

Expert group joint opinion

Evaluation Procedure: Assessment of Study Field

Higher Education Institution: EKA University of Applied Sciences

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

Experts:

1. Simona Grigaliūnienė (Chair of the Experts Group)
2. Mart Tamre (Secretary of the Experts Group)
3. Tatjana Rubina
4. Boriss Vasečko (Employers' Confederation of Latvia)
5. Aiva Staņēviča (Student Union of Latvia)

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

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

EKA strategic development aims to prepare competitive professionals in the fields of business, information technology, culture and art relevant to current Latvian and international economic needs, acquired knowledge and practical skills for successful career and achievements. This complies with the study field tasks to provide a study process that complies with the laws and requirements of the labor market. Study field and corresponding study programme is prepared and implemented according to the Old education standard. Institution has indicated the strengths, weaknesses, threats and opportunities. Definitely one of the important strength factors is a good system for recognizing the learning outcomes achieved in previous education and professional experience. The administration of the Higher Education Institution, teaching staff, student council, students, employers, graduates and others are involved in the management of the study field, but the employers seem to lack the ability to interact in the management and decision making process. EKA has developed a Quality Assurance System oriented to continuous improvement, the system clearly contributes to HEI strategic goals. Procedures and regulations cover all relevant dimensions of a quality system. EKA is well staffed with qualified personnel and teaching staff and is able to invite guest lecturers to differentiate studies while making them even more attractive and relevant. EKA possesses all the resources necessary for the provision of the study programme however it possesses quite a small, but not insufficient book. EKA has rich collaboration with local and international HEI's, but at the same time the efficiency of international collaboration is limited in the sense of international projects and mobility. The teaching staff and students mobility have to be improved, by moving from classical mobility programmes to the blended intensive programmes (BIP). Participation in the ERASMUS+ programme should have clear focus and strong and attractive partners and the number of ERASMUS+ partners does not play a key role in intensifying the mobility. EKA has a potential for cooperation to develop, by expanding it with national and international companies and organizations, developing new cooperation formats and involving graduates and employers more actively. Attraction of the international students includes several mechanisms, which corresponds to the size and strategy of the EKA, while the strategy on involvement of international teaching staff is not presented and usually based on personal contacts or occasions.

The interrelation of the analyzed study programme "Information technologies"(42484) of the analyzed elements title, code, degree to be obtained, professional qualification or degree and professional qualification of the study programme, aims, objectives, learning outcomes and admission requirements are interrelated. Changes in the field of the study programme are made on annual self-assessment, visit results, evaluating the submitted proposal by teaching staff, students, graduates and employers, and etc. The surveys are organized regularly and the results of the implemented aspect is seen in the updates of the study programme. Eka offers various types of studies for a precise study programme: full-time studies 4 years, part-time and distance studies 4 years and six months. It can be seen that the total number of students is increasing in part-time studies and distance learning studies. This is also confirmed and this is seen also in analyzing the tables that are showing the statistics of enrollment in higher courses (there are enrollments into 1st - 3rd year in distance and part-time studies. Threatening factor is the enrollment of the full-time students, since the numbers are really low, compared with the other types of studies, and the same aspect is seen in the dynamics of the graduates.

The study programme complies with Level 6 of the European Qualifications Framework of Latvian Education Classification and the basic principles and procedure for the assessment of the acquisition of the study programme comply with the requirements of the National Academic Education Standard. Considering SAR and evidence collected during the meeting it shall be concluded that the

presented study programme fulfills formal requirements, is inline with the requirements of the industry and labor market. The content of the SP supports reaching the aim and learning outcomes of the programme. There are some problems with use of very old study literature as well as the LMS system could be improved. In the same among learning outcomes the practical research component is not very well indicated and there are quite few applied research projects students can take part. Also EKA provides support in terms of finding internship places, if a student has some problem with it. During the meeting employers confirmed their ability to take international students for internships. The defended theses are inline with the study programme.

EKA has sufficient resources for the implementation of the study programme but its library size is relatively small and part of it is old literature. During practical programming work some computers (MacOS) might need to be shared between one course students as there's currently not enough Mac computers to cover all needs conveniently without sharing, but a new computer class with Mac computers is in process of equipping. EKA uses resources in an efficient manner, utilizing systems such as Big Blue Button and Moodle efficiently. Every student, disregarding of teaching form can benefit from resources available to EKA.

The qualification of the teaching staff complies with the requirements set forth in the Law of Higher Education Institutions, is appropriate for professional bachelor study programme "Information technologies" implementation, allow to achieve the aims and ensure the learning outcomes of the study programme IT in both Latvian and English languages. The members of teaching staff have published in peer-reviewed editions, including international editions, but their activity of publishing articles in the ICT field could be improved. EKA has established a mechanism for mutual cooperation of teaching staff to ensure the achievement of the aim of the study programme.

I - Assessment of the Study Field

I - Assessment of the Study Field

1.1 Management of the Study Field

Analysis

1.1.1.

As it is presented in EKA University of Applied Sciences SAR (page 11), the aim of the study field, also a study program (one study program in the field is analyzed) is to prepare the qualifield in the field of ICT for work at enterprises, organizations and state and municipal institutions who are able to perform tasks related to the profession and ready to continuously improve their knowledge and skills in a changing environment. Within 8 study field objectives and tasks are formulated in the light of the University's strategic goals and objectives, and contribute to their achievements. Analyzing the EKA strategic development aim to prepare competitive professionals in the fields of business, information technology, culture and art are relevant to current Latvian and international economic needs, acquired knowledge and practical skills for successful career and achievements. This complies with the study field tasks to provide a study process that complies with the laws and requirements of the labor market. EKA has also set an aim for development of lifelong learning and aim to be an open and dynamic university which is flexible with regard to market topicalities and international; recognition, this also complies with the study field tasks to develop international collaboration with higher institutions, enterprises, organizations; develop research activities in the study field; involve field professionals in the implementation of the study program. The full perspective of the strategic development plan also is presented in the Development plan of the study field "Information technology" (Annex nr. 3), which indicates the activities and indicators that are foreseen to implement the study field tasks. Also, as it is mentioned in SAR(page 10), the study field is implemented in accordance with the regulatory enactments of the EU and the Republic of Latvia taking into account the priorities of the National Development Plan (NPD2027) and the

Sustainable Development Strategy of Latvia until 2030. As it is mentioned in the LIAS_2030 ([chrome-extension://efaidnbmnnnibpcajpcgiclfndmkaj/https://www.pkc.gov.lv/sites/default/files/inline-files/LIAS_2030_en_1.pdf](https://www.pkc.gov.lv/sites/default/files/inline-files/LIAS_2030_en_1.pdf)), one of the of the key directions is indicated as Development and Productivity Improvement in Human Capital, as one of the indicators long-time learning, which is also one of the strategic aims of EKA.

As it is presented in EKA University of Applied Sciences SAR, in Latvia, second -level professional bachelor's study programs of Latvian universities in the information technology sector included in the comparison are based on the professional standard "Programming engineer", and therefore cover a relatively equal set of acquired knowledge, skills and abilities (Regulation No. 512, "Regulations on the State Standard of Second Level Professional Higher Education"), thus the total amount of each programme is 160 credit points. EKA has three forms of study, three practices with total amount of CP 26, the bachelor's thesis according to the Cabinet Regulation No.512 and the volume of the thesis is 12CP. IT industry special courses like Artificial Intelligence, Mobile application development for Android and iOS platform, as well as course Programming Languages, which is the current programming language of the IT industry Python.

1.1.2.

As it is presented in EKA University of Applied Sciences SAR is given the SWOT analysis (SAR, page 15, Table), conducted by the study field student council, employers and graduates. From the given strengths it could be noted that implementation of the study programme in a foreign language gives a possibility to raise the amount of the students in the analyzed field, the growth of the foreign students is increasing (SAR, page 50, Table) and gives a possibility to expand the knowledge of EKA worldwide. Different forms of study, including part-time and distance learning study types are definitely the biggest strength. The opportunity to choose the students and graduates during the meeting indicated that they chose to study in EKA, because they offered part-time or distance learning studies and they could work and study at the same time. As it was indicated it is the only higher education institution close to the capital of Latvia. The teaching staff, and as it is indicated in SAR: almost 50% of the teaching staff are professionals in the field are the attractive point to students, as it was mentioned during the meeting and program director indicated also that core of the program is one of the lecturers in the department helping to form the attractive study program, adapting to the today's market needs. Definitely one of the important strength factors is a good system for recognizing the learning outcomes achieved in previous education and professional experience. This is also proved by the dynamics of the numbers of students in later stages of studies (SAR, page 21, table), and seen as a valuable factor within the discussion with students and graduates of EKA. Reviewing the threats that are indicated, some of the most important is competition in the education services, including that some of education is free in the local and abroad sector. Also, the demography, social and economic situation in Latvia and abroad. This was confirmed by HR management during the meeting, since situations like COVID-19, also the war in Ukraine has changed the amount of enrolled students, especially from abroad. Analyzing the weaknesses of EKA, the most important one is the small number of students studying full-time, since as it was given in Annex 22, we can see that full time students amount is decreasing each year, and most of the students are also international students. Since there is also only one study programme in the study field it is a big threat that the program will be closed, due to the lowering amount of the students, especially according to and seeing the dynamics of the number of graduates (Annex 22) - only 5 students have graduated the studies im 2021./2022. One of the important weaknesses stated in SAR is the insufficient collaboration with local universities, which is confirmed by Annex nr. 5 Contracts, where we can see only two institutions: Daugavpils University and Transporta un sakaru instituts. But this can also be stated as one of the opportunities to expand the partners network, which could increase the number of the students, since during the meetings with students most of

them stated that they are continuing the studies after finishing the lower level studies. Also, one of the biggest opportunities is seen in further development of distance learning, since this is the niche in Latvia, especially in the Riga region.

