the international evaluation of the field of study*)

The expert report, evaluations and recommendations were carefully analyzed, discussed and a plan for the implementation of the recommendations was drawn up, which was implemented as far as possible in the following years. The review of the implementation of the provided expert recommendations is attached in the appendix (*2.6.1. Review of the implementation of study direction accreditation recommendations*). All recommendations were implemented, activities were carried out for their implementation and the achievable results are reflected in the Appendix No. 2.6.1. The impact of the given recommendations and their implementation on the quality of studies can be evaluated positively and allowed to improve the study process.

2.6.2. Implementation of the recommendations given by the experts during the evaluation of the changes to the study programmes in the respective study field or licensed study programmes over the reporting period or recommendations received during the procedure for the inclusion of the study programme on the accreditation form of the study field (if applicable).

During the reporting period, no new study programs were licensed in the field of study "Environmental protection".

Annexes

I - Information on the Higher Education Institution/ College		
Information on the implementation of the study field in the branches of the higher education institution/ college (if applicable)		
List of the governing regulatory enactments and regulations of the higher education institution/ college	1.2_List of the main internal laws and regulations.pdf	1.2_Ieksejo normativo aktu un regulejumu saraksts.pdf
The management structure of the higher education institution/ college	1.2_Governance structure.pdf	1.2_Parvaldibas struktura.pdf
II - Description of the Study Field - 2.1. Management of the Study Field		
Plan for the development of the study field (if applicable)	2.1.2_Study field develompent plan summary_EN.docx	2.1.2. Studiju virziena attīstības plāna kopsavilkums_LV.docx
The management structure of the study field	2.1.3. Management structure of study direction_EN.pdf	2.1.3. Studiju virziena pārvaldības struktūra_LV.pdf
A document certifying that the higher education institution or college will provide students with opportunities to continue their education in another study programme or another higher education institution/ college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.	Agreement between DU and LU_Environmental protection.docx	Vienošanās_starp_DU_un_LU_par_virzienu_Vides aizsardzība.edoc
A document certifying that the higher education institution or college guarantees compensation for losses to students if the study programme is not accredited or the study programme license is revoked due to actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.	CONFIRMATION_Compensation guarantee for students.docx	Apliecinājums par zaudējumu kompensāciju.edoc
Standard sample of study agreement	2.1.4_Agreement_on_studies.docx	2.1.4_Studiju_līguma_paraugs.docx
II - Description of the Study Field - 2.2. Efficiency of the Internal Quality Assurance System		
Analysis of the results of surveys of students, graduates and employers	2.2.4.Survey analysis.zip	2.2.4.Aptauju analīze.zip
II - Description of the Study Field - 2.3. Resources and Provision of the Study Field		
Basic information on the teaching staff involved in the implementation of the study field	2.3.7. Basic information about the teaching staff involved in the implementation of the study field.xlsx	2.3.7. Pamatinformācija par studiju virziena īstenošanā iesaistītajiem mācībspēkiem_LV.xlsx
Biographies of the teaching staff members (Curriculum Vitae in Europass format)	CV_EN.zip	CV_LV.zip
A statement signed by the rector, director, head of the study programme or field that the knowledge of the state language of the teaching staff involved in the implementation of the study programmes within the study field complies with the regulations on the state language knowledge and state language proficiency test for professional and official duties.	STATEMENT_native language.docx	Apliecinājums par valsts valodas prasmi.edoc
A statement of the higher education institution/ college on the respective foreign language skills of the teaching staff involved in the implementation of the study programme at least at B2 level according to the European Language Proficiency Assessment levels (level distribution is available on the website www.europass.lv, if the study programme or part thereof is implemented)	STATEMENT_foreign_language_B2.docx	Apliecinājums par svešvalodas prasmi.edoc
II - Description of the Study Field - 2.4. Scientific Research and Artistic Creation		
Summary of quantitative data on scientific and/ or applied research and / or artistic creation activities corresponding to the study field in the reporting period.	2.4.4. Compilation of quantitative data Environmental protection.docx	2.4.4. Kvantitatīvo datu apkopojums Vides aizsardzība_LV.docx
List of the publications, patents, and artistic creations of the teaching staff over the reporting period.	2.4.4.Scientific publications and participation in projects Environmental protection.zip	2.4.4.Zinātniskās publikācijas un dalība projektos Vides aizsardzība.zip
II - Description of the Study Field - 2.5. Cooperation and Internationalisation		
List of cooperation agreements, including the agreements for providing internship	2.5.1. Cooperation partners.docx	2.5.1. Sadarbības partneri_LV.docx
Statistical data on the teaching staff and the students from abroad	2.5.3. Statistical data on foreign students Environmental protection.docx	2.5.3. Statistikas dati par ārvalstu studējošajiem Vides aizsardzība_LV.docx
Statistical data on the incoming and outgoing mobility of students (by specifying the study programmes)	2.5.3. Statistical data on program student mobility.docx	2.5.3. Statistikas dati par programmu studējošo mobilitāti.docx
Statistical data on the incoming and outgoing mobility of the teaching staff	2.5.3. Mobility of academic staff Environmental protection.docx	2.5.3. Macībspēku mobilitāte Vides aizsardzība_LV.docx
II - Description of the Study Field - 2.6. Implementation of the Recommendations Received During the Previous Assessment Procedures		
Report on the implementation of the recommendations received both in the previous accreditation and in the licensing and/ or change assessment procedures and/ or the procedures for the inclusion of the study programme on the accreditation form of the study field.	2.6.1. Overview of the implementation of study direction accreditation recommendations.docx	2.6.1. Studiju virziena akreditācijas rekomendāciju izpildes pārskats_LV.docx
An application for the evaluation of the study field signed with a secure electronic signature	APPLICATION for the evaluation.docx	Iesniegums SV Vides aizsardzība novērtēšanai.edoc
III - Description of the Study Programme - 3.1. Indicators Describing the Study Programme		
Sample of the diploma and its supplement to be issued for completing the study programme		
For academic study programmes - Opinion of the Council of Higher Education in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions (if applicable)		
Compliance of the joint study programme with the provisions of the Law on Higher Education Institutions (table) (if applicable)		
Statistics on the students in the reporting period		
III - Description of the Study Programme - 3.2. The Content of Studies and Implementation Thereof		
Compliance with the study programme with the State Education Standard		
Compliance of the qualification to be acquired upon completion of the study programme with the professional standard or the requirements for professional qualification (if applicable)		
Compliance of the study programme with the specific regulatory framework applicable to the relevant field (if applicable)		
Mapping of the study courses/ modules for the achievement of the learning outcomes of the study programme		
The curriculum of the study programme (for each type and form of the implementation of the study programme)		
Descriptions of the study courses/ modules		
Description of the organisation of the internship of the students (if applicable)		
III - Description of the Study Programme - 3.4. Teaching Staff		
Confirmation that the academic staff of the doctoral study programme includes not less than five doctors, of which at least three are experts approved by the Latvian Council of Science in the branch or sub-branch of science in which the study programme intends to award a scientific degree (if applicable)		
Confirmation that the academic staff of the academic study programme complies with the requirements specified in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions (if applicable)		

Other annexes

Name of document	Document
Daugavpils Universitātes attīstības stratēģija 2022.-2028. gadam	1.1.DU attīstības stratēgija 2022_2028.pdf
Studiju iekšējās kvalitātes nodrošināšanas politika	1.3_DU-STUDIJU-IEKŠĒJĀS-KVALITĀTES-NODROŠINĀŠANAS-POLITIKA.pdf
Internal Quality Assurance Policy of Studies	1.3_INTERNAL QUALITY ASSURANCE POLICY OF STUDIES AT DAUGAVPILS UNIVERSITY.pdf
DU normatīvie akti iekšējās kvalitātes nodrošināšanai	1.3_Normativie akti ieksejas kvalitates nodrosinasanai.pdf
Daugavpils University normative acts for internal quality assurance	1.3_List of Regulations for internal quality assurance.pdf
Studiju iekšējās kvalitātes sistēmas efektivitātes nodrošināšanas kārtība	1.3_DU-STUDIJU-IEKŠĒJĀS-KVALITĀTES-SISTĒMAS-EFEKTIVITĀTES-NODROŠINĀŠANAS-KĀRTĪBA.pdf
Daugavpils Universitātes akadēmiskā personāla zinātniskās aktivitātes vērtēšanas kārtība	1.4.Zinatniskas_efektvitates_vertesanas_kartiba.pdf
The procedure for evaluating the scientific activity of the academic staff of Daugavpils University	1.4.Procedure of assessing the scientific activity.pdf
Infrastruktūra un materiāltehniskais nodrošinājums	2.3.2. Infrastruktūra un materiāltehniskais nodrošinājums_LV.docx
Studiju virziena starptautiskā izvērtējuma (2012.02.19.) ekspertu ziņojums/Expert report	2.6.1. Studiju virziena starptautiskā izvērtējuma 2012.02.19 ekspertu ziņojums.pdf
QA documents (mainly in LV)	Ar kvalitāti saistīti dokumenti_DU.zip
3.2.1. PMSP Environmental planning course mapping.docx	3.2.1. PMSP Environmental planning course mapping.docx
3.2.1. PMSP Environmental planning study plan.xlsx	3.2.1. PMSP Environmental planning study plan.xlsx
3.2.1. PMSP Vides plānošana kursu kartējums kompakts.docx	3.2.1. PMSP Vides plānošana kursu kartējums kompakts.docx
3.2.1. PMSP Vides plānošana kursu kartējums kompakts-1.docx	3.2.1. PMSP Vides plānošana kursu kartējums kompakts-1.docx
Q1_1.1.1.STUDENT SURVEY.docx	Q1_1.1.1.STUDENT SURVEY.docx
Q1_1.1.1.STUDĒJOŠO APTAUJA.docx	Q1_1.1.1.STUDĒJOŠO APTAUJA.docx
Q1_1.1.2.DARBA DEVĒJU APTAUJA.docx	Q1_1.1.2.DARBA DEVĒJU APTAUJA.docx
Q1_1.1.2.EMPLOYERS SURVEY.docx	Q1_1.1.2.EMPLOYERS SURVEY.docx
Q1_1.1.3.ABSOLVENTU APTAUJA.docx	Q1_1.1.3.ABSOLVENTU APTAUJA.docx
Q1_1.1.3.ALUMNI SURVEY.docx	Q1_1.1.3.ALUMNI SURVEY.docx
Q3_INTERNAL-QUALITY-ASSURANCE-POLICY-OF-STUDIES-AT-DAUGAVPILS-UNIVERSITY.docx	Q3_INTERNAL-QUALITY-ASSURANCE-POLICY-OF-STUDIES-AT-DAUGAVPILS-UNIVERSITY.docx
Q4_Appendix 1-2_evaluation points_EN.pdf	Q4_Appendix 1-2_evaluation points_EN.pdf
Q4_Procedure of assessing the scientific activity.pdf	Q4_Procedure of assessing the scientific activity.pdf
Q9_List of the defended BSc thesis.docx	Q9_List of the defended BSc thesis.docx
Q9_List of the defended MSc thesis.docx	Q9_List of the defended MSc thesis.docx
Q 1-9_Answers to questions 1-9 from experts.docx	1. Answers to questions 1-9 from experts.docx
2. Answers to questions 10-14 from experts.docx	2. Answers to questions 10-14 from experts.docx
Q10_3.2.6. ABSP Vides zinātne bakalaura darba recenzijas piemērs.docx (in Latvian)	Q10_3.2.6. ABSP Vides zinātne bakalaura darba recenzijas piemērs.docx
Q10_3.2.6. ABSP Vides zinātne_bakalaura darba izvērtēšanas protokols.docx (in Latvian)	Q10_3.2.6. ABSP Vides zinātne_bakalaura darba izvērtēšanas protokols.docx
Q10_3.2.6. ABSP Vides zinātne_bakalaura darba izvērtēšanas protokols.docx (in Latvian)	Q10_3.2.6. ABSP Vides zinātne_bakalaura darba izvērtēšanas protokols.docx
Q10_Vides_aizsardziba_Darbu_noformesanas_metodiskie_noradijumi.pdf (in Latvian)	Q10_Vides_aizsardziba_Darbu_noformesanas_metodiskie_noradijumi.pdf

Environmental Science (43431)

Study field	*Environmental Protection*
ProcedureStudyProgram.Name	*Environmental Science*
Education classification code	*43431*
Type of the study programme	
Name of the study programme director	*Juris*
Surname of the study programme director	*Soms*
E-mail of the study programme director	*juris.soms@du.lv*
Title of the study programme director	*Assoc. prof., Dr. Geol.*
Phone of the study programme director	*+371 29295432*
Goal of the study programme	*Preparing qualified, internationally competitive environmental specialists who are able to independently plan and conduct research and are competent to work in environmental protection institutions and research in environmental science, its sub-branches and related sciences, to continue studies in master's and doctoral studies, as well as meeting the prospective labour market demand in the field of environmental protection in Latvia and abroad.*
Tasks of the study programme	*1) to provide competitive education in environmental science and environmental protection corresponding to the bachelor's study level and the recommendations of the Bologna Declaration;* *2) to provide students with high-quality basic and specialized knowledge in environmental science, its sub-branches and communication sciences, as well as an understanding of the most important concepts and regularities, thus ensuring the acquisition of higher academic education and the opportunity to continue higher level studies;* *3) acquire the skills to conduct independent research in accordance with the basic principles of research, to develop critical thinking and analysis in the evaluation of the obtained results, as well as to present the research results;* *4) develop the skills necessary for working in a team or leading it, promote the process of self-directed learning and self-growth;* *5) develop motivation for postgraduate education and professional development.*

Results of the study programme	*Knowledge:* *1. The graduate demonstrates basic and in-depth theoretical and practical knowledge in the most important modern theories and factual material of environmental science and its related sciences, critical understanding of this knowledge, and at the same time knows how to apply it to the interpretation of newly acquired information according to the level of the latest achievements in scientific fields.* *2. The graduates are familiar with the findings, concepts and most important regularities of environmental science and related sciences, as well as the possibilities of their use in solving issues and problems of nature protection and environmental management.* *3. They understand and appreciate the research content, basic principles and importance of environmental science and related sciences in the analysis of human-environment interaction, identification and solving of environmental problems, as well as in the clarification of global environmental changes.* *Skills:* *4. They are able to independently obtain, select, analyze and critically evaluate the information available from various sources on specific issues or research methodology, to make decisions and solve problems, as well as to plan and implement the improvement of one's knowledge and skills.* *5. Graduates are able to carry out scientific or applied research activities in the field of environmental science or related sciences, working both individually and in working groups, they know how to choose and apply the most suitable methods for data acquisition and processing. Graduates are able to formulate and analytically describe the obtained research results, are able to explain them and reasonedly discuss problems and solutions, as well as present and publicly defend their performance.* *6. Able to independently structure their own learning, guide their own and subordinates' further learning and professional development, apply a scientific approach to problem solving, take responsibility and initiative when working individually, in a team or leading the work of others, make decisions and find creative solutions in changing or uncertain circumstances.* *Competencies:* *7. Graduates are able to analyse, synthesize and independently apply the acquired theoretical and practical knowledge in the performance of work tasks, take initiative and responsibility, acting individually or in a team; be communicative, observe the principles of correctness and collegiality and feel responsible for the accuracy and timeliness of personal performance.* *8. Graduates are able to integrate the knowledge of fields related to environmental science in the process of self-development and self-improvement in the perspective of the future academic or professional career and apply critical thinking.* *9. They are able to strengthen general human attitudes and at the same time clarify the attitudes related to environmental science (and its sub-branches), creating awareness and understanding of the most important natural and human-caused processes in the environment.*
Final examination upon the completion of the study programme	*Bachelor thesis*

Study programme forms

Full time studies - 3 years - latvian

Study type and form	*Full time studies*
Duration in full years	*3*
Duration in month	*0*
Language	*latvian*
Amount (CP)	*180*
Admission requirements (in English)	*Secondary education*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Bachelor's degree in environmental science*
Qualification to be obtained (in english)	*-*

Places of implementation

Place name	City	Address
Daugavpils University	DAUGAVPILS	VIENĪBAS IELA 13, DAUGAVPILS, LV-5401

Full time studies - 3 years - english

Study type and form	*Full time studies*
Duration in full years	*3*
Duration in month	*0*
Language	*english*
Amount (CP)	*180*
Admission requirements (in English)	*Secondary education For studies in English: knowledge of the English language at least at B2 level*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Bachelor's degree in environmental science*
Qualification to be obtained (in english)	*-*

Places of implementation

Place name	City	Address
Daugavpils University	DAUGAVPILS	VIENĪBAS IELA 13, DAUGAVPILS, LV-5401

3.1. Indicators Describing the Study Programme

3.1.1. Description and analysis of changes in the parameters of the study programme made since the issuance of the previous accreditation form of the study field or issuance of the study programme license, if the study programme is not included on the accreditation form of the study field, including changes planned within the evaluation procedure of the study field evaluation procedure.

Since the previous study program license was issued, the study programme has experienced significant changes in structure of the study programme, taking into account both development trends in the field of environmental sciences field and its corresponding sciences, student feedback and wishes, but also in the employer recommendations. These changes have been made to improve the quality of study content and ensure that the program meets industry standards, requirements and integrates the latest theories, insights and factual material.

Key changes include the following:

1. Introduction of new courses, replacement of existing courses.
2. Restructuring and optimization of the study plan of the Academic Bachelor's Study Program (ABSP) "Environmental Science" study program.
3. Updating the content and materials of study courses.
4. Active use of the e-study environment MOODLE in the study process.
5. Student engagement and feedback.

1. Introduction of new courses, replacement of existing courses

In order to promote students' interest, ensure the acquisition of systematized knowledge corresponding to the level of development of modern sciences, and develop new skills and competence, several new courses were introduced in environmental science and related fields such as ecology, earth sciences, geomatics *etc.* (refer to table No. 3.1.1.1.). At the same time, a number of previous courses were replaced by a new study course in the same field of science. These courses cover current topics and provide a closer link between environmental science and other natural sciences, in aspects such as the problematic issues of human-environment interaction, possibilities of using knowledge in nature protection, analysis of environmental problems and solving environmental management issues, *etc.*

In order to ensure compliance with the requirements of the Law on Environmental Protection and Civil Protection and Disaster Management, and in order to improve students' competence in civil and occupational safety issues, Civil and labour protection study course was integrated into part A of the bachelor's study program [VidZ1046].

During the reporting period, the approach to teaching English was changed several times. In the study year 2012/2013, the study course "English language" (2 CP) was moved from part C to part B and renamed "Professional English" (2 CP), providing this study course in a flow with ABSP "Biology" and ABSP "Chemistry". In the study year 2015/2016, due to the introduction of a new centralized study course "Practical English (improvement of functional language use)" at DU, changes were also made to the ABSP "Environmental Science" study course offer, including the centralized study course and deleting the study course "Professional English" from the study plan. On the other hand, in the study year 2021/2022, taking into account the opinion of students and the "Environmental

Protection" study direction council, a new study course "English in environmental science" was prepared ("English for Environmental Science" [VidZ1044]), which was included in the new study plan, part A, replacing the course "Practical English (improvement of functional language use)". The content of the specific study course has been improved, focusing directly on the use of English terminology specialized in the field of environmental science.

Table No. 3.1.1.1. ABSP "Environmental Science", summary of proposed changes in the list and scope of study courses

Existing study course name and scope (version of the study plan V15-16 in the study year 2022/2023)	**Proposed changes (from the study year 2023/2024)**	**Explanation of proposed changes**
VidZ1012 Environmental science	VidZ1049 Environmental science	It is proposed to increase the volume of the study course by 1 CP.
Biol1039 Basics of environmental biology	–	The study course was proposed to be deleted due to the reduction of the total number of credits in the study program from 124 credits to 120 credits and the need to express credit points in whole numbers. The content is partially integrated into other study courses.
Biol1017 General Ecology	Biol1094 General Ecology	It is proposed to increase the volume of the study course by 1 CP.
Ķīmi1002 General and inorganic chemistry	VidZ1045 General and inorganic chemistry	It is proposed to reduce the scope of the study course by 1 CP in order to ensure that it is conducted in a stream with ABSP "Biology"
JurZ4015 Civil Defence	VidZ1046 Civil and labour protection	It is proposed to increase the volume of the study course by 1 CP, including work safety issues as a module.

