Expert group joint opinion

Evaluation Procedure: Assessment of Study Field

Higher Education Institution: Turība University

Study field: Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science

Experts:
1. Jānis Zuters (Chair of the Experts Group)
2. Yannis (Ioannis) Manolopoulos (Secretary of the Experts Group)
3. Sirje Virkus
4. Aivars Šāblis (Employers' Confederation of Latvia)
5. Marta Viļuma (Student Union of Latvia)

Summary of the Assessment of the Study Field and the Relevant Study Programmes

The study field "Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science" of Turiba University (BAT) consists of two very closely related study programmes with the main aim to develop professional specialists in programming:

(1) "the first cycle 4-year professional bachelor programme "Computer Systems" (42484)", 4 years (first admission in 2019, no graduates yet);

(2) "the short cycle 2-year professional programme "Computer Systems" (41484)", 2 years (first admission in 2020, first graduates last year).

The latter programme is to a great extent the first part of the first cycle programme, so both programmes are well integrated.

BAT management is interested in the development of the field, the administrative and technical support for the field is sufficient. Teaching staff mostly consists of practitioners of the field. The quality policy is based on various principles, which define the BAT priorities that are competitiveness and to ensure a qualitative, labor market - and state recognized study process. BAT is investing cautiously in the new study field: well equipped laboratories have been set, besides other general facilities such as classrooms, library, mensa, dormitories etc. Scientific research is integrated in the study process of the study programmes, however BAT has not yet developed mechanisms for the involvement of the teaching staff in scientific research. A common system for the provision of internships and the organization thereof has been developed within the study field. The employers are involved in discussing the content of the internship.

Strengths:

1. The study programmes of the field are based on industry trends and cooperation with important players of the industry.

2. Efficient decision making process.

3. Support to the study field from higher management.

4. Advanced plagiarism control is carried out.

5. Different forms of complaints and proposals mechanism.

6. Adequate financial resources, healthy financial management.

7. Well organized campus with all essential infrastructures and services .

8. Staff experienced in IT industry.

9. BAT has established good cooperation with institutions in Latvia and such cooperation contributes to the achievement of the aims and learning outcomes of the study field and the study programme.

10. A common system for the provision of internships and the organization thereof has been developed within the study field.

Weaknesses:

1. Having the same person being both the study field director and the director of the both programmes entails certain risks.

2. There is no steady/permanent community of the teaching personnel, with regular meetings to discuss all academic and other organizational issues.

3. A significant number of academic staff is visiting lecturers/instructors, in relation to the permanent academic staff.

4. It is remarked that there are big deviations with respect to the teaching load.

5. The research production of the academic staff of the study field is modest.

6. Ratio of academic and research workload of academic staff is an obstacle for scientific research.

7. International cooperation has not been developed in a systematic way.

8. The level of incoming mobility among teaching staff is low.

9. Gender balance deviates significantly from a reasonable state.

I - Assessment of the Study Field

I - Assessment of the Study Field

1.1 Management of the Study Field

Analysis

1.1.1. The analysis is based on SAR (see Section 1 and Section 2.1) and meetings with the study field team during the visit at BAT on March 16-17, 2023. The main goal of the study field "Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science" is to educate qualified programming specialists for practical work with computer software development and software based to the professional standards of a programmer and programming engineer.

In the study field, two programmes are directed for accreditation – the short cycle 2-year professional programme and the first cycle 4-year professional bachelor programme, and the short cycle programme is almost fully integrated within the first cycle programme. The programmes provide a good entry point to the ICT industry. Employment in ICT is increasing, and as there are about 670 graduates in Latvia every year, there is a very noticeable shortage of ICT specialists. The study field is based on industry trends, as gathered from the opinions of leading ICT companies (like Accenture) and the demand for programmers observed in the labor market. To achieve the aims, most of the educators specialized in the field are practitioners, and modern material and technical base is available for the study process. The positioning of study programmes is clear – the short-cycle programme constitutes the first half of the first cycle programme to a great extent. The programmes of the study field are consistent with the strategy of the institution as a flagship of business education by focusing on specialists demanded by employers.

1.1.2. The analysis is based on SAR (see Section 2.1.2) and meetings with the study field team during the visit at BAT on March 16-17, 2023. SWOT factors have been identified and analyzed. The main strengths are professional educators, which are practitioners, as well as high demand for the professionals in the field. The main challenges are increase of research activities as well as workload balance among lecturers. Following SWOT analysis, elaboration of the Study direction development plan was carried out (Annex 04_Studiju virziena attīstības plāns_en.docx). The Study direction development plan lists and briefly describes the main objectives and activities of the study field, some important ones to be named: intensification of scientific activity, extending cooperation with other HEIs and companies, as well as increasing professional qualification of the staff.

1.1.3. The analysis is based on SAR (see Section 2.1.3) and meetings with the study field team during the visit at BAT on March 16-17, 2023. The responsible person for a study programme is the head of the programmes. The quality of each study programme is ensured by the head of the programme, while the academic staff is responsible for individual courses. Study field director reports to the Senate and the ITN Council on the effectiveness and possible improvements by examining self-evaluation reports and potential amendments to the programmes. The IT Field (ITN) Council serves as a coordination structure of the study field. It examines the self-evaluation reports, recommends improvements needed, evaluates the development plan and actual trends. In the case of BAT, the same person is both the study field director and director of the both programmes. This makes the decision making process efficient; however, having decision-making in hands of a single

person entails certain risks. Documentation and discussions during the meetings show that the administrative and technical support is sufficient for the time being. The compact and efficient field management together with support from higher management make a good basis for the development of the study field.

1.1.4. The analysis is based on SAR (see Section 2.1.4) and meetings with the study field team during the visit at BAT on March 16-17, 2023. The admission process is centralized by BAT, and both programmes of the field are designed for high school graduates. Requirements for students starting the study program are indicated in the BAT Enrolment Regulations of the respective study year. The study results achieved through previous education or professional experience are subject to be recognized with the relevant credits to be awarded. The criteria have been defined for recognition of previous education and professional experience; a special recognition commission makes decisions on previous professional experience and non-formal education. The criteria are reasonable and effective. As the short cycle professional study programme is to a great extent the first part of the professional bachelor programme, after successful completion of the first level professional higher education program (college) "Computer Systems" students can continue studies in the Professional Bachelor's study program "Computer Systems" starting from the 3rd study year. BAT Enrolment Regulations can be viewed on the BAT website (https://www.turiba.lv/en/admission/admission).

1.1.5. The analysis is based on SAR (see section 2.1.5) and meetings with the study field team during the visit at BAT on March 16-17, 2023. The lecturer of the study course can develop their own criteria according to the expected learning outcomes of the course. The whole assessment system is regulated by BAT Examination regulations. The students can get acquainted with the criteria, requirements and procedures for student assessment on the BAT homepage (http://nodarbibas.turiba.lv/regdok_en.asp) and on BATIS under the section regulatory documents. To make the grading system more "transparent" and more understandable to students, each study program includes the number of regular tests and independent work and their weightage in the final assessment. Student surveys (Annex "Files.fm_Studentu_aptauja_2022_2023.pptx_un_2_citi_faili.zip") that are carried out at the end of each study course play an important role in determining the conformity of assessment methods to the program goals and the student needs. Students are asked to grade several aspects of the study process, including study process organization, provision, services, teaching staff, and study courses. Survey results are collected centrally and then brought to the management of the field. As the summary of student surveys of the last study year shows, for most aspects (e.g. provision, teaching staff, study courses), the results for the IT department are better than those for other faculties of BAT.

1.1.6. The analysis is based on SAR (see Section 2.1.6) and meetings with the study field team during the visit at BAT on March 16-17, 2023. BAT regards issues of academic integrity as very important. The Regulations on compilation of students' independent papers determine the sequence and procedure for writing individual papers, with particular attention to procedure for references. Integrity issues are also addressed in such internal documents of BAT as The Regulations on academic integrity and plagiarism (integration specific issues) and The Study Regulations (more general matters). As of November 15, 2019 BAT started using the Turnitin plagiarism system. No plagiarism cases were detected in the field during that time. Principles of academic integrity, as well as cases of plagiarism, are discussed during methodological seminars.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:

The aim of the study field is clear: to educate professional specialists in programming based on industry trends. The field consists of two integrated programs
– the short cycle 2-year professional programme, and
– the first cycle 4-year professional bachelor programme.
SWOT analysis reveals the main challenge for the study field. On the one hand, teaching staff mostly consists of practitioners of the field, a fact that can be considered as positive from a professional expertise aspect. However, research activities would be increased. Documentation and discussions during the meetings show that the administrative and technical support is sufficient. The compact and efficient field management together with support from higher management make a good basis for the development of the study field. The same person is both the study field director and director of the both programmes, which makes the decision making process efficient. However, this practice entails certain risks. The admission process is centralized by BAT. Assessment principles and methods of the students are clearly defined, and students' opinions are collected and considered. BAT has defined principles to detect and fight plagiarism, and several internal document regulate academic integrity issues; no plagiarism was detected yet in this study direction.

Strengths:
1. The study programmes of the field are based on industry trends and cooperation with important players of the industry.
2. Efficient decision making process.
3. Support to the study field from higher management.
4. Advanced plagiarism control is carried out.

Weaknesses:
1. Having the same person being both the study field director and the director of the both programmes entails certain risks.

1.2. Efficiency of the Internal Quality Assurance System

Analysis

1.2.1. BAT has an established quality policy, which is publicly available at its webpage under section "For Students"--> "Regulating documents"--> "Higher education"--> "Quality policy". The link is available at:

https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fbatis.turiba.lv%2FNormativieDokumenti%2FDokB%2F2008_gada_marta_sakot%2FSekretariats%2FKvalitates_politika_V66_4_vers_ENG.docx&wdOrigin=BROWSELINK

The quality policy on the website is available in English and Latvian and it depends on the language chosen of the website to operate in. There is also a link provided in SAR (see page 28) to the quality policy document in Latvian. The quality policy includes information on internal procedures of the quality management, study programs, study process, resources, information, personnel and others. According to SAR (see page 29), the quality policy is based on BAT Strategic Guidelines, which define the vision, mission and values of BAT. The quality policy is based on various principles, which define the BAT priorities that are competitiveness and to ensure a qualitative, labor market- and state recognized study process. According to SAR (see page 29), BAT has set specific priorities to achieve through the application of the quality policy outlayed principles, which are:
- Regular measurement of client satisfaction (with clients meaning students, graduates, employees and employers);
- Provision of high quality service;

- Continuous improvement to ensure efficiency and satisfaction;
- Openness and flexibility to meet the needs and demand of the clients;
- Ensure professional and personal growth.

According to SAR (see page 28), BAT has a Quality Management Manual, which is designed in accordance with the Standards and Guidelines for Quality Assurance in the European Higher Education Area and the strategic guidelines of BAT. Internal documents within BTI are approved by the Senate, including The Quality Management Manual.

Based on the information gathered during the onsite visit, each and every person at BAT has a specific role and duties assigned to work on. Coordinators of International Projects focus on BAT involvement in international projects as well as to assist students with provision of information on exchange opportunities, internships and other relevant matters. The Quality Manager is responsible for the processes of quality management and internal quality assurance mechanisms in place and their efficiency, gathering data on student satisfaction and conducting analysis. The Rector and Vice-Rector are responsible for strategic planning of the BAT's future development, involvement of BAT in scientific projects, possible improvements of pedagogical aspects of BAT, whereas the Chief Financial Officer overlooks the financial capabilities, the budget of BAT. In this study field, there is one study programme director for both of the study programmes, who is also filling the role of the director of the study field. This person is responsible for the particular study programmes and the improvement of the study processes within them. Each BAT employee holds responsibility for the implementation of the qualitative work in their activities. Based on the information provided by the onsite visit, there are internal audits conducted to monitor quality assurance.

According to the information gathered during the onsite visit, the person responsible for quality management, stated that one of the most substantial parts of the quality assurance mechanism is the analysis of student surveys that are conducted on a regular basis in two different ways. As provided, BAT has implemented an annual survey of the overall study process that takes place at the end of the study year. The other form of surveys are semester surveys that take place two times a year about study course implementation, where students can evaluate the content, the lecturer work, etc. Then, the data is analyzed by the Quality Manager. One of the examples mentioned when student opinion was taken into account, is when students stated that there is lack of information provided to students from BAT side, and that it is hard to follow the changes made in study schedule, for example. Based on that, BAT introduced the BATIS platform system where students had their profiles made on and thus, students can more easily access their study courses, lecture schedule and other topical matters. BATIS platform is considered as a practical and useful tool to use for various forms of flow of information exchange, as it is rather easy to communicate through the platform and for students to reach out in case of need to the lecturers. Based on this information gathered, it can be stated that students are very actively involved in the study development and quality assurance processes.

Experts believe that the system established and developed by BAT enforces a quality assurance system, which contributes to the achievement of the aims and learning outcomes of the study field and the relevant study programmes. As the surveys of students are conducted on a regular basis, the system is considered to ensure continuous improvement, development, and efficient performance of the study field and the relevant study programmes.

1.2.2. There are specific procedures implemented for changes to be made in the relevant study programmes. According to SAR (see page 35), changes in the study program can be proposed by the Study Programme Director, the Dean, the Head of Department, the Faculty Council, and the Student Association. According to the procedure in place, desired changes in the study programme shall be

submitted by the Study Programme Director for consideration by the Faculty Council, which shall decide on making the changes and forwarding it for approval to the Senate. After approval of the changes by the Senate, the Study Programme Director prepares an application, signed by the rector, about the changes in the study programme and submits it to the AIC.

More frequent review of relevant study programmes takes place once a year. According to SAR (see pages 35-36), review of the study programmes, including their objectives to be achieved and the requirements of the labor market, takes place by regularly preparing the study programme plan for the new study year. Any changes made, such as new optional courses, updating of compulsory courses, changes in regulatory requirements are evaluated and approved by the ITN Council and Senate.

It is clear from the onsite visit that students are actively involved in the procedure of study programme development and the quality maintenance. As already mentioned in 1.2.1., students are participating in surveys twice during the study year and in one annual survey for overall evaluation of the study year and quality of studies. However, it was clarified during the onsite meeting that there is a very limited feedback system in place to the students of the survey results. There is no data published accessible to students on BATIS platform or the website of BAT. The only form of feedback exchange with students takes place when student survey results are gathered and discussed by the management and study director with participation of the student association. Technically, this means that some group of students get to see the results of the surveys and review them, although it is not freely accessible to all students that wish to be informed of them.

According to the information gathered from onsite visits, employers, to some extent, are involved in the internal quality assurance process. During the meeting with employers, it was clarified that when a student internship ends, the employers evaluate the skills the student has acquired and what they are lacking. Also, some of the employers stated that they are guest lecturers to some courses at BAT. One employer indicated that he was a part of the expert group developing one of the study programmes. During the exchange of information with the employers, they stated that they wish that students had more group work as IT students are usually introverts preferring to work independently and do not know how to work in a team after graduation. Employers emphasized that students and new graduates have to understand that the programmes are working and cooperating with each other and not just focus on their own software. Employers also emphasized that it does not matter to them from which higher education institution students come from as long as they have the necessary skills to successfully perform the assigned tasks. IT field employers take very seriously the skills of the people they employ and thus, they have internal evaluations in a test form to measure the level of skills that people applying have. Employers indicated that there is no specific form of survey or questionnaire form that they fill out on a regular basis. Main form of exchange of information between employers and BAT takes place informally, while experts believe that there has to be some form of formal information and feedback establishment as well. Employers, thus, also do not receive any feedback of the data gathered on the survey results sent out to them as there is none to evaluate or analyze.