1.1.3.

As it is presented in EKA University of Applied Sciences SAR the administration of the Higher Education Institution, teaching staff, student council, students, employers, graduates and others are involved in the management of the study field. The study results are regularly analyzed and, based on results of the analyzes and this process in the later stage of the development and improvement of the study field and the program, so the activities of the Study Council are important. The main management decisions are made according to the subordination by the Senate, Rector, Vice - Rectors, Quality Manager, Study Council, Head of the Study Director, Programme director and general staff. As it was stated in SAR each member of staff supports students and academic staff for the qualitative study process. The study programme director is responsible for the development, implementation and management of the study program. This was also confirmed during the meeting with experts then asking about the program development, it was stated that working together with the department, according to fast changes in the IT sector, twice in a year meet the IT study council (determined by the Study Council of EKA University of Applied Sciences) to discuss the necessary changes, representatives from students, students council, employers and academic staff are invited. It was stated that after the student survey, according to the discussion the mobile application course was changed dividing it in two. The Quality Manager carries out the assessment of the quality system, organizes the assessment process of study fields, organizes annual surveys of personnel, students and employers, also informs about the results and gives the report to the Rector. As it was mentioned during the meeting with HEI management, an annual survey about the study process, twice a year survey for teaching staff is given, once per year for graduates, twice a year about the teaching process (subjects) for students at the end of each semester. Survey results are analyzed and summarized by the Quality manager and the study council gives a protocol with decisions. Also there are decisions made to agree on implementation, assign responsible person, implement, follow up the process. In addition, Self assessment for study field is made annually and named as a Study YearBook. The students and graduates have confirmed about the surveys that have been given to them, the support of the Student Council and giving the feedback to the Programme Director if there were any aspects that have to be changed according to their needs. Also during the meeting with HEI management it was stated that according to the surveys it was decided to change lecturers or include more programming into the study program. It was also stated during the meeting that annual survey participation rate for 2022. - 30% for graduates and around 50% for students. But during the meeting with EKA employers and reviewing the SAR expert lack of integration of employers in the decision making and strategic changes. As by asking if someone of the employers are participating or were participating in the management structure there was no one, also there was no social partners participating in social partners day events, just giving a informal discussions with the program director, reviewing the works of students or some participated in the final defenses and gave some notes for the presentations that were implemented.

1.1.4.

As it is presented in EKA University of Applied Sciences SAR the requirements for the admission of the students are determined taking into account the requirements of regulatory enactments, as well as the specific study programmes, rules approved by the EKA Senate and published in the official website ([chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.augstskola.lv/upload/Uznemsanas_noteikumi_2023_2024_EN.pdf](https://www.augstskola.lv/upload/Uznemsanas_noteikumi_2023_2024_EN.pdf)). Admission of Latvian-flow students to undergraduate studies takes place using both the Unified Admission System: Latvija. It and applying in person on the premises of the

University. For the part - time students and distance education students there is possibility to apply remotely by adding necessary documents as it is mentioned in SAR "For future students". As for foreign students EKA has admission stages including the language test and interview (SAR, page 20). As it was mentioned during the meeting with HEI management and it is noted in SAR for the later stages students are admitted twice a year - in summer and winter and necessary information is provided in the website "For the prospective students" and after the submission of the documents the programme director prepares a protocol according the Regulation on recognition of study results achieved in previous education on professional experience (chrome-extension://efaidnbmnnnibpcajpcgiclfndmkaj/https://www.augstskola.lv/upload/EKA_nolikums%20par%20izgllitibas%20un%20pieredzes%20atzisanu_ENG_2019.pdf). During the meeting graduates and students of EKA have confirmed that they had admission according to the possibility to start studies in later stages and that they had been given the opportunity to study according to their individual plan. This is also proved by the dynamics of the numbers of students in later stages of studies (SAR, page 21, table). According to the discussions during the meeting with students, graduates and information given in SAR students are enrolled in the 2nd or 3rd year.

1.1.5.

As it is presented in EKA University of Applied Sciences SAR the basic principles of assessment are laid down in the Study Regulations (chrome-extension://efaidnbmnnnibpcajpcgiclfndmkaj/https://www.augstskola.lv/upload/EKA_Studiju_nolikums_EN_2019.pdf). The teaching staff is entitled to choose test methods, taking into account the specifics of the study course, the level of preparedness of students and other factors. As it was mentioned during the meeting with the EKA teaching staff and also indicated in SAR during the first lecture, students are informed about the course evaluation, assessment and learning outcomes of the specific study course. Also the information is given and mentioned in the Moodle system, as all study courses despite the study type have a prepared Moodle course with material and information, which was shown during the meeting with representatives showing the learning management system. Students are also informed about the possibility to contact the lecturer for the consultation (this was confirmed by students and teaching staff during the meetings). Depending on the study course the final marks can be created only from exams, or indicating half or more final grade for various intermediate tests, which from the expert point of view makes it difficult for students to adapt for a different evaluation system for each study course, which is totally dependent on the lecturer. As it is mentioned in SAR final (bachelor) paper (theses) are evaluated after students defending them at a meeting of the State Examination Commission and the principles are laid down in EKA regulations (chrome-extension://efaidnbmnnnibpcajpcgiclfndmkaj/https://www.augstskola.lv/upload/32_Nolikums_par_nosleguma_darbiem_grozijumi_apstiprinats_EN_2022.pdf). During this process an advisor is appointed for each student to assist during the preparation in line with EKA requirements. The assessment of distance students takes place on Moodle and the Video Conferencing System Big Blue Button, using the similar principals as for part-time in-person students.

1.1.6.

As it is presented in EKA University of Applied Sciences SAR the principles of academic honesty are defined in the EKA's Code of Ethics and Academic Integrity. Students are informed about the content of the Code and the principles of academic integrity at the beginning of studies, as well as during the preparation and consultation on the preparation of study works, final thesis, also available in Student Guide online (chrome-extension://efaidnbmnnnibpcajpcgiclfndmkaj/https://www.augstskola.lv/upload/12_EKA_ieksejas_%20kartibas_%20noteikumi_%20studejosiem_2017_EN.pdf) . During the meeting with HEI management it was also confirmed that EKA has a principles for Academic Integrity and the person

who recovers the situation has to write the application to the rector, which makes a commission to understand the full situation, for the first time it is just the recommendation, and for the next times it is consequences, not only for plagiarism, or with behavior. As it is mentioned in the SAR and also during the meeting in the reviewed study field at the moment there were no incidents, but In law they had a situation. It is important that a student council also takes part in the committee. The teaching staff is informed about the principles of academic integrity at general meetings and other events, as well as when starting the work, and also the code is available in the e-environment for administration which was presented during the meeting. Also the teaching staff is available to use the Unified Computerized Plagiarism Control system for checking the papers if there is a suspicion of possible plagiarism. Also during the meeting it was said by HEI management that this autumn plagiarism system in moodle will have a plugin to check chatGPT.

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

EKA strategic development aims to prepare competitive professionals in the fields of business, information technology, culture and art relevant to current Latvian and international economic needs, acquired knowledge and practical skills for successful career and achievements. This complies with the study field tasks to provide a study process that complies with the laws and requirements of the labor market. Study field and corresponding study program is prepared and implemented according to the Cabinet Regulation No.512. Institution has indicated the strengths, weaknesses, threats and opportunities. Definitely one of the important strength factors is a good system for recognizing the learning outcomes achieved in previous education and professional experience. Analyzing the weaknesses of EKA, the most important one is the small number of students studying full-time, since as it was given in Annex 22, we can see that full time students amount is decreasing each year, and most of the students are also international students. The administration of the Higher Education Institution, teaching staff, student council, students, employers, graduates and others are involved in the management of the study field, but the employers seem to lack the ability to interact in the management and decision making process.

Strengths:

1. EKA focuses on creating the aims of the study field and the relevant study program which comply with the main directions of the strategic development of the higher education institution.
2. EKA has established clear admission, including the results achieved in previous education on professional experience
3. EKA management have implemented additional possibilities to contact the lecturer for personal consultation,
4. EKA University of Applied Sciences has established the principles of Academic Integrity and has a clear system which is known by students, academic staff and administration.

Weaknesses:

1. Depending on the study course the final marks can be created only from exams, or indicating half or more final grade for various intermediate tests, which from the expert point of view makes it difficult for students to adapt.
2. Though it was stated in SAR and during the expert's meeting with the EKA management, but there was no confirmation about the involvement of the employers in the management and decision-making during the expert's meeting with the employers.
3. Annual survey participation rate for 2022. - 30% for graduates and around 50% for students.

1.2. Efficiency of the Internal Quality Assurance System

Analysis

1.2.1.