Ģeog1002 Basics of physical geography	VidZ1051 Earth systems	It is proposed to replace the existing study course with a new one, reducing the volume of the course by 1 CP. A large part of the content of the existing course is integrated into the new course, in which more emphasis is placed on interdisciplinary issues in the field of environmental science, especially on the functioning and mutual interaction of the Earth's systems (atmosphere, hydrosphere, *etc.*).
Ģeog2012 Soil Science	Ģeog2014 Conservation of the Pedosphere and Soils	It is proposed to replace the existing study course with a new one, reducing the volume of the course by 1 CP. A large part of the content of the existing course is integrated into the new course, in which more emphasis is placed on interdisciplinary issues in the field of environmental science, especially on soil protection and conservation.
Ģeog1005 Climatology with the basics of meteorology	Ģeog1012 Atmosphere and climate change	It is proposed to replace the existing study course with a new one, increasing the volume of the course by 1 CP. Much of the existing course content is integrated into the new course, which places greater emphasis on interdisciplinary issues in environmental science, particularly in relation to the trends and potential consequences of global climate change.
Valo1289 Practical English	VidZ1044 English in Environmental Science	It is proposed to replace the existing study course with a new one without changing the scope of the course in credit points (CP). The content of the study course has been improved, focusing directly on the use of English terminology specialized in the field of environmental science.
Ģeog1004 Cartography	Ģeog1013 Digital cartography in environmental science	It is proposed to replace the existing study course with a new one, reducing the volume of the course by 1 CP. A large part of the content of the existing course is integrated into the new course, in which more emphasis is placed on interdisciplinary issues in the field of environmental science, especially the use of digital solutions in environmental process mapping and research.

Ģeol1003 Geomorphology	Ģeol1005 Environmental geomorphology	It is proposed to replace the existing study course with a new one, reducing the volume of the course by 1 CP. A large part of the existing course content is integrated into the new course, which has a greater emphasis on interdisciplinary issues in the field of environmental science, especially geological developments and environmental impacts caused by climate change and human influence.
Ģeog2002 Landscape science	VidZ1048 Landscape ecology	It is proposed to replace the existing study course with a new one without changing the scope of the course in credit points (CP). A large part of the content of the existing course is integrated into the new course, in which more emphasis is placed on interdisciplinary issues in the field of environmental science, especially in the field of landscape ecology and conservation.
Fizi1013 Physical research methods in natural sciences	VidZ1050 Field Methods in Environmental Science	It is proposed to replace the existing study course with a new one without changing the scope of the course in credit points (CP). The content of the study course has been reworked, focusing directly on the practical learning of the field research methodology necessary for the field of environmental science.
Ģeog2011 Human geography	VidZ2024 Concept of sustainable development	It is proposed to replace the existing study course with a new one, increasing the volume of the course by 1 CP. The content of the study course has been reworked, focusing directly on understanding the concept of sustainable development and solutions necessary for the field of environmental science.
VidZ3028 Research methodology in environmental science	VidZ2027 Research methodology in environmental science	It is proposed to reduce the volume of the study course by 1 CP, while at the same time increasing the proportion of the practical part.

Ģeog2008 Introduction to Earth Remote Sensing	Ģeog2016 Introduction to Environmental Remote Sensing	It is proposed to replace the existing study course with a new one without changing the scope of the course in credit points (CP). The content of the study course has been reworked, focusing directly on the deciphering and analysis of environmental remote sensing data necessary for the field of environmental science. Increased proportion of the practical part.
Biol1021 Hydroecology	Biol2049 Freshwater ecology	It is proposed to replace the existing study course with a new one without changing the scope of the course in credit points (CP). The content of the study course has been reworked, focusing on surface water objects characteristic of the natural conditions of Latvia.
Ģeog2007 World regional geography	–	The study course was proposed to be deleted due to the reduction of the total number of credits in the study program from 124 credits to 120 credits and the need to express credit points in whole numbers. The content is partially integrated into other study courses.
VidZ3003 Natural resource utilization strategy	VidZ2025 Natural resource management	It is proposed to replace the existing study course with a new one, increasing the volume of the course by 1 CP. A large part of the content of the existing course is integrated into the new course, in which more emphasis is placed on interdisciplinary issues in the field of environmental science, especially in relation to environmental management and planning for the rational use of natural resources.
VidZ2019 Sustainable development and environmental protection in the Baltic Sea region	VidZ2026 Environment and protection of the Baltic Sea region	It is proposed to replace the existing study course with a new one without changing the scope of the course in credit points (CP). The content of the study course has been reworked so that its content does not overlap with the course content of the VidZ2024 "Sustainable Development Concept" course.
VidZ2006 Study work in environmental science	VidZ2028 Study work in environmental science	It is proposed to increase the volume of the study course by 1 CP.

Ģeog3004 Basics of planning	–	The study course was proposed to be deleted due to the reduction of the total number of credits in the study program from 124 credits to 120 credits and the need to express credit points in whole numbers. The content is partially integrated into other study courses.
Ģeog3003 Geospatial analysis methods in environmental science	Ģeog3003 Geospatial analysis methods in environmental science	Increased proportion of the practical part.
VidZ1015 Field Course in Environmental Science: Environmental Management and Protected Natural Areas	–	The study course was proposed to be deleted due to the reduction of the total number of credits in the study program from 124 credits to 120 credits and the need to express credit points in whole numbers. The content is partially integrated into other study courses.
VidZ3030 Development of bachelor thesis in environmental science I	VidZ3033 Development of bachelor thesis in environmental science I	It is proposed to increase the volume of the study course by 1 CP.
Biol3010 Virology	–	The study course was proposed to be deleted due to the reduction of the total number of credits in the study program from 124 credits to 120 credits and the need to express credit points in whole numbers.
VidZ2010 Environment Protection	VidZ3036 Nature diversity and protection	It is proposed to replace the existing study course with a new one without changing the scope of the course in credit points (CP). The content of the study course has been reworked so that its content does not overlap with the content of the course VidZ3014 "Environmental Law and Legislation" and includes issues of biological diversity as a part of natural diversity.

VidZ3015 Biological diversity	VidZ3035 Introduction to Environmental Technologies	It is proposed to replace the existing study course with a new one without changing the scope of the course in credit points (CP). The content of the study course has been reworked, focusing directly on the understanding of environmental technologies and solutions necessary for the field of environmental science.
VidZ3031 Development of a bachelor's thesis in environmental science, II	VidZ3034 Development of a bachelor's thesis in environmental science, II	It is proposed to decrease the volume of the study course by 1 CP.

The introduction of new courses and the replacement of previous courses in the fields of environmental science and related sciences could measure several indicators of change, something which reflects the impact of these innovations on the study process and the development of students as future industry professionals:

- Improving the feedback and ratings system

Indication of change implementation: The analysis of student reviews and evaluations about the course content helped to identify the strengths and weaknesses of the study program content, as well as contributed to the necessary improvements and the introduction of new courses or the replacement of previous courses.

- Lecturers' satisfaction and experience

Indication of change implementation: The satisfaction of the lecturers and positive feedback about the inclusion of the new courses in the ABSP "Environmental Science" study plan and their content indicated the successful implementation of the courses.

- Increase of students' interest in scientific-research activity

Indication of change implementation: An increase in student interest and involvement in scientific research, which was facilitated by the introduction of new courses that offered such opportunities.

- Innovations in the study process

Indication of change implementation: The introduction of new courses promoted innovation in the study process, offering new teaching methods, skills acquisition and interactive elements, for example, the use of deep machine learning (Deep Machine Learning) algorithms and artificial intelligence (AI) solutions in classifying and deciphering satellite images in environmental quality monitoring.

- Increased professional training

Indication of change implementation: The preparation of students in the professional sphere, which was the goal of many new course offerings, can be evaluated as an effective change.

2. ***Restructuring and optimization of the study plan of the Academic Bachelor's Study Program (ABSP) "Environmental Science" study program***

Starting from 2023/2024 several changes have been proposed in the implementation of the study program of the study years. The total volume of the study program is planned to be reduced from

124 CP (186 ECTS) to 120 CP (180 ECTS). [1]By implementing the requirements of the new version of the Higher Education Institutions Law *[Augstskolu likums]* that 60 credit points correspond to the study results acquired in full-time studies in one academic year, in accordance with the European Credit Transfer and Accumulation System (ECTS) and that credits are expressed in whole numbers, the amount of a number of study courses was changed (refer to Table 3.1.1.1.). As part of these changes, it is proposed to remove the study courses "Fundamentals of Environmental Biology" (3 CP; 4.5 ECTS) from the list of taught study courses, as well as "Human geography" (3 CP; 4.5 ECTS), "World regional geography" (3 CP; 4.5 ECTS) and "Basics of planning" (2 CP; 3 ECTS). The changes affecting geography cycle courses are related to the fact that DU is no longer implementing the master's study program "Education" D139D with the specialization "Teacher of Geography and Chemistry", in which also ABSP "Environmental Science" graduates studied and whose content determined the need for geography knowledge at the undergraduate level. However, the content of these courses is at least partly integrated into existing or new study courses. So, for example, the questions of the course "Fundamentals of Environmental Biology" are also covered in other study courses – "General Ecology" and "Environmental Science", where the volume of each course is increased by 1 CP from 3 CP to 4 CP respectively.

In order to promote the development of higher quality and science-based studies and bachelor theses, from the study year 2023/2024, it is proposed to increase the amount of credit points intended for the development of study thesis (works) to 2 CP. The changes also affect the offer of B-restricted elective and C-free elective courses, harmonizing it with the courses of other study programs so that they can be administered to students of different study programs.

3. ***Updating the content and materials of study courses***

Renewal of the content of study courses and study materials was carried out and is constantly being continued, including the latest scientific discoveries, theories, insights, factual material and changes in technologies and research methods. It ensures that students are well prepared and acquire up-to-date knowledge, skills and competence in the fields of environmental science and related sciences.

By introducing constant updating of study materials, several change indicators could be evaluated, which reflect this innovation and its impact on the study process:

- Integration of the latest scientific discoveries in the study process

Indication of change implementation: The study materials were regularly supplemented with the most current information on scientific discoveries, theories and factual material in the fields of environmental science and related sciences, which, in turn, ensures that students acquire the latest knowledge and modern research methodologies and techniques during their studies.

- Adaptability of study material structure and menu:

Indication of change implementation: Menus and structures of study materials were adapted to allow students to easily access specific courses or topical materials according to their individual needs and interest level (see also below on the use of the e-learning environment MOODLE).

Changes in the content of the study course in a number of study courses have also been made regarding changes in the ratio of the theoretical/practical part (refer to Table 3.1.1.1.). These changes were made based on the recommendations of the course lecturers about development trends and new technologies in the courses they taught, as well as the feedback and comments of students about the need to allocate more time for learning skills in laboratory work and for practical works, as well as for employers' recommendations.

4. ***Active use of the e-study environment MOODLE in the study process***

The active use of the MOODLE system in the study process had a significant impact on the student training process, providing several positive changes and improvements:

- Increased availability and flexibility

Indication of change implementation: Students can access study materials and complete assignments even outside DU premises and outside class time thanks to MOODLE's online availability.

- Increased engagement and collaboration

Indication of change implementation: Interactive types of lessons, discussion forums promote active involvement of students and mutual cooperation.

- More effective communication

Indication of change implementation: MOODLE provides a central communication point where instructors and students can exchange information, assignments and feedback, thus promoting effective communication.

- More objective and more operative assessment:

Indication of change implementation: Automated scoring and the ability to receive individual feedback directly on the platform improves the objectivity and speed of the scoring.

Taking into account the restrictions in the study process caused by the Covid-19 pandemic and the transition to the remote study format, the existing study implementation forms were also adapted to the new situation during the reporting period (lectures on the ZOOM platform, video lectures, *etc.*).

5. ***Student engagement and feedback***

In order to ensure the quality of the study program and improve its content, the involvement of students in the development of the study program was emphasized. Seminars, discussions and surveys are regularly organized to listen to students' opinions and evaluate them in order to improve the quality of the program.

Indicators that reflect this approach and its impact on the development of the study program:

- Active involvement of students in the process of improvement and development of the study program

Indication of change implementation: Student participation in seminars, discussions and surveys increases, showing greater interest and involvement in improving the study content and process.

- Regular and structured discussions

Indication of change implementation: The frequency and structure of discussions will increase, reflecting the active exchange of information between students and lecturers.

- Improving the survey system

Indication of change implementation: The survey system was improved in such a way that students' opinions were collected not only about the study program as a whole, but also about each study course studied in a given semester and the quality of teaching by lecturers; student opinions are taken into account and used to improve the content and program of study courses.

- More intense feedback

Indication of change implementation: Students receive more frequent and specific feedback on

their performance and progress assessment, which helps them understand their strengths and weaknesses.

It is planned to accredit ABSP "Environmental Science" for the implementation also in English. Realization of the study program in English will allow to increase the number of foreign students in the program. Taking into account that currently Daugavpils University is witnessing an increase in interest from foreign students from the USA, Philippines, Indonesia, Lesotho and other countries to study individual study courses or programs, it was also decided to implement the bachelor's study program in English, in order to ensure the opportunity for foreign students to learn the full extent of the bachelor's level study program.

Due to changes in the Law on Universities, the scope of the study program has been changed according to ECTS credit points. In full-time studies, 1 credit point (LV) corresponds to 40 academic hours, of which 16 hours are contact hours of lectures, while 1 ECTS corresponds to 26.7 academic hours, of which 10.7 are contact hours, which is 40% of the intended amount.

[1] Law on Universities. Available: https://likumi.lv/ta/en/en/id/37967-law-on-higher-education-institutions [viewed 22.03.2024]

3.1.2. Analysis and assessment of the study programme compliance with the study field. Analysis of the interrelation between the code of the study programme, the degree, professional qualification/professional qualification requirements or the degree and professional qualification to be acquired, the aims, objectives, learning outcomes, and the admission requirements. Description of the duration and scope of the implementation of the study programme (including different options of the study programme implementation) and evaluation of its usefulness.

Academic Bachelor's Study Program (ABSP) "Environmental Science" is a bachelor's program of the "Environmental Protection" field of study, created in accordance with the requirements of the Latvian Higher Education Institutions Law *[Augstskolu likums]* and provides opportunities for academic education in environmental science in accordance with the Cabinet of Ministers *[Ministru kabinets]* Regulations No. 240 "Regulations on the state standard of academic education" (Cabinet of Ministers May 13, 2014 Regulations No. 240)[1]. ABSP "Environmental Science" provides students with the acquisition of theoretical knowledge of sciences and research skills in the field of environmental science, achieving the study results determined in the study program, which corresponds to the level 6 knowledge, skills and competence of the European Qualifications Framework defined in the Latvian education classification. In the course of studying the bachelor's study program, students acquire a systematized knowledge base in environmental science, its sub-branches and related sciences, expand their skills by learning laboratory, chamber and field research methods, students acquire the competences and attitudes necessary for professional activity in the field of environmental science.

The goals and objectives of the study program correspond to Level 6 of the Latvian Qualifications Framework (LKI) and it is oriented towards students with general secondary education or vocational secondary education without additional admission rules.

The program code 43431 reflects the status and content of the program, according to the requirements established by the "The regulations on the classification of education in Latvia"

(Cabinet of Ministers *[Ministru kabinets]* June 13, 2017 Regulations No. 322[2]). The first digits of the code 43 denote academic education (bachelor's degree), which can be implemented after general or vocational secondary education. The second part of the code corresponds to the thematic field of education (43 – Environmental science) and the group of educational programs (431 – Environmental science and environmental management).

Enrollment in the study program takes place in accordance with the "Daugavpils University admission rules for full-time and part-time undergraduate studies"[3], which are annually approved by the DU Senate. Admission (enrollment) requirements for full-time studies: centralized exams in Latvian, first foreign language, mathematics, average value of all CE scores). Additional points are awarded for CE in biology, for CE in chemistry, for an exam grade in certified geography, as well as for winners of the DU Science School certificate.

Admission requirements for those studying in English: a document certifying secondary education and a document certifying knowledge of the English language at least at the B2 level.

The name of ABSP "Environmental science", degree to be obtained, purpose and tasks, admission requirements of students are interconnected. The set goal of the study program, the tasks set and the results to be achieved are also directly linked to the other parameters of the program - the scientific field of the study program, the code of the study program according to the Latvian education classification, the type of program (academic bachelor's study program), its scope, the form of implementation, the type and duration - 3 years of full-time face-to-face studies. The content of the study courses included in the program, the sequence and extent of their learning are subordinate to and directly related to the fulfillment of the program's tasks, the achievement of the goal and the provision of results. Thus, the parameters of the study program are interconnected and correspond to the degree to be obtained.

Refer to the appendix for more about the completion of the study program, the diploma to be issued and the sample of diplomas annexes in accordance with the April 16, 2013 Cabinet of Ministers *[Ministru kabinets]* Regulations No. 202 "The procedure for issuing documents certifying higher education recognized by the state"[4], and, in respect to the study contract sample in accordance with the January 23, 2007 Cabinet of Ministers *[Ministru kabinets]* Regulations No. 70 "Mandatory provisions in the study contract"[5] (*appendices 3.1.2. ABSP Environmental science diploma sample; 3.1.2. ABSP Environmental science diploma appendix; 3.1.2.* and *3.1.2. ABSP Environmental science Contract for studies*).

The duration and scope of the study program implementation, as well as the achievable results, do not differ between the Latvian and English versions of the study program implementation. The offer of both options and their implementation is considered useful, it is determined by the following arguments:

1. expanding the research and innovation potential of the program: the study program includes research components and cooperation with institutions, companies and/or research institutions both in Latvia, the European Union and elsewhere in the world; therefore, offering study programs in Latvian and English increases the attraction of students who want to participate in innovation and scientific research projects, which, in turn, results in a wider geography of students and an increase in their number.
2. improvement of employment prospects: the graduates of both variants of the study program clearly have broader employment prospects, because the implementation of the European Commission's plan "The European Green Deal", the fight against climate change and solving other pressing environmental issues in the coming decades will require specialists both in Latvia, but also in the EU and other countries of the world, which in turn can boost the demand for the program.

3. development of human resources and strengthening of the business environment in the regional context: in Latvia in general and in the Latgale region in particular, there is still a lack of specialists capable of comprehensive analysis of environmental problems. Therefore, the implementation of both variants of the program is focused on the development of human resources. In addition, the new geopolitical situation has rapidly changed the geographic vectors and economic ties of business, forcing a reorientation to other markets in Europe and the world. At the same time, the already mentioned "European Green Course", climate neutrality requirements and the implementation of "green" technologies in companies determine that companies in the Latgale region need not just environmental specialists, but environmental specialists with good knowledge of the English language and communication skills, which enable the development of business relations with the EU and countries of the world. Therefore, the implementation of both variants of the study program is also aimed at strengthening the business environment.

[1] Regulations of the Cabinet of Ministers of May 13, 2014 No. 240 "Regulations on the standard of state academic education". Available in Latvian only: https://likumi.lv/ta/id/266187

[2] Regulations of the Cabinet of Ministers of June 13, 2017 No. 322 "Rules on Latvian education classification". Available in Latvian only: https://likumi.lv/ta/id/291524

[3] Daugavpils University admission rules for full-time and part-time undergraduate studies. Available in Latvian only: https://du.lv/gribu-studet/uznemsana/ [viewed 22.03.2024]

[4] Regulations of the Cabinet of Ministers of April 16, 2013 No. 202 "Procedure in which documents certifying higher education recognized by the state are issued". Available in Latvian only: https://likumi.lv/ta/id/256157 [viewed 22.03.2024]

[5] Regulations of the Cabinet of Ministers of January 23, 2007 No. 70 "Terms that must be included in the study contract". Available in Latvian only: https://likumi.lv/ta/id/152072 [viewed 22.03.2024]

3.1.3. Economic and/ or social substantiation of the study programme, analysis of graduates' employment.

The necessity of the bachelor's study program in environmental science and the field of study "Environmental protection" in general and its further development from the point of view of national and EU interests is determined by the need to prepare academically and professionally educated specialists for state and local government institutions, services and subordinate structural units of the Republic of Latvia, which are related to solving issues of nature protection, territorial planning and environmental management. Specialists of this profile are also needed by companies and employers of the private sector of the economy, who are directly involved in environmental management, such as waste management, or whose business field is related to environmentally polluting activities, or the provision of services aimed at the environment and nature protection, for example consulting and planning companies that participate in the development of nature protection plans *etc.*

Similarly, the need for trained specialists in the field of environmental and nature protection in our country is also determined by the European Union's environmental protection guidelines and policy[1], which serves as a cornerstone for environmental legislation and national environmental

protection policy[2], for the sustainable development strategy[3] and the National Development Plan for the years 2021-2027[4]. At the same time, development prospects of the the Bachelor study program "Environmental Science", "Environmental protection" study direction are based on and closely related to the European Commission's plan "European Green Deal"[5]. Among other things, this plan emphasizes the need to develop "green" production, "green" transport, "green" consumption and pollution prevention in order to reduce greenhouse gas emissions, preserve Europe's natural capital and invest in research and innovation, and thus face the climate changes.

In this context, compliance with the requirements of the EU environment and nature protection legislation is determined by the necessary administrative structure, the provision of adequate funding and the preparation of human resources. The last of the named tasks directly corresponds to the implementation of the bachelor's study program "Environmental Science" at Daugavpils University, moreover, in our country in general and in the Latgale region in particular, there is still a lack of academically educated specialists who would be capable of comprehensive analysis of environmental problems. The theoretical and practical knowledge required for the performance of this type of work is provided by the studies of environmental science, its sub-disciplines and related sciences offered by DU ABSP "Environmental Science".