As the IT study programmes implemented are new, there are no graduates yet of the Bachelor's study programme, whereas at this point there are 5 graduates of the first cycle higher education study programme. The graduates expert group met were the ones who have recently graduated the so called "short cycle programme", and now they have started the second round of their studies of another two year term, which technically means that they are BAT students at this moment as well. In expert opinion, this means that it is hard to evaluate the graduate involvement in quality assurance procedures, since the graduates that are also current students could not indicate whether

they have filled graduate surveys.

1.2.3. According to the information gathered during onsite visit, there are 4 different types of mechanisms developed for student complaints and suggestions. Firstly, there are official applications of claims through the Study Information Centre (SIC), which will then be addressed to the responsible department. According to SAR (see page 37), this procedure is set out in the procedure for reviewing student applications received by the Study Information Centre approved by the Senate on 24.04.2019 and the Board decree dated 26.04.2019. Based on the document "Procedure for acceptance and review of claims", approved by decree No.55 of the Deputy Chairman of the Board as of 14.09.2011. states that BAT accepts any claim addressed to it by a natural or legal person and gives its author a substantive reply in accordance with the procedures prescribed by the laws and regulations of the Republic of Latvia. Claims in writing shall be filed and registered with the Secretariat or the SIC, as appropriate. Written claims shall be answered in writing. If the complainant wishes to address the matter to BIT management in person, the Board Secretary shall arrange an appointment. Second form of complaints and proposals is personal complaints by the student who personally goes to the faculty and discusses the problem with the Study Programme Director and/or the lecturer. Third option is to communicate through the platforms such as Whatsapp or Telegram with the relevant person as these platforms are actively used by the IT department. Fourthly, students can also make comments on the lectures they are taking in Google Docs after the lecture and evaluate it, make suggestions.

In case of formal application of the complaint or suggestion, according to SAR (see page 38), after receiving a written complaint, the Secretary of the Secretariat or employee of SIC no later than the next working day forwards it to the head of the structural unit responsible for the particular issue. Prior to that Secretary or an employee of SIC should verify if the complaint concerned is not a repeated complaint. In case of dealing with a repeated complaint, it is submitted attaching documents related to previous claims or complaints. In accordance with written instructions of the head of a structural unit, the secretary of the Secretariat or a SIC employee forward a copy of complaint to the responsible executive who prepares information necessary for assessment of the situation. The Head of the responsible structural unit assesses the prepared information and takes a decision. The Secretary of the Secretariat or a SIC employee ensures that the response is provided in a timely manner.

When asked to the students whether they are aware of the complaints and suggestions system, they stated that they are aware and during Covid time the most commonly used approach was the evaluation of the study course lectures in the Google docs. Students do not remember receiving specific feedback on the evaluation but some of the students indicated that they feel heard and that their opinion is taken into account. One of the students stated that one course was purely and deeply theoretical with no practical skill application and then the student reached out to the Study Programme Director and stated the problem. After that the Study Programme Director made some specific changes together with the lecturer in the study course and improved it.

1.2.4. According to SAR (see page 38), statistics are compiled in accordance with the Personal Data Processing Policy (approved by the Management Board decision No 21 of 08.05.2018). According to the information outlined in SAR (see page 39), BIT ensures regular collection and analysis of various different types of statistics relevant to the study programmes implemented in the study field. As stated, BAT collects and analyzes student numbers and status. This information is updated monthly and has been outlined in external reports. Another form of data collected is mobility and student involvement in study exchange activities. This information is updated continuously. There are also other forms of data analyzed such as internship placements of students. If necessary, specific data

may be requested from the Study Department, International Department, and Faculty for collection and analysis. The data are used for the improvement of the study discipline, including changes in the credit points of individual study courses, addition of new study courses (especially, in Parts B and C), conversion or removal of outdated study courses.

As outlined in1.2.2., there are mainly two forms of feedback (surveys of students and internship surveys filled by employers) implemented in the study field and internal quality assurance. However, as stated previously, there is no data on the graduates' employment rate as there are no graduates yet of the study programmes. There are also no formal employer surveys which significantly limits the amount of data to analyze in regards to employer satisfaction of the programmes and their ability to prepare students for the labor market. When asked during the onsite visit in regards to the reasons for dropouts of students, there were various reasons mentioned such as financial difficulties to pay for the studies, hardship to combine studies with work as well as other personal matters. Although, BIT mentioned that it is rather hard to clarify the reasons as students usually just disappear at one moment without large willingness to communicate with BIT for the reasons of dropping out or possibly taking an academic year from the studies.

From the information and data provided, it is not exactly clear to the experts how BAT analyzes the data, whether BAT provides feedback to students of any data results, and how the exchange of information in regards to data statistics takes place. There is no clear clarified structure seen on this matter. It is also advised for BAT to make precise conclusions from the data gathered and come up with specific goals on how to address the problems, such as drop-out rates. There has to be a detailed strategy that could help to tackle the issues in place, for each one a specific approach.

During the onsite meeting, experts met also with the HEI of BAT and it became clear that the amount of students enrolled in the study programmes are comparably small to other universities, such as RTU and UL. From one side, it is a great benefit for the students to have more of a personal approach from the lecturers, however, it has to be noted that the amount of students also influences and makes a large impact on the financial aspect of BAT. Thus, BAT has to come up with a specific plan on how to address this matter. Apparently, experts are aware that the IT field has a high demand and it is going to remain in the future, but the importance is for BAT to ensure that its IT programmes stand out and attract students so that they choose BAT instead of RTU, UL or any other university abroad. It has to be done with a purpose so that the implementation of the IT study field pays back not evens out to a 0.

1.2.5. BAT has its official website available at: https://www.turiba.lv/lv/ . It provides detailed information on the higher education institution and the existing study programmes within each of the study fields. The webpage is available in both languages - Latvian and English. All the relevant study programmes of the study field can be found in the webpage of the BIT under section "Uzņemšana" finding "Studiju programmas" where anyone can find the level of studies of their interest as Bachelor, Master, Doctoral and College level and from there find the study field of interest. Following from there, there are descriptions of the study programmes with the necessary information - study length, degree obtained after graduation, qualification obtained after graduation, language of studies and other relevant information. The provided levels of studies by BIT are - College study programmes, Bachelor's study programmes, Master's study programmes and Doctoral study programmes. The information published on BAT website about the study programmes of the study field of Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science (https://www.turiba.lv/lv/uznemsana/studiju-programmas-1/bakalaura-programmas/datorsistemas and

https://www.turiba.lv/lv/uznemsana/studiju-programmas-1/1-limena-koledzas-programmas/datorsiste mas-1)
corresponds to the information available in the official registers (VIIS and E-platform).

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
BAT has established a quality assurance system that is publicly available on its website. Students are actively involved in quality assurance processes, including through regular surveys and complaints and suggestions mechanisms. BAT regularly monitors student satisfaction on the study courses and lecturers. Employers to some extent are part of QA processes, as they provide feedback to student internships. However, they are not a part of an established official feedback mechanism. As there are no graduates yet of the study programmes, this aspect could not be assessed. BAT summarizes the data collected regularly. There is a statistical data collecting system established; however, it needs to be improved. Information about the study programmes is accessible on the BAT website in English and in Latvian.

Strengths:
1. Different forms of complaints and proposals mechanism.
2. Active student involvement in surveys.

Weaknesses:
1. No official form of survey/questionnaire that allows to gather feedback from employers.
2. No feedback provided to the stakeholders. Students have no access to the summary data of survey results (only members of the Student Association).
3. No clear strategy on how BAT plans to tackle drop out rates of the students.
4. No specified strategy on how to increase the amount of students in the future.

Assessment of the requirement [1]

1 R1 - Pursuant to Section 5, Paragraph 2.1 of the Law on Higher Education Institutions, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study field whilst implementing its internal quality assurance system:

Assessment of compliance: Partially compliant

BAT has established a quality assurance system and developed a Quality Policy and it is available to all interested parties on the BAT website. Monitoring of the implementation of the strategic plan is carried out every year, evaluating the achieved indicators. Students are a substantial part of the improvement of the study programmes. However, employers should be involved in the study quality processes more. Based on the information acquired during onsite visit when having discussions with the employers they indicated that there is no specific form of survey or questionnaire form that they fill out on a regular basis.
As it was clarified, the main form of exchange of information between employers and BAT takes place informally, while experts believe that there has to be some form of formal information and feedback establishment as well. If there is only informal feedback loop, then BAT has to be able to show that they are implementing that incorporating it and feed it into QA system and work on it.
Secondly, as specified during the visit, employers also do not receive any feedback on the data gathered in regards the survey results. There is no conclusion on the feedback loop of QA sent out to them as there is no survey results to evaluate or analyze.
Thirdly, there is feedback present from internships and expert group is not arguing with it.

However, the before mentioned system is a separate system and part of QA and it is not implemented and expert group wishes to point out that a formal/informal form of feedback specifically which regards only employer satisfaction with student knowledge, what could be improved, is needed outside the established form of internship surveys It was not possible for the expert group to evaluate the graduate participation of the quality assurance processes.

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

Assessment of compliance: Fully compliant

BAT has established a quality assurance system and developed a Quality Policy and it is available to all interested parties on the BAT website. There are various procedures in place to ensure quality of higher education such as Quality Manual, BAT Development Strategy 2021-2025.

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

Assessment of compliance: Fully compliant

According to SAR (see page 14), the development and approval of programmes is carried out in accordance with the procedure developed by BAT. During the development of the study programme, the qualification obtained in the programme is coordinated with the appropriate level of higher education in the national qualification framework and, accordingly, also in the framework of the qualifications of the European Higher Education Area. Study programmes are regularly audited and improved.

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

Assessment of compliance: Fully compliant

Based on the information provided in SAR (see page 14), the course descriptions are published in the BATIS system and are readily available to students who study the relevant study course. Every year, at the meetings of the Council of Faculties/Departments, the proposed results of the study course description are evaluated, it is discussed whether they have been achieved, or are achievable, and whether there is a need to improve the study course descriptions by clarifying the wording of the results or evaluation criteria. BAT has developed the Regulations for Examinations, which state the general principles of assessment and certain procedures. A study course has been introduced in each study program, within the framework of which students are informed about the planned results of the study programme.

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

Assessment of compliance: Fully compliant

According to SAR (see page 14), BAT has developed and implemented the Personnel Policy, rules for improving the professional competence of lecturers, and rules for financing scientific activity. Staff were involved in the system development and implementation. The budget provides funding for raising the qualifications of academic staff and supporting scientific activity.

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

Assessment of compliance: Partially compliant

BAT has implemented surveys as the main tool of analysis of student satisfaction of the study process, study courses and lecturers. Their surveys are conducted regularly to monitor the study quality. As clarified by the employers there is an opportunity for employers to participate in the improvement process of studies through evaluation of students in internship surveys, however, as expert group agrees, there has to be another form of employer satisfaction, which is separate from internship surveys and is specifically focused on employers interests alone. As specified by the management and Quality Manager during the visit, there are mechanisms described of graduate surveys in internal regulatory documents, however, it was difficult to evaluate their practical aspect of implementation due to no graduates of the new IT study programmes.

7 1.6 - The higher education institution/ college ensures continuous improvement, development, and efficient performance of the study field whilst implementing its quality assurance systems.

Assessment of compliance: Fully compliant

There are various mechanisms and tools on how BAT ensures continuous improvement, development and efficient performance of the study field. These mechanisms are provided and outlined in the relevant quality assurance documents as BAT Quality Policy, Quality Manual, BAT Development Strategy 2021-2025 and other documents.

1.3. Resources and Provision of the Study Field

Analysis

1.3.1. From the hearing and the interviews, the committee understands that a serious financial investment has been made towards establishing the whole institution, and the new study field (that of Computer Systems) besides other study fields, which already run with quite a success in terms of recognition and sustainability. It is reported that since last year, the budget of the new study field is balanced with respect to income from fees vs. operational expenses, salaries etc. Subsequently, the financial management of the study field is carefully designed and implemented. Overall, it is understood that the institution is responsibly managed and financed. A system for funding scientific and/or applied research and/or artistic creation is defined and implemented and it is effective if one considers the "output" in terms of quality and perspective for growth. Also, it is certain that there is an amount dedicated for research purposes, including specialized machinery and publication expenses. However, this amount is not great and is not spent to its entirety. The latter fact needs to be well monitored in future, towards strengthening the research output.

1.3.2. From the visit at the campus premises, it is certified that a wide range of resources is available to students and teaching staff. More specifically, the study field has been well equipped: lecture rooms and labs are in an excellent operational condition with a plethora of networked machinery. Plus, the students can make use of a well organized library with studying spaces, an exhibition of the publications of the own publishing house, a cafeteria, a Mensa, a sports hall, a dormitory, a car park, as well as services online or in-person, including the potential use of incubating facilitation. All the above are nicely concentrated in the campus, in an ergonomic environment.

1.3.3. A unified system and procedures have been established for the improvement and purchase of material, methodological, informative, etc. provision. Library resources and databases are available to students and meet the needs of the study field. The library is well organized in specific sections related to study fields. In addition, there are plenty of desks, so the students can study individually or work in groups. Web access is also provided in general, as well as to digital libraries.

1.3.4. From the visit at campus premises, the committee of experts witnessed the following. With respect to the provided information and communication technologies for course delivery, the computing milieux is well organized as witnessed during the visit to a number of labs. In particular, there is a platform called BATIS, via which the students have direct access to assorted educational material and other BAT resources. For distance education, the Moodle platform is used. Notably, more or less, Moodle is the standard tool for on-line education delivery world-wide. The provided demonstration of the platform showed a full use of the system capabilities, including material, quizzes etc. Finally, it is understood that the software tools are mainly Microsoft-based (MS-based). It is essential to also support other operating systems, like UNIX, LINUX , as well as open source software (OSS).

1.3.5. From the interviews with the teaching staff, it comes up that they mainly consists of part-timers without doctoral degrees, who have parallel employment in the IT industry or they run their own IT businesses. The teaching personnel is qualified and acts at a high professional level, given that the desideratum is to direct students to acquire practical skills and give solutions to real-life problems. On one hand, the fact that students are guided to grasp a problem-solving attitude is positive. On the other hand, it must be ensured that in the future more qualified teaching personnel must be hired (e.g. Ph.D. graduates, with extensive research working experience), so that a research spirit is amalgamated into the teaching process. Besides, care must be taken to establish a group of permanent academic personnel and minimize the number of temporary teaching staff. Besides, an issue to be examined in the future when the number of students will increase, is that the teaching personnel should be trained towards training student in groups. Finally, from the Annex (10_IT_virziena_docetaji_en.xlsx) it comes up that gender balance issues have not attracted enough attention. In particular, male teaching staff dominate in IT related subjects, whereas female teaching staff dominate in non-IT related subjects (e.g. Languages).