The higher education institution/ college has developed and maintains a quality assurance system, which contributes to the achievement of the aims and learning outcomes of the study field and the relevant study programmes. Basis of the quality assurance system is EKA quality policy publically available at https://www.augstskola.lv/upload/EKA_Kvalit%C4%81tes_Politika_2022.pdf (in Latvian) and https://www.augstskola.lv/upload/Kvalit%C4%81tes_Politika_2_EN.pdf (in English). The policy is approved by EKA Senate and is in compliance with laws and regulations governing higher education, as well as EKA strategy. Quality policy forms the EKA framework for development with the focus on fulfilling the requirements set by the regulatory framework in Latvia and the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). The system, the policy is a basis of, ensures continuous, development, and efficient performance of the study field and the relevant study programme. Continuous development and efficient performance are ensured mainly by collecting, analyzing and acting upon the feedback from EKA stakeholders. The system contributes to the achievement of the aims and learning outcomes of the study field and the relevant study programme by maintaining the quality of education of EKA at desired level that is continuously measured (mainly by feedback mentioned above) and keeping relevant documentation up-to-date. This not only solves problems with quality of education, should they arise, but also prevents problems from happening by closely monitoring education quality. The system is supported by a quality manager responsible for quality policy and quality management system. The quality manager carries out the assessment of the quality system, organizes the assessment process of the personnel involved in the study field, organizes annual surveys of personnel, students and employers, analyses and evaluates their results and provides a report to EKA management. Another key input to the quality system is given by EKA student council. The Study Council performs analysis of the study process and develops recommendations for the improvement and development of the study field and study process (SAR, section 2.2.1). Quality manager works together with the head of the study field. The head of the study field is responsible for the management and development of the study field, who organizes, supervises and evaluates the work of the personnel involved in the study field and their results. The head of the study field analyses and evaluates the study process and its results, sets new tasks, informs the Vice-Rector for Study and Development and teaching staff thereof, and provides proposals to EKA management for the improvement of the study field. Quality system goal achievement is measured mainly by student, teaching staff and graduate satisfaction surveys conducted by EKA. Important criteria for evaluating EKA's performance and results are the assessment and recommendations of accreditation experts, the level of satisfaction of students and graduates, feedback from employers (SAR, section 1.3).

In general it is safe to conclude that EKA quality management system reaches its goals and its goals do contribute to EKA strategic goals.

1.2.2.

In order to assess the quality of the study process and provide opportunities for improvement the following measures are performed:

every year student surveys are conducted on the quality of the study process;

at the end of each semester, a survey of students is conducted on the quality of the work of the teaching staff;

after each graduation, graduates are surveyed to evaluate EKA's performance and understand the areas to be improved;

employers are to some extent involved in the steering of programme development, but the involvement is irregular and not systematic (in interview with employers).

representatives of the industry, who participate in the defense of the bachelor theses, express their opinion on the achievements of students and offer opportunities for the development of the programme.

Within the framework of the project "Innovation grants for students in the interdisciplinary fields of art, culture, economics and IT (MaKE IT)", a strategic collaboration has been established for the study field with the association LATA - Latvian Open Technology Association in order to develop students' research capacities and help to realize innovative/ interdisciplinary ideas. The obtained information is analyzed at the administration meeting and the study council and decisions are made to improve the situation. Based on the results of the surveys and recommendations of industry representatives, decisions have been made to improve the study process (SAR, section 2.2.1).

During interviews with EKA students, teaching staff and graduates some inconsistency in answers regarding survey frequency mentioned in SAR (above) and survey amount received by teaching staff, graduates and students were found. Also there are some discrepancies in EKA SAR as section 2.2.1 of SAR states that survey of students is conducted on the quality of the work of the teaching staff - every semester; and at the same time SAR section 2.2.4 states that assessment of the quality of the work of the teaching staff by students is analyzed once a year by conducting a survey. These discrepancies may suggest that EKA doesn't have a good control over which surveys are sent, at which frequency and how results are processed.

After survey feedback to stakeholders is done via concrete actions or changes implemented by EKA. Examples of changes based on feedback are the following:

new study course "Programming Languages" has been created as part of the course, the basics of the modern current programming language will be taught, currently it is the Python programming language. In the future, it is possible to change the course content without changing the course name;

study course "Higher Mathematics" is supplemented with topics that will help students calculate tasks for the course "Artificial Intelligence". The basics of the Python programming language make it easier and more convenient for students to calculate tasks for the course "Artificial Intelligence"; discussions with management have taken place about the possibility of moving from an existing version of Microsoft office to Microsoft Office 365;

At the regular annual meeting of the Study Council, a decision has been made on the process of implementing, concluding, studying and developing additional IT research methods.

In collaboration with the company "Like a Coffee", in the 2021 academic year, a guest lecture was organized for students on the topic Javascript frameworks (Angular, Vue, React) use in the course WEB Programming.

1.2.3.

EKA has developed a procedure for submitting complaints and proposals and it is included in the Study Regulations. The Regulation is available publicly on the EKA website, in Student's Guide section: https://www.augstskola.lv/upload/10_EKA_Studiju_nolikums_EN_2022.pdf). According to the regulations EKA requires all formal complaint applications to be signed by all submitters. EKA management explains it by noting that EKA wants to talk to people to try to resolve a conflict, rather than receive anonymous complaints (in interview with EKA management). It can be suggested that complaints regarding EKA higher management itself will not be received via this channel, thus an opportunity for improvement for EKA management might be missed by utilizing the system as it is now. But as identified in interviews with EKA management - the above is a conscious decision and the tradeoff the management is willing to make. Students are definitely informed about complaint submission opportunities as it is an integral part of EKA Student's Guide. Additionally, suggestions for improvements can be submitted via student's survey, there is evidence that EKA administration reviews improvement suggestions and acts to implement some of them (Annex8, Survey Results).

The principles of academic honesty are defined in the EKA's Code of Ethics and Academic Integrity,

that is available publicly (https://www.augstskola.lv/upload/12_EKA_ieksejas_%20kartibas_%20noteikumi_%20studejosiem_2017_EN.pdf, retrieved in July 2023). This document prescribes action if a violation of academic integrity and ethics has been established and applies to all EKA students.

The teaching staff is informed about the principles of academic integrity at EKA's general meetings and professional development events (seminars and methodological conferences), as well as when starting work at the university. (SAR, section 2.1.6).

EKA uses anti-plagiarism tools, examining all final theses and scientific papers submitted for publication in EKA's scientific journals. EKA uses the Unified Computerized Plagiarism Control System for checking papers, which is mutual to several Latvian higher education institutions. Study and project papers are checked in case when the teaching staff suspects possible plagiarism. (SAR, section 2.1.6). Until now, no serious violations of the code in the activities of students were found (SAR, section 2.1.6). This might be an indicator that either all EKA students during all 25 years of EKA existence are aware of the system and internal regulations and comply with them, or that the system is not efficient enough in fulfilling its purpose.

1.2.4.

The mechanism for obtaining and providing feedback, including from students and graduates, is effective and focused on the improvement of the study field. EKA regularly collects information on: student enrolment results once a year through the collection of information and its analysis in the EKA yearbook;

staff meeting and board meeting;

students' success once a semester by collecting information and reviewing it at an administration meeting and the Study Council;

drop-out reasons once a semester;

collecting information and analyzing the reasons for the refusal from studies indicated by students. Information is analyzed by the Vice-Rector for Study and Development.

mobility indicators for students and teachers once a year. The information is analyzed and the results reviewed by the Vice-Rector for Science and International Relations;

assessment of the quality of the work of the teaching staff by students once a year by conducting a survey. The results of the surveys are collected, analyzed and published;

assessment of the quality of the work of the teaching staff by students once a year by conducting a survey. The results of the surveys are collected, analyzed and published;

satisfaction of graduates with the achieved study results twice a year by conducting a survey. The results of the surveys are collected, analyzed and published;

employment of graduates (once a year for graduates of the last year, for the rest - once every three years);

quantitative and qualitative results of students' scientific and creative activities once a year, performing a summary of results and analysis of achievements in accordance with the planned;

the quantitative and qualitative results of the scientific and creative activities of the teaching staff once a year, carrying out an assessment of the collection of information. (SAR, section 2.2.4).

The information and statistical data is analyzed by EKA administration, corrective actions are taken, improvement suggestions are reviewed, once decided to be implemented - are followed up.

1.2.5.

The information published on EKA website <https://www.augstskola.lv/index.php?parent=272&lng=eng> is relevant to all interested in the corresponding study programme and EKA in general. The information regarding the evaluated programme corresponds to the information available in VIIS official register (<https://www.viis.gov.lv/registri/iestades>) and does match information available in AIKA official

register

(<https://eplatforma.aika.lv/index.php?r=expert%2Fstudy-direction-programs%2Flist&id=1875>). Information on EKA website is available in Latvian, English and Russian. That exceeds languages of study programmes that are delivered by EKA. The website has no search functionality thus making the navigation and finding relevant information more difficult.

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

EKA has developed a Quality Assurance System oriented to continuous improvement, the system clearly contributes to HEI strategic goals. Procedures and regulations cover all relevant dimensions of a quality system. There are some discrepancies in feedback collection frequency that might indicate that EKA doesn't have a good overview of how often feedback from which stakeholders is collected.

Strengths:

1. Strong support of EKA strategic goals by its quality management system;
2. Lots of feedback collected from various surveys.

Weaknesses:

1. Discrepancies and mismatches in survey collection frequencies;
2. Lack of website search functionality.

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: Fully compliant

Fully compliant on all subsequent criteria.