The need for young people in Latvia to acquire a scientific basis for further activities in the course of their academic and professional studies, developing the abilities of scientific analysis and the ability to independently solve problems directly in environmental science, is also determined by the fact that in the course of economic development in Latvia, the expansion of the ecological footprint of the society and the increase of the negative anthropogenic impact on the environment can be observed.

For the later prevention of the side effects of these processes (degradation of natural habitats, increasing level of environmental pollution, *etc.*), as the experience of the existing EU member states shows, huge funds from the national budgets have to be spent, thus using financial resources inefficiently. Therefore, the investments of the Republic of Latvia in the development and strengthening of the academic bachelor's study program "Environmental Science" are actually investments in the economy and effective use of the state's financial resources in the future.

In addition, such national policy is directly in line with the sustainable development program Agenda 2030 and the achievement of the sustainable development goals defined by the UN[6] and European Union guidelines for the preservation of the natural environment in the Baltic Sea region, which are included in the "Baltic Local Agenda 21"[7], as well as in the Hague Declaration and the "Baltic Local Agenda 21 for Education"[8], namely: "Education and preparation for sustainable development is the learning necessary to preserve and improve the economic, environmental and social aspects of our lives and those of future generations".

It follows that solving sustainable development issues in the Baltic Sea region requires specialists trained at a high academic and professional level, which will be able to implement the UN Agenda 2030 and Agenda 21 action program not only in the centre, but also in other regions of Latvia, including in Latgale. It is exactly environmental studies in the country that ensure the preparation of specialists of this nature, as well as opportunities to develop and practically implement the balanced and sustainable development concepts of the country.

It should also be noted that the realization of the study direction is also considered essential from the point of view of the interests of Daugavpils University, as it integrates and complements other study programs in natural sciences, the study of which requires knowledge in environmental science. In addition, the implementation of the study program is important, taking into account the requirements formulated in the Environmental Protection Law *[Vides aizsardzības likums]* of the Republic of Latvia regarding the need to provide environmental education in Latvia.

According to the 2020 data of the monitoring of graduates of higher education institutions implemented by the Ministry of Education and Culture *[Izglītības un zinātnes ministrija]* (monitoring is carried out in accordance with the Cabinet of Ministers *[Ministru kabinets]* June 25, 2019 Regulations No. 276 "Regulations of the state education information system"), the difference in income of graduates of higher education institutions as a percentage compared to the national average income of persons with higher education in the last two years of taxation shows a trend, that already in the second year after graduating from higher education institutions, the national average income level for persons with higher education is promptly reached. This confirms the importance of higher education in the income level of the population. According to monitoring data, the demand for graduates of natural sciences, including environmental science programs in Latvia is high – about 88% of the graduates of study programs in the field of natural sciences are able to find their place in the labour market.

Graduate monitoring shows that science graduates also have some of the highest average incomes. More than 90% of natural sciences graduates are employed in highly qualified professions. Also, judging future perspectives, in the field of natural sciences, there will be a significant shortage of specialists in the coming years. Therefore, the studies and forecasts of the balance of labor demand and supply carried out by the Ministry of Economy *[Ekonomikas ministrija]* of the Republic of Latvia until 2030 show that the demand in the field of natural sciences, including environmental science, will be 20% higher relative to supply (refer to Figure 3.1.3.1.).

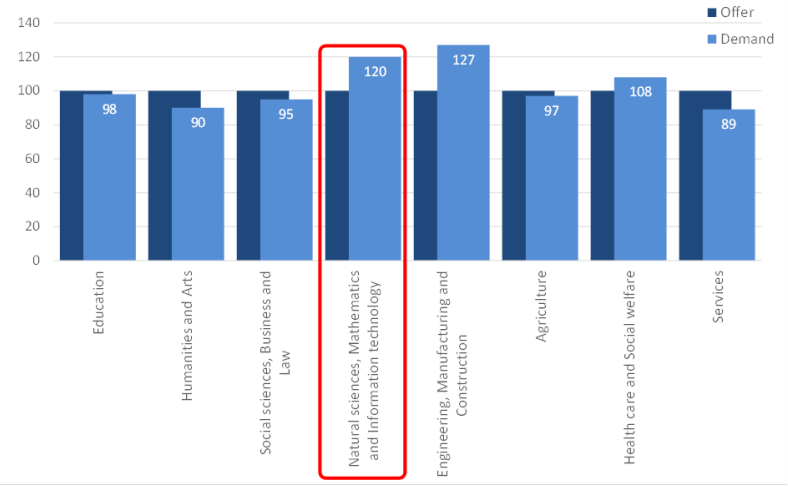


Figure 3.1.3.1. Forecasts of labour supply and demand with higher education in the distribution by educational thematic groups in Latvia (in percentages; demand versus supply in 2030; data source: Ministry of Economy *[Ekonomikas ministrija]* of the Republic of Latvia).

Similar trends are also shown by the results of the employers' survey conducted by DU. The preparation of ABSP "Environmental Science" graduates for the labour market in Latvia and the world can be assessed as good, they have a sense of purpose at work, a sense of responsibility, discipline, and initiative at work, desire and willingness to learn, improve professionally, ability to work with people, communication skills, wide horizons. Therefore, the high competitiveness of the graduates of the program is also supported by their personal qualities – the graduate's talent, work abilities and motivation. The opinion that most employers believe that the graduates use the acquired knowledge in their professional work, and that career growth is possible for them, is a positive assessment. The results of the survey show that DU graduates have good theoretical and practical preparation and are able to perform their duties immediately independently or after a little training, quickly learn new knowledge and skills, they are able to find and process information, graduates have good communication and cooperation skills and the ability to work in a team (refer to attachment *2.2.4. Analysis of the employer survey*)

Evaluating the relevance of the obtained education to the labour market, more than half of the graduates who filled out the questionnaire work in a job that corresponds to the education obtained at DU (47%), or in the industry related to the obtained education (20%). (refer to appendix No. *2.2.4. ABSP Environmental science graduate survey analysis*). After graduating from the academic bachelor's study program, 67% of the respondents continued their studies in the master's study program "Environmental Planning" or in other master's programs in Latvia and abroad.

When answering the question whether the obtained education played a significant role in finding a job or starting a business, 47% of graduates fully agreed with this statement. 50% of graduates believe that the content learned during studies meets the requirements of the labour market, while 77% admit that the knowledge acquired during studies contributes to professional development. 62% of graduates note that during their studies they had the opportunity to participate in improving the quality of the study program. Graduates rate the quality of studies at a high level in general: 37% of students rated the process with 10 points, 35% – with 9 points and 17% with 8 points, whereas 7% – with 7 points. So, 89% of graduates rated the quality of studies in the interval "very good – excellent", or at an even high level.

The comments received from ABSP "Environmental Science" graduates about the study program show that a lot of new and future-useful knowledge, which helped to acquire during the studies and to choose a future profession. Cooperation and support from the teaching staff is highly appreciated.

Taking into account that DU is the only regional university that offers academic studies in the field of environmental science to those interested, it is also of fundamental importance from the point of view of the development of the region. For students who, due to financial reasons, have limited opportunities to afford studies in Riga, it is possible to get quality education closer to their place of residence. A significant part of DU graduates remain to live and work in the Latgale region, thus contributing to the economic development of the region. Most of the graduates of the study program are from Daugavpils city, Agšdaugava region and other regions of the Latgale planning region. This means that the implementation of the study program is very important from the point of view of the interests of national and regional development, as it ensures the development of local human resources and the training of qualified specialists for state and municipal institutions, as well as for the private sector.

As previously mentioned in subsection 3.1.2, as well as in this subsection, for the implementation of the European Commission's plan "The European Green Deal", the fight against climate change and solving other pressing environmental issues in the coming decades, specialists are needed both in Latvia and the EU and in other countries of the world. This is also confirmed by the research conducted in the industry. Therefore, it is clear that the planned employment opportunities of students studying in English must be considered not only within the Latvian labour market, but much more widely - both in the European Union and in other countries and regions of the world. In this context, their employment opportunities can be evaluated positively.

[1] Environment policy: general principles and basic framework. Pieejams: https://www.europarl.europa.eu/factsheets/en/sheet/71/environment-policy-general-principles-and-basic-framework [viewed 22.03.2024]

[2] Environmental Policy Guidelines for the year 2021-2027. Available in Latvian only: https://www.varam.gov.lv/lv/vides-politikas-pamatnostadnes-2021-2027-gadam [viewed 22.03.2024]

[3] Latvia's sustainable development strategy until 2030. Available:

https://www.mk.gov.lv/en/media/15132/download?attachment [viewed 22.03.2024]

[4] National Development Plan for the year 2021-2027. Available in Latvian only: https://www.pkc.gov.lv/lv/attistibas-planosana-latvija/nacionalais-attistibas-plans [viewed 22.03.2024]

[5] The European Green Deal. Available: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en [viewed 22.03.2024]

[6] The 2030 Agenda for Sustainable Development. Pieejams: https://sdgs.un.org/2030agenda and https://sdgs.un.org/goals [viewed 22.03.2024]

[7] Baltic Local Agenda 21. Pieejams: http://www.baltic21.org [viewed 22.03.2024]

[8] Education for Sustainable Development. An Agenda 21 for the Baltic Sea Region. Pieejams: http://static.uvm.dk/Publikationer/2003/learnersguide/pdf/lg5.pdf [viewed 22.03.2024]

3.1.4. Statistical data on the students of the respective study programme, the dynamics of the number of the students, and the factors affecting the changes to the number of the students. The analysis shall be broken down into different study forms, types, and languages.

At the time of submission of the accreditation report, ABSP "Environmental Science" has a total of 22 students, of which 8 are students in the 1st year of study, (7 admitted and 1 returned from a study break), 5 students in the 2nd study year and 8 students in the 3rd study year. However, within the time period from 2016 to 2023, the total number of students enrolled in ABSP "Environmental science" reached 102 students. In the reporting period, a total of 64 students graduated from the study program (refer to appendix *3.1.4. Statistics on students, Environmental protection*).

Figure 3.1.4.1. reflects data on the number of students enrolled in previous study programs, figure 3.1.4.2. – total number of students, whereas in figure 3.1.4.3. – the number of deducted (expelled) students.

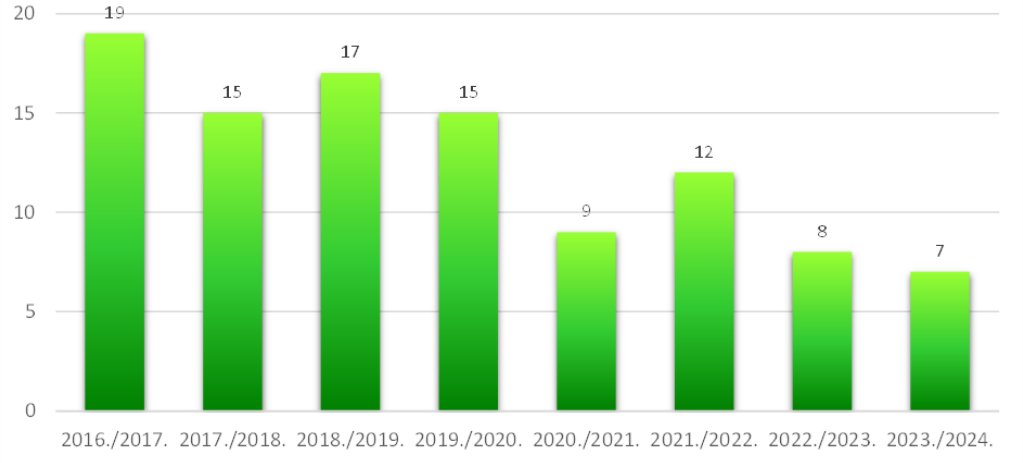


Figure 3.1.4.1. The number of students admitted to the study program in the period from 2016/2017 academic year until the 2023/2024 academic year.

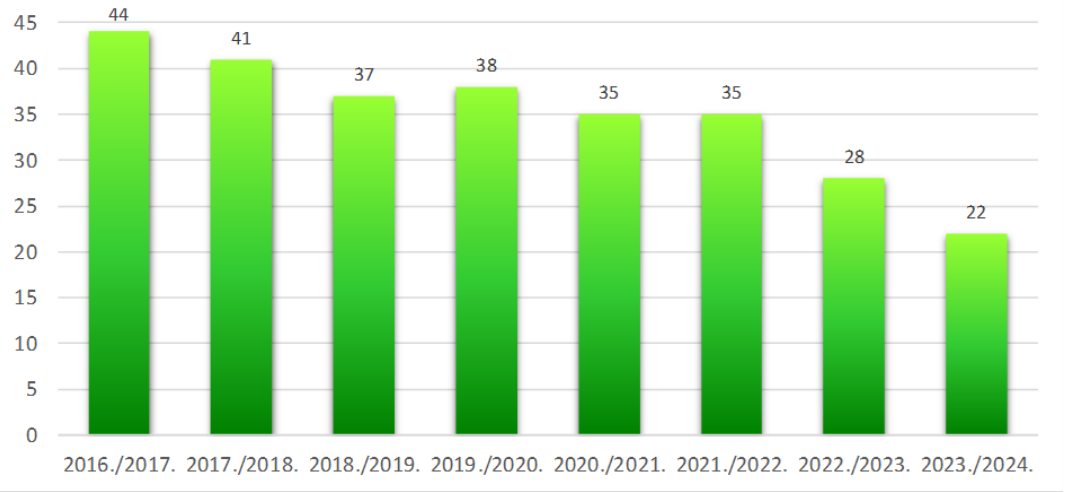


Figure 3.1.4.2. The number of students in the study program in the period from 2016/2017 academic year until the 2023/2024 academic year.

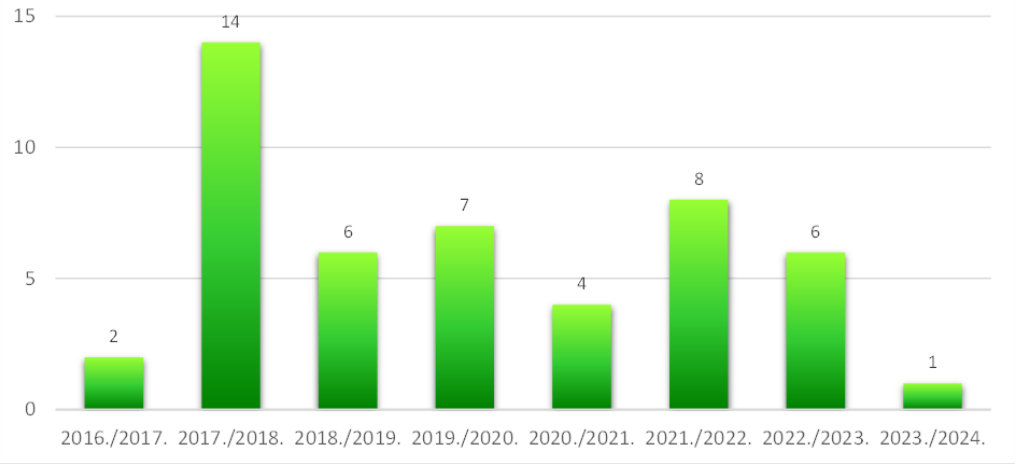


Figure 3.1.4.2. Total number of expelled students from the study program in the period from 2016/2017 academic year until the 2023/2024 academic year.

Basically, all students of ABSP "Environmental Science" studied with state budget funds (except for one foreign student in 2023, who studied with personal funds (refer to appendix No. *3.1.4. Statistics on students, Environmental protection*). The statistics of the number of students do not include foreign students who have studied ABSP "Environmental Science" as part of various mobility programs and have been matriculated for a specific study period. Statistics of the number of students enrolled within the mobility programs for the reporting period are summarized in the appendix (*2.5.3. Statistical data on foreign students and outgoing mobility during the reporting period, Environmental protection*).

Evaluating the long-term dynamics of the number of students at the ABSP "Environmental Science", a slight decrease in the number of students can be observed, which in general coincides with the trends of changes in the number of students in the country as a whole, taking into account the demographic situation and trends in the field of natural sciences in Latvia. The decrease in the number of students matriculated in the 1st year during the last two years could be explained by the Covid-19 pandemic, which caused the deterioration of the financial situation in households. Some of the students enrolled in the study program stop their studies for various reasons. The main reasons for stopping studies are failure, moving abroad in search of work, financial difficulties, as well as an ill-considered, inappropriate choice of study program. In the longer term, the number of students tends to decrease, which is basically related to a negative demographic trend in the country.

ABSP "Environmental Science" is implemented only in the form of full-time studies. In the previous stage of accreditation, the study program was implemented in Latvian for those studying with state budget funds, while for foreign students studying for a fee, study courses were taken in English according to an individual plan. As part of the mobility programs, the selected study courses are provided in English for matriculated students.

During the Covid-19 pandemic, new digital study forms were learned (for example, consultations on the ZOOM platform), which are widely used even after the end of the pandemic. The study program is basically implemented face-to-face, but each lecturer, in coordination with the program director and the students, has the right to implement part of the scheduled lessons remotely. This type of study is especially suitable for providing individual consultations. In the modern study process, the need to use hybrid forms is increasing, offering students to connect to face-to-face lessons through video conferencing devices.

3.1.5. Substantiation of the development of the joint study programme and description and evaluation of the choice of partner universities, including information on the development and implementation of the joint study programme (if applicable).

Not applicable.

3.2. The Content of Studies and Implementation Thereof

3.2.1. Analysis of the content of the study programme. Assessment of the interrelation between the information included in the study courses/ modules, the intended learning outcomes, the set aims and other indicators with the aims of the study course/ module and the aims and intended outcomes of the study programme. Assessment of the relevance of the content of the study courses/ modules and compliance with the needs of the relevant industry, labour market and with the trends in science on how and whether the content of the study courses/ modules is updated in line with the development trends of the relevant industry, labour market, and science.

The content of ABSP "Environmental science" is determined by the purpose and tasks of the study program, which are aligned with the new trends in the education system in the European Union, with the requirements of related regulations of the Cabinet of Ministers *[Ministru kabinets]*, the DU Constitution and with the priority research directions of Daugavpils University. In the course of studying the bachelor's study program, students acquire a systematized knowledge base in environmental science, its sub-branches and related sciences, expand and strengthen their skills by learning laboratory, chamber and field research methods, students acquire the competences and attitudes necessary for professional activity in the field of environmental science.

The organization and implementation of the study process for those studying in English will be based on the same principle as for those studying in Latvian.

When analysing the compliance with the May 13, 2014 Cabinet of Ministers *[Ministru kabinets]* Regulations No. 240 "Regulations on the national standard of academic education", it can be concluded that the academic bachelor's study program "Environmental science" meets the requirements set forth in the standard. Appendix No. 3.2.1. provides a comparison of the study program with the standard requirements has been made.

The study program provides a connection between the information included in the study courses, the achievable results, the set goals, methods, as well as the connection of each study course with the goals of the study program and the results to be achieved. The connection is reflected in the mapping of the study program (*Appendix No. 3.2.1. ABSP Environmental Science course mapping*).

The aim of the study program has been developed in accordance with current events in the industry, as well as the needs of the economy and society. The tasks of the study program are designed in such a way as to educate students in accordance with the requirements of the Latvian qualification framework, as well as to promote students' competitiveness in changing socio-economic conditions and the international labour market.

The study program is implemented in lectures, laboratory works, practical lessons and seminars, reserving half of the time for independent studies, in which environmental sciences, their sub-branches and related sciences, guidelines and theories are studied in detail. The content of the study program meets the requirements of regulatory acts.

The duration of studies is 3 years, divided into 6 study semesters, during which compulsory study courses, limited and optional study courses are studied. At the end of the studies, a bachelor's thesis must be developed.

The study program is implemented in Latvian and English languages.

The content of the study program, according to its structure, is divided between compulsory part (A), compulsory optional part (B) and free optional part (C) study courses.

Section A: COMPULSORY COURSES. The study of this part of the courses is compulsory for all students matriculated in the academic program. It includes theoretical and practical core courses in Environmental Science, Ecology, Atmospheric and Climate Sciences, Sustainable Development and Earth Sciences, as well as basic courses in other natural and applied sciences such as geomatics, environmental law and others, which all aligns students' knowledge level, introduces the concept, guidelines, structure and scientific methodology of environmental science, and also provides comprehensive knowledge, skills and abilities in the main interfaces of environmental sciences. At the same time, the study courses of the compulsory part provide an insight into the history of the development of environmental science, current problems and possible solutions to these problems on a global and regional scale and in an interdisciplinary aspect. Special attention is paid to field courses that strengthen theoretical and practical knowledge, develop skills and abilities, allow students to more optimally plan the future specialization of scientific work (bachelor's work) and the choice of part B courses. By studying the theoretical and practical courses of part A, the student gets 66 CP (99 ECTS), including successful completion of field course assignments – 4 CP (6 ECTS). In total, block A constitutes 66 CP or 55% of the total number of credits required to obtain a bachelor's academic degree in environmental science (refer to Figure 3.2.1.1).