1.3.6. As reported during the meeting with current students and alumni, there are certain measures for evaluation of the teaching personnel by students. After discussions with current students and alumni, it seems that - in general - students are quite happy and satisfied with their instructors, as well as the overall organization of their studies. It is expected that the outcomes of these questionnaires are used to improve applied procedures, materials and teaching approaches. Noticeably, the questionnaires are distributed after the exams. However, the standard international practice is to be distributed either during the last lecture before the exams, or during the exams but before distributing the exam papers. Significant statistical populations must be ensured to derive reliable conclusions, without sacrificing data protection issues.
There is a certain and detailed policy with respect to hiring academic personnel, as well as remuneration, with extra bonuses and other benefits (see SAR, page 40). Policies (including seminars, support for extroverted activities etc) exist for improving the qualifications of the academic personnel (ibid). Future measures should include specific actions to augment student team work. This implies that proper didactic approaches have to be devised and implemented.

1.3.7. As mentioned previously, the teaching personnel are mainly part-timers, who have been hired at different times during the previous years according to the evolving needs of the programs. It has been verified during the meeting with the academic personnel that the teaching load is not balanced among them. For example, the teaching load spans from roughly 3 hours/week up to 15 hours/week. It is necessary to pay special attention towards reaching a more balanced teaching workload, and probably other academic duties (i.e. administrative etc).

1.3.8. From the interviews with the BAT administration, the staff and the students, it is certified the institution shows particular care towards facilitating students. The crucial issue of accommodation of

foreign students has been solved with an in-campus dormitory of big capacity. For distance learning students provision has been taken by using extensively proper methodologies, tools and platforms, such as moodle, forums etc. In addition, the International Department psychologically supports students, if necessary. Noticeably, a specific document (Student Council Regulations) determines in detail the provided support (see SAR, page 58).

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:

Given the European demand for IT professionals, it is certain that there is room for computer science/ engineering studies at university level. BAT is correctly aiming at satisfying this need. BAT is investing cautiously in the new study field: well equipped laboratories have been set, besides other general facilities such as classrooms, library, mensa, dormitories etc. Proper platforms are in operation to support distance education. Academic personnel have been hired, mostly with professional expertise in order to train the student with practical capabilities. Although the number of students is not great, the budget is balanced. Finally, the students are quite satisfied with respect to their studies and their mentors.

Strengths.
1. Adequate financial resources, healthy financial management.
2. Well organized campus with all essential infrastructures and services.
3. An operating library with reading rooms, subscriptions to some digital libraries of publishing houses for free access.
4. An own publishing house and incubator capabilities.
5. Staff experienced in IT industry.

Weaknesses
1. The Computer Science section of the library is not sizable.
2. The software tools are mainly Microsoft-based.
3. There is no steady/permanent community of the teaching personnel.
4. The number of visiting lecturers is significant, related to the number of permanent staff.
5. Genders have particular roles in the curriculum (different gender distributions in IT curses vs. non-IT courses)
6. There is significant deviation with respect to the teaching load.
7. It appears that the involvement of the academic staff into research activities is not up to the proper level.
8. There is hardly a specific and intensive student teamwork.
9. Questionnaires are distributed after the exams. Statistical significant is not ensured.

1.4. Scientific Research and Artistic Creation

Analysis

1.4.1. The Development Strategy 2021-2025, developed in 2020 (last update in 2021) notes that "BAT ensures a close connection between business and applied science, implementing current and meaningful research" (see SAR, page 6). It is also mentioned that among the main tasks for the study direction there are: "To conduct research in Information technology based on professional practice and to promote the proportion of research in studies" (see SAR, page 18). The study direction and the individual study programmes have very good prospects in the Latvian as well as the global context. Cooperation among HEIs, research institutions and private sector as well as the transfer of research and innovation to the Information technology sector has also been determined

as priority for Latvia in the near future, and therefore the aims of the study direction and its implementation are directly related to the interests of the state and its vision of development (see SAR, pages 18-19). It is also mentioned that the permanent staff members are involved in various projects to enhance their practical skills and carry out scientific research as well (see SAR, pages 18-19).

All references indicate that scientific research is given central place and high priority in all strategic documents of BAT. This interpretation was confirmed during the interviews with the BAT management. Thus, BAT and the study field have clearly identified research among its priorities and strategic goals; the study field complies with the development aims of BAT. However, although BAT is willing to become a research-led institution in its strategic goals, no clear implementation plan and evidence to achieve such a level was found. While BAT has implemented systems of quality assurance and continuous quality improvement for its educational programmes, in relation to its research activities such systems were found to be underdeveloped, with limited formalized control. Stakeholder involvement in research activities is also generally limited. Thus, BAT has partly implemented a policy of promoting research excellence. The academic staff needs more input than the baseline to achieve a higher research standard.

1.4.2. According to SAR (see pages 56-57) the relationship between scientific research and the study process is closely connected and mutually beneficial. Lecturers' research results are used in the study process, while the study process inspires new ideas for scientific research. Students are required to develop research papers related to their study courses and carry out real research for their qualification paper or bachelor thesis. Educators provide guidance on independent research and library database usage. An international scientific conference is held annually, with a focus on the student section, whereas the students are encouraged to participate with research developed in connection with their studies. Research is increasingly used in student theses, and the IT field is organizing the XXII International Scientific Conference "Artificial Intelligence and Green Thinking" in 2021.

These statements above were confirmed during the interviews with students, staff and graduates. The students are involved in scientific research through project- and problem-based learning activities and the opportunities are provided to present their research in conferences. Lecturers of the study programmes promote students to take part in practical studies and development projects. Thus, it was evidenced that students of the study programme were involved in scientific research in a variety of areas of the study programmes and BAT has developed mechanisms to promote the involvement of the students in scientific research that seems to function well.

1.4.3. SAR (see pages 57-58) states that BAT educators engage in international collaboration for scientific research through participation in conferences abroad, cooperation with foreign researchers, and implementation of international cooperation projects. BAT regularly organizes international scientific conferences and publishes a scientific journal, "Acta Prosperitatis", which features research articles by educators and doctoral students from Latvian and foreign universities. The study direction also benefits from the cooperation, as lecturers involved can use their newly acquired experience and competences to work with students. Examples of successful international cooperation projects are highlighted, such as the Erasmus+ project "Introducing training on user testing with people with disabilities into UX design and related higher education programs" and the ESF project "Digitalization initiatives for the improvement of study quality in strategic areas of specialization of universities". Overall, BAT plans to continue developing international scientific cooperation for the benefit of its study programs. The interviews with the academic staff and analysis of the publications of the academic staff confirmed that international cooperation in the

field of scientific research is still quite modest.

1.4.4. The strategy of BAT focuses on the development of academic staff, with a stable team that implements the study process based on theory and practice. BAT provides opportunities for academic and further education, including English courses and participation in ERASMUS+ projects. BAT funds the publication of scientific monographs and participation in conferences. The academic staff is encouraged to publish articles in internationally cited databases and is evaluated based on their research activities, including participation in research projects and conferences, and publication of articles and monographs. BAT also encourages its teaching staff with experience seminars where they can share their experiences and listen to cooperation partners from Latvia and abroad (see SAR, page 59).

However, on the basis of interviews it seems that BAT has not yet developed sufficient mechanisms for the involvement of teaching staff in scientific research. It seems that only publishing (in outlets indexed by Scopus and/or Web of Science) counts, not applying for and receiving research projects, organizing research conferences and workshops, reviewing doctoral theses at foreign universities, being a member of the editorial boards of pre-reviewed international journals, reviewing research articles in research journals, etc. There was no evidence of supporting academic staff in the field of open science and in the research data management (e.g. creating data management plans).

There was no evidence that BAT and the study field have an accurate and reliable system for recording the research results of the academic staff. The research production of the study field is rather modest (the only two researchers have h-index in the Web of Science 4 or 3, all others have much lower or non-existent; in the Scopus it is a bit higher, but not too much). The motivation of the academic staff to contribute to the research activities is not effectively supported and there are no clear mechanisms for their involvement. Ratio of academic and research workload of academic staff is an obstacle for scientific research and perhaps also for methodological and technological innovation.

Thus, the Expert group finds no strong evidence of a system of institutional level recognition and support to engage teaching staff in scientific research. Mechanisms to ensure an efficient operation of research activities are not well developed and systematically monitored. While the importance of research is clearly in evidence in the institution's strategic goals and there is a broad awareness among the academic staff of the importance of research, this is not clearly translated into an apparent awareness of the importance of achieving the highest quality outputs. As a result, the research efforts do not fully make an intellectual contribution to the institution's reputation. They have an institutional conference where students and staff can publish their research results, but the quality criteria for accepting high-quality publications are not clearly set.

1.4.5. BAT encourages student involvement in scientific research within its study programs. Short cycle professional higher education program students carry out practice-based research work and present their study and qualification papers, which enables discussion of the research results and their practical applications. First cycle professional higher education program students are involved in research of various types and levels of complexity from the first year of study. Students' interest in research is stimulated through study courses, research papers, and the opportunity to participate in international competitions. BAT provides opportunities for students to present their research work at annual scientific conferences and publishes the best student research works on its website (see SAR, page 60). These statements were confirmed during the interviews with students and staff.

1.4.6. BAT applies different study process innovations and methods. Lecturers participate in

seminars to acquire various skills and knowledge, such as innovations in pedagogy, language competence, contemporary teaching methods, and academic integrity. The IT direction has a business incubator and organizes the "Business Night" contest where participants create a business idea plan. Lecturers participate in providing consultation and evaluating the results. Some lecturers have worked as experts of the Latvian Council of Science, indicating research quality and scientific innovation. Innovative solutions in the study process promote greater student engagement and interest, and have produced excellent results, such as a student winning first place in an international competition thanks to the "Design Thinking in the IT Industry" study course (see SAR, pages 60-65).

However, the interviews with management, academic staff, students and graduates did not indicate that innovative solutions (product, process, performance, organizational, methodological, technological innovation, etc.) are extensively implemented in the study process - no innovation in the use of learning methods or technology stood out – innovative learning design models, learning analytics, open digital badges, use of available functionalities of the learning management system Moodle, online whiteboards or possibilities of artificial intelligence.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
The directions of scientific research in the study field comply with the development aims of the higher education institution and they are relevant to the study field and the relevant industry. The relation between scientific research in the study field and the study process has been defined. Scientific research is integrated in the study process of the study programme. BAT has developed mechanisms to promote the involvement of the students in scientific research. International cooperation in the field of scientific research within the study field takes place to a certain extent. BAT has not yet developed mechanisms for the involvement of the teaching staff in scientific research. Innovative solutions are implemented in the study process only to a small extent.

Strengths:
1. BAT and the study field have clearly identified research in its priorities and strategic goals.
2. The directions of scientific research of the study field comply with the development aims of BAT.
3. The directions of scientific research are relevant to the study field and the relevant industry.
4. Scientific research is included into the study process of the study programme.
5. BAT has developed mechanisms to promote the involvement of the students in scientific research.
6. Students develop research skills through various courses, project-based activities and final thesis and have opportunities to present their research in the conferences.
7. BAT supports attendance of academic staff in conferences, publishing and provides resources for these purposes.

Weaknesses:
1. BAT has not developed a clear implementation plan to achieve the status of a research-oriented institution. It seems that the main goal is to engage students in research, rather than focusing on high-level research, that is, how to contribute to nationally and internationally recognized research.
2. BAT has not yet developed mechanisms for the involvement of teaching staff in scientific research.
3. The research production of the academic staff of the study field is modest.
4. The motivation of the academic staff to contribute to the research activities was not identified during the interviews.
5. Innovative solutions are implemented in the study process to a small extent.

6. Ratio of academic and research workload of academic staff is an obstacle for scientific research.

Assessment of the requirement [2]

1 R2 - Compliance of scientific research and artistic creation with the level of development of scientific research and artistic creation (if applicable)

Assessment of compliance: Partially compliant

International cooperation in the field of scientific research within the study field takes place to a certain extent. BAT has not yet developed successful mechanisms for the involvement of the teaching staff in scientific research. Innovative solutions are implemented in the study process only to a small extent.
Suggestions for developing a successful research mechanism:
1. Foster a research culture by emphasizing its importance and providing incentives, resources, and recognition for academic staff.
2. Offer research training programs, mentorship, and guidance to enhance the research skills of academic staff.
3. Encourage interdisciplinary collaboration with external institutions.
4. Establish a system to assist faculty members in identifying and securing research grants and funding opportunities.
5. Streamline administrative processes to reduce bureaucratic barriers and minimize paperwork.
6. Recognise and reward research excellence through awards, honours, and internal grants.
7. Ensure access to adequate research facilities, equipment, and resources.
8. Implement a performance evaluation system and provide constructive feedback to enhance research output.
9. Introduce internal seed grant programs to encourage small-scale research projects.
10. Support faculty members in publishing and disseminating their research findings through high-quality publications and conferences.
Suggestions to address the lack of implementation of innovative solutions in the study process:
1. Establish an Innovation Committee comprising faculty members, instructional designers, and relevant stakeholders to identify and implement innovative solutions.
2. Foster a culture of innovation by promoting open dialogue, idea sharing, and recognizing innovative initiatives.
3. Provide professional development opportunities for faculty members on innovative teaching methods and educational technologies.
4. Collaborate with instructional designers and educational technologists to integrate innovative solutions.
5. Encourage pilot projects and research to test and evaluate innovative practices.
6. Emphasize collaborative learning and peer interaction through online platforms and group projects.
7. Explore and adopt educational technologies that enhance learning experiences.
8. Use learning analytics to inform instructional decisions and personalize learning.
9. Collaborate with external partners to share best practices and explore innovative solutions.
10. Establish a feedback loop and evaluation process to continuously improve and align with educational innovation trends.

1.5. Cooperation and Internationalisation

Analysis

1.5.1. SAR (see page 66) describes the various ways in which cooperation with Latvian and foreign

higher education institutions, employers, and professional organizations is implemented to achieve the learning outcomes of the study program. The cooperation with employers and professional organizations includes study visits, guest lectures, practice places, and industry trend analysis based on the opinions of leading IT companies and demand for programmers in the labor market. The cooperation is both contractual and long-term, and the study program also has cooperation agreements with other higher education institutions in Latvia for the provision of study processes, research, and continuation of education at a higher level. The study direction also participates in scientific conferences and invites colleagues from other universities. An example of cooperation with IT companies is given with Accenture Latvia's continuous BootCamp activities, which offer paid internships and are always full with at least 25 participants, and IT students actively participate in applying for them.

SAR and interviews with the management and academic staff confirmed that BAT collaborates with various institutions in Latvia within the framework of the study field. This cooperation aims to achieve the goals and learning outcomes of the study field and relevant study programs. The selection of cooperation partners is based on the specific characteristics of the study field and relevant study programs.

1.5.2. BAT collaborates with more than 100 higher education institutions worldwide, as well as employers, employer organizations, municipalities, non-governmental organizations, and scientific institutes, with a focus on achieving the aims and learning outcomes of their study field and programs. They participate in Erasmus+ mobility, double degree, and bilateral exchange programs, and regularly invite guest lecturers and visiting professors to enhance the quality of their studies. The institution is involved in several international projects, including the INTUX project and the "Digitalization Initiatives for Improving the Quality of Studies in the field of Strategic Specialization of Higher Education Institutions" project. They have successful cooperation with other higher education institutions in Latvia and abroad, and are focused on developing competences appropriate for the labor market for both students and lecturers (see SAR, pages 67-68). These arguments were confirmed during the interviews with representatives of students, graduates and academic staff. Discussions with management and academic staff indicated, that international cooperation has not been developed in a systematic way.