- 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

Quality management system in place, the system receives frequent feedback from multiple stakeholders and is geared towards continuous improvement. Quality management system supports the strategic goals of EKA.

- 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

EKA has developed and implemented the procedures for the development, approval and updating of study programmes and the Regulation "On the preparation, updating and approval of the description of the content and implementation of studies" that is approved on corresponding level. These procedures and regulations describe the mechanism of development and approval of study programmes (SAR, section 1.4).

- 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

EKA Regulation "On the preparation, updating and approval of the description of the content and implementation of studies" specifies the creation of a description of the study course that determines the criteria for the evaluation of study results, providing for how the achievement of a certain result is verified. Study course descriptions are published and available to students in EKA learning management system "Moodle".

- 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

EKA has developed and implemented the procedure for evaluating the performance of employees, it includes questionnaires for the evaluation of the academic staff. When evaluating the academic staff, the information included in this questionnaire is taken into account. Pedagogical work, scientific and creative activities, international activities, results of student surveys and performance of the e-study course in accordance with the existing requirements are evaluated. (SAR, section 1.4).

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

Assessment of compliance: Fully compliant

Information on student performance is accumulated in a student data database (Nexus) and is regularly analyzed by the study council (SAR, section 1.4).

- 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

Quality assurance system is clearly focused on support of EKA strategic goals and is well implemented having stakeholder feedback at the center of it (SAR, section 1.4; in interview with EKA management and quality manager).

1.3. Resources and Provision of the Study Field

Analysis

1.3.1.

A system for funding scientific and / or applied research is defined and implemented and it is effective. The budget of the study field and programmes consists of tuition fees and external financing (project financing). The share of external financing in the budget, which consists of EU structural funds and international projects, is 29%. Revenues from the implementation of all study programmes are used in solidarity to finance the costs of the academic, scientific and administrative process of the entire HEI. According to the approved budget, the division of costs by their main types is carried out. Currently, each study field provides sufficient revenue and attraction of external financing, so that the implementation of the field is ensured and profitability is determined. The funding for science and creative activity consists of the resources of the higher education institution and external funding (incl. project funding), its share in the total budget of the study field is 16%. These financial resources have been used to support teaching staff and students in research and creative work, as well as for the implementation of the project. (SAR, section 2.3.1). Biggest share of

the budget is taken by personnel costs including staff development (55%), EKA doesn't disclose how many % is spent on development versus personnel salaries. Second-biggest expense position is the funding for science and creative activity with 16%. Third expense position is "equipment" with 12% and that includes material and technical resources that EKA acquires and maintains (computers, software, etc.). Student attraction i.e. marketing activities take up 12% of the budget of study field. "Information resources" section takes up 2% of the budget when "unexpected expenses" take up additional 2% (SAR, section 2.3.1). There's no detalization of what is included into "information resources", if funding to replenish the library stocks is included that approximately matches with statement from SAR section 2.3.3 regarding library resource replenishment (2-3% of the budget) but only taking into account that all "information resources" budget and half of "unexpected expenses" budget is spent on replenishment of library resources - the figure can reach 3%. Personnel being the most significant area of spending for EKA indicates that the institution tries to attract the best personnel it possibly can.

1.3.2.

All resources, such as premises, classrooms, computers, operating systems and software, internet connection and internal networks, education management system "Moodle", storage for lecture video recording etc. are available to students and teaching staff. EKA has sufficient resources for the implementation of the study field (in premises visit).

Specialized rooms for the study field needs:

1) Digital laboratory. Computer systems with MacOS operating system are available in the room, with the provision of a special software for the implementation of the course "Development of mobile application";

2) Computer classes in which the software "Virtual Box" is available; with the help of this software, students have the opportunity to simultaneously use different operating systems on one computer; network equipment and peripherals for the implementation of laboratory work are available. (in premises visit).

3) Wi-Fi is available throughout the premises. All lecture-rooms have access to the material and technical equipment necessary for conducting classes, incl. computer, projector, etc. (in premises visit).

4) EKA has sufficient personnel with technical knowledge and expertise to maintain reliable work of the hardware and systems it has implemented (in premises visit).

There's small amount of Mac computers that allow development for iOS and MacOS platforms that is included in the study courses. On site students have to share these resources to be able to develop software for Apple environment. Currently EKA is in the process of acquisition of a new Apple computer room (in premises visit).

Distance learning students have certain inconveniences and hidden costs compared ot full time or part time students as e.g., they are not that well positioned to use EKA information technology infrastructure and software, while sometimes it is necessary to use special software and hardware for development for iOS and MacOS operating systems that is mandatory part of the study programme. For comfortable participation in the study programme distance learning students need to either own an Apple computer or rent one in a virtual environment - both options present costs that are hidden from students when they enroll into the programme.

A unified system and procedures have been established for the improvement and purchase of material, methodological, informative, etc. provision.

Neither during interviews nor in EKA SAR it has presented any proof of the establishment of an unified system of purchase of material, methodological or informative provision.

1.3.3.

Library resources and databases are available to students and meet the needs of the study field.

Library working schedule is aligned with student demands. (in library visit). The library's collection fund is replenished in several ways:

1) Initiated by the librarian who follows the news and informs the programme director about notable pieces of literature. Purchase needs are evaluated and approved by the programme director and teaching staff of the relevant study courses.

2) The teaching staff regularly reviews the content of the study courses, incl. topicality of bibliographic sources necessary for the acquisition of the course. If the list of obligatory literature is replenished with newer sources that are not in the library, then the teaching staff must inform the librarian about the need for purchase. (SAR, section 2.3.3).

Funding to replenish the stocks is planned from EKA's annual budget, which amounts to 2-3% a year, depending on the depreciation of books and the demand of the teaching staff for the latest literature (SAR, 2.3.3). Students can suggest ideas for library replenishment using surveys or other means of communication with management. No standard mechanism for library resource replenishment suggestions originating from students is implemented in EKA.

1.3.4.

EKA delivers distance and on-site learning for the evaluated study programme. Besides the premises, hardware and software used in on-site learning, EKA utilizes at least the following tools and systems for provision of distance learning:

1) education management tool "Moodle" successfully implemented, adopted and in use by EKA - a system to store study materials, organize course, store and conduct tests and other controlled assignments, give access to previous lecture recordings;

2) conference system BigBlueButton for provision of live video lectures with wide possibilities for collaboration and teamwork e.g. breakout rooms, votes, tests, etc.

3) own file hosting, storage system and network infrastructure for storing and managing access to lecture recording and study materials available in electronic format.

EKA uses the systems and technical solutions in effective ways, both, from cost and utilization perspective. Resources used for distance learning are also utilized by full time and part time students (in interview with study programme director; in premises visit). There's no definition of resources used exclusively in distance learning, as even Big Blue Button conference system, originally implemented to enable distance learning is used to make recording of lectures and in some cases make them available to full time or part time students who do not participate in distance learning. Of course EKA premises are used only by full or part time students, not ones enrolled in distance learning. During the premises visit it was discovered that many students prefer to use own devices (laptops) during the study process, over ones that are provided by EKA, this might indicate irrelevance of EKA material technical resources at least for some students.

The teaching staff also uses other modern digital tools (both in full-time and part-time and distance learning) in the study process, which allows them to use design thinking and problem-solving methods, such as Mural, Miro, Trello, Kahoot, ITPoker, Menti, etc. In some cases, Discord has been used to exchange information (SAR, section 2.3.4).

1.3.5.

EKA employs elected lecturers and guest lecturers. Mainly, lecturers for base subjects are full time EKA employees, while specialized subject lecturers are industry professionals who work in the HEI part time - this approach ensures students get experience and latest trends from the industry while getting a solid education in all base subjects (in interview with teaching staff). Once the need arises, an open competition is advertised for attracting teachers: for elected academic positions - in the official publisher "Latvijas Vestnesis", for guest teachers - in other media resources such as CV online <https://www.cv.lv/lv/>. Election to an academic position is carried out on the basis of the requirements of regulatory enactments and in accordance with the Regulation of Academic Staff

election (the document is not available publicly, but is available in Moodle education management system). The election procedure and detailed criteria are laid down in the above-mentioned Regulation. Any lecturer who meets the requirements set out is eligible for the announced position. Regardless of the status of the teaching staff in a higher educational institution, the evaluation of candidates is carried out according to the following criteria:

- 1) Acquired education;
- 2) Pedagogical work experience;
- 3) Professional work experience;
- 4) Achievements in science and/or creative work;
- 5) Communication skills. (SAR, section 2.3.5, in interview with teaching staff).

LinkedIn <https://www.linkedin.com/feed/> can be used more actively to represent EKA and recruit teaching staff, especially English speaking, there's greater chance to find advanced industry professionals with international work and teaching experience on LinkedIn than on any other "local" hiring platform. However EKA is represented quite well on LinkedIn with recent posts, announcements and with around 50 people currently listing it as their workplace https://www.linkedin.com/search/results/people/?currentCompany=%5B%2247071909%22%5D&origin=COMPANY_PAGE_CANNED_SEARCH&page=5&sid=XSb (retrieved on 24.07.2023). Currently there are no job offers posted on LinkedIn, but in case the need arises - the portal can be used effectively to attract new teaching staff.

1.3.6.