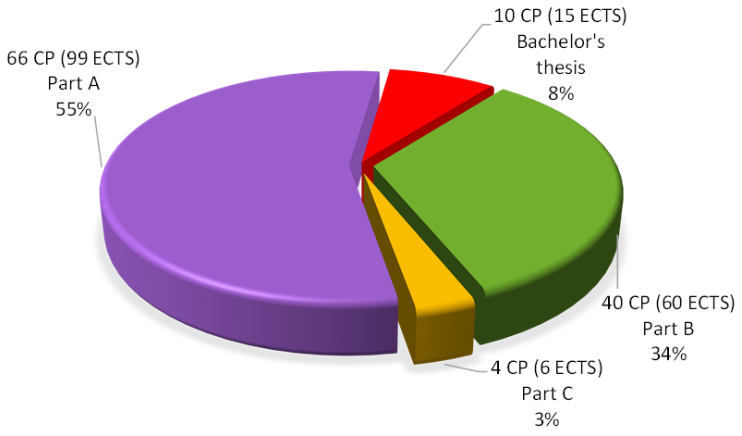


Figure 3.2.1.1. The proportion of parts A, B and C in the content of the bachelor study program "Environmental science".

Section B: LIMITED OPTIONALITY ELECTIVE STUDY COURSES The courses included in this section of the study program provide opportunities for students to choose in-depth study of the most important environmental sciences, Earth sciences or their related sub-fields. The specialization directions of the students derive from the specialization directions offered by the departments and scientific research units. Students also have the opportunity to acquire widely applicable knowledge in research work in other branches of science, in presenting and approving the results of scientific research, in environmental economics, *etc.* The student must obtain at least 40 CP while studying the courses selected in part B (60 ECTS), or 34% of the total required number of CPs (refer to Figure 3.2.1.1).

Part C: ELECTIVE STUDY COURSES. This section of the study program includes free elective courses from which students can choose various humanities, social and natural sciences courses. When studying the courses of this part, the student must obtain at least 4 CP (6 ECTS), which is 3% of the total required number of CP (refer to Figure 3.2.1.1.).

At the end of the study program, the student must prepare a bachelor's thesis (10 CP or 15 ECTS; refer to Figure 3.2.1.1), which includes the preparation of a theoretical review on the topic of the thesis, the practical part of the thesis and the compilation of results. The work/paper topics are offered by the departments of the faculty and they are always related to current research directions.

Each teaching staff involved in the study program has a sufficient and up-to-date number of scientific publications on the topic of the taught study course. This confirms the ability of the participating teaching staff to include the latest scientific current affairs in the content of the study course.

Study courses include both theoretical and practical lessons and laboratory work. In addition, in a number of courses, taking into account the suggestions of students, the proportion of the practical part has been increased, which promotes the acquisition of digital skills, geospatial analysis and Geographical information system (GIS) skills necessary for the labour market.

The list of study courses in each of parts A, B and C and the scope of these courses in KP are provided in the appendices *3.2.1. ABSP Environmental science compliance with the national education standard*; *3.2.1. ABSP Environmental science study plan DUIS; 3.2.1. ABSP Environmental science study plan by semesters* and *3.2.1. ABSP Environmental science course mapping*.

Amount of contact lessons (%): 1 credit point corresponds to 40 academic lessons, of which 16 academic lessons are contact classes, which is 40% of the intended amount.

Compliance with the requirements of the Law on Environmental Protection and Civil Protection and Disaster Management *[Civilās aizsardzības un katastrofas pārvaldīšanas likums]*: the study program "Civil and Labor Protection" (2 CP) is included in the content of the study program. In addition, environmental protection issues are included in study courses in Environmental Science [VidZ1049] 4 CP (6 ECTS); Environment and protection of the Baltic Sea region [VidZ2026] 4 CP (6 ECTS); Nature diversity and protection [VidZ3036] 2 CP (3 ECTS)

Degree to be awarded and/or qualification to be obtained: Bachelor of Science in Environmental Science (no qualification provided).

Possibilities for continuing studies: graduates can continue their studies in the DU academic master's study program "Chemistry", the academic master's study program "Biology" and the professional master's study program "Environmental planning", or in academic and professional master's study programs in other universities in Latvia and abroad.

The parameters of the study program are summarized in the appendix of the reports, which confirm the compliance of the study program with the national education standard (*3.2.1. ABSP Environmental science compliance with the national education standard*). The ABSP "Environmental Science" study program plan is attached in appendix (*3.2.1. ABSP Environmental science study plan in DUIS* and *3.2.1. ABSP Environmental science study plan by semesters*), while the descriptions of study courses of the study program are added *III_3.2.1 ABSP Environmental science study course descriptions*). The mapping of study courses for achieving the study results of the study program can be found in the appendix (*3.2.1. ABSP Environmental science course mapping*).

3.2.2. In the case of master's and doctoral study programmes, specify and provide the justification as to whether the degrees are awarded in view of the developments and findings in the field of science or artistic creation. In the case of a doctoral study programme, provide a description of the main research roadmaps and the impact of the study programme on research and other education levels (if applicable).

Not applicable.

3.2.3. Assessment of the study programme including the study course/ module implementation methods by indicating what the methods are, and how they contribute to the achievement of the learning outcomes of the study courses and the aims of the study programme. In the case of a joint study programme, or in case the study programme is implemented in a foreign language or in the form of distance learning, describe in detail the methods used to deliver such a study programme. Provide an explanation of how the student-centred principles are taken into account in the implementation of the study process.

Various study methods are used in the practical implementation of the study program, the most important of which are the systems approach and the problem-oriented approach. Forms of studying the study program are lectures, laboratory works, practical works, seminars, field courses,

independent work of students, research projects and their presentation (*e.g.*, reports on field courses), independent work, group work, colloquiums, tests, study work, bachelor's work.

Lecture is a way of learning the knowledge included in the study course, in which students are presented with theoretical and factual material dedicated to a specific topic. The lecture is also a concentrated review of the basic problems of the content of study courses. The lecture is structured in a certain system and is one of the means of guiding students' cognitive activity and independent study work. Lecturers use video projectors, interactive whiteboards and large-format touch-sensitive tablet-type panels in lectures. The use of video projectors, interactive whiteboards and other digital presentation and ICT means in lectures should be considered the most optimal, because the electronic versions of the lecture material allow, if necessary, to quickly modify and improve the material presented in the lectures. In lectures, teaching staff try to involve students in discussions on specific issues.

Laboratory work is a way of building and developing the knowledge and professional competences defined in the results of the study course, in which students individually or in a work group, under the guidance of academic or scientific staff, working in a specially equipped room or using certain hardware, computer programs and other equipment necessary for the performance of laboratory work, conduct research and experiments, obtain and analyse data, and draw appropriate conclusions. Each laboratory work is evaluated with a mark, taking into account the student's submitted laboratory work sheet or laboratory work protocol with the obtained data, calculations, graphs, pictures and other results of the tasks performed in the specific laboratory work. The laboratory works are carried out in the laboratories of the Institute of Life Sciences and Technologies of DVAF and DZTI of DU. The laboratories are equipped with equipment, laboratory furniture, small inventory, etc. that fully meet modern requirements. A series of study course lessons are also conducted in the scientific laboratories of DU DVAF and DZTI, which are equipped with modern equipment such as laser diffraction equipment, chromatography equipment, light microscopes, laser scanning microscopes, electron microscopes, gene analyzer, flow cytometers, gene amplifiers, various spectrophotometers for DNA, RNA, protein quantification, equipment for digital recording of gel photos, centrifuges, *etc.* (refer to Appendix *2.3.2. Infrastructure and material and technical support*).

Practical (internship) work is a way of building and developing the knowledge and professional competences defined in the results of the study course, in which students individually or in a work group, under the guidance of academic or scientific staff, acquire skills and abilities relevant to the relevant topic in a practical way or perform practical tasks. This type of lessons is implemented together with the learning of certain theoretical material and provides an opportunity to supplement and strengthen the acquired knowledge in a practical way, thus developing students' abilities to use the competences acquired within the study course in a certain context. Each practical work is evaluated with a mark, taking into account the results of the practical work submitted by the student.

Seminar is a way of strengthening and supplementing the knowledge and competences included in the study course, in which the students discuss a specific topic under the guidance of the lecturer, during the lesson in the form of a discussion or individually prepared reports. This type of lessons is realized after learning certain theoretical material in the form of independent work and provides feedback and control of students' independent study work. At the same time, this type of lessons promotes the student's ability to independently analyse, understand and evaluate theoretical and factual material, and also promotes the acquisition of cross-cutting competencies in the field of critical thinking, public speaking and correct discussion of different opinions. Each seminar is evaluated with a grade, taking into account the student's understanding of the discussed topic and participation in the course of the seminar. The special attention in the seminars is paid to

those issues, without deep and complete learning, the full learning of the relevant course is unthinkable. In the seminars, students acquire the ability to prove their understanding of a specific topic, and to discuss problems. Discussions and public presentations of the prepared topic are a strong motivation for students to seriously do independent study work.

Team (group) work in mandatory and limited optional courses, is used mainly in seminar classes, analysing the mistakes made during the discussion of problems (questions) and searching for possible solutions to problems (questions), as well as solving tasks provided in field courses. Special attention is paid to the high-quality organization of students' independent work, because, taking into account that the parents of many students do not have the opportunity to support their studies, students are forced to enter the labour market during their studies. On the one hand, it is very positive, because students get to know the demand of the labor market and its problems. On the other hand, early entry into the labor market raises concerns about the quality of studies, as students cannot always attend lectures and other types of classes. Therefore, serious work is being done to prepare study materials in an electronic version, which would allow students to learn the study material independently. Continuation of this work is one of the study work priorities of the academic staff involved in the program.

Individual work is practiced relatively widely, because individual tasks allow the lecturer, first of all, to identify in time the questions that the students have not mastered with sufficient quality, secondly, to some extent solve the problems of class attendance.

The organization and implementation of the study process for those studying in English will be based on the same principle as for those studying in Latvian.

Basic principles and procedure of studying and evaluating the study program: the following principles are applied in studying and evaluating the study program:

- the principle of openness;
- principle of obligation;
- the principle of assessment review options;
- the principle of diversity of the types of tests used.

The principles and procedures for evaluating study results are included in the "Regulations on studies at Daugavpils University"[1]. A more detailed description of assessment is reflected in the credit requirements of each individual study course. Study results are assessed on a 10-point scale or with a "pass/fail" rating.

The number of student and lecturer contact hours and the amount of independent work of the student are balanced in studying study courses. The ratio between contact classes and students' independent work is 40% of the total amount of credit points. Studies in the e-environment are used to optimize students' independent work. A large part of the study materials is placed in the MOODLE environment, which is used as an additional communication tool between teachers and students. Many courses offer tasks for independent work, as well as additional study materials and forms of interactive discussion.

Both the principles of program implementation and the content of specific study courses are subject to the principles of student-centered education. When organizing the study process, students' opportunities are taken into account: when creating lesson lists, it is coordinated with students as far as possible. Taking into account the demand, individual and group consultations are organized at the most convenient time for students. When implementing the program in face-to-face form, students are given the opportunity to connect to the class through the ZOOM conference website if necessary. The e-study environment MOODLE is widely used for independent work.

In general, the study program and the planning of each semester are designed with a focus on the acquisition and strengthening of knowledge and professional skills for each student, working both individually and in a team.

At the start of each study course, the teaching staff informs the students what the study course requirements are and introduces the students to the specific evaluation criteria of the study course. They are published in the electronic environment of the study course, MOODLE. Study Quality Assessment Centre (SKNC) organizes a student survey at the end of each study year (see the sample questionnaire in the appendix *2.5.1. Sample student survey*), the results of which provide information on the assessment of study quality and related aspects.

To ensure the principles of student-centered education, incl. student involvement in the study process and content improvement, as well as monitoring the quality of the taught study courses and lecturers' work, parallel to the SKNC student survey, the Department of Environment and Technology has developed and organized an anonymous student survey at the end of each semester in the courses of the A and B parts of the study program (see the sample questionnaire in the appendix *2.5.1. A sample of a student survey developed by the department*). The analysis of survey results is presented in the appendix *2.2.4. Analysis of ABSP Environmental Science student surveys.*

In order to reduce the costs of ABSP "Environmental Science" (taking into account the relatively small number of students), the following program planning measures were taken: realization of several study courses takes place together with academic bachelor's study programs "Biology" and "Chemistry", as well as in the form of stream lectures (stream lecture - a lecture that is read simultaneously in the same auditorium for several students of the study programs implemented by DU), organizing them together with other DU study programs. This allows to save DU lecturers' time, as well as economise on DU budget funds.

19 study courses are implemented as joint courses, 3 of which are conducted together with students of ABSP "Biology" and with students of ABSP "Chemistry"; 4 courses are conducted together with ABSP "Biology" students; 5 courses – with ABSP "Chemistry" students and 7 courses – as flow classes (refer to Table 3.2.3.1.).

Table No. 3.2.3.1. Study courses included in ABSP "Environmental science" program, which are read in parallel with those studied in other programs

Courses that are conducted together with ABSP "Biology"		Courses that are conducted together with ABSP "Chemistry"		Flow classes	
Name	CP (ECTS)	Name	CP (ECTS)	Name	CP (ECTS)
Biol1094 General Ecology			4 (6)	Civil Defence	1 (1.5)
Mate1090 Mathematical Methods in Natural Sciences			2 (3)	Part C course	2* (3)
Fizi1014 General Physics			2 (3)	Part C course	2* (3)
VidZ1045 General and inorganic chemistry	2 (3)	VidZ2004 Environmental Chemistry	4 (6)		

Ķīmi1004 Organic Chemistry	2 (3)	VidZ1049 Environmental science	4 (6)		
Biol2012 Microbiology	2 (3)	Ķīmi1010 Occupational Health and Safety	1 (1.5)		
Biol3012 Typology of forests	2 (3)	VidZ3032 Ecotoxicology	2 (3)		
		VidZ3020 Environmental economics	2 (3)		
In total					**34 (51)**

* – C or optional free elective courses, the student must receive at least 4 credits (CP) in the courses offered within the program

The total volume of combined courses is 34 CP (51 ECTS), which is 28.3%, or almost a quarter of the total number of credit points included in ABSP "Environmental Science" (refer to Figure 3.2.3.1).

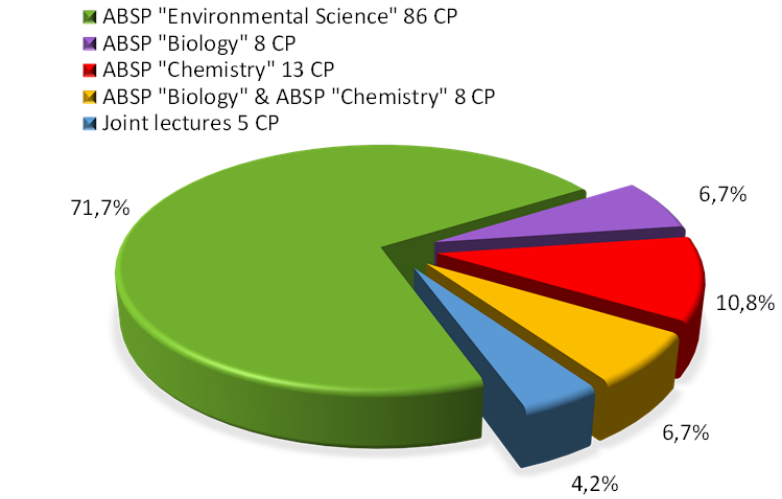


Figure 3.2.3.1. Study courses that are read only for ABSP "Environmental science" students, as well as study courses that are read in parallel to those studying in other programs.

[1] Regulations on studies at Daugavpils University. Available: https://du.lv/wp-content/uploads/2022/06/ENG-NOLIKUMS_PAR_STUDIJAM_DU_2018-1-1.pdf

3.2.4. If the study programme envisages an internship, describe the internship opportunities offered to students, provision and work organization, including whether the higher education institution/ college helps students to find an internship place. If the study programme is implemented in a foreign language, provide information on how internship opportunities are provided in a foreign language, including for foreign students. To provide analysis and evaluation of the connection of the tasks set for students during the internship included in the study programme with the learning outcomes of the study programme (if applicable).

Not applicable.

3.2.5. Evaluation and description of the promotion opportunities and the promotion process provided to the students of the doctoral study programme (if applicable).

Not applicable.

3.2.6. Analysis and assessment of the topics of the final theses of the students, their relevance in the respective field, including the labour market, and the marks of the final theses.

Students choose the topics of bachelor's theses in consultation with supervisors who are specialists in their field and who have extensive academic work experience and knowledge in the implementation of research in their field. The topics of the study papers and the scientific supervisors of the papers were approved at the meeting of the Council of the "Environmental Protection" Study Direction of DU, where one of the evaluation criteria is relevance in the industry. Supervisors help to choose the most relevant topics in the industry and coordinate the further advancement of a specific topic for consideration by the study direction council. The topics of bachelor's theses are coordinated by the study direction council and approved by the DVAF council.

The topics of environmental science bachelor's theses are basically related to the directions of scientific specialization of the teaching staff involved in the implementation of the study program. The topics of the bachelor's theses developed during the reporting period correspond to contemporary issues in the field of environmental issues and have been related to environmental science, its sub-branches and the subject of communication sciences, for example, hydrological, hydrochemical, hydrobiological, and geomorphological research of surface water objects and their environmental complex; application of analytical chemistry, environmental chemistry and bioindication methods in air quality and environmental pollution control studies; studies of the Quaternary environment and terrain, research into the regularities of the interrelationship of modern exogenous geological processes and the state of the environment; monitoring of specially protected natural areas, development of management and nature protection plans; underground water quality research and monitoring; assessment of the state of the environment; invasive plant species distribution studies; studies of contaminated sites; deciphering and classification of remote sensing data for determining changes in the environment and vegetation, research and assessment of biological and geological diversity, protection and preservation of geoheritage, *etc.* Complete list of topics and evaluations of defended bachelor's theses in the period from 2017 to 2022 is provided in appendix (*3.2.6. ABSP Environmental science undergraduate topics with evaluations*).

The topics of final theses are relevant in the industry, including employers, for example, the Nature Protection Board and the State Environmental Service, where the results of student research are included or used in the work of the named institutions.

DU has developed and follows the procedure for submitting final theses for plagiarism control at Daugavpils University[1], which provides for mandatory submission and storage of electronic versions of final theses in the DU Information System and provides an opportunity to compare students' final theses with the set of theses defended in previous years.

The bachelor's thesis must be prepared in accordance with the technical design requirements set for the bachelor's thesis. Literature sources published in foreign languages and included in international scientific periodical databases or open access scientific publications must be used in the preparation of the final version of the bachelor thesis, for example, monographs, collective monographs, collections of scientific articles, publications in scientific journals, etc. The number of such used literature and sources for bachelor theses must not be less than 20 (twenty). The theoretical part of the bachelor thesis is designed in accordance with the technical design requirements and prepared in digital form and submitted to the Department of Environment and Technology of DU DVAF; after the acceptance of the scientific supervisor of the bachelor's thesis, the bachelor's thesis is submitted for evaluation to the reviewer of the bachelor's thesis, and its electronic version is uploaded for plagiarism control.

Each bachelor's thesis is evaluated by one reviewer, who assesses the technical design of the thesis, compliance with the bachelor's level, the structure and content of the thesis, incl. relevance of work, research results and their interpretation, and makes conclusions (appendix *3.2.6. ABSP Environmental science bachelor thesis evaluation protocol*), and also prepares a review in written form and raises issues for scientific discussion (appendix *3.2.6. ABSP Environmental science undergraduate thesis review example*).

In the defence of the work, in a 10-15 minutes long oral report, using the presentation, the author introduces the most important issues considered in the work to those present and his study colleagues and lecturers, including, about materials and methods used in research, research results, their analysis and interpretation and conclusions.

The student receives the final grade in the defense of the bachelor's thesis by summing up the following results: the grade received from the reviewer (70% – structure and content of the thesis (max. 46 points) + technical presentation of the work, (max. 24 points)), assessment of performance with a presentation (10%) and answering questions in pre-defence (20%). Additional points can be awarded for the approval of the results of the bachelor's thesis, presenting a paper at a scientific conference, symposium, congress, or publishing the results of the thesis in a scientific periodical.

As can be seen in figure 3.2.6.1., the average rating of the final theses of previous study programs is consistently high and ranges from 7.8 to 8.5. In addition, in the proportion of evaluations of defended bachelor's theses, usually >50% consist of evaluations in the range from 8 ("very good") to 10 ("excellent") – refer to Figure 3.2.6.2.