1.5.3. Teaching staff and students participate in both outgoing and incoming mobility, which provides added value to the implementation of the study process and the quality of studies. SAR describes the procedures and regulations for the Erasmus+ Mobility Program at BAT, which facilitates the exchange of foreign students and lecturers. Foreign students must apply through an online form and provide necessary documents such as their CV, identity document, photograph, and study agreement. The study agreement is signed by the foreign student and the partner institution and reviewed by BAT. If possible, the Dean and Vice-Rector sign the agreement. After completing studies, the foreign student is awarded certificates. BAT lecturers and staff are also eligible for mobility programs, and their selection process is determined by the Dean and Vice-Rector. After concluding tripartite agreements, the lecturer or staff member submits the Erasmus Mobility Report online. The appendix includes data on foreign students and teaching staff during the reference period (see SAR, pages 68-70). BAT has developed a sufficient system and procedures for the attraction of students from abroad within the study field. However, the attraction of the teaching staff from abroad still needs further attention.

According to SAR (p. 68) "The attraction of foreign students and lecturers mainly takes place within the framework of the Erasmus+ Mobility Program and its procedure is specified in the "Erasmus+ Mobility Program Regulations" (approved by the Senate on 22.05.2019)".

The process gives the progress to the quality of studies.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
BAT cooperates extensively with institutions from Latvia and abroad within the study field, and such cooperation contributes to the achievement of the aims and learning outcomes of the study field and the study programmes. The cooperation partners are selected in view of the specific features of the study field and the relevant study programmes. A common system for the provision of internships and the organization thereof has been developed within the study field. The employers are involved in discussing the content of the internship. The internship providers are satisfied with the knowledge and skills of the students of the study programme. However, BAT has not yet developed a sufficient system and procedures for the attraction of the teaching staff from abroad within the study field.

Strengths:
1. BAT has established good cooperation with institutions in Latvia and such cooperation contributes to the achievement of the aims and learning outcomes of the study field and the study programme.
2. The cooperation partners are selected in view of the specific features of the study field and the relevant study programmes.
3. A common system for the provision of internships and the organization thereof has been developed within the study field.
4. The employers are involved in discussing the content of the internship.
5. The internship providers are satisfied with the knowledge and skills of the students of the study programme.

Weaknesses:
1. International cooperation has not been developed in a systematic way.
2. The level of incoming mobility among teaching staff is low.
3. The system or mechanisms which are used by BAT to attract the teaching staff from abroad have not been very efficient.

Assessment of the requirement [3]

1 R3 - The cooperation implemented within the study field with various Latvian and foreign organizations ensures the achievement of the aims of the study field.

Assessment of compliance: Fully compliant

BAT cooperates extensively with institutions from Latvia and abroad within the study field, and such cooperation contributes to the achievement of the aims and learning outcomes of the study field and the study programmes. The cooperation partners are selected in view of the specific features of the study field and the relevant study programmes. A common system for the provision of internships and the organization thereof has been developed within the study field. The employers are involved in discussing the content of the internship. The internship providers are satisfied with the knowledge and skills of the students of the study programme. However, TAB has not yet developed a sufficient system and procedures for the attraction of the teaching staff from abroad within the study field.

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

Analysis

1.6.1. The analysis is based on SAR Section 2.6., and attachment - 18_IT_rekomendāciju izpildes pārskats_en.pdf. Previous accreditation of the study direction provided 18 recommendations for improvement of the study field. BAT considers 15 recommendations as implemented and 3 as planned to be implemented. However, some of the recommendations that have been implemented, are implemented with very vague achievable results and are defined to achieve results that are not sufficiently justified. For example:

- recommendation 1 - "Do more cooperation with industry and other universities – to improve contents and the teaching process", achievable goal is two new cooperation agreements. It is not clear why two new cooperation agreements are deemed to be sufficient. Also, both agreements are with other universities and there aren't any new cooperation agreements with the industry or any other form of cooperation with the industry mentioned in the self-assessment report. Thus, even considering the simplest goal of recommendation this recommendation is only formally fulfilled.

- recommendation 9 - "Define strategy for professional and didactic improvement of teaching staff", is formally fulfilled because yes, strategy is defined in BAT. However, there is no mention in the self-assessment report of whether the strategy is working. Furthermore, during interviews, we didn't find that there is a clear strategy for professional and didactic improvement of teaching staff in practice. Thus, even considering the simplest goal of recommendation this recommendation is only formally fulfilled.

- recommendation 18 - "Increase mobility both for teaching staff and students", where the achievable goal is defined as "max 2 students and max 2 teaching staff". It is unclear why achievable goals are defined not as "at least" but as "max". Neither it is clear whether mobility has increased compared to the previous period, as the self-assessment report doesn't mention previous numbers.

Some of the recommendations that have been formally implemented have not been sufficiently effective in resolving the underlying weakness and/or in completely removing its root causes. For example,

- recommendation 12 - "Programme tasks should be updated to be more concrete being more oriented to the computer system study program", doesn't mention or provide reference to analytics what and why was updated.

- Or recommendation 3 - "Offer training for teaching staff (both elected and visiting) to improve knowledge on the principles of student-centered learning" lists a long list of courses that have been provided to teaching staff. However, it doesn't provide a list of topics in these courses or whether the teaching staff has attended these courses or whether that is and will be a systematic approach to increase teaching competencies. Furthermore, as mentioned in the study program evaluation (both programmes, part 3.2.3) there isn't any evidence that student-centered learning is used sufficiently.

Lastly, as for recommendations marked as "formally fulfilled but have defined vague achieved results." – the main issue and experts' recommendation is that HEI have to define achieved results that are more specific, measurable, and achievable.

Summary:
Fullfilled: 8, 9, 10, 14, 15, 16,
Formally fulfilled: 6, 12, 13,
Formally fulfilled but have defined vague achieved results: 1, 2, 3, 11, 17, 18,
Planned: 4 (short-term, planned for 2022./2023.st.y.), 5 (short-term, planned for 2023./2024.st.y.), 7 (long-term, planned for 2023./2024.st.y.).

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
While most of the recommendations can be formally considered fulfilled, many aren't in practice. However, many of the achieved results were defined as very vague. Many of the recommendations are only formally fulfilled but not in practice and few have been formally implemented and have not been sufficiently effective in resolving the underlying weaknesses and/or in completely removing their root causes.

Strengths:
None

Weaknesses:
1. Many recommendations fulfilled only formally.
2. Although recommendations formally fulfilled, they have defined vague achieved results.

Assessment of the requirement [4]

1 R4 - Elimination of deficiencies and shortcomings identified in the previous assessment of the study field, if any, or implementation of the recommendations provided.

Assessment of compliance: Fully compliant

Most of the recommendations can be formally considered fulfilled. However, some of the recommendations that have been formally implemented and might not been sufficiently effective in resolving the underlying weakness and/or in completely removing its root causes. Some recommendations are formally fulfilled, but HEI has definied them with vague achieved results that aren't sufficiently justified.

1.7. Recommendations for the Study Field

Short-term recommendations

1. Establish and implement an official form of a survey that gathers feedback from employers.
2. Implement a system that provides feedback to stakeholders (students, employers and graduates) of survey results that they have participated in. At this point, students have no access to the data or summary of survey results. Only those who are members of the Student Association. There is no system of feedback to graduates or employers. It can be easily implemented through making data summaries and sending these results back to them in an email form.
3. It is necessary to stabilize the teaching personnel, so that their community can share and exploit from common accumulated experiences.
4. Guarantee that student questionnaires comprise sufficient statistical populations, so that anonymity is practically enforced.
5. Effort must be made towards a more balanced teaching load.
6. Find ways to balance and optimize the workload distribution.
7. Gender balance issues must be maintained with respect to teaching personnel vs. the taught courses, in an inclusion & diversity spirit.

8. Subscription to international publishing houses for free access to books, journals and conference proceedings must be enriched (e.g. IEEE, ACM, Taylor & Francis etc.).
9. It is essential to also support other operating systems, as well as open source software.

Long-term recommendations

1. Establish a strategy on how to increase the number of students in the study field in the future (including tackling drop out rates) as currently the student numbers in this study field are low. It has to be clearly stated and addressed in a document form with a clear outline of a plan.
2. Increase the number of permanent staff vs the number of visiting lecturers.
3. Increase incoming mobility among teaching staff.
4. Develop mechanisms for the involvement of teaching staff in scientific research.
5. Establish a structured and formal mechanism for international cooperation to facilitate academic and research collaborations.
6. Develop a clear implementation plan to achieve the status of a research-oriented institution.
7. Establish a structured and formal mechanism for international cooperation to facilitate academic and research collaborations.
8. Delegate some responsibilities of the study field/study programme director to some other person.
9. Particular effort is needed towards organizing specific student teamwork.
10. Questionnaires should be distributed before the exams. If significant statistical populations is not enforced, then the results should not be forcedly considered.

II - "Computer Systems" ASSESSMENT

II - "Computer Systems" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1.The first level professional higher education study programme "Computer systems'' complies with indicators, conditions and criteria of the study field of "Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science". The length of the implementation of the study programme, which is 2 years for full-time studies, is evaluated as sufficient for acquiring the necessary skills and way of thinking to enter the labor market. With this accreditation round BAT wishes to implement the study programme in part-time extramural distance studies that are planned to be for a period of 2 years and 4 months. Study programme correlates with the study field.

2.1.2. According to SAR (see page 99), the title of the study programme is "Computer systems" in the study field of "Information Technology, Computer Hardware, Electronics,Telecommunications, Computer Management, and Computer Science" with education classification code 41484 with the last 3 numbers (484) standing for programming according to the classification of Latvian education

which is available at:
https://likumi.lv/ta/id/291524-noteikumi-par-latvijas-izglitibas-klasifikaciju.

There is a qualification given after graduating as it is a professional higher education study programme - a programmer. According to SAR (see page 99), the main three goals of the programme are:
- To prepare professional specialists for independent work in the field of informatics by providing the short cycle professional higher education in the field of study "Information technologies, computer technology, electronics, telecommunications, computer control and computer science";
- To prepare qualified programming specialists for practical work with computer software development and software based on professional standard programmers;
- To prepare for continuing studies at the first cycle professional higher education study level.
According to the information provided in SAR (see page 101), the admission requirements of this programme is secondary education as well as knowledge of the English language at least at B2 level. The English language test for applicants who have taken the Centralized Foreign Language Examination in another foreign language is performed while taking the test. Those who have taken the Centralized English language test and have received B2 level do not have to take the English Language test. The programme is implemented in English language, thus the B2 level of English is required. It has been stated in SAR (see page 101), that after successful completion of the studies, students are not awarded with a degree but with a qualification of a programmer. According to SAR (see pages 101-102), the study programme is currently implemented in a full-time study mode with 80 CP to be gathered during the study process of 2 years. As part of this accreditation, the study programme is planned to be implemented also in the aforementioned part-time extramural distance studies with study length of 2 years and 4 months. The entry requirements for both study modes are indicated the same as well as the aims, title, code and aims, objectives, learning outcomes of the study programme. In the opinion of the experts, there should be some specificity and differences of different study modes as the tools used, the learning methods significantly differ. There is a more limited amount of interaction with lecturers, other students, thus, the approach of the whole study process should be different and specified. Overall, the learning outcomes, objectives of the programme as well as the tasks have been specified in SAR (see pages 100-101).

As it has been stated by the BAT representatives during onsite visit, it has been chosen strategically to implement the study programmes in English because of difficulty to compete with UL and RTU in regards to their programmes implemented in Latvian. That is why they have chosen a different approach focusing mainly on local students who wish to study in English. The difference in the study length of full-time and part-time extramural distance studies is very narrow. The difference is 4 months and there are no stated preconditions of the knowledge basis for the students who start their studies through part-time distance studies. Experts are aware of the purpose why BAT has decided to implement this form of studies, however, the expert group wishes to point out the possible problems that may arise during the study process such as a need of actual longer time to finish the studies. Full-time students regularly come to lectures onsite and do practical tasks. Part-time distance students most likely have work during the day and have a rather more limited amount of time in the evenings or weekends to keep up with their studies. Thus, the duration and scope of the study programme implementation has to be reviewed taking this into account. However, the implementation language is considered reasonable and justified.

2.1.3. It is unclear to the expert group what specific changes have been made in the parameters of this study programme. The only changes identified have been those that are indicated in the recommendations from the previous accreditation round. None has been indicated in SAR. One of the recommendations from the previous accreditation round, which has been specified in the Annex

18 - "IT rekomendāciju izpildes pārskats" , is to revise the contents of the course "Software testing and quality" to correspond to the title. Based on the recommendation there has been a review of the description of the study course "Software testing and quality" and its content. As the recommendation specified that the name of the study course "Software testing and quality", is equated to the International Software Testing Qualifications Board Foundation Certified Tester Level standard Version 2018 V3.1., two lecturers were sent for training in cooperation with TDL School to learn the basics of Certified Tester. This recommendation applied to both study programmes.

Second recommendation received was in regard to overall study programme content. Based on the recommendation received from the previous accreditation expert group, the study programmes need to be supplemented with content improvement and content development in databases, internships, qualification work. BAT has indicated that this recommendation has been implemented and the study programme content has been improved but there are no examples specified or mentioned in the document. This recommendation applied to both study programmes.

Third recommendation received was regards to alignment of the contents of the set of the courses "Software development fundamentals" to those of the first-level programme. BAT was requested to supplement the programme content for the study course set. BAT has indicated that this recommendation has been implemented, and there have been improvements made in the study courses and their contents but there are no examples specified or mentioned in the document. This recommendation applied to both study programmes.

During an onsite visit, experts asked the management how they are planning to maintain the same quality of studies for the part-time extramural distance study mode as well as what are the main differences of the study programmes? It was stated that the study fees for the part-time extramural distance studies are generally lower. During part-time study distance mode, students rarely have to come on-site, only to present their study papers, defend their thesis and to use library resources, if needed. The study requires that mostly students study independently and there are self-tests available for them to assess their skills and knowledge. Experts discussed this idea with the lecturers as well, and came to a conclusion that this form of studies, overall, sets a burden on BAT itself. For part-time distance learning it is more complicated to monitor student studying pace, their skills, studying regularity in parallel with work, for example. Another relevant aspect is that part-time students mainly focus on work and studies are secondary and thus, there are higher risks of dropouts of students as well as taking academic years. BAT has to take into account these aspects.

2.1.4. According to the information gathered during an onsite visit meeting, it became clear that there is high demand from the employers in regards to graduates of the IT field and who have the necessary skills for the labor market. During the onsite meeting with the management, they specified that the study programmes have been formed and implemented by a direct request from employers as there is a lack of workforce. This is a great indicator of social justification of the programme.