The process of further education and development in EKA is driven by its staff. The teaching staff is actively encouraged by EKA management to find relevant courses, conferences and other possibilities for professional development, then apply for the participation (in interview with teaching staff; in interview with management). Every request is reviewed individually by EKA management and once approved - EKA covers conference participation or tuition costs and provides its staff possibilities to develop professionally. Study and development progress is being followed up by EKA management (in interview with EKA management). Continuing education and professional development of teachers, motivating them to study in doctoral studies and obtain doctoral degrees is mentioned as an opportunity in EKA SWOT analysis (SAR, section 2.1.2) which confirms that this is a priority for management. Additionally, EKA budget along with staff salaries mentions staff qualification development (SAR, Section 2.3.1). Certain risk for utilizing this opportunity presents the fact that most of the teaching staff who teach professional subjects are industry professionals who might prioritize career in the field over personal development as a teacher or in academic field.

1.3.7.

The workload of the teaching staff includes pedagogical, methodological work and research and creative activities. Pedagogical work (50-60%) includes conducting classes, conducting studies, supervising project and final work, etc. Methodological work (10-20%) involves updating one's own study courses, incl. attendance of e-courses, methodological events, etc. Research and creative work (20% - 40%) includes participation in research, projects, conferences and creative activities (SAR, section 2.3.7; in interview with teaching staff). List of activities is available publicly at <https://www.augstskola.lv/?parent=208&lng=eng> (retrieved in July 2023). Taking into account the fact that the implementation of the programme involves industry professionals, research workload accounts for the smallest part of the total load. Some lecturers are involved in the programme on a part-time basis (SAR, section 2.3.7; in interview with teaching staff).

1.3.8.

EKA provides local and foreign students with the following types of support:

- 1) informational support;

2) methodological support: in EKA e-environment, teaching staff place study course materials, course acquisition requirements, and links to freely available bibliography sources. All of which makes it easier to access the information one needs to acquire courses; consultations on the acquisition of the study course in person and electronically; consultations on the development of studies, projects and final works; colloquium on the topicality, purpose of the topic of the final thesis, research methods used. At the colloquium, students are provided with recommendations at the initial stage of the development of the thesis.

3) career support - career advice and help with internship arrangements as well as guest lectures with industry professionals outlining challenges in specific professions.

4) financial support - opportunity to receive a grant study place, flexible payment schedule, tuition fee discounts;

5) technical support - e-environment troubleshooting, EKA Information and communication -related technical support.

All of the above support is available to local and foreign students and in addition for foreign students the following is available: psychological support in the first months - the opportunity to discuss and receive support in household matters; 37 Latvian language and culture training. The Student Council implements the Mentoring Programme, within the framework of which the introduction of new students to the study process is ensured (SAR, section 2.38; in interview with students; in interview with graduates). Additionally there's "welcome to Latvia" information on EKA website <https://www.augstskola.lv/?parent=240&lng=eng> (retrieved in July 2023) regarding transportation to and around EKA, hotlines and emergencies, events and attractions. All with useful and working links to Riga municipal and other relevant websites. The information is available in English and might be very useful for foreign students.

The support provided by EKA to local and international students is sufficient.

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

EKA is well staffed with qualified personnel and teaching staff and is able to invite guest lecturers to differentiate studies while making them even more attractive and relevant. EKA possesses all the resources necessary for the provision of the study programme however it possesses quite a small, but not insufficient book library (outlined in 2.3.1); .

Strengths:

1. Ability to attract guest lecturers.
2. Full-time teachers of basis subjects.
3. Wide range of industry professionals working as teaching staff in EKA (part time).

Weaknesses:

1. Currently not a lot of available Apple Mac computers to be able to provide all students with possibilities of software development for MacOS (outlined in 1.3.2). During the visit it was mentioned that EKA has signed a contract for the supply of more Apple MAC computers.
2. Certain hidden costs related to study programme acquisition for distance learning students - need to have or rent apple computer for comfortable and legal work on study programme (outlined in 1.3.2).
3. Lack of centralised and unified system of purchase of material, methodological or informative provision.

1.4. Scientific Research and Artistic Creation

Analysis

1.4.1.

The "Strategy of the EKA University of Applied Sciences 2019 - 2023" (EKAAS2023) document (<https://www.augstskola.lv/index.php?parent=208&lng=eng>) clearly states that the objectives for past five years. In general the main objective was set as "... strong commitment to significantly strengthen science and research, and to continue to build a university reputation through research-based studies, innovation and teachers-researchers whose scientific work is recognised at a global level and provides a practical contribution to the industry". It is defined specific priorities for each EKA' study fields, incl., Information Technologies (SAR p.37) as follows: quality assurance in research and creative activity; involvement of lecturers in research and creative activities in each field of study; involvement of students in research and creative activities in each field of study; collaboration in research and creative activities; EKA's reputation. Each priority has clearly specified KPI's (ZRDAS2023, p.7) with defined values for science and creativity, including target data for scientific publications and scientific projects and collaboration. Unfortunately the strategy documents do not mention promotion of commercialization of the applied research project results. There have been 48 publications in total indexed in Web of Science or SCOPUS databases related to the field of ICT published during the last 6 years period (SAR p.40-41 and Annex 12 to SAR). EKA participated as a partner in two international research projects in the field of ICT, MAKEIT and AUTORADE (SAR p.38 and p. 45) and as a partner in two youth education, training, and sport EU Erasmus+ projects incorporating ICT field: Uxiship and VILESA (SAR p.38) during the same period. Now, close to the end of the ZRDAS2023 given period, it can be stated that the research aims are partially fulfilled. The impact of the research performed by the own Teaching staff in the ICT field , as concerning especially the publications in Web of Science or SCOPUS listed journals are weak in the sense of contribution to start new research or local applied research projects. Concerning establishing new multi-disciplinary research groups (SAR p.38), it is hard to estimate what would be their strong competencies and how these might contribute in strengthening the ICT SF. These research groups definitively have inter- and multidisciplinary features and are in line with national priorities and collaboration of management, design and ICT field. There is a list of projects in SAR (SAR p.45-47) but it is unclear which of them are just student final or course works completed in some company or institution and which are applied research projects conducted in collaboration with some local companies. Experts could identify only three SF related applied research projects from SAR and from the information collected from the meetings with the EKA's management and staff and from the information sent by EKA after the visit: ICT solution for patients (registration, payments etc.) in medicine center, 20000 EUR; Mobile application for distance learning school (schedule, announcements, grades etc.), 5000 EUR; Application for identification of places in the city, which are not available for people with disabilities, 5000 EUR. At EKA there exists a research-administrative structure which is coordinated by the Vice-Rector for Science and International Relations. Unfortunately, its catalytic role in the applied research could not be observed from the SAR. From the point of view of the research organization, the infrastructure is divided between the research groups at EKA and a research group established within the framework of the ICT field is focused on the "Research in ICT and digitalization" (SAR p 40). On the other hand the SAR and list of research and youth development projects do not demonstrate the growth of applied or scientific projects targeted to Latvian industry or scientific challenges in general and there is a lack of ICT scientific capacity for the implementation of projects. The financial income of the SF of EKA of these research entities (from projects, consulting, equipment rental, etc.) are not transparently available. The open-access policy for providing a share of the equipment and software is commendable, but much care must be taken to not infringe software licensing agreements (for example, academic licenses usually cannot be used for industrial developments). The list of public and private partners with whom EKA is collaborating in the SF is relevant to the ICT field (for example Prosthetics and Orthopaedics Centre; Valpro IT; EIROLCDs Ltd; The Institute of Economics of Latvian Academy of Sciences; Latvian Digital Accelerator; Latvian Information Communication Technology Association

(LIKTA), the Latvian Open Technology Association (LATA), etc) (SAR p.44-45). EKA is organizing annually an international scientific and practical conference with partners "Emerging Trends in Economics, Culture and Humanities (etECH)" (<https://etech.eka.edu.lv>) (SAR p.46) which is a good option for young researchers, teaching staff and students to present their work in the ICT field and get experiences for future research.

Summarizing all mentioned above it shall be concluded that applied and scientific research is considered as an important area of the development of EKA, at the same time it should be stated that there are places for improvement related with applying for more projects, commercialisation, publishing activity and joint applied or scientific research projects with international and also local partnership. Considering that EKA is the university of the applied sciences it would be expected intensive activities targeted on collaboration with the local industry and commercialisation activities, while SAR do not provide much details on commercialisation policy in EKA and any ICT field "success stories" in commercialisation (for example start-ups, spin-offs, patents, intellectual property rights etc. Overall number of ICT-related publications could be improved. In the SAR projects EKA takes a role of the partner, while considering EKA experience a leader position is recommended.

1.4.2.