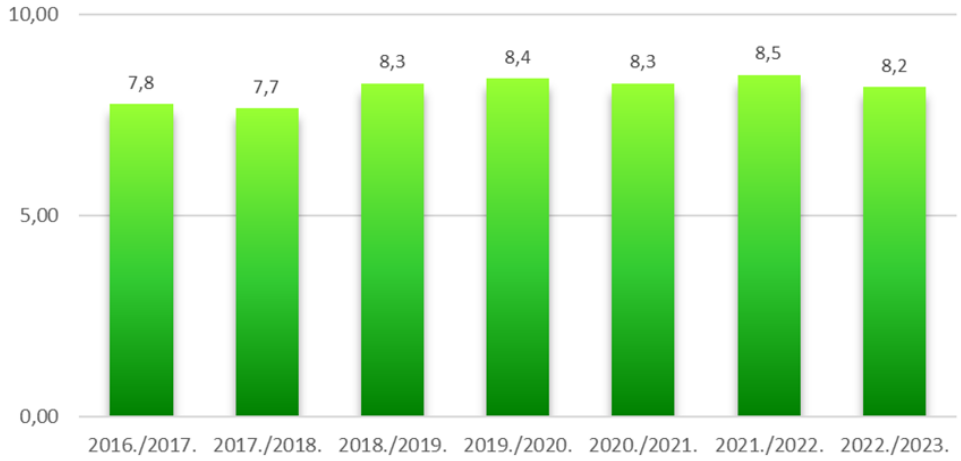


Figure 3.2.6.1. The average rating of defended bachelor's theses in the period from the 2016/2017 academic year to the 2022/2023 academic year.

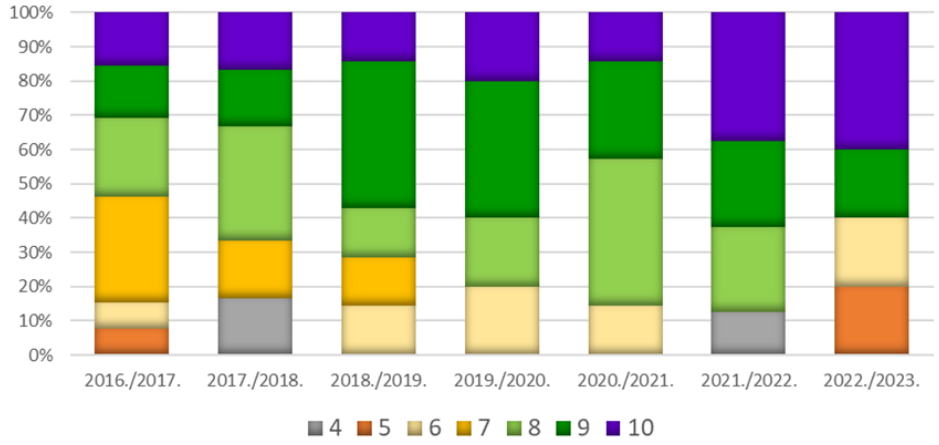


Figure 3.2.6.2. The rating proportion of defended bachelor's theses in the period from the 2016/2017 academic year to the 2022/2023 academic year.

In conclusion, it should be noted that evaluation in the study program in all courses is carried out based on the following principles:

- the evaluation criteria are clear and understandable, are previously published and available,
- evaluators are familiar with testing and examination methods,
- assessment gives students the opportunity to show to what extent they have achieved the expected learning outcomes;
- students receive feedback that, if necessary, provides advice related to the learning process,
- assessment is consistent, fair, suitable for all students and is carried out in accordance with approved procedures and legislative enactments;
- there is a procedure for examining student appeals.

[1] Procedure for submitting theses for plagiarism control at Daugavpils University. Available: https://du.lv/wp-content/uploads/2022/09/Procedure-of-thesis-submission-for-plagiarism-control.pdf [viewed 28.03.2024]

3.3. Resources and Provision of the Study Programme

3.3.1. Assessment of the compliance of the resources and provision (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 the learning outcomes to be achieved by providing the respective examples.

ABSP "Environmental Science" study program is being implemented using the shared infrastructure of DU (for detailed information, refer to section No. 2.3.2.), both the specialized laboratories corresponding to the specifics of a specific study course and the equipment available in them, provided by several structural units of DU: Institute of Life Sciences and Technologies (Department of Biodiversity, Department of Ecology, Department of Technology), DU Study and Research Centre "Ilgas", Faculty of Natural Sciences and Health Care (Department of Environment and Technology). In order to provide field courses, as well as to conduct field research within the framework of studies and bachelor theses, students also have access to a wide and modern range of field research equipment at the disposal of the specified DU structural units.

According to the proposal of the lecturer of study courses, for the implementation of individual study courses or in cases where students choose specific topics of studies and bachelor's theses, the director of the study program can also agree with other scientific institutions or universities (for example, the Faculty of Geography and Earth Sciences of the University of Latvia) about the possibilities of using the equipment available in specific scientific laboratories, usually involving scientific employees of these institutions or teaching staff of universities as consultants or supervisors.

ABSP "Environmental Science" students have access to all services offered by the DU Library – the library's electronic catalog, ordering books, reserving and extending the term of use online, automated user service, as well as access to electronic databases subscribed to DU, incl.. Web of Science, Scopus, Science Direct, Cambridge Journals Online *etc.* (for more detailed information see Section 2.3.3 of the description of the study direction). The number of books in environmental science, its sub-branches, geomatics, Earth sciences and communication sciences is 8808, incl. 706 in English language. Students are also provided with the opportunity to use the specialized scientific literature available in the scientific laboratories of the Institute of Life Sciences and Technologies of DU, as well as scientific and educational literature, purchased by the teaching staff and available in the Department of Environment and Technology and its laboratories.

The provision of the field of study "Environmental science", including infrastructure and equipment, guarantees a quality study environment for all those studying in the field of study (including students with special needs) for high-quality implementation of study programs and achievement of study results.

For detailed information on the infrastructure and material and technical provision available for the implementation of the study direction and corresponding study programs, see appendix *(2.3.2. Infrastructure and material and technical support*).

3.3.2. Assessment of the study provision and scientific base support, including the resources provided within the framework of cooperation with other science institutes and higher education institutions (applicable to doctoral study programmes) (if applicable).

Not applicable.

3.3.3. Indicate data on the available funding for the corresponding study programme, its funding sources and their use for the development of the study programme. Provide information on the costs per one student within this study programme, indicating the items included in the cost calculation and the percentage distribution of funding between the specified items. The minimum number of students in the study programme in order to ensure the profitability of the study programme (indicating separately the information on each language, type and form of the study programme implementation).

The source of financing for ABSP "Environmental Science" is the state budget financing for studies (grant) and study fees. The cost calculation for one student in the programs of the study direction was carried out in the Department of Finance and Accounting of DU, including the costs of the wage fund and the employer's Mandatory State Social Insurance Contributions (VSAOI), business trips, materials, energy resources and inventory, book, equipment purchase and investment costs, as well as costs for student social security. For calculation of costs per student of ABSP "Environmental science" (full-time studies, 3 years, 120 CP) and information on the percentage distribution of funding, please refer to Table No. 3.3.3.1.

Table 3.3.3.1. Academic bachelor study program "Environmental science" (43431, study duration - 3 years, amount - 120 CP, full-time) costs per 1 student

No.	Title	Sum (EUR)	% distribution
1	Salary fund per student	6492.30	62.4
2	Employer SSIMC 23.59% per 1 student	1531.53	14.7
3	Costs of business trips and business trips per 1 student	156.30	1.5
4	Services per 1 student	691.52	6.7
5	Costs of materials, energy resources, water and inventory per 1 student	560.25	5.4
6	Cost of purchasing books and magazines per 1 student	52.70	0.5
7	Equipment purchase and investment costs per 1 student	408.24	3.9
8	For student social security per 1 student	503.96	4.8
	Total cost of 1 student	10396.80	100

The costs per student in the study program in Latvian and in English shall not differ. The minimum number of students in a group to ensure the profitability of the study program is 9 students.

State budget grants for the study program have decreased during the reporting period. Costs per student have increased, which is justified by the overall increase in DU costs (utilities, rise in energy prices, building maintenance, *etc.*).

Tuition fees are determined in compliance with the instructions of the State Audit Office that tuition fees for students who study together with budget students cannot be less than the state funding for this service. The study fee for ABSP "Environmental Science" is set in the following amount - 1600 EUR per study year, 4800 EUR in total.

The specific development of each study program is the responsibility of each study program director, as well as the responsible faculty. For the development of all study programs, centralized funding is used for the renewal of the scientific library fund, the improvement and maintenance of shared auditoriums, public relations, program marketing activities, development and maintenance of information systems related to the study process and other activities.

3.4. Teaching Staff

3.4.1. Assessment of the compliance of the qualification of the teaching staff members (academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants) involved in the implementation of the study programme with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments. Provide information on how the qualification of the teaching staff members contributes to the achievement of the learning outcomes.

The qualifications of the teaching staff involved in ABSP "Environmental science" fully meet the conditions of program implementation, the content of the program and the requirements of regulatory acts. A statement that the academic staff involved in the realization of the academic study program meets the requirements set out in the third paragraph of the first part of Article 55 of the Law on Higher Education Institutions *[Augstskolu likums]* is provided in appendix (*3.4.1. ABSP Environmental science Certificate of staff compliance with Article 55*). The knowledge of the national language of the academic staff employed in the implementation of the study program complies with the regulations on the amount of knowledge of the national language and the procedure for testing the knowledge of the national language for the performance of professional and official duties, in other words, this knowledge allows any study course of the study direction to be fully taught in the national language. The level of English language knowledge of the lecturers involved in the study program enables the full implementation of the study program in English (*2.3.7. Basic information about the teaching staff involved in the implementation of the study course*).

At the time of preparation of the accreditation report, a total of 28 lecturers are involved in the implementation of ABSP "Environmental science" (refer to Table No. 3.4.1.1.), 23 of whom have the place of primary election at DU, while 5 are guest lecturers.

Table No. 3.4.1.1. Academic staff involved in ABSP "Environmental Science".

Position	Number of	*% of total*	*Main election place DU*	*Visiting lecturer*
Professor	2	7	2 (100 %)	
Assoc. prof.	4	14	3 (75 %)	1
Docent	10	34	10 (100 %)	
Leading researcher	2	7	2 (100%)	
Researcher	2	7	2 (100%)	
Lekturer	7	25	4 (57 %)	3
Assistant	1	4	-	1
In total	**28**	**100**	**23**	**5**

ABSP "Environmental Science" is implemented by 2 professors, 4 associate professors, 10 assistant professors, 2 leading researchers, 2 researchers, 7 lecturers and 1 assistant (refer to Figure 3.4.1.1). Out of 28 lecturers, 23 lecturers' primary place of election is DU and 5 are guest lecturers. Out of 28 lecturers, 20 lecturers or 71.4% of the total number of lecturers in the study program have a doctor's degree, the rest have a master's degree (refer to figure 3.4.1.2.).

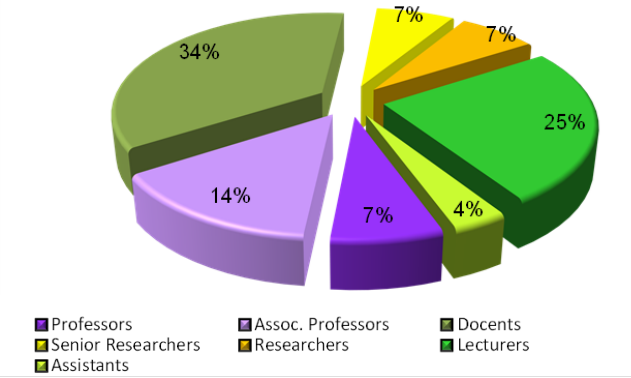


Figure 3.4.1.1. The academic staff involved in the implementation of ABSP "Environmental Science".

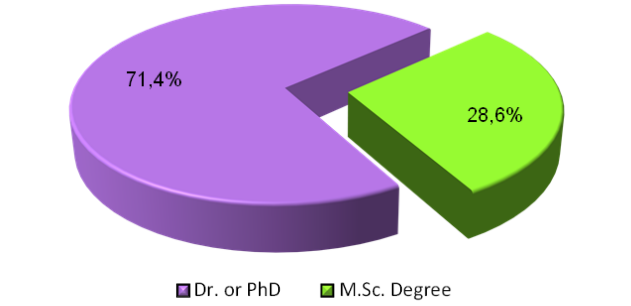


Figure 3.4.1.2. The personnel involved in the implementation of ABSP "Environmental Science" which have doctor's and master's degrees

According to the collected data, DU teaching staff and guest (visiting) lecturers purposefully and regularly engage in various professional development activities in the fields corresponding to their

scientific interests, both at DU and also at foreign universities. In addition to the academic work at the university, the teaching staff has practical experience in the implementation of industry-related projects and contract works. This type of activity contributes to a comprehensive understanding of the specifics of the industry, thus also ensuring a direct unity of theory and practice during the study process. The list with the experience of the academic staff involved in the implementation of the study programs of the field of study "Environmental protection" in the implementation of industry projects is attached in the appendix *2.4.3. Participation in projects, Environmental Protection*, whereas the appendix *2.4.4. List of scientific publications Environmental protection*, a list of teaching staff is attached in the appendix, where scientific publications related to study programs in peer-reviewed editions or research achievements in the last six years are indicated for each teaching staff. See the CV of the teaching staff in the appendix *2.3.7 Teaching Staff CV.*

The research activity of the academic staff involved in the program is oriented towards the successful implementation of the study program and in most cases is related to the specialization of the lecturers within the program. Lecturers prepare scientific articles, including in internationally peer-reviewed journals, participate in conferences and practical seminars, training, internships and various scientific events, they publish textbooks and develop methodological materials, participate in international and national research projects.

The research carried out by the academic staff is an important contribution to the development of the branch they represent, as well as to the development of the study program, improvement and updating of the study content. The researches cover both theoretical aspects and industry topicalities and novelties, which are used in lecturers' study courses, thus promoting the interaction of the research and study process and significantly improving the quality of the study process. The participation of students in scientific and practical conferences and seminars as listeners is constantly stimulated.

The total number of publications of the lecturers of the study programme "Environmental Science" increased from 17 publications in 2016 to 34 publications in 2023. SCOPUS publications include 11 fields, of which the majority of publications are in the fields of environmental science and agricultural and biological sciences, 31.3% and 38.9%, respectively (refer to Figure 3.4.1.3).

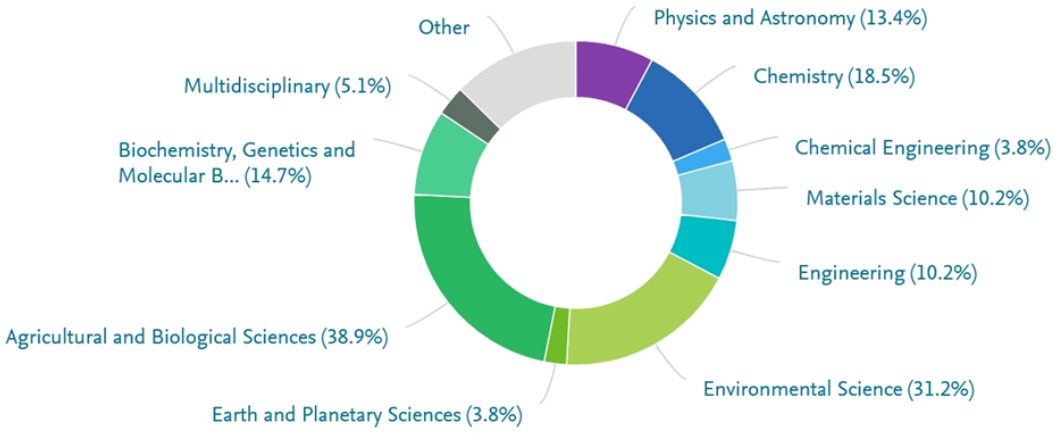


Figure 3.4.1.3. Scientific publications of the personnel involved in the realization of the ABSP "Environmental Science" study direction by branches of science (data obtained from the Elsevier "SciVal" database on March 15, 2024).

3.4.2. Analysis and assessment of the changes to the composition of the teaching staff over the reporting period and their impact on the study quality.

Since the previous accreditation of the study direction, certain changes have been made in the composition of the teaching staff, which are basically related to the integration of new study courses into the study plan or the deletion of previously taught study courses from it more detailed information (refer to Section 3.1.1. of the report).

At the time of submission of the report, the study courses included in the study program are provided by 29 lecturers, 24 of whom are based in DU. 72.4% of the teaching staff involved in the implementation of the study program have a doctorate degree, which confirms the professionalism and high qualification of the lecturers. At the same time, the involvement of young specialists in the provision of the study process is also being considered in order to promote the renewal of the academic staff. Several young scientists are currently involved in the implementation of the study program.

In some cases, the changes are related to the changes initiated by the structural units providing the study courses or the study direction council, taking into account the results of student surveys or other reasoning. Some of the changes in the list of study course lecturers were also related to the death of lecturers or the termination of employment legal relations with individual lecturers (for example, Prof. E. Tamanis *[E. Tamanis]*, lecturer L. Jonane *[L. Jonāne] etc.*).

When implementing the study program, the study direction council ensures that changes in teaching staff do not affect the quality of the study process. When making decisions about the inclusion of new lecturers in the provision of study courses, the experience and specialization of the specific lecturers was evaluated, ensuring the attraction of specialists with equivalent or higher qualifications.

3.4.3. Information on the number of the scientific publications of the academic staff members, involved in the implementation of doctoral study programme, as published during the reporting period by listing the most significant publications published in Scopus or WoS CC indexed journals. As for the social sciences, humanitarian sciences, and the science of art, the scientific publications published in ERIH+ indexed journals or peer-reviewed monographs may be additionally specified. Information on the teaching staff included in the database of experts of the Latvian Council of Science in the relevant field of science (total number, name of the lecturer, field of science in which the teaching staff has the status of an expert and expiration date of the Latvian Council of Science expert) (if applicable).

Not applicable.

3.4.4. Information on the participation of the academic staff, involved in the implementation of the doctoral study programme, in scientific projects as project managers or prime contractors/ subproject managers/ leading researchers by specifying the name of the relevant project, as well as the source and the amount of the funding. Provide information on the reporting period (if applicable).

Not applicable.

3.4.5. Assessment of the cooperation between the teaching staff members by specifying the mechanisms used to promote the cooperation and ensure the interrelation between the study programme and study courses/ modules. Specify also the proportion of the number of the students and the teaching staff within the study programme (at the moment of the submission of the Self-Assessment Report).

The cooperation of the teaching staff of the program is diverse, deciding on activities related to the organization and management of the learning process; considering questions about the content of studies; when planning scientific events; cooperating in the research field (conducting joint research within projects, writing publications, participating in scientific conferences, *etc.*).

The mutual cooperation between the teaching staff of the study courses and the linking of the courses was carefully planned during the creation of the study program. Study courses are grouped by study year in such a way that their learning is based on previously acquired knowledge and coordinated with the achievable results. Within one year, the study courses are thematically linked, thus strengthening and promoting the achievement of the goals of the study program. When implementing the study program, each teaching staff familiarized themselves with the content and implementation method of the other study courses in order to prevent duplication of content and reduce the possibility of unlearned topics. In the joint discussions on the formation of the study program, points of contact between the study courses were sought, which would allow to understand and experience the connection of the various environmental science, its sub-branches and fields of related sciences. Such targeted creation of the study program has enabled the teaching staff to realize the need for cooperation and the ways to achieve it.

At the end of each study year, there is an evaluation of the results of the teaching staff questionnaire and an exchange of experiences with the discussion of further cooperation. The conformity of the evaluation criteria and the achievable results of the study courses to the overall achievable results of the study program is an important part of the discussion.

In the regular meetings of lecturers, the content of the study courses and the structure are discussed, it is discussed how to maintain the basic principle of creating the courses of the developed program – systemicity, how it is possible to improve the organizational forms of the study process in order to promote the growth of students. Such discussions take place both collectively and individually.

At the end of each study year, academic staff workloads for the next study year are planned in the respective structural units. Taking into account the results of the evaluation of the relevant study courses of the students of the program and the self-analysis of the academic activity performed by the lecturers, the suitability of the teaching staff for the development and teaching of the specific study courses is evaluated. Approval of academic workloads takes place in accordance with the "Procedures for recording the workload of academic staff at the DU".

In the 2023/2024 academic year, a total of 29 teaching staff are involved in the implementation of the bachelor's study program, while counting only the teaching staff involved in the implementation of parts A and B of the program, their number count is 23. At the moment of submission of the accreditation report, ABSP "Environmental Science" has a total of 22 students. Recalculating the workload of lecturers to full-time equivalent, the ratio of the number of students and teaching staff

within the study program at the time of submitting the self-evaluation report is one PLE teaching staff for 1.9 students.