However, it has to be taken into account that there is quite substantial competition for the study programmes of BAT in the IT field as the two largest universities in Latvia are also preparing specialists every year in this field of studies. That makes it more complex to attract students to pay for their studies in a private institution with paid study places instead of budget places in a public university. According to SAR (see page 105), in 2022, 5 students graduated from the first level professional higher education study programme being the first graduates of the IT field of BAT. As far as known to BAT, 4 of the graduates work in the industry, which accounts for 80% of the employment rate. As clarified during the onsite visit, 2 of these 5 people are currently studying

further in the Bachelor's study programme at BAT as well. However, experts believe that 5 students is a comparably small number.

As indicated in the numbers provided by BAT, in the study year of 2019/2020, the number of students in this programme was 12, in 2020/2021 it was 6, in 2021/2022 - 6 and this year 2022/2023 - 18. The data shows a slight decrease during covid time and then an increase after that. Based on the information gathered during onsite meeting, it has clarified that the current flow of finances even out the expenses of the study field and study programme implementation and maintenance, which is planned to be improved when the programme has developed further and attraction of foreign students is applied. According to SAR (see page 105), this is defined in the responsibilities and strategy of the Development Department and the International Department.

2.1.5. N/A.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
All of the indicators of the study programme are in compliance with the existing preconditions of the implementation of the study programme. The study programme "Computer Systems" complies with the study field indicators, conditions and criteria. In the opinion of the experts, the title, code, degree to be obtained of the study programme, aims, objectives, learning outcomes and admission requirements are interrelated. However, experts believe that there should be some distinctions made between learning outcomes, objectives and aims between the study modes. The duration of the part-time extramural distance studies has to be analyzed and reviewed based on the study content and intensity of realistic time frames to manage the studies in the indicated time. The scope of the study programme implementation as well as the implementation language, are reasonable and justified. The study programme is implemented in English. The programme is at this point in rather low demand and there is a flow of incoming students every study year but rather small which is planned to be increased. It is also not completely clear what changes have been made in the parameters of the study programme and where to find these changes indicated as they have not been specified in the SAR and it is not clear what is meant with the accreditation sheet. Also, BAT has to take into account the risks of implementation of part-time extramural distance studies.

Strenghts:
1. None.

Weaknesses:
1. Low student numbers;
2. Unclarity of the changes made in the parameters. They have not been clearly specified in SAR and no annex document has been indicated to look for them;
3. No difference in the learning outcomes, objectives, tasks and goals in between the different study modes. There should be a specific number of differences as the study modes are significantly different from each other.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1 The first level professional higher education study programme "Computer Systems'' is provided as an 80 CP 2-year study programme. 54 CP is allocated to the compulsory study courses, of which 16 CP are allocated to internship, 22 CP are allocated to compulsory elective study courses,

4 CP are allocated to free elective study courses and 8 CP are allocated to Qualification Work.

According to SAR, in terms of topics, the compulsory study courses cover Mathematics (6 CP), the basics of computer architecture and software engineering, programming and algorithmization (16 CP), English language (6 CP) and mandatory course in civil defense and environmental protection (2CP). It is unclear why 6 CP are allocated to the English Language as language courses specifically a) are not required by law or regulations of the Minister Cabinet nor is complementary to the field of study.

The compulsory elective courses consist of field-specific study courses (18 CP, 16 CP for foreign students, where 2 CP is allocated to the Latvian language) and two courses in Business and Labor Law (4 CP). The content of the two courses in Business and Labor Law is general and thus not much interconnected specifically to software engineering or IT. There is no elective part in field-specific study courses, as the study programme has 9 courses in this part (22 CP) and students have to choose all 9 courses to reach 22 CP. Free elective courses are two other courses that are field specific - "Enterprise Continuous Application Software Integration" and "Graphics and Visualization" and it is unclear whether students can choose different courses.

Overall, the content of the study program is topical. However, the content of the study courses could be better interconnected and complementary. For example, Mathematics lacks a connection to specific IT applications. Also, 4 courses for learning programming in 3 different languages where some of the topics are overlapping seems a bit extensive. It is unclear if learning another language provides maximum benefits compared to learning other IT-related topics. Compulsory elective study courses in Business and Labor Law contain very general topics and are not customized for the study program or the learning outcomes. 6 CP allocated to the English language courses is way too extensive and unnecessary.

SAR (Computer Systems (41484) section 3.2.1 and Annex 7 and 8) have provided the comparison of study courses to the professional standard - "Programmer". According to SAR, the study programme content corresponds to the professional standard on a course basis. However, SAR maps different knowledge levels to the same courses. Therefore, more in-depth analysis is impossible because SAR doesn't match the learning outcomes of individual courses to the professional standard.

2.2.2 Not applicable

2.2.3 SAR (Computer Systems (41484) section 3.2.3) briefly mentions the use of student-centered learning methods, including promoting student autonomy and providing guidance and support. However, the answer does not provide a detailed description of how student-centered learning methods are used in the implementation of the study process.

Overall, SAR or conducted interviews does not provide evidence of the use of student-centered learning methods in the implementation of the study process. While it does briefly mention the importance of student-centered principles and provides some information on the methods used to deliver the study program, it does not provide a detailed description of how student-centered learning methods are used. Therefore, the answer could be improved by providing more specific information on how student-centered learning methods are incorporated into the study process.

The study program "Computer Systems" in the form of distance learning has a duration of 2 years and 4 months. According to SAR (Computer Systems (42484) section 3.2.3), distance learning is realized in the e-studies form of independent studies. Students' introduction to distance learning

studies is supported by the distance learning department, which introduces students to how to access distance learning materials, how to work with them properly, how to work with online training platforms, and receives introductory lectures and consultations. Each distance learning course is organized in two parts. Study courses use learning materials in e-format (assignments, practical examples, video materials, regular tests, and exams) on the Moodle online training platform, which each of the students has to study individually. Consultations are available for the students in two ways - consultations during seminars, discussions, and practical works and outside classroom consultations from the lecturer can be received directly or using available forms of communication (mail, phone, WhatsApp, e-mail, etc.) at the time suitable for the students. According to SAR, there is a test at the end of each part and an exam at the end of the course. Lecturers received training for the specific job requirements of distance learning and prepare specific course materials. Furthermore, according to SAR, the individual study process is supported by the staff of the Study Department and the head of the Distance Learning Department, an IT specialist.

2.2.4 SAR (Computer Systems (41484) section 3.2.4) states that the study program includes practice work of 16 CP, which consists of pre-qualification work practice, aimed at consolidating theoretical and practical knowledge in programming. The internship enables students to develop specific competencies, demonstrate knowledge and skills in programming, and demonstrate the ability to perform independent information analysis.

The higher education institution helps students to find an internship place by appointing an individual practice supervisor from BAT, who provides the student with support in performing the internship tasks. Students have the opportunity to practice at a place of their choice, but SAR (Computer Systems (41484) section 3.2.4) states that BAT has also signed 3 cooperation agreements with companies to provide practice placements. Internships are provided in international companies where the main language is English.
Overall, our understanding based on SAR and interviews are that BAT can provide sufficient internship opportunities for students. Internship goals are reasonable. However, student's performance in the internship is assessed only with 3 self-answered questions in Trello each week and a internship journal, which is insufficient to assess students performance in the internship. A more focused approach (both software engineering topics-wise and performance-wise) might be necessary.

2.2.5 Not applicable

2.2.6 According to SAR (Computer Systems (41484) section 3.2.6), there have been 4 qualification works during the 2021/2022 academic year. Two of them are related to application development, one to simulation development, and one to a machine learning problem. Topics of qualification works are development of software applications, simulation development and ML applications. These topics are related to software engineering, and given the level of study program could be sufficiently relevant to the IT industry.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
Overall, the content of the study program is topical. However, the content of the study courses could be better interconnected and complementary. For example, Mathematics lacks a connection to specific IT applications. Also, 4 courses for learning programming in 3 different languages where some of the topics are overlapping seems a bit extensive. It is unclear if learning another language provides maximum benefits compared to learning other IT-related topics. Compulsory elective study

courses in Business and Labor Law contain very general topics and are not customized for the study program or the learning outcomes. And 6 CP allocated to the English language is way too extensive and unnecessary. SAR or conducted interviews do not provide evidence of the use of student-centered learning methods in the implementation of the study process. While it does briefly mention the importance of student-centered principles and provides some information on the methods used to deliver the study program, it does not provide a detailed description of how student-centered learning methods are used. Therefore, the answer could be improved by providing more specific information on how student-centered learning methods are incorporated into the study process. Furthermore, BAT can provide sufficient internship opportunities for students. Internship goals are reasonable. However, 3 questions in Trello and a journal might be insufficient to assess students' performance in the internship. A more focused approach (both software engineering topics-wise and performance-wise) might be necessary.

Strengths:
1. The content of the study program is topical.
2. BAT can provide sufficient internship opportunities for students.

Weaknesses:
1. Unnecessary courses - The English language 6 CP.
2. Mathematics is not well-connected with software engineering.
3. Limited use of student-centered learning methods.

Assessment of the requirement [5] (applicable only to master's or doctoral study programmes)

1 R5 - The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or field of artistic creation.

   Assessment of compliance: Not relevant

   Not relevant.

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1. As confirmed during the visit of the laboratories, there has been established a concrete hardware and software infrastructure to support the program and guarantee the prescribed learning outcomes (see SAR, page 41). Remote students who prefer distance education are supported by using proper tools and platforms, such as Moodle, forums etc. Lecture halls are also equipped with multimedia projectors.

Computer labs are well equipped with networked personal computers and assorted software, mainly Microsoft-based. There is no provision for open source software (OSS) or other UNIX-based operating systems. It is essential for a modern program/degree in computer science to include courses and labs with emphasis in OSS, including alternative operating systems (e.g. LINUX). Practically, the capacity of the laboratories exceeds the class population (see SAR, page 43) as student numbers remain small for the time being. Therefore, it is difficult - if possible at all - to enforce teamwork in small student cohorts, an approach which is essential to provide well trained IT professionals. With respect to distance students, it is necessary to exploit the full functionality of the used platforms and tools, in all delivered courses, with enriched material (e.g. videos, animation, external links etc), to come up with the greatest possible student serving.

The library is also well organized in sections, including a specific section for the study programs in Computer Science. Books are grouped according to Software, Programming languages, Databases, Computer Communication and Networks and other fields (see SAR, page 45). Web access to collections of academic material available in digital libraries of international publishing houses is being provided. Notably, access to Scopus by Springer and ScienceDirect by Elsevier - among others - are available (see SAR, page 42).

2.3.3. For the time being, the program runs during a few years only. For instance, the full program has not yet any graduates. Thus, the program has attracted only a specific threshold number of students as mentioned during the meetings (e.g. the total number of students is <100). This is clear if one considers that the minimum number of students in classes (onsite or remote) is only five. Therefore, financially the program is hardly characterized as "profitable" (see SAR, page 40). However, the present status permits the program to run decently, aiming at further future growth. At present, and given the income from fees vs. the general and specific expenses, from the financial point of view, a break-even point has been reached, which allows some optimism for further investment and development. Indeed, it is expected that a future higher number of students will lead to further investment and growth.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
Computer classes are well equipped - mainly with MS-based software - and in capacities greater than the cohort sizes. Lecture rooms are also equipped with audio-visual infrastructure. The library includes a specific section with CS/IT books. Web access to digital libraries, line Scopus and ScienceDirect are available. Financially, the study program is healthy in terms of budget balance, with a positive outlook. To establish a graduate or a doctoral program, a change of paradigm is necessary towards a more vivid research culture, supported by new academic staff.

Strengths
1. Decent infrastructure in terms of hardware, software, library and other facilities, towards a coherent program aiming at providing technical skills
2. Balanced budget and financial sustainability. Positive outlook for growth.

Weaknesses
1. Too close connection to Microsoft-based products without support of open source software and other operating systems.
2. No possibility for student team-work in projects.

Assessment of the requirement [6]

1 R6 - Compliance of the study provision, science provision (if applicable), informative provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of learning outcomes

   Assessment of compliance: Partially compliant

   During the next few years, it is important for the study program to become more attractive, so that the number of students is increased substantially. Increasing the number of students will allow better team-work. Also, this will allow to further hire permanent academic staff with research culture, if especially graduate and doctoral studies are in future plans.

2.4. Teaching Staff

Analysis

2.4.1. SAR (see page 113) notes that the qualifications of those employed in the direction of studies correspond to the implementation of the goals and tasks of BAT. The study direction has a total of 14 lecturers, out of which nine were elected. Among the elected lecturers, five are visiting teaching staff, six are regular lecturers, and one is a professor. Additionally, there is one leading researcher and one docent. Out of the five guest lecturers, one has a bachelor's degree and four have master's degrees. Among the regular lecturers, six have master's degrees, and one is an associate professor and another is a professor, both with a Ph.D (see SAR, page 114).

SAR (see page 113) notes that BAT's strategic task is to deliver a proficient academic staff that facilitates the implementation of high-quality study programmes. This includes incorporating science and research, industry practicality, and working in tandem with employers and strategic partner universities.

According to SAR, BAT continuously encourages teaching staff to improve their qualifications and provides opportunities for staff and student mobility through cooperation with other higher education institutions, including foreign universities (see SAR, page 113). The SAR states that the recruitment of the academic staff is corresponding to the requirements of higher education and is in accordance with the procedures specified by BAT. The loyalty of the academic staff and employees is promoted by motivating them to increase the quality of work by presenting awards, expressing recognition, creating various social and cultural events and, as far as possible, material stimulation (ibid).

In addition, the University seeks to enhance the quality of the study programme by collaborating with foreign higher education institutions, developing study programmes and scientific research, and supporting mobility of staff and students. They continuously analyze their ICT study processes against the achievements of other institutions and invite guest lecturers to offer fresh perspectives. They utilize webinars to educate students on the computer science world and the EU, and cooperate with other Latvian higher education institutions. Additionally, they encourage student collaboration with secondary schools (see SAR, page 114). According to SAR (ibid) the continuous improvement of the qualifications of the teaching staff leads to an increase in quality, because the acquired knowledge can be implemented in study courses and ensure the application of more effective training methods.

In general, the study programme involves competent lecturers who are interested in promoting the acquisition of students' knowledge, skills and professional competence. The interviews with staff members, students and employers confirmed this statement.

2.4.2. According to SAR (see page 115) the composition has been expanded with several elected lecturers and a leading researcher and lecturer, which increases the quality of studies. It was evident that the necessary procedures for recruitment of staff have been established, the dialogue on the expected learning outcomes in study courses has been maintained. Based on documentation and interviews with management and faculty, it can be argued that BAT has developed procedures for staff engagement and/or employment processes. As per SAR (ibid), there has been an increase in the number of lecturers from 6 to 8 during the period of 2020-2023.

2.4.3. Not applicable

2.4.4. Out of 25 lecturers, 15 lecturers have publications. Three of them have no publications included in the Web of Science database and two have no publications in the Scopus database. Three lecturers have one publication in the Web of Science database, two have 2 publications, one has 4, one has 5, one has 6, two have 16, one has 35 (Rosita Zvirgzdina) and one has 39 (Inese Polaka). However, the h-index is still quite low, four people has h-index 0, three persons has 1, three persons has 2, one person has 4 and one has 7. Two lecturers have one publication in the Scopus database, one has 2 publications, two has 3 publications, two have 4, one has 8, one has 9, one has 23, one has 30 (Rosita Zvirgzdina) and one has 42 (Inese Polaka) publications. However, the h-index is again quite low, two people has h-index 0, five persons has 1, three persons has 2, one person has 3 and one has 7.