Upon studying the descriptions of the courses and research projects, it could be stated that the own research results are weakly introduced in the courses mostly because the research and applied projects background in the SF at EKA is insufficient. Both students and graduates were emphasizing the need of modern curricula and the content of the disciplines to be more practical and in line with modern technological trends. For these purposes, the intensive educational employment of modern research results and applied projects should be the most obvious way. According to the information from teaching staff CV's (Annex 10 to SAR) and information presented during the meetings in assessment visit (meeting with teaching staff) there are a significant number of the teaching staff, who work in parallel to teaching at EKA in some advanced ICT company and therefore able to deliver students not only fundamental knowledge, but also enrich students with the up-to-date issues they are dealing with. As a positive bullet point, could be mentioned the etECH conference organized for the students and staff, in which they are able to present their findings and ideas. During the meeting with EKA management and study programme director, it has been confirmed that the primary goal of the conference is knowledge sharing, and popularization of the research among the students. At the same time it has been reported that the conference is not obligatory and it is up to students to participate in it or not. Page 42 of the SAR provides numbers of the students participated in the Conference for the study year 2021/2022, which is 5 students and the number of publications in the collection of the student articles for the study year 2021/2022 was 8, which is very low considering the whole number of the students on the SP, which is roughly 100 in this study year (Appendix 22 for the SAR). The student participation in projects is also low (SAR p.42): study year 2021/2022 - 4 students and 2022/2023 - 10 students. The SP contains Course Research Methodology (2 CP), where the course includes a study paper, which includes an annotation and the development of a scientific article for a student conference. The data are confusing because of the low number of the reported student participation on the conference (SAR p.42).

1.4.3.

International cooperation in the field of scientific research and/or applied research and/or artistic creation within the study field and the relevant study programmes is ensured and it is being purposefully developed. Nowadays, due to the complexity of the addressed research topics, successful R&D cannot be performed without strong inner- and inter-institutional collaboration. Therefore, EKA is also focusing on good inner university multidisciplinary connections with Information Technologies, Management and Economics in the form of the multidisciplinary research group "ICT and digitization research" (SAR p.38). The research group contains members also from

EKA, Albert College, Cape Peninsula University of Technology (South Africa), European Digital Learning Network - Dlearn (Italy), Hochschule Kehl University of Applied Sciences (Germany), Western Norway University of Applied Sciences (Norway) and Vilnius Tech (Lithuania) (SAR p.39 and p.47). EKA has a great number of collaboration agreements with universities and public institutions both from abroad and in Latvia in the framework of Erasmus+ youth education and training projects Uxiship and VILESA (SAR p.39). Unfortunately in most cases, HEI is not a leading institution in these projects, but a partner. A great part of these agreements includes research-related activities in the research areas of this study field, such as mutual publishing, project proposal writing and running, academic staff and student exchange, etc. In addition EKA has international partners in organizing etECH conference: Albert College (Latvia), Sumy State University (Ukraine) and Walsh College (USA) (SAR p.39) which is an excellent place for disseminating the work results of the staff as well as the students. Unfortunately the conference proceedings are not SCOPUS-indexed, but they are indexed in ERIH+. The other side of this medal is that the academic staff involved in the evaluated study field is seemingly focusing on publishing here more than in other journals having a higher impact. The numerous plans for the development of international cooperation in scientific research listed in the SAR and EKAAS2023 and ZRDAS2023 are ambitious, and hopefully will bring improvements in research collaborations and increase in the number of applied research projects in future. It should be mentioned that the EKA's plan to increase the number of collaboration agreements (SAR p.40) is definitely supported but it is essential to concentrate on collaboration with highly ranked and strong research background universities internationally, which could lead to collaborative international research projects, attract more students for mobility and not so much increasing just the number of the agreements without increasing the research competence at EKA. Not looking at the fact that there are ongoing and completed projects, the research capacity of the EKA is limited and improvement in this field could potentially raise the number of the projects and improve international collaboration, which would include not only joint projects, but also joint publications.

1.4.4.

The staff development plan is defined as a detailed set of KPI's and tasks in ZRDAS2023 on page 38-39 with deadlines and persons in charge. The strategy also identifies highest risk as "insufficient awareness of EKA's staff and stakeholders of its strategic directions and objectives" (ZRDAS2023 p.51) and specifies the risk prevention measures: Planned information activities on the new strategy; Discussion of employees' roles in the implementation of the objectives during the evaluation procedure; Procedure has been developed for introducing new staff with the strategy. To promote the involvement of the teaching staff in scientific research and artistic creation EKA provides methodological and informational support on research collected into the folder "Administration" in EKA's Moodle system); support for forming and joining to research groups in each direction of research; providing financial support for the preparation of publications and participation in conferences within the framework of the Scientific Budget ("Regulations for Research and Artistic Creation Activities" in EKA's Moodle in the folder "Administration") and help in organizing scientific events at the university, such as the annual conference etECH, etc. (SAR p.40). The support activities are adequate and could lead to higher performances in the covered research field. The research-related obligations of the academic staff are established and monitored in general annually in EKA's Scientific and Creative Activities Annual Report (<https://www.augstskola.lv/?parent=8&lng=eng>). General principles on how EKA is supporting research (especially in cooperation with foreign institutions) are specified in the document "Regulations for Research and Artistic Creation Activities" (EKA Moodle system folder "Administration"). As an example, in accordance with the regulation for the allocation of financing for professional trips to participate in conferences - transport and accommodation expenses and participation fees at the conference could be covered. Among listed mechanisms several could be noted, as positive examples of motivation - option for self-initiated projects, budget for conferences

and publication. Considering the status of the EKA “university of applied” it would be useful and important also to stimulate R2B activities and propose the motivation scheme for teaching staff participation in such activities etc. EKA involves professionals from the labor market as teachers, which prevents them from being involved in research. It is necessary to involve the staff more in research activities in the future, by providing research experience for all members of the academic staff and for these purposes it is needed to have more research and B2B projects to motivate and finance respective activity. SAR and provided documents do not have a clear vision from the management perspective of the KPI, activities, and possible motivation actions, which would raise EKA to the next level in the ICT field. It would be useful and important also to stimulate research-to-business (R2B) activities and propose the motivation scheme for teaching staff participation and initiation of such activities etc.

1.4.5.

The intention for integrating all students in the ongoing research projects and their encouragement for innovation (SAR p.41) is appreciable, but a more intensive involvement should be targeted as the statistics in table Table. Participation of students in research activities (SAR p.42) shows very low numbers. Calling bachelor level student study paper or final thesis as “research” is very stipulated and is only the very first step in the direction of the research if it is not presented and published as a conference paper or not real participation in some running applied research project. At EKA the annual etECH scientific conference is organized, where the students from the programme can participate and present their research results though the student participation is very low (5 students participated in the year 2021/2022 and 8 students had their abstracts published there. The conference could be a good opportunity to make the SP more attractive for the current and future students. It should be mentioned that it is advantageous to organize conferences that are just open to students since this gives them a great occasion to participate in an interdisciplinary scientific meeting and to be listened also by experienced scientists and teachers. This is a good opportunity for the students to join pan-European research communities, accumulate knowledge, and last but not least validate their research results through a great variety of specialists in the field. The mentioned in SAR student conference (SAR p.41) also could be considered as a step forward into “promotion” of the research activities, but as it has been reported conference is not obligatory. Despite there exist several mobility possibilities to join hosting universities research projects (within the ERASMUS+ programme, but also in the framework of some research programmes) the students are very poorly taking advantage of such actions, which surely could improve their scientific knowledge and experience. Upon the meetings experts had with students, it seems that this is due to the impossibility to leave their workplace for a longer period. On the other hand the students did not demonstrate full knowledge of all the options the mentioned programmes could offer - for instance internship in some prestigious EU company supporting their future professional career and shorter period visits. There is a financial support scheme in EKA for students to cover the following categories of costs (Regulations for Research and Artistic Creation Activities, EKA Moodle “Administration” folder): the cost of publishing scientific articles; costs of participation in conferences; costs of participation in exhibitions; other costs for the provision of research and artistic creation activities agreed with the Vice-Rector for Science and respective information on the procedures is available on the EKA website, "Student Guide". Demonstrated in page 68 of the SAR thesis are in the frame of the study field and in many cases are industry related. Not looking at the fact that SAR provides specific cases of students involvement, there is no clear systematic approach which could promote more intensive involvement of the students, while already done efforts are respectable.

1.4.6.

EKA is fully aware of the role of multidisciplinary approach in research and development, which is

not very common in other universities and could lead to specific advantages in teaching and research. The Moodle-based LMS e-learning system should be foremost mentioned as a relatively innovative solution at EKA. The system contains a dedicated website called "EKA Administration" containing up-to-date strategic documents, information on scientific events, methodological materials, etc. and a Student's Guide containing information about the study process in breakdown by stages, corresponding internal regulatory documents, application forms, infographics and links to other informative resources and also containing distance learning materials like online video lectures, assigned tasks, seminar and discussion groups materials and examinations e-environment tools. EKAS has introduced an Unified Database of students and teaching staff NEXUS making possible to digitize a number of processes and document processing, for example: application and preparation of statements, issuing orders, drawing up study contracts and amendments, preparing diplomas, compiling statistical data for external and internal needs, etc. It is worth mentioning My EKA app for students: for faster browsing of the list of classes, announcements and updates, the student's profile. Experts noticed a continuous development of Moodle teaching materials, promotion among teaching staff knowledge and skills on courses development etc. Also during the assessment meetings in EKA with teaching staff the provided information about methodological seminars (conducted with the teaching staff) could be even more intensified focusing on the newest scientific achievements and new teaching techniques.

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

The research interests of the teaching staff are in line with current trends in the fields, and their intentions regarding research are commendable. EKA considers scientific and research development with attention, as the scientific activity and research is mentioned in the HEI development strategy. EKA's development strategy includes specific activities targeted to improve this domain. But in the same time, it should be stated that now in many cases used mechanisms and approaches are fragmented one and do not form the system or framework of the scientific and research domain development, including students and teaching staff attraction, R2B and commercialisation activities, continuous utilization of results gained in the frame of the already running or completed projects. There are international projects, in which EKA is involved, but we strongly believe that EKA has enough experience not only to participate in projects as partner having quite a small number of projects, but also initiate and take leading positions in some EU level projects and increase the involvement of the students in projects.