Annexes

III - Description of the Study Programme - 3.1. Indicators Describing the Study Programme		
Sample of the diploma and its supplement to be issued for completing the study programme	3.1.2. ABSP Environmental science diploma and supplement example.zip	3.1.2.ABSP Vides zinātne Diploma un pielikuma paraugs_LV.zip
For academic study programmes - Opinion of the Council of Higher Education in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions (if applicable)		
Compliance of the joint study programme with the provisions of the Law on Higher Education Institutions (table) (if applicable)		
Statistics on the students in the reporting period	3.1.4. Statistics on students Environmental protection.xlsx	3.1.4. Statistika par studentiem Vides aizsardzība.xlsx
III - Description of the Study Programme - 3.2. The Content of Studies and Implementation Thereof		
Compliance with the study programme with the State Education Standard	3.2.1. ABSP Environmental science compliance with the national education standard.docx	3.2.1. ABSP Vides zinātne atbilstība valsts izglītības standartam_LV.docx
Compliance of the qualification to be acquired upon completion of the study programme with the professional standard or the requirements for professional qualification (if applicable)		
Compliance of the study programme with the specific regulatory framework applicable to the relevant field (if applicable)		
Mapping of the study courses/ modules for the achievement of the learning outcomes of the study programme	3.2.1. ABSP Environmental Science course mapping.docx	3.2.1. ABSP Vides zinātne kursu kartējums kompakts_LV.docx
The curriculum of the study programme (for each type and form of the implementation of the study programme)	3.2.1. ABSP Environmental Science study plan by semesters.xlsx	3.2.1. ABSP Vides zinātne studiju plāns pa semestriem_LV.xlsx
Descriptions of the study courses/ modules	ABSP_Environmental_science_course_descriptions.zip	ABSP_Vides_zinatne_kursu_apraksti_LV.zip
Description of the organisation of the internship of the students (if applicable)		
III - Description of the Study Programme - 3.4. Teaching Staff		
Confirmation that the academic staff of the doctoral study programme includes not less than five doctors, of which at least three are experts approved by the Latvian Council of Science in the branch or sub-branch of science in which the study programme intends to award a scientific degree (if applicable)		
Confirmation that the academic staff of the academic study programme complies with the requirements specified in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions (if applicable)	Statement_Article 55_ABSP Environmental science.docx	Apliecinājums par personāla atbilstību MK noteikumu 55.pantam.edoc

Environmental Planning (47431)

Study field	*Environmental Protection*
ProcedureStudyProgram.Name	*Environmental Planning*
Education classification code	*47431*
Type of the study programme	
Name of the study programme director	*Dainis*
Surname of the study programme director	*Lazdāns*
E-mail of the study programme director	*dainis.lazdans@du.lv*
Title of the study programme director	*Lektors, maģistrs vides plānošanā*
Phone of the study programme director	*+371 22336604*
Goal of the study programme	*Provide students with high-quality education that meets the needs of the state and is aligned with the requirements of the professional standard, providing the opportunity to acquire theoretical and practical knowledge, supplement the skills and abilities of research work, thus preparing students for work in environmental management and the opportunity to successfully continue their studies in doctoral studies.*
Tasks of the study programme	*1) Provide high-quality theoretical and applied knowledge in order to provide Master's specialization directions in environmental management, integrating various branches of environmental science, ecology, geography, economics, law and environmental planning, emphasizing the interrelationship between theory and practice;* *2) Create an understanding of the basic principles, methods and application of legislative acts of EU and Latvian environmental policy, environmental management and development planning, based on European and global experience;* *3) During practical work and qualification practice (internships), develop and strengthen professional skills and abilities that meet the standard requirements of the profession "Environmental management specialist", as well as the ability to independently organize research, obtain and process data, monitoring environmental indicators and drawing up reports on research;* *4) Develop the skills necessary for working in a team and/or leading it, promotes self-improvement and professional growth.*

Results of the study programme	*Knowledge* *1. Understand an in-depth understanding of the natural environment and its basic components (water, terrain, flora and fauna, climate, etc.), their interrelationship and diversity, as well as are able to assess the interaction between the economic, social and natural environment in the course of society's development, while being aware of the sustainable development approach as a basis for environmental management;* *2. Familiar with the Republic of Latvia and EU environmental regulations and institutional systems, company (institution) administrative management principles;* *3. Familiar with the methods of environmental quality assessment (in accordance with environmental quality parameters and indicators defined in the Republic of Latvia and EU regulatory acts) and research data analysis and know how to obtain information necessary for professional activity with remote sensing technologies and geographic information systems, maps etc., and their application to the interpretation of regularities according to the level of the latest achievements of the related sciences;* *Skills* *4. Organize environmental quality control, analyse the obtained results, prepare reports, forecast and model future situations using special information technology products, make decisions, determine the main tasks and the most optimal measures for environmental management;* *5. Acquire the skills to participate in data collection and processing for the development of nature conservation plans for protected natural areas and monitor their implementation, manage protected areas, habitats and species monitoring programs, develop and implement environmental projects and studies;* *6. Know how to prepare and provide in writing to the public information related to the range of environmental problems, know how to present these issues and reasonedly discuss them;* *Competencies* *7. Able to use their knowledge and understanding in a way that demonstrates a professional approach to their work and their competence in environmental management issues and to base their professional activities on principles promoting sustainable development;* *8. Able to take initiative and responsibility, acting individually or in a team, plan and organize their own and structural unit's work, be communicative, respect the culture of communication and professional ethical norms and feel responsibility for the accuracy and timeliness of personal performance;* *9. Strive to improve their knowledge and skills according to the field of activity, following the latest Latvian and foreign periodicals, educational and scientific literature, changes in regulatory acts, as well as current trends in environmental planning.*
Final examination upon the completion of the study programme	*Master thesis*

Study programme forms

Full time studies - 2 years - latvian

Study type and form	*Full time studies*
Duration in full years	*2*
Duration in month	*0*
Language	*latvian*
Amount (CP)	*120*
Admission requirements (in English)	*• First-cycle higher education (or equivalent higher education) in environmental science, natural sciences, engineering, agricultural sciences or forestry • First-cycle higher education in comparable thematic areas of education, if the applicant has at least 2 years of work experience in the field of environmental management, as evidenced by a certificate from the workplace, or the employer has determined the need to obtain a qualification in the field of environmental management in order to fulfill the duties of the position*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Master's Degree in Environmental Planning*
Qualification to be obtained (in english)	*Environmental Management Specialist*

Full time studies - 2 years - english

Study type and form	*Full time studies*
Duration in full years	*2*
Duration in month	*0*
Language	*english*
Amount (CP)	*120*
Admission requirements (in English)	*• First-cycle higher education (or equivalent higher education) in environmental science, natural sciences, engineering, agricultural sciences or forestry • First-cycle higher education in comparable thematic areas of education, if the applicant has at least 2 years of work experience in the field of environmental management, as evidenced by a certificate from the workplace, or the employer has determined the need to obtain a qualification in the field of environmental management in order to fulfill the duties of the position For studies in English: knowledge of the English language at least at B2 level*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Master's Degree in Environmental Planning*
Qualification to be obtained (in english)	*Environmental Management Specialist*

Places of implementation

Place name	City	Address
Daugavpils University	DAUGAVPILS	VIENĪBAS IELA 13, DAUGAVPILS, LV-5401

3.1. Indicators Describing the Study Programme

3.1.1. Description and analysis of changes in the parameters of the study programme made since the issuance of the previous accreditation form of the study field or issuance of the study programme license, if the study programme is not included on the accreditation form of the study field, including changes planned within the evaluation procedure of the study field evaluation procedure.

Since the previous study program license was issued, the study program has experienced significant changes, taking into account both development trends in the field of environmental planning, and employers' suggestions for improving the program and students' feedback and wishes. These changes have been made to improve the study experience and ensure that the program evolves with the latest industry standards and requirements.

The main points of change include the following:

1. Update of Study Materials: Continuous updating of study materials was carried out to incorporate the latest scientific researches/discoveries and changes in technology. This ensures that students are well prepared and receive an up-to-date education in environmental planning.

By introducing constant updating of study materials, the change indicator can be evaluated, which reflects this innovation and its impact on the study process:

- Integration of the latest technologies in the study process

Indication of change implementation: The material and technical base of the studies is supplemented with the latest technologies in the field of environmental management and planning, which in turn ensures that students learn modern research methodologies and techniques during the study process.

2. Student involvement and feedback: student involvement in the development of the study program was emphasized. Seminars, discussions and surveys are regularly organized to listen to students' opinions and evaluate them in order to improve the quality of the program.

Indicators that reflect this approach and its impact on the development of the study program:

- Active involvement of students in the process of improvement and development of the study program

Indication of change implementation: Student participation in seminars, discussions and surveys increases, showing greater interest and involvement in improving the study content and process.

- Regular and structured discussions

Indication of change implementation: The frequency of discussions increases and their quality improves, reflecting the active exchange of information between students and lecturers.

- Improving the survey system

Indication of change implementation: The survey system was improved in such a way that the opinions of students are reflected more accurately, thus they can be better used to improve the study program.

- Improved feedback

Indication of change implementation: Using the *Moodle* environment, each student receives more frequent and specific feedback on their performance and progress assessment, which helps them understand their strengths and weaknesses.

3. Active use of the electronic environment *Moodle*in the study process

The active use of the *Moodle* system in the study process had a significant impact on the student training process, offering several positive changes and improvements:

- Increased availability of study materials and flexibility. Lectures and additional course materials are placed in the *Moodle*.

Indication of change implementation: Students can access study materials and complete assignments anytime, anywhere thanks to *Moodle's* online availability.

- Increased engagement and collaboration

Indication of change implementation: Interactive types of lessons promote active involvement of students and mutual cooperation.

- More effective communication

Indication of change implementation: *Moodle* provides a central communication point where instructors and students can exchange information, assignments and feedback, thus promoting effective communication.

- More objective assessment

Indication of change implementation: Automated evaluation and the possibility of receiving individual feedback directly in an electronic environment *(Moodle)* improves the objectivity and speed of evaluation.

4. Due to the low interest of the students, the implementation of the program takes place only in the face-to-face, full-time study format.
5. From now, in the implementation of the program, it is necessary to abandon the awarding of the qualification of a nature protection specialist, because in the regulations of the Cabinet of Ministers No. 615. (31.10.2023) there is no such qualification.
6. Due to changes in the Law on Universities, the scope of the study program has been changed according to ECTS credit points. In full-time studies, 1 credit point (LV) corresponds to 40 academic hours, of which 16 hours are contact hours of lectures, while 1 ECTS corresponds to 26.7 academic hours, of which 10.7 are contact hours, which is 40% of the intended amount.

3.1.2. Analysis and assessment of the study programme compliance with the study field. Analysis of the interrelation between the code of the study programme, the degree, professional qualification/professional qualification requirements or the degree and professional qualification to be acquired, the aims, objectives, learning outcomes, and the admission requirements. Description of the duration and scope of the implementation of the study programme (including different options of the study programme implementation) and evaluation of its usefulness.

PMSP "Environmental Planning" is created in accordance with the requirements of the Law on

Higher Education Institutions of Latvia and provides opportunities for the improvement of environmental science professional education in accordance with the "Regulations on the State Professional Higher Education Standard" (Cabinet Regulations No. 305). PMSP "Environmental Planning" is a master's level study program included in the study field "Environmental Sciences" implemented by DU, which provides students with the acquisition of theoretical knowledge of sciences and research skills in the field of environmental science, achieving the study results specified in the study program, which corresponds to the level 7 knowledge, skills and competence of the European qualification framework defined in the Latvian education classification.

The compliance of the program with the level 7 knowledge, skills and competence of the European Qualifications Framework is confirmed on October 31, 2023, the regulations of the Cabinet of Ministers No. 615 "The list of professional qualifications to which the relevant professional qualification requirements included in the professional standard must be applied, and the procedure for publicizing the professional qualification requirements". The list includes qualifications: Environmental management specialist 7 LKI (second cycle professional higher education). The placement of qualifications in the industry qualifications system can be viewed in Latvian only at the link: https://registri.visc.gov.lv/profizglitiba/dokumenti/nozkval/NKSK_kimija.pdf. It should be recognized that the professional standard - Environmental management specialist. Code PS0268. Approved June 3, 2004 order no. 336 (https://www.niid.lv/files/prof_standartu_registrs/Vides_parvaldibas_specialists.pdf), is outdated. The process of updating the standard was started. It is long-term and it is impossible to predict its conclusion at the moment. It will definitely be done.

Reflectants participate in the competition after obtaining the first cycle of higher education in environmental science, geography, biology, chemistry, agricultural sciences, forestry, environmental engineering or equivalent education. Similarly, after the acquisition of the first cycle of higher education in certain other thematic areas of comparable education, if the applicant has at least 2 years of work experience in the field of environmental management, as evidenced by a certificate from the workplace, or the employer has determined the need to obtain a qualification in the field of environmental management in order to fulfill the duties of the position.

The total amount of the program is 80 CP (120 ECTS), including the amount of its compulsory part is 68 CP (102 ECTS), the amount of the limited elective part is 10 CP (15 ECTS), optional part C 2 CP (3 ECTS) master's thesis 20 CP (30 ECTS).

The content of the study program is designed to ensure the graduate's compliance with employers' requirements for a highly qualified graduate with in-depth knowledge in the chosen field or an interdisciplinary knowledge base in environmental planning, as well as practical skills in a specific field of specialization.

The study program is intended to be learned in full-time face-to-face studies.

Program code 47431 complies with Cabinet of Ministers regulations no. 322 Regulations on the classification of education in Latvia. The first and second classification levels, which are denoted by the first two digits in code 47, are second-level professional higher education (professional master's degree or fifth-level professional qualification), which can be implemented after obtaining a bachelor's degree, professional bachelor's degree or fifth-level professional qualification. The duration of studies in full-time studies is at least one year. The total duration of full-time studies is five years. The third and fourth levels of classification (thematic group and thematic field of education), denoted by the next three digits 431, are Environmental Science and Environmental Management.

The usefulness and demand of the professional master's study program "Environmental Planning"

can be assessed:

1. By employment prospects: graduates of the study program have good employment prospects, as good opportunities for cooperation with private entrepreneurs and public institutions are provided, which in turn can promote the demand for the program.
2. According to the demand of the local labour market: in the field of environmental management and environmental planning, the Latgale region needs qualified specialists who are able to make balanced decisions in these areas. The degree program may offer locally tailored educational opportunities.

3.1.3. Economic and/ or social substantiation of the study programme, analysis of graduates' employment.

The relevance of the program was determined by the need to prepare high-level specialists for the Latvian and international labor market with in-depth knowledge and practical skills in environmental planning and the chosen specialization. The study program is aimed at preparing leading-level specialists for the Latvian and international labour market, who have interdisciplinary knowledge and practical skills, which are essential in solving various issues in the fields of environmental management.

In order to evaluate the prospects of MSP "Environmental planning" in the Latvian labour market, a survey of potential employers is regularly conducted. The results of the survey show that existing and potential employers believe that environmental management specialists will be more in demand on the labour market in the future than at present. When evaluating the demand on a 10-point scale, the current demand in the labour market is evaluated with 7.8 points, the future demand – 8.8 points. The main explanation for the assessment of the current situation could be the current economic situation in the country, the decrease in the amount of funding in the field of environmental management. Personal communication with managers and employees of local government institutions also shows that many would like to hire an environmental specialist in their institutions, but they still cannot afford it financially. All respondents believe that the need for environmental management specialists will increase.

The main reason for this is EU legislation. Less important in this matter are the tendencies of national development planning and the lack of such specialists in Latvia, although some potential employers emphasized exactly this aspect - there is a lack of specialists with specific knowledge in issues related to the environment. Respondents highly value the prospects of an "Environmental Management Specialist" in the existing and potential labour market. It should be noted that the theoretical knowledge, skills and abilities of many master's students are highly valued during practice, offering to stay and work at the place of practice.

The main employers where study program graduates are employed after successful completion of their studies are the Ministry of Environmental Protection and Regional Development of the Republic of Latvia and its structural units – Department of Nature Protection, Department of Environmental Protection, Department of Climate and Environmental Policy Integration, *etc.*, Institutions subordinate to the Ministry of Environmental Protection and Regional Development of the Republic of Latvia – State Environmental Service, Nature Protection Board, Regional Administrations of the Nature Protection Board; Latvian Geospatial Information Agency, State Land Service, Rural Support Service, municipalities of different levels and their structural units – regional planning departments, regional development departments, *etc.*, scientific and educational

institutions, private structures and companies, *e.g.*, SIA "Metrum", SIA "Parnas D", SIA "Šurfs", SIA "Latgales ģeologs", SIA "Envirotech" *etc.*

The results of the employers' survey conducted by DU show that the preparation of graduates for the labour market in Latvia and in the world can be assessed as good, they have a sense of purpose at work, a sense of responsibility, discipline, initiative at work, a desire to learn, improve professionally, the ability to work with people, communication skills, a broad perspective. Therefore, the high competitiveness of the graduates of the program is also supported by their personal qualities – the graduate's talent, work abilities and motivation. The opinion that most employers believe that the graduates use the acquired knowledge in their professional work, and that career growth is possible for them, is a positive assessment. The results of the survey show that DU graduates have good theoretical and practical preparation and are able to perform their duties immediately independently or after a little training, quickly learn new knowledge and skills, they are able to find and process information, graduates have good communication and cooperation skills and the ability to work in a team (refer to attachment *2.2.4. Analysis of the employer survey*)

The results of the graduate survey show that more than half (55%) of the graduates who filled out the questionnaire are working in a job that corresponds to the education they received at DU or in the industry related to the education they received (27.8%) and all of them are employed. 58% of graduates believe that the content learned during studies meets the requirements of the labour market, while 72% admit that the knowledge acquired during studies contributes to professional development. 66% indicate that the acquired education played a significant role in finding a job or starting a business. 35% of graduates indicate that they are considering continuing lifelong learning. 61% of the surveyed graduates state that they would recommend the study program to others. 75% of respondents are satisfied with the graduate study program. 61% of graduates note that during their studies they had the opportunity to participate in improving the quality of the study program. Graduates rate the quality of studies at a high level in general: 45% of students rated the process with 10 points, 22% – with 9 points and 25% with 8 points, whereas in total 8% – with 5 and 7 points. (refer to appendix No. 2.2.4. PMSP Environmental planning graduate survey analysis)

Diplomas obtained by graduates studying in English are recognized in the international labour market.

The comments received from students of PMSP "Environmental Planning" about the study program show that the graduates value the learning process, teachers and study quality.

3.1.4. Statistical data on the students of the respective study programme, the dynamics of the number of the students, and the factors affecting the changes to the number of the students. The analysis shall be broken down into different study forms, types, and languages.

In the period from 2016/2017 to 2022/2023 academic year, from seven to eighteen people enrolled in the professional master's study program "Environmental Planning" (2016/2017 - ten people; 2017/2018 - eighteen people; 2018/2019 - ten people; 2019/ 2020 - seven people; 2020/2021 - nine people; 2022/2023 - seven people). The total number of students (in all study years combined) varied from fourteen people in the 2022/2023 academic year to 31 people in the 2017/2018 and 2018/2019 academic years.

The implementation of the study program after receiving the license has been started in the 2006/2007 study year.

3.1.4.1. figure reflects data on the number of students enrolled in previous study programs, 3.1.4.2. figure – total number of students, whereas in 3.1.4.3. figure – the number of deducted (expelled) students is shown.

The main reasons for students dropping out of the "Environmental planning" program are starting work, which is not always compatible with studies. Similarly, the downward dynamics of the number of students shows the demographic situation in the region, as well as in the country as a whole. No less important factors are the risks of a fall in the standard of living and deterioration of the material situation in the country as a whole and in the region, the decrease in the solvency of the population and the inability of students to cover the costs related to their studies.

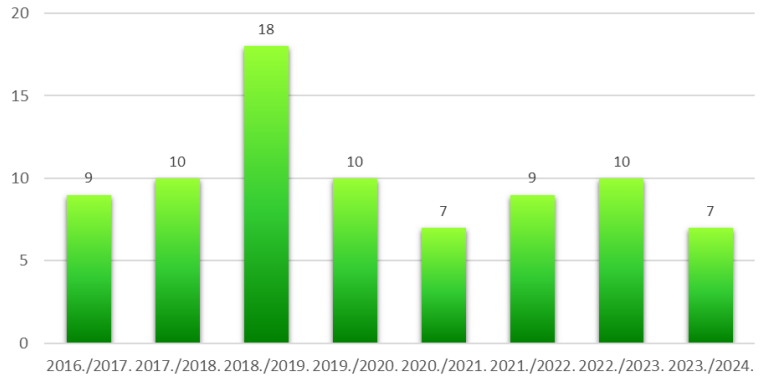


Figure 3.1.4.1. The number of students enrolled in the study program

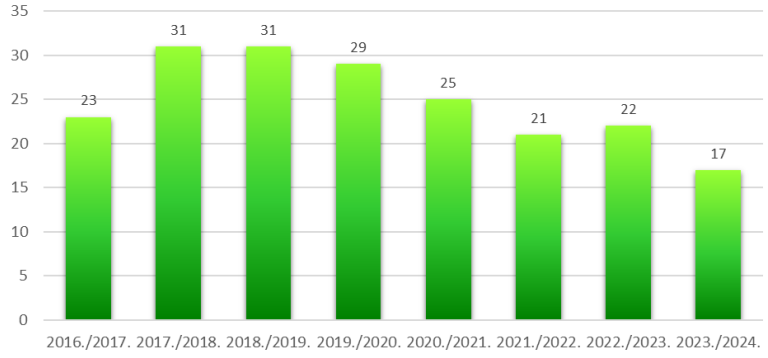


Figure 3.1.4.2. Total number of students in the study program

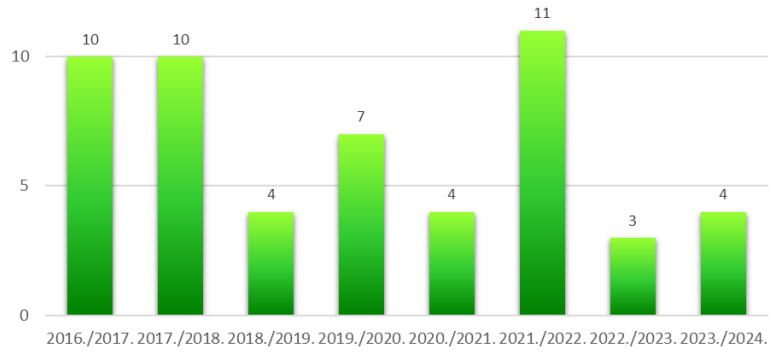


Figure 3.1.4.3. Total number of expelled students in the study program

3.1.5. Substantiation of the development of the joint study programme and description and evaluation of the choice of partner universities, including information on the development and implementation of the joint study programme (if applicable).