2.4.5. SAR (see pages 96-97) discusses the successful cooperation among lecturers at a higher education institution, facilitated by the involvement of lecturers from different faculties and the organisation of seminars, master classes, and annual strategic seminars. The cooperation is further strengthened through annual scientific conferences and teamwork in organizing student research evaluation. The cooperation among lecturers allows for better communication and collaboration, leading to the improvement of the study process and the establishment of better links between study courses. Interviews with academic staff confirmed that there are regular meetings to exchange information and academic staff share information about the content of their courses and the teaching methods they use.

Conclusions on this set of criteria, by indicating strengths and weaknesses

Conclusions:
The study programme employs competent academic staff for the implementation of the study programme. There is a conviction that the study process is successfully implemented in the institution. Based on interviews with academic staff, it has been found that they are not utilizing all the features of the learning management system Moodle and technologies such as learning analytics, badges, and online whiteboards. The workload of academic staff in terms of teaching is a significant hindrance to the implementation of innovative technological and methodological practices.

Strengths
1. The qualification of the teaching staff involved in the implementation of the study programme complies with the requirements for the implementation of the study programme and the requirements set forth in the regulatory enactments.
2. There is a conviction that the study process is successfully implemented in the institution.
3. Competencies of academic staff of the study field are generally high.
4. The study programme management, lecturers, and support staff work as a team.
5. In the pandemic situation, BAT and academic staff quickly reorganized its work into a distance learning mode.

Weaknesses:
1. Innovative solutions (methodological and technological innovation) are not implemented in the study process, no innovation in the use of learning methods or technology stood out (e.g. innovative learning design models, learning analytics, open digital badges, online whiteboards).
2. The teaching workload of academic staff is an obstacle for methodological and technological innovation.

Assessment of the requirement [7]

1. R7 - Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements set out in the respective regulatory enactments.

   Assessment of compliance: Fully compliant

   The study programme employs competent academic staff for the implementation of the study programme. There is a conviction that the study process is successfully implemented in the institution. Based on interviews with academic staff, it has been found that they are not utilizing all the features of the learning management system Moodle and technologies such as learning analytics, badges, and online whiteboards. The workload of academic staff in terms of teaching is a significant hindrance to the implementation of innovative technological and methodological practices.

2.5. Assessment of the Compliance

Requirements

1. 1 - The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard

   Assessment of compliance: Fully compliant

   Annex 04 (04_Atbilstība_izglītības_standartam_KC_EN.pdf) confirms that the study programme complies with Cabinet Regulations No. 141 "Regulations on the State Standard of First Level Professional Higher Education"

2. 2 - The study programme complies with a valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided if the completion of the study programme leads to a professional qualification (if applicable)

   Assessment of compliance: Fully compliant

   Updated version of Annex 05 (05_Atbilstība_profesijas_standartam_KC_EN.docx) provides the mapping of the courses of the programme to the knowledge areas described by the 4th level professional standard "Programmer"

3. 3 - The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 561 , Paragraph two and Section 562 , Paragraph two of the Law on Higher Education Institutions.

   Assessment of compliance: Fully compliant

   Attached study course descriptions in Annex 08 (08_Studiju kursu moduļu apraksti_KC_EN.pdf) are prepared in English. Descriptions complies with regulations set forth in Law on Higher Education Institutions

4. 4 - The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure according to which state recognised documents of higher education are issued.

   Assessment of compliance: Fully compliant

   The provided Diploma sample (00_Īsā cikla diploms un pielikumi abas valodas.pdf) complies with the procedure by which state-recognised documents of higher education are issued according to cabinet regulation No. 202 "Kārtība, kādā izsniedz valsts atzītus augstāko izglītību apliecinošus

dokumentus"

5   5 - The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions.

    Assessment of compliance: Not relevant

6   6 - Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions.

    Assessment of compliance: Not relevant

7   7 - At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts (if applicable).

    Assessment of compliance: Not relevant

8   8 - The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

    Assessment of compliance: Fully compliant

    Attached resumes of staff and BAT confirmation letter (08_Apliecinajums par valsts valodas zinasanam_EN.pdf) Nr. 02000-2.2.1-e/54 verifies that state language proficiency is compliant with Cabinet Regulation . Nr. 733 " Regulations Regarding the Extent of the Knowledge of the Official Language, the Procedures for Examining the Proficiency in the Official Language and the State Fee for Examining the Proficiency in the Official Language"

9   9 - The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language (if applicable).

    Assessment of compliance: Fully compliant

    Attached summary of BAT teaching staff in IT field (10_IT_virziena_docetāji_en.xlsx) states that language proficiency in English is at least B2

10 10 - The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

    Assessment of compliance: Fully compliant

    Sample of attached study agreement (03_Studiju_ligums_EN.docx) complies with Cabinet Regulation. Nr. 70 "Studiju līgumā obligāti ietveramie noteikumi"

11 11 - The higher education institution / college has provided confirmation that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.

    Assessment of compliance: Fully compliant

BAT confirmation (8_Ligumi_par_turpinasanu_KC_EN.pdf) indicates that students have the opportunity to continue studies in Ventsipils university of aplied sciences"

12 12 - The higher education institution / college has provided confirmation that students are guaranteed compensation for losses if the study programme is not accredited or the study programme's license is revoked due to the actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.

   Assessment of compliance: Fully compliant

   BAT confirmation (02_Zaudejuma_apliecinajums_CS_EN.edoc) No. 1.1.-07/2249 states, that students are guaranteed compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the college (actions or failure to act) and the student does not wish to continue the studies in another study programme

13 13 - The joint study programmes comply with the requirements prescribed in Section 55.(1), Paragraphs one, two, and seven of the Law on Higher Education Institutions (if applicable)

   Assessment of compliance: Not relevant

14 14 - Compliance with the requirements specified in other regulatory enactments that apply to the study programme being assessed (if applicable)

   Assessment of compliance: Not relevant

Assessment of the requirement [8]

1 R8 - Compliance of the study programme with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

   Assessment of compliance: Fully compliant

   Study programme fully complies with regulatory enactments.

General conclusions about the study programme, indicating the most important strengths and weaknesses of the study programme

Conclusions:
The study programme "Computer Systems" complies with the study field indicators, conditions and criteria. The scope of the study programme implementation is reasonable and justified. However, experts believe that there should be some distinctions made between learning outcomes, objectives and aims between the study modes. The content of the study program is topical. However, the content of the study courses could be better interconnected and complementary. BAT can provide sufficient internship opportunities for students. Computer classes and lecture rooms are well equipped. To establish a graduate or a doctoral program, a change of paradigm is necessary towards a more vivid research culture, supported by new academic staff. The overall qualifications of the teaching staff are satisfying.

Strengths:
1. The content of the study program is topical.
2. Sufficient internship opportunities for students.
3. Well developed infrastructure and provision.
4. Competent teaching staff.
5. Good collaboration between management and teaching staff.

Weaknesses:

1. Small number of students.

2. No difference in the learning outcomes, objectives, tasks and goals in between the different study modes.

3. The contents, relevance, and integrity of some study courses (English, Mathematics).

4. The teaching workload of academic staff is an obstacle for methodological and technological innovation.

Evaluation of the study programme "Computer Systems"

Evaluation of the study programme:

Good

2.6. Recommendations for the Study Programme "Computer Systems"

Short-term recommendations

1. Specify the changes that are made in the parameters as they are not clearly stated in the SAR and no annex document has not been indicated where to find them.
2. Describe the differences in the learning outcomes, objectives, tasks and goals between the different study modes.
3. Project-based and group-learning-based approach to allow the development of soft skills and further enhance student-centered learning is somehow limited as there are a lot of courses that students have to learn in parallel.
4. Find ways to balance and optimize the workload distribution.
5. It is essential to also support other operating systems, as well as open source software.
6. Find ways to balance and optimize the workload distribution.

Long-term recommendations

1. Examine the inclusion of teaching material/course related to open source software and not MS-based software.
2. Reduce "pure" English language courses in the study programme. Increase amount of specialization courses (e.g. software engineering) instead.
3. Develop a strategy to increase the number of students.
4. Consider moving more theoretical courses to a more applied setting. For example, mathematics could be more related to software engineering or even be part of software engineering or project-based courses.
5. Particular effort is needed towards organizing specific student teamwork.
6. Provide faculty members with professional development opportunities focused on innovative teaching methods and educational technologies.

II - "Computer Systems" ASSESSMENT

II - "Computer Systems" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1. The Professional bachelor study programme "Computer systems'' complies with indicators, conditions and criteria of the study field of "Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science". The length of the implementation of the study programme, which is 4 years for full-time studies, is evaluated as sufficient for acquiring the necessary skills and way of thinking to enter the labor market. With this accreditation round BAT wishes to implement the study programme in part-time extramural distance studies that are planned to be for a period of 4 years and 4 months. Study programme correlates with the study field.

2.1.2. According to SAR (see page 75), the title of the study programme is "Computer systems" in the study field of "Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science" with education classification code 42484 with the last 3 numbers (484) standing for programming according to the classification of Latvian education which can be accessed at:
https://likumi.lv/ta/id/291524-noteikumi-par-latvijas-izglitibas-klasifikaciju.

The degree obtained after graduation is First Cycle Professional Degree in Computer Systems. There is a qualification given after graduating as it is a professional study programme - a software engineer. According to SAR (see page 75), the main three goals of the programme are:
- To prepare professional specialists for starting independent work in the field of informatics with knowledge of computer systems architecture, software engineering, systems analysis, basic database technologies and the basics of artificial intelligence. As well as specialists who are able to demonstrate systemic thinking and system approach in a software development project, performing various roles and observing the professional standards and professional ethics of an IT programming engineer;
- To prepare students to conduct scientific research based on experiments, modeling and simulation;
- To prepare for continuing studies at the level of second cycle professional studies.
According to the information provided in SAR (see page 76), the admission requirements of this programme is secondary education as well as knowledge of the English language at least at B2 level. The English language test for applicants who have taken the Centralized Foreign Language Examination in another foreign language is performed while taking the test. Those who have taken the Centralized English language test and have received B2 level do not have to take the English Language test. The programme is implemented in English language, thus the B2 level of English is required. It has been stated in SAR (see page 76), that after successful completion of the studies, students are awarded with a degree and a qualification of a software engineer. According to SAR (see page 76), the study programme is currently implemented in a full-time study mode with 160 CP to be gathered during the study process of 4 years. As part of this accreditation, the study programme is planned to be implemented also in the aforementioned part-time extramural distance studies with study length of 4 years and 4 months. The entry requirements for both study modes are indicated the same as well as the aims, title, code and aims, objectives, learning outcomes of the study programme. In the opinion of the experts, there should be some specificity and differences of different study modes as the tools used, the learning methods significantly differ. There is a more limited amount of interaction with lecturers, other students, thus, the approach of the whole study process should be different and specified. Overall, the learning outcomes, objectives of the programme as well as the tasks have been specified in SAR (see pages 75-76).

As stated by BAT representatives during the onsite visit, it has been chosen strategically to implement the study programmes in English because of difficulty to compete with UL and RTU in regards to their programmes implemented in Latvian. That is why they have chosen a different approach focusing mainly on local students who wish to study in English. The difference in the study length of full-time and part-time extramural distance studies is very narrow. The difference is 4 months and there are no stated preconditions of the knowledge basis for the students who start their studies through part-time distance studies. Experts are aware of the purpose why BAT has decided to implement this form of studies. However, the expert group wishes to point out the possible problems that may arise during the study process such as a need of actual longer time to finish the studies. Full-time students regularly come to lectures onsite and do practical tasks. Part-time distance students most likely have work during the day and have a rather more limited amount of time in the evenings or weekends to keep up with their studies. Thus, the duration and scope of the study programme implementation has to be reviewed taking this into account. However, the implementation language is considered reasonable and justified.

2.1.3. It is unclear to the expert group what specific changes have been made in the parameters of this study programme. The only changes identified have been those that are indicated in the recommendations from the previous accreditation round. None has been indicated in SAR. One of the recommendations from the previous accreditation round which has been specified in the Annex 18 - "IT rekomendāciju izpildes pārskats" , is to revise the contents of the course "Software testing and quality" to correspond to the title. Based on the recommendation there has been a review of the description of the study course "Software testing and quality" and its content. As the recommendation specified that the name of the study course "Software testing and quality", is equated to the International Software Testing Qualifications Board Foundation Certified Tester Level standard Version 2018 V3.1., two lecturers were sent for training in cooperation with TDL School to learn the basics of Certified Tester. This recommendation applied to both study programmes.

Second recommendation received was in regard to overall study programme content. Based on the recommendation received from the previous accreditation expert group, the study programmes need to be supplemented with content improvement and content development in databases, internships, qualification work. The BIT has indicated that this recommendation has been implemented and the study programme content has been improved but there are no examples specified or mentioned in the document. This recommendation applied to both study programmes. Third recommendation received was regards to alignment of the contents of the set of the courses "Software development fundamentals" to those of the first-level programme. BAT was requested to supplement the programme content for the study course set. BAT has indicated that this recommendation has been implemented and there have been improvements made in the study courses and their contents but there are no examples specified or mentioned in the document. This recommendation applied to both study programmes.

During an onsite visit, experts asked the management how they are planning to maintain the same quality of studies for the part-time extramural distance study mode as well as what are the main differences of the study programmes? It was stated that the study fees for the part-time extramural distance studies are generally lower. During part-time study distance mode, students rarely have to come on-site, only to present their study papers and defend the thesis and to use the library resources, if needed. As stated by the management and academic staff during the visit, the study requires that mostly students study independently and there are self-tests available for them to assess their skills and knowledge. Experts discussed this idea with the lecturers as well and came to a conclusion that this form of studies, overall, sets a burden on BAT itself. As stated by the academic staff during the visit, for part-time distance learning it is more complicated to monitor student

studying pace, their skills, studying regularity in parallel with work, for example. Another relevant aspect is that part-time students mainly focus on work and studies are secondary and thus, there are higher risks of dropouts of students as well as taking academic years. BAT has to take into account these aspects.

2.1.4. According to SAR (see page 81) and the information gathered during onsite visit, at the moment, there are no graduates of this programme as it is rather new and recently implemented. According to the information gathered during an onsite visit meeting, it became clear that there is high demand from the employers in regards to graduates of the IT field and who have the necessary skills for the labor market. During the onsite meeting with the management, they specified that the study programmes have been formed and implemented by a direct request from employers as there is a lack of workforce. This is a great indicator of social justification of the programme. However, it has to be taken into account that there is quite substantial competition for the study programmes of BAT in the IT field as the two largest universities in Latvia are also preparing specialists every year in this field of studies. That makes it more complex to attract students to pay for their studies in a private institution with paid study places instead of budget places in a public university.

Based on the data available in SAR (see page 82), since the implementation of the study programme, there has been an increase of the number of students. The increase has been in the amount of 5 times since the study year of the start 2019/2020. As indicated in the numbers provided by the BIT, in the study year of 2019/2020, the number of students in this programme was 12, in 2020/2021 it was 32, in 2021/2022 - 31 and this year 2022/2023 - 52. The data shows an increase. After the request of additional information from BIT, it was indicated that in the study field of IT the dropout rate in the previous study year of 2021/2022 was 36,78%.