Strengths:

1. Inclusion of scientific and research development to the EKA strategy and underlining its importance on all levels (mission, vision, specific activities etc).
2. Clearly fixed KPI's for research and creativity activities in strategy documents, which unfortunately cover the period only till 2023.
3. EKA has multidisciplinary research groups (Information Technologies, Management and Economic), which could boost the respective project based activity.
4. EKA is running annual scientific conferences etECH and student conference.
5. There is a financial support scheme in EKA for students to cover the cost of publishing scientific articles; costs of participation in conferences; costs of participation in exhibitions; other costs for the provision of research and artistic creation activities.

Weaknesses:

1. Lack of the commercialisation strategy/policy (research R2B) for establishment of the long running collaboration with industry.
2. Fragmented approach for students and teaching staff involvement to the scientific/research activity.
3. No experience on taking the leading positions (project leader) in international projects (only partner role).
4. Lack of attention to the research-related issues in the bachelor level study programmes.
5. Only two research projects and two ERASMUS projects and 3 local company projects during the assessment period.
6. No clear applied research domain in the field of ICT as "digitalization" is very broad.
7. Very low attendance of the students in the etEch and student conference.
8. The research capacity of the EKA is limited in the field of ICT as teaching staff works in parallel somewhere else and the number of the staff is small.

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

Very small number of ICT related research projects - only 2 EU level R&D projects during last 6 years) and only 2 Erasmus+ projects during the reporting period with very low SP student participation, only few local R&B projects and very low participation of the SF students in R&D projects and international conferences.

1.5. Cooperation and Internationalisation

Analysis

1.5.1.

The SF has established a collaboration with a large number of partners (SAR p.45 and 47-49 and Annex 14), with the focus towards leveraging their experiences and expertise to ensure the relevance of its educational offering. The main criteria for the collaboration partner selection are: reputation of the partner, compliance with the specifics of the field activity and benefit to all collaboration partners (SAR p.44). The cooperation partners are selected considering their relevance to the specific features of the study field and the relevant study programme. Such collaboration is based on institutional agreements and takes on several forms: representatives of employers participating in the EKA Study Council; representatives of employers chair the final examination committee of the SP; employers offer topics for final theses; staff of employers offer guest lectures in courses; employers offer internship places for students. During the meeting in assessment visit the employers expressed support to the EKA in general, to the SF and to the SP. Both the academic staff of the SF and employers actively participate in the professional organizations and associations, the most important of which are the Latvian Information Communication Technology Association (LIKTA) and the Latvian Open Technology Association (LATA), etc. (SAR p.44 and Annex 14). EKA is engaged in various forms of cooperation with Latvian educational institutions in framework of Erasmus+, projects and creative activities: Transport and Telecommunication Institute; Rezekne Academy of Technologies; Vidzeme University of Applied Sciences; The University of Latvia; Liepaja University; Alberta College; Daugavpils University, etc. The full list of EKA´ cooperation partners contains 81 names, where these are not only partners for the ICT SF but all the HEI and some of these had only minor contacts with EKA and some are long term partners: Latvian HEI´s - 8;

Erasmus+ mobilities partners – 26; associations – 4; companies and organizations – 43 (Annex 14). The main directions of the collaboration are: participation in scientific research and creative activities; participation in the improvement of study fields and study programmes; provision of places of practice; organization of methodological events; organization of guest lectures and creative workshops; organization of student competitions and olympiads; participation in state final examinations (SAR p.44). To conclude EKA has created a rich partnership with educational institutions and professional organizations, which supports HEI in its activities. A weak point could be mentioned is the collaboration with the private sector to support students with scholarships, support development of the specialized laboratories and to initiate applied research projects to involve the students in practical research and to bring in more resources to EKA for hiring researchers or increasing the teaching staff income.

1.5.2.

EKA main directions of collaboration are: participation in scientific research and creative activities; participation in the improvement of study fields and study programmes; organization of methodological events; organization of guest lectures and creative workshops (SAR p.46). The list of the cooperation partners includes 81 institution names (Annex 14) but the most of them are general partners of the HEI and not explicitly partners of the SF or these partners have participated some single activity during the reporting period according to SAR (SAR p.47-49), e.g. partners at the some creative workshop, trainings or ERASMUS+ mobility programme. The distribution of the cooperation partners is given in the previous section of the current report. Cooperation with the foreign universities and scientific institutes entails, among others: guest lectures; ERASMUS+ project implementation and mobility; organization of international conferences (etECH); joint publications; staff exchange; staff training events etc.

SAR is not reporting a wide presence in the international associations, which corresponds to the domain of ICT. So it would be useful to improve such a collaboration to raise international recognition of the EKA. For example INFORMATICS EUROPE etc. However, all aspects of international cooperation should be guided by an international cooperation strategy that, among others, should be targeting broad and well targeted geographical coverage of the partner institutions and selection of the cooperation partners having high potential for the research collaboration and creating joint research projects as the number of ICT related international research projects during the current assessment period is very low (only projects Uxiship and VILESA) despite of the high number of cooperation partners and also increasing the attractiveness of the whole EKA and the ICT SF among the current and future students. It should be noted that SAR is listing some cooperation activities more than five years and more old (SAR p.47-48), which is inappropriate for the current assessment and SAR.

1.5.3.

EKA has established and implements a system for attracting qualified students and teachers from abroad by participating in international exhibitions and cooperating with agents according to the standards of the Higher Education Export Association for attracting foreign students, including SP admission criteria in accordance with the Admission Regulations (https://www.augstskola.lv/upload/Uznemsanas_noteikumi_2023_2024_EN.pdf) and includes the SF test and a test of English language (SAR p.50). The number of foreign students in the SF increased from 6 students in 2018/2019 to 22 students in 2022/2023 (SAR p.49). Within the context of the ERASMUS+ programme, EKA has established a wide network of partner universities in Europe. In total, the university has concluded 26 bilateral cooperation agreements with higher education institutions (Annex 14), which allow both for students to study at the partner universities as part of the exchange programme, and for the academic staff to go on exchange trips to the partner universities to deliver lectures and to attend training. Not all these agreements are active, and

ERASMUS+ mobility of both students and academic staff have remained very low. The Covid-19 pandemic certainly contributed largely to this, however the fact that most of EKA students are working constitutes a severe obstacle to their participation in mobility schemes, at least of a duration longer than a week. During the reporting period, there were 2 incoming and 4 outgoing students and 14 incoming lecturers and 7 outgoing lecturers in the ICT field in the ERASMUS+ mobility programme (Annex 16 and 17). Therefore it is seen that not all the ERASMUS+ agreements (26 ERASMUS+ partners) do not work and particularly do not work for student mobility. Number of foreign students in the English language SP is 22 in the study year 2022/2023 (Annex 15).

To conclude the presented mechanisms are active and are used actively by the EKA. At the same time it should be stated (and reported during visit), that in many cases personal contacts are playing a great role in this process. So formalization of this process (or strategy) could be a good support for the HEI to establish sustainable development and make it more efficient.

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

It shall be concluded that EKA has rich collaboration with local and international HEI's, but at the same time the efficiency of international collaboration is limited in the sense of international projects and mobility. The teaching staff and students mobility have to be improved, by moving from classical mobility programmes to the blended intensive programmes (BIP). Participation in the ERASMUS+ programme should have clear focus and strong and attractive partners and the number of ERASMUS+ partners does not play a key role in intensifying the mobility. Eka has a potential for cooperation to develop, by expanding it with national and international companies and organizations, developing new cooperation formats and involving graduates and employers more actively.

Strengths:

1. EKA has established a comprehensive system for attracting qualified students from abroad, resulting in an increase in the number of foreign students in the study field.
2. Some positive examples of international cooperation as a foundation for further development and enhancement of global partnerships.
3. Number of listed partners is high.
4. Running the international conference etECH at EKA is a great challenge for intensifying the future collaboration.
5. The study programme is running also in English and this lead to bring 22 students to EKA in 2022/2023.

Weaknesses:

1. Only two ERASMUS projects during the assessment period.
2. Staff participation is low and student participation in ERASMUS mobility is inconsiderable .
3. Weak collaboration with private sector.
4. Not all the ERASMUS agreements work as there is no mobility in the framework of most of the agreements.
5. Lack of presence in international bodies/associations, related to computer science and electronics.

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: Partially compliant

EKA has established cooperation with many local and international HEI's, which is considered to be a significant benefit for the SF and could to achieve the objectives of the SF, to train ICT specialists with international mobility experiences and good practical applied research skills, but there is relatively weak cooperation with national and international industry and very low number of related international and local research projects. However, its potential is not completely reached nor there are clear activities to reach it. Furthermore, the applied research projects activation is a minimum for the further success of the SF.

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

Analysis

1.6.1.

16 recommendations were given to the HEI in the previous accreditation assessment (annex no. 18) which happened in 2016.

"1. To improve the descriptions of study courses in order to more accurately reflect the compliance of the course content with the title of the study course and current events in the field (short-term)" - recommendation implemented fully. Looking through the study course descriptions (annex no. 26) - they are written accurately and there are no inconsistencies.