Not applicable.

3.2. The Content of Studies and Implementation Thereof

3.2.1. Analysis of the content of the study programme. Assessment of the interrelation between the information included in the study courses/ modules, the intended learning outcomes, the set aims and other indicators with the aims of the study course/ module and the aims and intended outcomes of the study programme. Assessment of the relevance of the content of the study courses/ modules and compliance with the needs of the relevant industry, labour market and with the trends in science on how and whether the content of the study courses/ modules is updated in line with the development trends of the relevant industry, labour market, and science.

When analysing the compliance with the June 13, 2023 Cabinet of Ministers Regulations No. 350 "Regulations on the state standard of professional higher education", it can be concluded that the professional master's study program "Environmental planning" meets the requirements set forth in the standard. Appendix No. 3.2.1. provides a comparison of the study program with the standard requirements has been made. In order to ensure the acquired knowledge described in the professional standard, the study program provides courses that provide this knowledge. Appendix 3.2.1 "Conformity of the qualifications to the professional master's study program "Environmental planning" to the standard of the profession" indicates the courses that provide the necessary knowledge and competences.

The study program provides a connection between the information included in the study courses, the achievable results, the set goals, methods, as well as the connection of each study course with the goals of the study program and the results to be achieved. The aim of the study program has been developed in accordance with current events in the industry and the profession, as well as the needs of the economy and society. The tasks of the study program are designed in such a way as to educate students in accordance with the requirements of the Latvian qualification framework, as well as to promote students' competitiveness in changing socio-economic conditions and the international labour market.

In order to evaluate the prospects of MSP "Environmental planning" in the Latvian labor market, a survey of potential employers is regularly conducted. The results of the survey show that existing and potential employers believe that environmental management specialists will be more in demand on the labour market in the future than at present. When evaluating the demand on a 10-point scale, the current demand in the labour market is evaluated with 7.8 points, the future demand – 7.8 points. The main explanation for the assessment of the current situation could be the current economic situation in the country, the decrease in the amount of funding in the field of

environmental management. Personal communication with managers and employees of local government institutions also shows that many would like to hire an environmental specialist in their institutions, but they still cannot afford it financially. All respondents believe that the need for environmental management specialists will increase.

The main reason for this is EU legislation. Less important in this matter are the tendencies of national development planning and the lack of such specialists in Latvia, although some potential employers emphasized exactly this aspect – there is a lack of specialists with specific knowledge in issues related to the environment. Respondents highly value the prospects of an "Environmental Management Specialist" in the existing and potential labor market. It should be noted that the theoretical knowledge, skills and abilities of many master's students are highly valued during practice (internship), offering to stay and work at the place of practice.

One of the directions of activity, which is oriented towards bringing the field of study closer to the demand of the labor market, is the integration of geomatics courses into the programs of the field of study. In addition, the need to develop education in the field of geomatics is determined by the fact that the use of GIS technologies and tools in state institutions and private companies is growing rapidly, and as a result, the demand for qualified specialists in this sector who are well versed in the methods and capabilities of geospatial information analysis and visualization is growing just as rapidly. Thus, Daugavpils University graduates who have acquired the appropriate knowledge and skills will be better prepared for the labour market and their employability and competitiveness will be higher. This is directly in line with the guidelines of the Bologna Declaration (1999) and the Yerevan Communiqué (2015).

The study program is implemented in lectures, practical lessons and laboratory work, reserving 60% of the time for independent studies, in which the latest theories and trends in the field of environmental management are learned in detail. The content of the study program meets the requirements of regulatory acts.

The study program provides a connection between the information included in the study courses, the achievable results, the set goals, methods, as well as the connection of each study course with the goals of the study program and the results to be achieved. The connection is reflected in the mapping of the study program (Appendix No. 3.2.1. PMSP Environmental planning course mapping).

The program envisages in-depth learning of students' theoretical and practical knowledge in the direction of specialization: "Environmental management specialist" includes courses that provide students with the theoretical and practical knowledge necessary for specialization. In this section of the study program, students' attention is emphasized on environmental technologies as important working tools of a knowledgeable environmental management specialist. Students also learn the basic theoretical and practical principles of geodesy, land valuation and cadastre. According to the standard of the profession (refer to appendix 3.2.1. PMSP Environmental planning compliance with the professional standard), students get to know the theoretical aspects of the management process, develop practical skills in working with personnel.

The duration of studies is 2 years, divided into 4 study semesters, during which compulsory study courses and limited optional study courses are studied. At the end of the studies, a master's thesis must be developed.

Several study course selection and learning principles operate in the study program.

The total amount of the professional higher education master's study program "Environmental Planning" is 80 credit points (CP) or 120 ECTS.

Since the admission rules state that, in addition to the basic requirements, first-cycle higher

education in comparable individual thematic areas of education are also accepted, if the applicant has at least 2 years of work experience in the field of environmental management, as evidenced by a certificate from the workplace, or the employer has a position has determined the need to obtain a qualification in the field of environmental management. Accordingly, so that all students equally achieve the achievable results of the program, a commission has been established that decides on the acquisition of individual courses from the bachelor's study program.

Each teaching staff involved in the study program has a sufficient and up-to-date number of scientific publications on the topic of the taught study course. This confirms the ability of the participating teaching staff to include the latest scientific current affairs in the content of the study course.

Final thesis topics are offered by the departments of the faculty and they are always related to current research directions.

3.2.2. In the case of master's and doctoral study programmes, specify and provide the justification as to whether the degrees are awarded in view of the developments and findings in the field of science or artistic creation. In the case of a doctoral study programme, provide a description of the main research roadmaps and the impact of the study programme on research and other education levels (if applicable).

The theoretical and practical part of the study program has been developed based on the scientific current affairs of the industry. Each specialization has at least one course on the latest developments in the chosen field or a project work in which the student carries out a small research work, analysing a specific scientific problem and applying industry-specific methods and data acquisition equipment. The students of the program in the last year of study have to seal the results of the research work at a conference with an oral report on the topic of the final work. In this way, the skills in formulating, presenting and developing a scientific thought are trained.

In order to fulfill the goal and keep up with the latest developments in the industry, the academic staff participates in projects, the results are used to update the content of study courses. Lecturers actively participate in the approbation and dissemination of research results, speaking at scientific and practical conferences and seminars. The information obtained in the scientific activities is used in the management of study courses and assignments, as well as in the preparation of teaching aids. The guidance staff consists of lecturers who regularly cooperate in improving study processes, thus achieving interdisciplinarity in the development of students' knowledge and skills.

It is very important that the staff involved in the field provide an innovative study environment and professional experience for students in the field's study programs. It should be noted that currently a great deal of emphasis in knowledge transfer is placed on the interaction of study work with research and student training based on scientific achievements. The interdisciplinary aspect of this process and the inclusion of different study programs and students of different levels in solving the current problems of the scientific society are essential. This is evidenced by the topics of the developed master's theses (some examples):

- SWAT+ application for modeling the factors influencing the quality of the water environment in the catchment basin of the Dviete river;

- Flood risk assessment in Lauces floodplain;

- Air quality changes in the city of Daugavpils in the period from 2012 to 2022, using licheno-indication;

- Evaluation of the health care waste management system of the Daugavpils regional hospital and development of recommendations for its improvement;

- Introduction of electric cars and their charging infrastructure at the National Armed Forces aviation base in Lielvārde.

All teaching staff of the faculty involved in the implementation of the program are scientifically active representatives of the industry, who perform not only teaching and scientific work, but also lead or participate in scientific projects.

As can be seen from the Sci-Val data (Figure 3.2.2.1.), most of the publications of the teaching staff involved in the study process are in the branches and sub-branches of environmental science, biology, earth science, biochemistry.

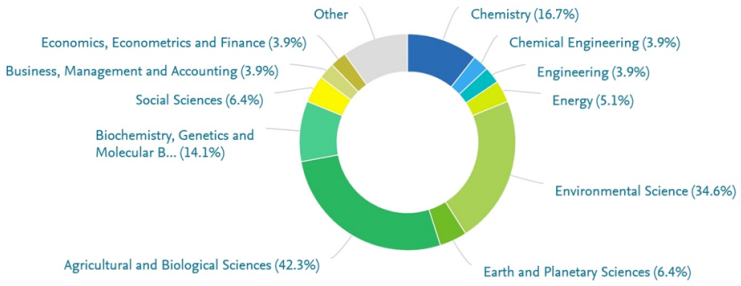


Figure 3.2.2.1. Distribution of publications of teaching staff involved in the realization of the professional master's study program "Environment protection" by scientific branch (Sci-Val data)

3.2.3. Assessment of the study programme including the study course/ module implementation methods by indicating what the methods are, and how they contribute to the achievement of the learning outcomes of the study courses and the aims of the study programme. In the case of a joint study programme, or in case the study programme is implemented in a foreign language or in the form of distance learning, describe in detail the methods used to deliver such a study programme. Provide an explanation of how the student-centred principles are taken into account in the implementation of the study process.

The study program is implemented in Latvian and it is planned to be implemented in English as well, providing an opportunity to learn in-depth the theories, technologies and latest trends of the selected industry, to gain practical skills in seminars, practical and laboratory classes. In the study program, the courses and practices to be studied and performed and the development of the final thesis are proportionally divided by semesters, so that they complement each other as much as possible, providing students with a targeted direction towards the acquisition of knowledge and skills. There are no differences between the Latvian and English language study programs (except for the Latvian language study course for foreigners).

In general, the study program and the planning of each semester are designed with a focus on the acquisition and strengthening of knowledge and professional skills for each student, working both individually and in a team. Evaluation of study results is described in detail in the "Regulations on

studies at Daugavpils University" (https://du.lv/wp-content/uploads/2022/06/ENG-NOLIKUMS_PAR_STUDIJAM_DU_2018-1-1.pdf). The teaching staff responsible for the study courses choose the methods of structuring, teaching and evaluating the study courses according to the specifics of the study course content and study program, as well as the needs of the students.

The following principles of student-centered education are taken into account in the implementation of the study process:

- The Master's study program is planned to ensure great flexibility and opportunities for individual approach to students. The program includes both in-depth theoretical knowledge research and theoretical knowledge approbation courses, as well as research skills and skills development courses, which reflects students' interests and provides the opportunity to adapt the study path to their career and personal needs.
- Interactive learning materials and technologies: in the implementation of the learning process, much attention is paid to interactive learning materials and technologies. Virtual seminars, online discussions and assignments are organized to support student engagement and active participation in the study process. This principle reflects the use of modern technology to make education more accessible and adapted to students' lifestyles.
- Student Protection and Support Measures: The program and the University offer a wide range of student protection and support services. Counseling sessions, career counseling and other resources are available to help students overcome personal and academic difficulties.
- Feedback and evaluation: in an indirect way, students express their thoughts about the study course during the mid-semester and end-of-semester anonymous questionnaires. On the other hand, graduates of the program fill out review questionnaires about the entire program as a whole. The results of the survey are examined at the department's meetings and proposals for changes are developed. The most important points of the questionnaire are also discussed at the session of the study direction commission. Careful analysis of the results of the questionnaire allows to make well-thought-out changes in the content of the study course and study program. The analysis of survey results is presented in the appendix 2.2.4. Analysis of PMSP Environmental Planning student surveys.

Faculty of Natural Sciences and Health Care (DVAF) relationship with students is built on the principles of mutual trust, respect and honesty. This creates both additional obligations and rights for the students. Students are provided with the opportunity to influence their study process, exercise their autonomy, provide feedback on the study process, aligning it with their professional development interests. The DVAF student self-government, which actively participates in all the mentioned processes, plays a major role in ensuring the connection between students, teaching staff and the administration of the study program.

At the start of each study course, the teaching staff informs the students what the study course requirements are and introduces the students to the specific evaluation criteria of the study course. They are published in the electronic environment of the study course, Moodle. Once a semester, students evaluate the work of teaching staff by answering questionnaire questions. They include evaluation of study progress, individual tasks, acquired skills, teaching staff's attitude and cooperation with students. Questionnaires and surveys are anonymous. Graduates of the program fill out graduate questionnaires.

The program director regularly discusses with the seniors of the course the topical issues of the progress and quality of studies, involving other involved parties in these discussions.

In order to ensure the interaction of the knowledge, competences and skills acquired by graduates, when developing and implementing study courses, special emphasis is devoted to the reflection of

current problem situations in the content of the study program (at the level of lectures, practical and laboratory works), for the integrity and interdisciplinarity of study courses and study programs. Students' independent studies play an important role. The description of their progress is included in the description of the study course as a mandatory component. Students' ability to learn independently is purposefully developed in all study courses. Students acquire the skills of practical and research work by regularly using literature and Internet resources, including international scientific databases available in the DU library, in order to successfully develop the master's thesis.

The lecture courses are general-theoretical, during which research elements are incorporated for the students to write reports, studies, etc. in the form of independent works. Attending practical classes is mandatory for all students throughout their studies. During the training of each study course, students must complete the planned tests, develop individual homework and practical work. Exams are allowed only to those students who have fulfilled all the requirements of the study course program. The results of exams and tests are fixed in the DU e-study environment Moodle.

In order to ensure the evaluation of study courses, a survey has been developed and, based on their results, the content of study programs is reviewed and improved. The director of study programs responds to all justified opinions, suggestions and reprimands expressed in the questionnaires, if necessary, examining the issues in the study field council. After making changes in the content of the study program, the director of the study program informs all involved parties, thus ensuring feedback.

The structural units of DU regularly inform the staff about the opportunities to improve their competence both in scientific-research, methodical and didactic skills, and general competences (foreign languages, information technology, speech and presentation skills, *etc.*), as well as in the field of specific professional activity. In the DUIS environment, information about the scientific activity of the academic staff is accumulated. In order to perform pedagogical work at a high level, methodological seminars are held for DU teaching staff on the possibilities of using various teaching methods, experiences and good practices.

The academic staff of the study program regularly improves the study content, introducing new study organization methods in the study process. International experience is integrated into the study process, the DVAF study environment and infrastructure are adapted to groups of students with different professional interests, maintaining stable study quality.

In full-time studies, 1 credit point (LV) corresponds to 40 academic hours, of which 16 hours are contact hours of lectures, while 1 ECTS corresponds to 26.7 academic hours, of which 10.7 are contact hours, which is **40%** of the expected volume.

3.2.4. If the study programme envisages an internship, describe the internship opportunities offered to students, provision and work organization, including whether the higher education institution/ college helps students to find an internship place. If the study programme is implemented in a foreign language, provide information on how internship opportunities are provided in a foreign language, including for foreign students. To provide analysis and evaluation of the connection of the tasks set for students during the internship included in the study programme with the learning outcomes of the study programme (if applicable).

Professional qualification practice is an integral and mandatory part of the study process. According

to the Regulations on practice (see Appendix 3.2.4), its purpose is to strengthen the theoretical and practical knowledge already acquired, to develop the skills and abilities corresponding to the chosen specialization, which are necessary for specialists with appropriate qualifications in environmental planning. During the qualification practice, students acquire high-quality theoretical and applied knowledge in the field of environmental management, developing and strengthening professional skills and abilities that meet the standard requirements of the profession "Environmental management specialist", as well as the ability to independently organize research, obtain and process data, monitor environmental indicators and form the performed research reports. During the practice, there is an opportunity to develop the skills necessary for working in a team and/or leading it, it promotes self-improvement and professional development. During the qualification practice "Environmental Management I", students develop an understanding of the basic principles, methods and application of legislative acts of EU and Latvian environmental policy, environmental management and development planning, based on European and global experience.

The total duration of practice is 24 weeks and their scope is 26 CP (36 ECTS). In professional qualification practices, students are introduced to the practice of tasks to be performed in environmental management, their theoretical knowledge gained from lecture courses and private practical work is updated, preparing for the further study of environmental planning courses and the successful development of a master's thesis. Practice tasks are directly aimed at achieving the results of the study program.

The purpose of the "Environmental management specialist" professional qualification practice "Environmental management" in the specialization direction of the study program is to use the theoretical opinions of the courses learned during the studies, get acquainted practically with the activities of various institutions that work in the field of environmental management and, by doing work during the internship, contribute to the specific place of internship. Depending on the specifics of the place of internship (practice), students:

- become familiar with the administrative and practical work organization of the internship site (regulatory documentation, personnel management, cooperation with local, regional, national and international institutions) and get involved in the environmental planning and management work of the internship site;
- get to know and evaluate the main tasks of the place of practice and the measures to be taken in the field of environmental management;
- participate in the meetings of relevant structures and working groups, joint planning meetings of the municipality, commissions, committees and council meetings (as needed),
- collect and analyze information (collect and systematize information in environmental protection and environmental management, analyse and create databases; prepare informative and analytical reports for the performance of environmental management tasks,);
- participate in the development of a specific environmental project, strategic environmental impact assessment, development planning document or its section related to the field of environmental planning and management (identification, collection of raw data, analysis, preparation and design of project documentation,);
- familiarize themselves with and analyze the municipal development program, territorial planning, environmental sections of detailed plans, as well as environmental protection programs that have been approved or are being developed in municipalities;
- become familiar with the operation of environmental technologies (waste management, wastewater treatment, water supply, energy management,), existing problems and the perspectives of their solutions;
- participate in the implementation of the tasks of the regional Environmental Administration in

the field of environmental protection, control, environmental information, registration of polluted and potentially polluted places and prevention of industrial accidents.

Internship (practice) in the "Environmental management" is divided into 2 blocks and is organized in the following places and institutions:

- In local governments, which have a specialist or a department related to environmental planning and management, in the activity of the regional environmental administrations of the State Environmental Service in the field of environmental management (Environmental management I" (12 CP/18 ECTS));
- In private companies, institutions operating in the field of environmental technology and management (internship (practice): "Environmental management II" (12 CP/18 ECTS)).

As part of the qualification practice "Implementation of environmental projects in Latvia" (2 CP/3 ECTS), individual projects implemented in Latvia in environmental protection infrastructure are visited: water management, energy management, waste management, ecotourism.

During the professional qualification internship, students develop individual or paired works, the results of the internship are presented at the final conference. The regulation on professional qualification practice is approved by the DMF Council.

By cooperating within the framework of various issues, DU has established successful cooperation with various state and private institutions, companies, *etc.* over many years. It has also served as a basis for continuing cooperation in the PMSP "Environmental Planning" for the provision of professional qualification practice places for master's students. Cooperation agreements have been concluded with a number of possible internship sites:

The signed cooperation agreements significantly facilitate the choice of internship places for master's students. It is not uncommon for master's students to complete their professional qualification practice in institutions or companies with which DU has not concluded cooperation agreements, however, so far this has not been an obstacle to successfully achieving the goals and tasks of the practice. Similarly, there have been no problems among students with finding an internship, but if there were any, the director of the study program would be involved in the process, discussing with the student the best and most suitable internship options and helping them find them, most likely, within the framework of the concluded contracts. It is important to note the cooperation agreement concluded in February 2024 between the State Environmental Service (VVD) and DU. The agreement envisages cooperation in the field of science communication: participation in scientific events organized by DU; recommendations and topics for the development of student scientific research, exchange of information and data; Internship opportunities for DU students, internships in VVD structural units according to the demand of study programs; information about job offers at VVD; cooperation in the use of the material and technical base by approving the developed technologies and research methods, improved knowledge and skills in operational pollution detection and long-term monitoring, involving DU qualified experts and high-precision equipment.

It should be noted that master's students have used the opportunities of the ERASMUS+ program and have completed professional qualification practice outside the borders of Latvia, for example Bohemian Switzerland National Park, Czech Republic; Aukštaitija National Park, Lithuania; Słowiński Park Narodowy (Slovinski National Park), Poland; Zarasai district municipality, Lithuania.