2.1.5. Not applicable

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
All of the indicators of the study programme are in compliance with the existing preconditions of the implementation of the study programme. The study programme "Computer Systems" complies with the study field indicators, conditions and criteria. In the opinion of the experts, the title, code, degree to be obtained of the study programme, aims, objectives, learning outcomes and admission requirements are interrelated. However, experts believe that there should be some distinctions made between learning outcomes, objectives and aims between the study modes. The duration of the part-time extramural distance studies has to be analyzed and reviewed based on the study content and intensity of realistic time frames to manage the studies in the indicated time. The scope of the study programme implementation as well as the implementation language, are reasonable and justified. The study programme is implemented in English. The programme is at this point in increase of the demand and there is a flow of incoming students every study year. As the tendency is stable, the increase is predicted to increase in the next few years as well. It is not completely clear what changes have been made in the parameters of the study programme and where to find these changes indicated as they have not been specified in SAR and it is not clear what is meant with the accreditation sheet. BAT also has to take into account the risks of implementation of part-time extramural distance studies.

Strenghts:
1. Increase in student numbers every year;

Weaknesses:

1. Unclarity of the changes made in the parameters. They have not been clearly specified in SAR and no annex document has been indicated to look for them;

2. No difference in the learning outcomes, objectives, tasks and goals in between the different study modes. There should be a specific number of differences as the study modes are significantly different from each other.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1 The professional bachelor study programme ''Computer Systems'' is provided as a 160 CP 4-year study programme. 56 CP is allocated to the compulsory study courses, of which 20 CP are allocated to internship (in two parts: 12 CP to Internship and 8 CP to Pre-Diploma practice), 68 CP are allocated to compulsory elective study courses, 6 CP are allocated to free elective study courses and 12 CP are allocated to the Bachelor Thesis.

According to SAR (see Computer Systems (42484), section 3.2.1 and Annex 9), in terms of topics, the compulsory study courses cover Mathematics (8 CP), the basics of computer architecture and software engineering, programming and algorithmization (16 CP), 18 CP are allocated to different field-specific courses (for example, Machine Learning, IT security), 6 CP are allocated to Finance and Accounting, IT Law and Copyright, Economics and Entrepreneurship, English language (6 CP) and mandatory course in civil defense and environmental protection (2CP). It is unclear why 6 CP are allocated to the English Language as language courses specifically a) are not required by law or regulations of the Minister Cabinet nor is complementary to the field of study.

According to SAR (see Computer Systems (42484), section 3.2.1 and Annex 9), the compulsory elective courses consist of field-specific study courses (68 CP, 66 CP for foreign students, where 2 CP is allocated to the Latvian language). There is no elective part in field-specific study courses. Field-specific study courses cover a variety of topics related to the IT industry from databases, and data analytics to simulations, robotics, and blockchains, but doesn't offer clear specialization or specialization paths. There is also a course "Transformation of a Business Idea into an E-commerce Retail Company".

Overall, SAR (see Computer Systems (42484), section 3.2.1 and Annex 8 and Annex 9), the content of the first two years of the study program is topical. However, the content of the study courses could be better interconnected and complementary. For example, Mathematics lacks a connection to specific IT applications. Also, 4 courses for learning programming in 3 different languages where some of the topics overlap seems a bit extensive. It is unclear if learning another language provides maximum benefits compared to learning other IT-related topics. However, the second two years of the study programme while generally filled with IT-related topics are not well interconnected and complimentary and, most importantly, do not improve the level of the learning outcomes. Most of the courses are an introduction to another basic IT-related topic. Students mostly continue to learn more programming and databases, but don't receive more in-depth or complex knowledge or skills which should be necessary to qualify the content of the study programme for the bachelor level. Furthermore, these courses don't offer clear specialization or specialization paths. Compulsory elective study courses in Finance and Accounting and Economics and Entrepreneurship contain very general topics and are not customized for the study program or the learning outcomes. 6 CP allocated to the English language courses is way too extensive and unnecessary. Study programme include multiple course paper courses, but project-based and group-based learning approaches

should be part of regular courses.

SAR (Computer Systems (42484) section 3.2.1 and Annex 7 and 8) have provided the comparison of study courses to the professional standard - "Programming engineer", profession code - 251202. According to SAR, the study programme content corresponds to the professional standard on a course basis. However, SAR maps different knowledge levels to the same courses. Therefore, more in-depth analysis is impossible because SAR doesn't match the learning outcomes of individual courses to the professional standard.

2.2.2 Not applicable

2.2.3 SAR (Computer Systems (42484) section 3.2.3) briefly mentions the use of student-centered learning methods, including promoting student autonomy and providing guidance and support. However, the answer does not provide a detailed description of how student-centered learning methods are used in the implementation of the study process.
Overall, SAR or conducted interviews does not provide evidence of the use of student-centered learning methods in the implementation of the study process. While it does briefly mention the importance of student-centered principles and provides some information on the methods used to deliver the study program, it does not provide a detailed description of how student-centered learning methods are used. Therefore, the answer could be improved by providing more specific information on how student-centered learning methods are incorporated into the study process.

The study program "Computer Systems" in the form of distance learning, according to SAR (Computer Systems (42484) section 3.2.3 has a duration of 4 years and 4 months. According to SAR, distance learning is realized in the e-studies form of independent studies. Students' introduction to distance learning studies is supported by the distance learning department, which introduces students to how to access distance learning materials, how to work with them properly, how to work with online training platforms, and receives introductory lectures and consultations. Each distance learning course is organized in two parts. Study courses use learning materials in e-format (assignments, practical examples, video materials, regular tests, and exams) on the Moodle online training platform, which each of the students has to study individually. Consultations are available for the students in two ways - consultations during seminars, discussions, and practical works and outside classroom consultations from the lecturer can be received directly or using available forms of communication (mail, phone, WhatsApp, e-mail, etc.) at the time suitable for the students. According to SAR, there is a test at the end of each part and an exam at the end of the course. Lecturers received training for the specific job requirements of distance learning and prepare specific course materials. Furthermore, according to SAR, the individual study process is supported by the staff of the Study Department and the head of the Distance Learning Department, an IT specialist.

2.2.4 SAR states that the study program includes an internship of 12 CP, and 8 CP pre-qualification work practice, aimed at consolidating theoretical and practical knowledge in programming. The internship enables students to develop specific competencies, demonstrate knowledge and skills in programming, and demonstrate the ability to perform independent information analysis. According to SAR (see Computer Systems (42484), section 3.2.4) BAT helps students to find an internship place by appointing an individual practice supervisor from Turiba, who provides the student with support in performing the internship tasks. Students have the opportunity to practice at a place of their choice, but BAT has also signed cooperation agreements with companies to provide practice placements. Internships are provided in international companies where the main language is English.

Overall, our understanding based on SAR and interviews are that BAT can provide sufficient internship opportunities for students. Internship goals are reasonable. However, it is not clear why an internship is split into two parts, which very much limits students' learning opportunities and complicates the process of finding an internship place. Also, 3 questions in Trello and a journal might be insufficient to assess a student's performance in the internship. A more focused approach (both software engineering topics-wise and performance-wise) might be necessary.

2.2.5 Not applicable

2.2.6 As study programme is implemented starting from 2019/2020 academic year, there have not been student theses yet. Not applicable.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
Overall, the content of the first two years of the study program is topical. However, the content of the study courses could be better interconnected and complementary. For example, Mathematics lacks a connection to specific IT applications. Also, 4 courses for learning programming in 3 different languages where some of the topics are overlapping seems a bit extensive. It is unclear if learning another language provides maximum benefits compared to learning other IT-related topics. However, the second two years of the study programme while generally filled with IT-related topics are not well interconnected and complimentary and, most importantly, do not improve the level of the learning outcomes. Most of the courses are an introduction to another basic IT-related topic. Students mostly continue to learn more programming and databases, but don't receive more in-depth or complex knowledge or skills which should be necessary to qualify the content of the study programme for the bachelor level. Furthermore, these courses do not offer clear specialization or specialization paths. Compulsory elective study courses in Finance and Accounting and Economics and Entrepreneurship contain very general topics and are not customized for the study program or the learning outcomes. 6 CP allocated to the English language courses is way too extensive and unnecessary.

In conclusion, up to 44 CP field-specific study courses + 6 CP English language courses should be reworked to provide students in the third and fourth year with more in-depth and more complex computer systems topics, and be better interconnected to justify the study programme as a bachelor-level programme. Furthermore, we recommend that students should be able to specialize in at least two IT-related specializations in B part. Project-based and group-learning-based approaches to allow the development of soft skills (which are in high demand in the IT industry) and further enhance student-centered learning is somehow limited as there are a lot of courses that students have to learn in parallel.

Strengths:
1. The content of the first two years of the study program is topical.
2. BAT can provide sufficient internship opportunities for students.

Weaknesses:
1. The content of the second two years of the study program is weak, not well interconnected and doesn't offer in-depth knowledge to justify the study programme as a bachelor-level programme.
2. Study programme contains courses that have no clear purpose for study field/specialization - the English language 6 CP, which should be replaced by more relevant courses or study field/specialization.

3. Mathematics is not well-connected with software engineering.

4. Very limited use of student-centered learning methods.

5. Project-based and group-learning-based approaches are very limited.

Assessment of the requirement [5] (applicable only to master's or doctoral study programmes)

1 R5 - The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or field of artistic creation.

Assessment of compliance: Not relevant

Not relevant.

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1. As confirmed during the visit of the laboratories, there has been established a concrete hardware and software infrastructure to support the program and guarantee the learning outcomes (see SAR, page 92). Computer labs are well equipped with networked personal computers and assorted software, mainly MS-based. There is no provision for open source software or other UNIX-based operating systems. Practically, the capacity of the laboratories exceeds the class population. It is difficult - if possible at all - to enforce teamwork in small student cohorts, an approach which is essential to provide well trained IT professionals.

Remote students who prefer distance education are supported by using proper tools and platforms, such as Moodle, forums etc. Lecture halls are also equipped with multimedia projectors. The library is also well organized in sections, including a specific section for the study programs in Computer Science. Books are grouped according to Software, Programming languages, Databases, Computer Communication and Networks and other fields. Web access to collections of academic material available in digital libraries of international publishing houses is being provided. Notably, access to Scopus by Springer and ScienceDirect by Elsevier - among others - are available.

2.3.2. Not applicable. In the interviews, it was mentioned by the administration and the teaching staff that there are future plans for founding a graduate program.

2.3.3. For the time being, the program runs for a few years only. For instance, the full program has not yet any graduates. Thus, the program has attracted only a specific threshold number of students as mentioned during the meetings (e.g. the total number of students is <100). This is clear if one considers that the minimum number of students in classes (onsite or remote) is only five. Therefore, financially the program is hardly characterized as "profitable" (see SAR, page 40). However, the present status permits the program to run without serious problems, aiming at further future growth. At present, and given the income from fees vs. the general and specific expenses, from the financial point of view, a break-even point is being reached, which allows some optimism for further investment and development. Indeed, it is expected that a future higher number of students will lead to further investment and growth. Besides, due to English as a delivery language, open/distance stream of learning may provide more opportunities to future development and growth.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:

Computer classes are well equipped - mainly with MS-based software - and in capacities greater than the cohort sizes. Cohort sizes do not allow for team-work. Lecture rooms are also equipped with audio-visual infrastructure. The library includes a specific section with CS/IT books. Web access to digital libraries, line Scopus and ScienceDirect are available. Financially, the study program is healthy in terms of budget balance, with a positive outlook. To establish a graduate or a doctoral program, a change of paradigm is necessary towards a more vivid research culture, supported by new academic staff.

Strengths:
1. Decent infrastructure in terms of hardware, software, library and other facilities, towards a coherent program aiming at providing technical skills
2. Balanced budget and financial sustainability. Positive outlook for growth.

Weaknesses:
1. Too close connection to Microsoft-based products without support of open source software and other operating systems.
2. No possibility for student team-work in projects.

Assessment of the requirement [6]

1 R6 - Compliance of the study provision, science provision (if applicable), informative provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of learning outcomes

Assessment of compliance: Partially compliant

During the next few years, it is important for the study program to become more attractive, so that the number of students is increased substantially. Regardless of the current balanced budget, increasing the numbers of student registrations is absolutely necessary in order to proceed to further generous investments and substantially lift the level of infrastructure and services, in general. For example, permanent academic staff with research culture, if especially graduate and doctoral studies are in future plans, will be hired, or the library will be enriched with books, subscriptions etc. Moreover, greater student populations will allow better student team-work, which will have impact on the learning outcomes.

2.4. Teaching Staff

Analysis

2.4.1. SAR (see page 94) notes that the qualifications of those employed in the direction of studies correspond to the implementation of the goals and tasks of BAT. There were 23 lecturers in total, of which 12 were elected. Among the elected, there were 11 visiting teaching staff, 7 of whom were lecturers, and 8 were guest lecturers. One of the guest lecturers was a professor, and another was a leading researcher. In addition, there were 3 assistant professors and 1 visiting assistant professor. There was also 1 guest lecturer with a bachelor's degree, 9 guest lecturers with a master's degree, 7 lecturers with a master's degree, 3 associate professors with a Ph.D., 1 lead researcher with a Ph.D., 1 professor with a doctor's degree, and 1 visiting professor with a doctor's degree.

SAR (see page 94) notes that BAT's strategic task is to deliver a proficient academic staff that facilitates the implementation of high-quality study programmes. This includes incorporating science and research, industry practicality, and working in tandem with employers and strategic partner universities. According to SAR, BAT continuously encourages teaching staff to improve their

qualifications and provides opportunities for staff and student mobility through cooperation with other higher education institutions, including foreign universities (SAR, see page 94).

SAR states that the recruitment of the academic staff is corresponding to the requirements of higher education and is in accordance with the procedures specified by BAT. The loyalty of the academic staff and employees is promoted by motivating them to increase the quality of work by presenting awards, expressing recognition, creating various social and cultural events and, as far as possible, material stimulation (see SAR, page 94). In addition, BAT seeks to enhance the quality of the study programme by collaborating with foreign higher education institutions, developing study programmes and scientific research, and supporting mobility of staff and students. They continuously analyze their ICT study processes against the achievements of other institutions and invite guest lecturers to offer fresh perspectives. They utilize webinars to educate students on the computer science world and the EU, and cooperate with other Latvian higher education institutions. Additionally, they encourage student collaboration with secondary schools (see SAR, page 94). According to SAR (ibid) the continuous improvement of the qualifications of the teaching staff leads to an increase in quality, because the acquired knowledge can be implemented in study courses and ensure the application of more effective training methods.

In general, the study programme involves competent lecturers who are interested in promoting the acquisition of students' knowledge, skills and professional competence. The interviews with staff members, students and employers confirmed this statement. In addition, BAT seeks to enhance the quality of the study programme by collaborating with foreign higher education institutions, developing study programmes and scientific research, and supporting mobility of staff and students. They continuously analyze their ICT study processes against the achievements of other institutions and invite guest lecturers to offer fresh perspectives. They utilize webinars to educate students on the computer science world and the EU, and cooperate with other Latvian higher education institutions. Additionally, they encourage student collaboration with secondary schools (see SAR, page 94).

2.4.2. According to SAR (see page 115) the composition has been expanded with several elected lecturers and a leading researcher and lecturer, which increases the quality of studies. It was evident that the necessary procedures for recruitment of staff have been established, the dialogue on the expected learning outcomes in study courses has been maintained. Based on documentation and interviews with management and faculty, it can be argued that BAT has developed procedures for staff engagement and/or employment processes.
As per SAR (ibid), there has been an increase in the number of lecturers from 6 to 8 during the period of 2020-2023.

2.4.3. Not applicable

2.4.4. Out of 25 lecturers, 15 lecturers have publications. Three of them have no publications included in the Web of Science database and two have no publications in the Scopus database. Three lecturers have one publication in the Web of Science database, two have 2 publications, one has 4, one has 5, one has 6, two have 16, one has 35 (Rosita Zvirgzdina) and one has 39 (Inese Polaka). However, the h-index is still quite low, four people has h-index 0, three persons has 1, three persons has 2, one person has 4 and one has 7. Two lecturers have one publication in the Scopus database, one has 2 publications, two has 3 publications, two have 4, one has 8, one has 9, one has 23, one has 30 (Rosita Zvirgzdina) and one has 42 (Inese Polaka) publications. However, the h-index is again quite low, two people has h-index 0, five persons has 1, three persons has 2, one person has 3 and one has 7.

2.4.5. SAR (see pages 96-97) discusses the successful cooperation among lecturers at a higher education institution, facilitated by the involvement of lecturers from different faculties and the organisation of seminars, master classes, and annual strategic seminars. The cooperation is further strengthened through annual scientific conferences and teamwork in organizing student research evaluation. The cooperation among lecturers allows for better communication and collaboration, leading to the improvement of the study process and the establishment of better links between study courses. Interviews with academic staff confirmed that there are regular meetings to exchange information and academic staff share information about the content of their courses and the teaching methods they use.

Conclusions on this set of criteria, by indicating strengths and weaknesses

Conclusions:
The study programme employs competent academic staff for the implementation of the study programme. There is a conviction that the study process is successfully implemented in the institution. Based on interviews with academic staff, it has been found that they are not utilizing all the features of the learning management system Moodle and technologies such as learning analytics, badges, and online whiteboards. The workload of academic staff in terms of teaching is a significant hindrance to the implementation of innovative technological and methodological practices.

Strengths:
1. complies with the requirements for the implementation of the study programme and the requirements set forth in the regulatory enactments.
2. There is a conviction that the study process is successfully implemented in the institution.
3. Competencies of academic staff of the study field are generally high.
4. The study programme management, lecturers, and support staff work as a team.
5. In the pandemic situation, BAT and academic staff quickly reorganized its work into a distance learning mode.

Weaknesses:
1. Innovative solutions (methodological and technological innovation) are not implemented in the study process, no innovation in the use of learning methods or technology stood out (e.g. innovative learning design models, learning analytics, open digital badges, online whiteboards).
2. The teaching workload of academic staff is an obstacle for methodological and technological innovation.

Assessment of the requirement [7]

1 R7 - Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements set out in the respective regulatory enactments.

   Assessment of compliance: Fully compliant

   The study programme employs competent academic staff for the implementation of the study programme. There is a conviction that the study process is successfully implemented in the institution. Based on interviews with academic staff, it has been found that they are not utilizing all the features of the learning management system Moodle and technologies such as learning analytics, badges, and online whiteboards. The workload of academic staff in terms of teaching is a significant hindrance to the implementation of innovative technological and methodological

practices.

2.5. Assessment of the Compliance

Requirements

1 1 - The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard

   Assessment of compliance: Fully compliant

   Annex 2 (2_Atbilstība_izglītības_standartam_CS_EN.docx) confirms that the study programme complies with Cabinet Regulations No. No. 512 "Regulations on the second level professional higher education state standard"

2 2 - The study programme complies with a valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided if the completion of the study programme leads to a professional qualification (if applicable)

   Assessment of compliance: Fully compliant

   Annex 3 (3_Atbilstība_profesijas_standartam_CS_EN.docx) provides the mapping of the courses of the programme to the knowledge areas described by the 5th level professional standard "Software engineer" – at the level of required knowledge

3 3 - The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 561 , Paragraph two and Section 562 , Paragraph two of the Law on Higher Education Institutions.

   Assessment of compliance: Fully compliant

   Attached study course descriptions in Annex 08 (08_Studiju kursu moduļu apraksti_CS_EN.pdf) are prepared in English. Descriptions complies with regulations set forth in Law

4 4 - The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure according to which state recognised documents of higher education are issued.

   Assessment of compliance: Fully compliant

   The provided Diploma sample (00_Pirma cikla diploms un pielikumi abas valodas.pdf) complies with the procedure by which state-recognised documents of higher education are issued according to cabinet regulation No. 202 "Kārtība, kādā izsniedz valsts atzītus augstāko izglītību apliecinošus dokumentus"

5 5 - The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions.

   Assessment of compliance: Not relevant

6 6 - Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions.

   Assessment of compliance: Not relevant

7   7 - At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts (if applicable).

    Assessment of compliance: Not relevant

8   8 - The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

    Assessment of compliance: Fully compliant

    Attached resumes of staff and BAT confirmation letter (08_Apliecinajums par valsts valodas zinasanam_EN.pdf) Nr. 02000-2.2.1-e/54 verifies that state language proficiency is compliant with Cabinet Regulation . Nr. 733 " Regulations Regarding the Extent of the Knowledge of the Official Language, the Procedures for Examining the Proficiency in the Official Language and the State Fee for Examining the Proficiency in the Official Language"

9   9 - The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language (if applicable).

    Assessment of compliance: Fully compliant

    Attached summary of BAT teaching staff in IT field (10_IT_virziena_docetāji_en.xlsx) states that language proficiency in English is at least B2

10   10 - The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

    Assessment of compliance: Fully compliant

    Sample of attached study agreement (03_Studiju_ligums_EN.docx) complies with Cabinet Regulation. Nr. 70 "Studiju līgumā obligāti ietveramie noteikumi"

11   11 - The higher education institution / college has provided confirmation that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.

    Assessment of compliance: Fully compliant

    BAT confirmation (8_Ligumi_par_turpinasanu_KC_EN.pdf) indicates that students have the opportunity to continue studies in Ventsipils university of aplied sciences"

12   12 - The higher education institution / college has provided confirmation that students are guaranteed compensation for losses if the study programme is not accredited or the study programme's license is revoked due to the actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.

    Assessment of compliance: Fully compliant

    BAT confirmation (02_Zaudejuma_apliecinajums_CS_EN.edoc) No. 1.1.-07/2249 states, that students are guaranteed compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the college (actions or failure to act) and the student does not wish to continue the studies in another study

programme

13 13 - The joint study programmes comply with the requirements prescribed in Section 55.(1), Paragraphs one, two, and seven of the Law on Higher Education Institutions (if applicable)

Assessment of compliance: Not relevant

14 14 - Compliance with the requirements specified in other regulatory enactments that apply to the study programme being assessed (if applicable)

Assessment of compliance: Not relevant

Assessment of the requirement [8]

1 R8 - Compliance of the study programme with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

Assessment of compliance: Fully compliant

Study programme fully complies with regulatory enactments

General conclusions about the study programme, indicating the most important strengths and weaknesses of the study programme

Conclusions:
The study programme "Computer Systems" complies with the study field indicators, conditions and criteria. However, there should be some distinctions made between learning outcomes, objectives and aims between the study modes. The duration of the part-time extramural distance studies has to be analyzed and reviewed based on the study content and intensity of realistic time frames to manage the studies in the indicated time. The scope of the study programme implementation as well as the implementation language, are reasonable and justified. The content of the first two years of the study program is topical. However, the content of the study courses could be better interconnected and complementary. Most of the courses are an introduction to another basic IT-related topic. Computer classes and lecture rooms are well equipped. To establish a graduate or a doctoral program, a change of paradigm is necessary towards a more vivid research culture, supported by new academic staff. The study programme employs competent academic staff for the implementation of the study programme.

Strengths:
1. Increase in student numbers every year.
2. The content of the first two years of the study program is topical.
3. Sufficient internship opportunities for students.
4. Well developed infrastructure and provision.
5. Competent teaching staff.
6. Good collaboration between management and teaching staff.
7. Decent infrastructure in terms of hardware, software, library and other facilities, towards a coherent program aiming at providing technical skills.
8. Balanced budget and financial sustainability. Positive outlook for growth.
9. There is a conviction that the study process is successfully implemented in the institution.
10. In the pandemic situation, BAT and academic staff quickly reorganized its work into a distance learning mode.

Weaknesses:

1. No difference in the learning outcomes, objectives, tasks and goals in between the different study modes.
2. The contents, relevance, and integrity of some study courses, especially of the last two years.
3. Project-based and group-learning-based approaches are very limited.
4. Too close connection to Microsoft-based products without support of open source software and other operating systems..
5. Innovative solutions (methodological and technological innovation) are not implemented in the study process.
6. The available possibilities of the Moodle are not fully used.
7. The teaching workload of academic staff is an obstacle for methodological and technological innovation.

Evaluation of the study programme "Computer Systems"

Evaluation of the study programme:

Good

2.6. Recommendations for the Study Programme "Computer Systems"

Short-term recommendations

1. Specify the changes that are made in the parameters as they are not clearly stated in the SAR and no annex document has not been indicated where to find them.
2. Describe the differences in the learning outcomes, objectives, tasks and goals between the different study modes.
3. Increase the number of project-based courses, and group-learning-based courses where it is possible to attain soft skills through learning by doing. Project-based and group-learning-based approach to allow the development of soft skills and further enhance student-centered learning.
4. Curricula and labs must be enriched with alternative approaches, related to open source software (e.g. Linux).
5. Find ways to balance and optimize the workload distribution.
6. Student team-work is a desideratum to deliver well trained IT professionals.

Long-term recommendations

1. Consider moving more theoretical courses to a more applied setting. For example, mathematics could be more related to software engineering or even be part of software engineering or project-based courses.
2. Reduce "pure" English language courses in the study programme. Increase number of specialization courses (e.g., software engineering) instead.
3. Provide faculty members with professional development opportunities focused on innovative teaching methods and educational technologies.

III - Assessment of the Requirements for the Study Field and the

Relevant Study Programmes

III - Assessment of the Requirements for the Study Field and the Relevant Study Programmes

Assessment of the Requirements for the Study Field

Requirements	Requirement Evaluation		Comment
R1 - Pursuant to Section 5, Paragraph 2.1 of the Law on Higher Education Institutions, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study field whilst implementing its internal quality assurance system:		Partially compliant	BAT has established a quality assurance system and developed a Quality Policy and it is available to all interested parties on the BAT website. Monitoring of the implementation of the strategic plan is carried out every year, evaluating the achieved indicators. Students are a substantial part of the improvement of the study programmes. However, employers should be involved in the study quality processes more. Based on the information acquired during onsite visit when having discussions with the employers they indicated that there is no specific form of survey or questionnaire form that they fill out on a regular basis. As it was clarified, the main form of exchange of information between employers and BAT takes place informally, while experts believe that there has to be some form of formal information and feedback establishment as well. If there is only informal feedback loop, then BAT has to be able to show that they are implementing that incorporating it and feed it into QA system and work on it. Secondly, as specified during the visit, employers also do not receive any feedback on the data gathered in regards the survey results. There is no conclusion on the feedback loop of QA sent out to them as there is no survey results to evaluate or analyze. Thirdly, there is feedback present from internships and expert group is not arguing with it. However, the before mentioned system is a separate system and part of QA and it is not implemented and expert group wishes to point out that a formal/informal form of feedback specifically which regards only employer satisfaction with student knowledge, what could be improved, is needed outside the established form of internship surveys It was not possible for the expert group to evaluate the graduate participation of the quality assurance processes.

Requirements	Requirement Evaluation		Comment
R2 - Compliance of scientific research and artistic creation with the level of development of scientific research and artistic creation (if applicable)		Partially compliant	International cooperation in the field of scientific research within the study field takes place to a certain extent. BAT has not yet developed successful mechanisms for the involvement of the teaching staff in scientific research. Innovative solutions are implemented in the study process only to a small extent. Suggestions for developing a successful research mechanism: 1. Foster a research culture by emphasizing its importance and providing incentives, resources, and recognition for academic staff. 2. Offer research training programs, mentorship, and guidance to enhance the research skills of academic staff. 3. Encourage interdisciplinary collaboration with external institutions. 4. Establish a system to assist faculty members in identifying and securing research grants and funding opportunities. 5. Streamline administrative processes to reduce bureaucratic barriers and minimize paperwork. 6. Recognise and reward research excellence through awards, honours, and internal grants. 7. Ensure access to adequate research facilities, equipment, and resources. 8. Implement a performance evaluation system and provide constructive feedback to enhance research output. 9. Introduce internal seed grant programs to encourage small-scale research projects. 10. Support faculty members in publishing and disseminating their research findings through high-quality publications and conferences. Suggestions to address the lack of implementation of innovative solutions in the study process: 1. Establish an Innovation Committee comprising faculty members, instructional designers, and relevant stakeholders to identify and implement innovative solutions. 2. Foster a culture of innovation by promoting open dialogue, idea sharing, and recognizing innovative initiatives. 3. Provide professional development opportunities for faculty members on innovative teaching methods and educational technologies. 4. Collaborate with instructional designers and educational technologists to integrate innovative solutions. 5. Encourage pilot projects and research to test and evaluate innovative practices. 6. Emphasize collaborative learning and peer interaction through online platforms and group projects. 7. Explore and adopt educational technologies that enhance learning experiences. 8. Use learning analytics to inform instructional decisions and personalize learning. 9. Collaborate with external partners to share best practices and explore innovative solutions. 10. Establish a feedback loop and evaluation process to continuously improve and align with educational innovation trends.

Requirements	Requirement Evaluation		Comment
R3 - The cooperation implemented within the study field with various Latvian and foreign organizations ensures the achievement of the aims of the study field.	Fully compliant		BAT cooperates extensively with institutions from Latvia and abroad within the study field, and such cooperation contributes to the achievement of the aims and learning outcomes of the study field and the study programmes. The cooperation partners are selected in view of the specific features of the study field and the relevant study programmes. A common system for the provision of internships and the organization thereof has been developed within the study field. The employers are involved in discussing the content of the internship. The internship providers are satisfied with the knowledge and skills of the students of the study programme. However, TAB has not yet developed a sufficient system and procedures for the attraction of the teaching staff from abroad within the study field.
R4 - Elimination of deficiencies and shortcomings identified in the previous assessment of the study field, if any, or implementation of the recommendations provided.	Fully compliant		Most of the recommendations can be formally considered fulfilled. However, some of the recommendations that have been formally implemented and might not been sufficiently effective in resolving the underlying weakness and/or in completely removing its root causes. Some recommendations are formally fulfilled, but HEI has definied them with vague achieved results that aren't sufficiently justified.

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

No.	Study programme	R5	R6	R7	R8	Evaluation of the study programme (excellent, good, average, poor)
1	Computer Systems (41484)	Not relevant	Partially compliant	Fully compliant	Fully compliant	Good
2	Computer Systems (42484)	Not relevant	Partially compliant	Fully compliant	Fully compliant	Good

The Dissenting Opinions of the Experts

No dissenting opinions.