It should also be noted that the provision of qualification practice in English is not an obstacle, as the range of practice opportunities offered is sufficient to accommodate this need. All courses included in the PMSP "Environmental Planning" program are offered within the ERASMUS + program. Students from the Philippines and Lesotho took part in the practice in 2024 -

"Implementation of environmental projects in Latvia". The head of practice ensured that the information was given in English.

3.2.5. Evaluation and description of the promotion opportunities and the promotion process provided to the students of the doctoral study programme (if applicable).

Not applicable.

3.2.6. Analysis and assessment of the topics of the final theses of the students, their relevance in the respective field, including the labour market, and the marks of the final theses.

The final theses of the Master's study program "Environmental Planning" have been very versatile and are related to current issues and solutions to problems in the industry. The topics of master's theses are chosen according to the areas of specialization of the program. Listed below are the most relevant work topics developed during the last six years of the program's specializations.

"Environmental management specialist" master thesis topics:

1. *Heracleum sosnowskyi* Manden. distribution analysis and proposals for their management in Barkava parish;
2. Identification and evaluation of green infrastructure elements in the forests of Daugavpils region;
3. Evaluation of the use of SWAT+ for modeling the factors influencing the quality of the water environment in the catchment basin of the Dviete river;
4. Proposals for the sustainable mobility action plan of the city of Daugavpils;
5. Hydrological monitoring in the Dviete floodplain in the context of the implementation of the LIFE+ project "Dviete";
6. Hydrological monitoring of groundwater in the "Dviete floodplain" nature park in the context of the implementation of the new Nature Protection Plan.

A complete list of topics and evaluations of defended bachelor's theses for the period from 2017 to 2022, see the appendix (3.2.6. PMSP Environmental planning master's thesis topics with evaluations).

In order to ensure the development of high-quality final theses, at the end of the third semester and before the defense, the department organizes an intermediate control of work progress, during which the student presents the completed work, and also receives recommendations from the department's teaching staff and scientific staff for improving their work.

During the last years of study, the average rating of the final exams (final theses) has been high and fluctuates around 8.0 – 9.0 points (Figures 3.2.6.1 to 3.2.6.3). The quality of Master's theses development has not been affected by the Covid-19 pandemic, as most students start developing theses already in the first year of study and this is often related to their direct work responsibilities.

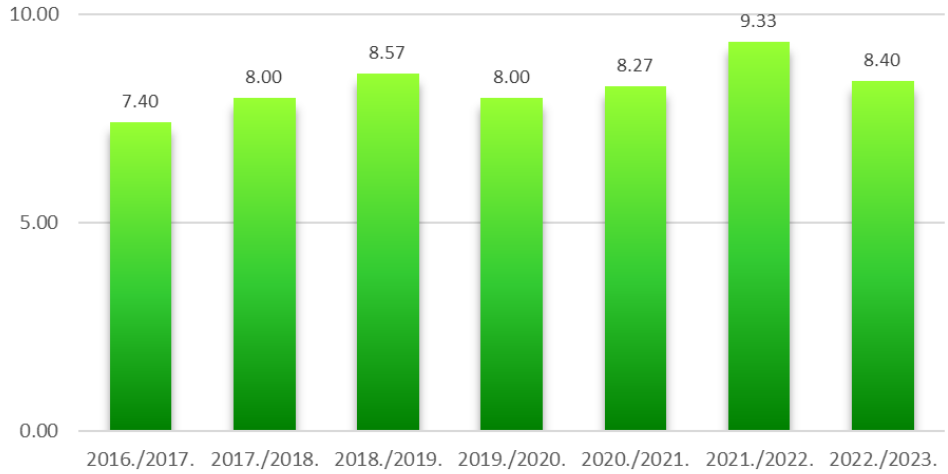


Figure 3.2.6.1. The average rating of defended master's theses in the period from the 2016/2017 academic year to the 2022/2023 academic year.

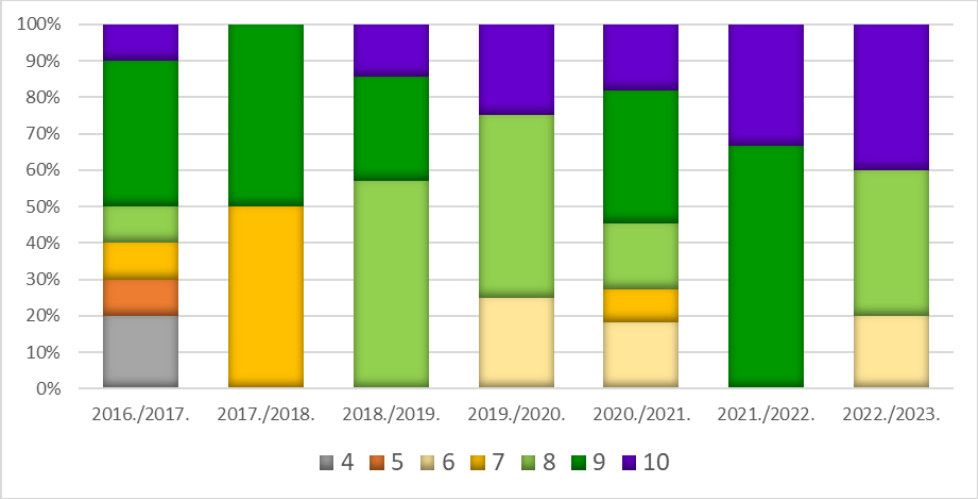


Figure 3.2.6.3. The rating proportion of defended master's theses in the period from the 2016/2017 academic year to the 2022/2023 academic year.

3.3. Resources and Provision of the Study Programme

3.3.1. Assessment of the compliance of the resources and provision (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 the learning outcomes to be achieved by providing the respective examples.

PMSP "Environmental planning" study program is being implemented using the shared infrastructure of DU (for detailed information, refer to section No. 2.3.2.), both the specialized laboratories corresponding to the specifics of a specific study course and the equipment available in them, provided by several structural units of DU: Institute of Life Sciences and Technologies (Department of Biodiversity, Department of Ecology, Department of Technology), DU Study and

Research Centre "Ilgas", Faculty of Natural Sciences and Health Care (Department of Environment and Technology). Students also have access to a wide and modern range of field research equipment at the disposal of the specified DU structural units.

According to the proposal of the lecturer of the study courses, for the implementation of individual study courses or in cases where students choose specific topics for master's theses, the director of the study program can also agree with other scientific institutions or universities (*e.g.* Faculty of Geography and Earth Sciences of the University of Latvia) about the possibilities of using the equipment available in specific scientific laboratories, usually involving scientific employees of these institutions or teaching staff of universities as consultants or supervisors.

Students of PMSP "Environmental Planning" have access to all the services offered by the DU Library – the library's electronic catalogue, ordering, reserving and renewing books online, automated user servicing, as well as access to electronic databases subscribed to DU, incl. Web of Science, Scopus, Science Direct, Cambridge Journals Online *etc.* (for more detailed information see Section 2.3.3 of the description of the study direction). The number of books in environmental science, its sub-branches, geomatics, Earth sciences and communication sciences is 8808, incl. 706 in English language. Students are also provided with the opportunity to use the specialized scientific literature available in the scientific laboratories of the Institute of Life Sciences and Technologies of DU, as well as scientific and educational literature, purchased by the teaching staff and available in the Department of Environment and Technology and its laboratories.

The provision of the field of study "Environmental science", including infrastructure and equipment, guarantees a quality study environment for all those studying in the field of study (including students with special needs) for high-quality implementation of study programs and achievement of study results.

For detailed information on the infrastructure and material and technical provision available for the implementation of the study direction and corresponding study programs, see appendix (2.3.2. Infrastructure and material and technical support).

3.3.2. Assessment of the study provision and scientific base support, including the resources provided within the framework of cooperation with other science institutes and higher education institutions (applicable to doctoral study programmes) (if applicable).

Not applicable.

3.3.3. Indicate data on the available funding for the corresponding study programme, its funding sources and their use for the development of the study programme. Provide information on the costs per one student within this study programme, indicating the items included in the cost calculation and the percentage distribution of funding between the specified items. The minimum number of students in the study programme in order to ensure the profitability of the study programme (indicating separately the information on each language, type and form of the study programme implementation).

DU financing from the state basic budget consists of study base financing corresponding to the list

of study programs and the number of students, which consists of funds for utility payments, taxes, infrastructure maintenance (including providing data for the register of students and graduates), for the purchase of equipment and equipment and for staff salaries, as well as funding for scientific activities, state budget grants and student funds are used for the implementation of the study program.

The number of study places is allocated after discussions with the Ministry of Education and Science. Study base financing from the state budget is allocated to full-time studies. The amount of study base financing is determined on the basis of the state-determined number of study places at DU, as well as the state-determined study place base costs and study cost coefficients of the thematic areas of education.

Information on the calculation of costs per student of PMSP "Environmental planning" is reflected in Table 3.3.3.

Table 3.3.3. The cost of the professional master's study program "Environmental Planning" (47431, study duration - 2 years, amount - 80 CP, full-time) per student

No.	Title	Sum (EUR)	% distribution
1	Salary fund per student	6252.24	60.6
2	Employer SSIMC 23.59% per 1 student	1474.90	14.3
3	Costs of business trips and business trips per 1 student	158.14	1.5
4	Services per 1 student	689.24	6.7
5	Costs of materials, energy resources, water and inventory per 1 student	524.16	5.1
6	Cost of purchasing books and magazines per 1 student	53.74	0.5
7	Equipment purchase and investment costs per 1 student	660.38	6.4
8	For student social security per 1 student	504.24	4.9
	Total cost of 1 student	10317.04	100

Costs per student have increased, which is justified by the overall increase in DU costs (utilities, building maintenance, etc.).

Tuition fees are determined in compliance with the instructions of the State Audit Office that tuition fees for students who study together with budget students cannot be less than the state funding for this service. The study fee is determined as follows: 1600 EUR per year of study (3200 EUR in total).

The specific development of each study program is the responsibility of each study program director, as well as the responsible faculty. For the development of all study programs, centralized funding is used for the renewal of the scientific library fund, the improvement and maintenance of shared auditoriums, public relations, program marketing activities, development and maintenance of information systems related to the study process and other activities.

The costs per student in the study program in Latvian and in English shall not differ. The minimum

number of students in a group to ensure the profitability of the study program is 7 students.

3.4. Teaching Staff

3.4.1. Assessment of the compliance of the qualification of the teaching staff members (academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants) involved in the implementation of the study programme with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments. Provide information on how the qualification of the teaching staff members contributes to the achievement of the learning outcomes.

The selection of teaching staff involved in the implementation of the study program is based on several criteria to ensure that the study courses are led by qualified lecturers who are specialists in their field with active scientific activity. (2.3.7. Basic information about the teaching staff involved in the implementation of the study course).

19 teaching staff are involved in the implementation of the professional master's study program "Environmental Planning", which, taking into account the volume of courses taught by these lecturers, the procedure for accounting and full-time calculation of academic staff's work set at Daugavpils University, corresponds to 1.80 full-time equivalents in terms of workload.

A total of 21 lecturers are involved in the implementation of PMSP "Environmental Planning". Among them, 1 is a professor, 1 is an associate professor, 5 are assistant professors, 1 is a leading researcher, 1 researcher and 11 lecturers (refer to Figure 3.4.1.1). For 14 lecturers, the main place of election is DU and 7 are guest lecturers. 9 lecturers (45 %) have a doctoral degree (refer to figure 3.4.1.2.).

Courses and seminars on the latest pedagogical methods are organized for the academic staff, as well as the attendance of qualification raising and development courses is encouraged both at the faculty and DU level, and internationally. The value of the study program is a professional dialogue between teaching staff and students, involving students in updating the content and methods of study courses. Students can realize their participation in the improvement of the study process directly - by expressing their wishes to the teaching staff of the specific study course, the head of the department, the program director. Similarly, students' interests and opinions can be expressed through the student self-government, whose representatives are members of the Faculty Council, DU Senate, and DU Constituent assembly.

For studies in English: knowledge of the English language at least at B2 level. Field specialists whose English language level is lower than B2 are engaged in the implementation of the program, but if there is a need to implement the study course in English, the existing teaching staff with an appropriate level of English knowledge are able to replace them.

In PMSP "Environmental Planning", the higher proportion of lecturers with a master's degree among the lecturers can be explained by the professional content of the program. In order to ensure that students acquire skills and competences based on work experience, guest lecturers – industry professionals from state and local government institutions are invited to implement individual study

courses.

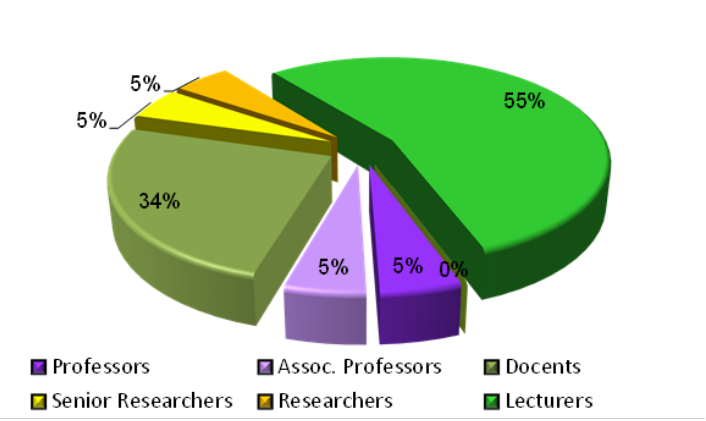


Figure 3.4.1.1. The academic composition of the staff involved in PMSP "Environmental Planning".

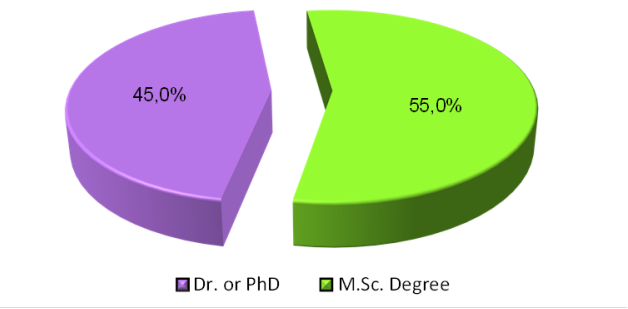


Figure 3.4.1.2. The personnel involved in the implementation of PMSP "Environmental Planning" which have doctor's and master's degrees

3.4.2. Analysis and assessment of the changes to the composition of the teaching staff over the reporting period and their impact on the study quality.

Since the licensing of the study program, there have been no significant changes in the composition of the provided study courses – all the teachers involved continue to teach the courses.

In order to reduce the risks of not having substitutes, the number of lecturers was increased with the new generation of academic staff (lect., MSc. chem. A. Puckin; lecturer, M. sc., envir. plan. I. Puckina *[I.Pučkina]*; visiting lecturer, M. sc., envir. plan. S. Ruskule; visiting lecturer, M. sc., envir. plan. M. Stepanova).

Changes in teaching staff have a positive effect on the quality of the study process. Students have the opportunity to get acquainted with a wider range of research equipment and methods, to use it in the study process and in their research in final theses. Students are regularly involved in scientific and practical projects implemented in the faculty of various levels – this attracts young people to the university.

3.4.3. Information on the number of the scientific publications of the academic staff members, involved in the implementation of doctoral study programme, as published

during the reporting period by listing the most significant publications published in Scopus or WoS CC indexed journals. As for the social sciences, humanitarian sciences, and the science of art, the scientific publications published in ERIH+ indexed journals or peer-reviewed monographs may be additionally specified. Information on the teaching staff included in the database of experts of the Latvian Council of Science in the relevant field of science (total number, name of the lecturer, field of science in which the teaching staff has the status of an expert and expiration date of the Latvian Council of Science expert) (if applicable).

Not applicable.

3.4.4. Information on the participation of the academic staff, involved in the implementation of the doctoral study programme, in scientific projects as project managers or prime contractors/ subproject managers/ leading researchers by specifying the name of the relevant project, as well as the source and the amount of the funding. Provide information on the reporting period (if applicable).

Not applicable.

3.4.5. Assessment of the cooperation between the teaching staff members by specifying the mechanisms used to promote the cooperation and ensure the interrelation between the study programme and study courses/ modules. Specify also the proportion of the number of the students and the teaching staff within the study programme (at the moment of the submission of the Self-Assessment Report).

The mutual cooperation between the teaching staff of the study courses and the linking of the courses was carefully planned during the creation of the study program. Study courses are grouped by study year in such a way that their learning is based on previously acquired knowledge and coordinated with the achievable results. Within one year, the study courses are thematically linked, thus strengthening the achievement of the goals of the study program.

When creating the study program, each teaching staff familiarized themselves with the content and implementation method of the other study courses in order to prevent duplication of content and reduce the possibility of unlearned topics. Such targeted creation of the study program has enabled the teaching staff to realize the need for cooperation and the ways to achieve it.

At the end of each study year, there is an evaluation of the results of the teaching staff questionnaire and an exchange of experiences with the discussion of further cooperation. The conformity of the evaluation criteria and the achievable results of the study courses to the overall achievable results of the study program is an important part of the discussion.

In order to successfully ensure the mutual cooperation of the teaching staff, a self-evaluation report of the study field is prepared once a year for the previous study year, which includes an analysis of

both the field as a whole and by programs. Accordingly, the report is sent to all teaching staff. Likewise, the lecturers, in coordination with each other, regularly revise the study course descriptions, update the course content, supplement it with the latest literature, as well as with the forms of practical lessons. Both for the "Environmental Science" field in general and in the implementation process of individual study courses, there is a regular survey of the opinions of the involved lecturers - industry professionals, as well as internship providers and employers of program graduates, which allows information to be passed on to the teaching staff in order to coordinate the implementation of the study courses with each other and adjust the content for the needs of the labour market.

The academic staff participates in academic and methodical conferences, seminars and qualification improvement courses as lecturers or listeners, regularly improving study courses with innovative study forms and modern methods.

It should also be noted that several basic criteria have been set for evaluating the performance of teaching staff:

- excellence – sustainable and continuous development, ensuring process and resource management;

- the ability to effectively use academic freedom - freely choosing directions and methods of academic activity, creating and publicizing new knowledge, openly discussing its content, looking for opportunities to implement it in practice;

- academic culture – collegial, based on the principles of academic ethics, cooperation with students and other teaching staff formed in an atmosphere of mutual respect, demandingness, interest and support;

- responsibility for one's work before society and the state in accordance with DU's quality management system and quality culture.

The ratio of the number of students to teaching staff within the study program at the time of submitting the self-evaluation report is 14/21 or one teaching staff to 0.66 students.

Annexes

III - Description of the Study Programme - 3.1. Indicators Describing the Study Programme		
Sample of the diploma and its supplement to be issued for completing the study programme	3.1.2. PMSP Environmental planning example of diploma and supplement.zip	3.1.2. PMSP Vides plānošana diploma un pielikuma paraugs_LV.zip
For academic study programmes - Opinion of the Council of Higher Education in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions (if applicable)		
Compliance of the joint study programme with the provisions of the Law on Higher Education Institutions (table) (if applicable)		
Statistics on the students in the reporting period	3.1.4. Statistics on students Environmental protection.xlsx	3.1.4. Statistika par studentiem Vides aizsardzība.xlsx
III - Description of the Study Programme - 3.2. The Content of Studies and Implementation Thereof		
Compliance with the study programme with the State Education Standard	3.2.1. PMSP_Compliance with the national educational standard.docx	3.2.1. PMSP_Atbilstība valsts izglītības standartam_LV.docx
Compliance of the qualification to be acquired upon completion of the study programme with the professional standard or the requirements for professional qualification (if applicable)	3.2.1. PMSP Environmental planning compliance with the prof standard.docx	3.2.1. PMSP Vides plānošana atbilstība prof standartam.docx
Compliance of the study programme with the specific regulatory framework applicable to the relevant field (if applicable)		
Mapping of the study courses/ modules for the achievement of the learning outcomes of the study programme	3.2.1. PMSP Environmental planning course mapping.docx	3.2.1. PMSP Vides plānošana kursu kartējums kompakts_LV.docx
The curriculum of the study programme (for each type and form of the implementation of the study programme)	3.2.1. PMSP Environmental planning study plan.xlsx	3.2.1. PMSP Vides plānošana studiju plans.xlsx
Descriptions of the study courses/ modules	PMSP_Environmental planning_course descriptions.zip	PMSP_Vides plānošana_kursu apraksti.zip
Description of the organisation of the internship of the students (if applicable)	3.2.4. PMSP Description of practice organization.zip	3.2.4. PMSP Prakses organizācijas apraksts.zip
III - Description of the Study Programme - 3.4. Teaching Staff		
Confirmation that the academic staff of the doctoral study programme includes not less than five doctors, of which at least three are experts approved by the Latvian Council of Science in the branch or sub-branch of science in which the study programme intends to award a scientific degree (if applicable)		
Confirmation that the academic staff of the academic study programme complies with the requirements specified in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions (if applicable)		