"2. To ensure the duration of e-courses (on-line) in accordance with the number of hours specified in the study course descriptions (short-term)" - not relevant. In the self-assessment report, the HEI points out that this recommendation was indicated incorrectly. Looking through the course description (Annex no. 26) there were no indications of problems.

"3. More precisely define the aims of the internship and the studies outcomes (short-term)" - recommendation implemented fully. EKA has 3 practices in the study programme. The aim, study outcome and other useful information for the student are all written down in the "EKA University of Applied Sciences Study programme "Information technologies" INTRODUCTORY INTERNSHIP (PRACTICE I) PROGRAMME", "BASIC INTERNSHIP (PRACTICE II) PROGRAMME" and "PROGRAMMING INTERNSHIP (PRACTICE III) PROGRAMME". The provided information in the documents is precise and extensive.

"4. To formulate more precisely the aim, tasks and study results of the study programme (short-term)" - recommendation implemented fully. The aim, tasks and study results of the study programme are formulated precisely (self-assessment report, page no. 57 has the programme description available)

"5. Determine research directions, closely related to the study field"- recommendation implemented fully. In the self-assessment report it is said that they are working in only one research direction - ITC solutions.

"6. Set up research teams with a lead researcher " - recommendation implemented fully. The HEI has set up research teams, the information about the teams is also available publicly (https://www.augstskola.lv/?parent=493&lng=eng_) In the interviews the teaching staff has confirmed, that they know and can be part of the research teams

"7. Develop a procedure for the preparation and publication of scientific articles" - recommendation implemented fully. The HEI has developed the "REGULATION FOR THE ACTIVITIES OF RESEARCH AND ARTISTIC CREATION OF THE EKA UNIVERSITY OF APPLIED SCIENCES" where the procedure for the preparation and publication of scientific articles is described.

"8. To provide additional support to teaching staff in the preparation and management of e-courses" - recommendation implemented fully. In the interviews with the teaching staff, there were no indications that they have problems managing e-courses. The HEI has guidelines on how to manage

the e-course and also an e-studies coordinator. In the interviews it was mentioned, that each year there is a committee that goes through all the e-courses and helps improve them if needed

“9. Aligning course descriptions with EQUANIE, ACM&IEEE requirements and recommendations” - recommendation implemented fully. Looking through the study course descriptions (annex no. 26) - they align with the EQUANIE, ACM&IEEE requirements and recommendations.

“10. To improve the existing technical support by expanding the possibilities of servers for homework ” recommendation implemented fully. In the annex no. 18 and in the self-assessment report it is mentioned that the servers were improved. When visiting the HEI the experts didn't see or hear in the interviews any problems with that

“11. Create additional laboratories "for hardware related courses"” recommendation implemented fully. HEI has a special laboratory where students have the possibility to try and work with different hardware (VR, drawing tablets, different phones and Apple products). It was also mentioned that there are spare parts of different computer systems available.

“12. Development of a plan for the improvement of language knowledge and provision of training for academic staff” - recommendation implemented fully. The academic staff mentioned that they have the possibility to take courses if needed.

“13. Attract more teachers with a doctor degree and involve them in teaching study courses in the study field ” - the recommendation was partly implemented. Right now there is just one teacher with a doctorate degree who teaches an ITC subject.

“14. To promote collaboration with employers by involving them more intensively in the implementation of the study programme ” - the recommendation was implemented fully. In the interviews with the employers they were satisfied with the collaboration with the HEI. Employers are part of different committees in the HEI and come to lectures as guest speakers

“15. Establish collaboration with the industry in the field of R&D” - recommendation implemented fully. In the interview with the academic staff, students and graduates the ERDF project "Innovation grants for students in the interdisciplinary fields of art, culture, economics and IT - MaKE IT" was mentioned as a gateway to work with the industry. The self-assessment report mentions also other collaborations, for example, with LATA

“16. To ensure the conduct of student research at the bachelor level” - recommendation implemented partly. The students have the possibility to present and publish their research in the Students conference but it isn't obligatory. There needs to be more done from the HEI side to ensure scientific research is done from the student's side.

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

Out of 16 recommendations - 13 recommendations were implemented fully, 2 recommendations were implemented partly and one recommendation was not relevant (as pointed out in the self-assessment page 48, it was a communication mistake). Taking into account all the interviews and provided documentation, it is visible that the HEI tried to implement all the recommendations as best as they could but there is still work that needs to be done.

Strengths:

1. The result of many recommendations are well prepared guidelines and documents that help work efficiently for the HEI staff.
2. It is visible that the HEI tried to implement all the recommendations as good as they could.

Weaknesses:

1. Still need to work on attracting more teachers with a doctor degree to teach ICT subjects.
2. There is still work on motivating students to do scientific research.

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

Using the provided documents and the interview it is possible to conclude that 13 out of 16 of the recommendations were implemented fully, 2 were implemented partly and 1 recommendation was not relevant.

1.7. Recommendations for the Study Field

Short-term recommendations

- 1) To indicate the value for exam and for the semester work, which could be used for all the courses, so that the students would have the same system. For example 40% and 60%, or 50% and 50%.
- 2) Include the employers more in the management and decision making (invite them into social partners days, commission of the final defence and University Senate).
- 3) Make a five year plan and do the survey to increase each year the student and graduate participation rate for the feedback about the study process.
- 4) Include a student council representative in the committee if there is a case of Academic integrity reviewed in the University.
- 5) Update distance study programme (implement by the start of the new study year) descriptions with information about requirements towards technical equipment that is required to comfortably attend study programme such as: powerful computer with several displays for simultaneous follow up with teacher and performing of study related work (coding, debugging); ability to install software on the computer (admin rights); licensed access to MacOS operating system, either as a virtual machine or as installed on Apple computer for software development for iOS and MacOS; (optional) - access to iOS and android device for testing developed software; high quality webcam and microphone for participation in lectures; broadband internet connection.
- 6) Introduce a commercialisation strategy/policy (research R2B) with industry for EKA defining clear tasks for each study field and introduce respective document for the next assessment period.
- 7) Define and focus on clear and suitably narrow applied to research domains in the field of ICT and introduce the new focus into next period strategy document and into respective research group action plan document
- 8) Take measures to increase the attendance of the students in the etECH and student conference, check strictly that all the students on the course "Research methodology" attend in one of these conferences and make it obligatory for the students to present Thesis before the defence in one of the conferences.
- 9) Define and focus on clear and suitably narrow applied to research domains in the field of ICT and introduce the new focus into next period strategy document and into respective research group action plan document.
- 10) Make an inventory for all the ERASMUS agreements and leave only the agreements which work or will work in some coming years, make the corrected (real working) ERASMUS agreements for ICT field available for the students on the EKA's web page or in Moodle.

11) Set the target value for each study field for taking part in respective field international bodies/associations, incl. IEEE, etc. and develop a yearly action report as a document for each association and document the analysis of the action report.

Long-term recommendations

1) Develop and implement clear policy of how survey feedback is collected (inform all stakeholders about the policy, analyzed, registered, actions taken and followed up that contains at minimum: survey frequency; survey target audience; survey nature and targets; description of how survey feedback is processed; description of how survey feedback is registered; description of how suggestions for improvement are registered and acted upon.

2) Introduce a systematic yearly analysis about achieving the International Cooperation KPI's for the study field "Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science".

3) Prepare and submit at least two EU level ICT related international research project proposals and two ERASMUS project proposals where EKA is project leader during the next assessment period.

4) Introduce and incorporate research-related issues into the bachelor level study programme (at least one subject).

5) Find a strong ICT focused practical research partner from Latvia or EU to collaborate in developing new projects and introducing new trends to students and to develop the study programme further.

6) Make the mobility obligatory for the teaching staff for certain periods of their career (at least once per five years) and introduce more ERASMUS options to students that might be attractive for them (short period visits, career in prestigious companies in EU, etc) and set target values as KPI's for the student mobility in EKA's next period strategy document.

7. Select and make some long-term collaboration agreements with the private sector who might be interested in getting the SF related training or developing new products in collaboration with EKA, set target target collaboration agreement number per year for the ICT field not less than 2 agreements per year.

II - "Information Technologies" ASSESSMENT

II - "Information Technologies" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1.

As it is presented in EKA University of Applied Sciences SAR (page 24), the development and approval of study programmes is organized in accordance with the procedures for the development, approval and updating of study programmes (EKA website Moodle "EKA Administration" was shown during the visit by HR management). This procedure determines in detail the process of developing, updating and closing study programmes and the responsible staff involved in this process. In accordance with the requirements of point 55 of the Law on Higher Education Institutions, the Regulation on the preparation, updating and approval of the description of the study content and

implementation has been developed and implemented (approved at the meeting of the EKA Senate on 26.04.2017. Protocol No. 120, available on EKA's website "EKA Administration"). Study programme "Information Technologies (42484) only one study programme is implemented in EKA University of Applied Sciences in the field Information Technology, Computer Hardware, Electronics, Telecommunications, Computer, Management, and Computer Science. As it is mentioned in SAR (page 11), the aim of the study field is "to prepare qualified specialist in the field of ICT for work at enterprises, organizations and state and municipal institutions who are able to perform tasks related to do profession and are ready to continuously improve their knowledge and skills in a changing environment", and this complies with the the main goal of the study programme (SAR, page 57), "Train programming engineers for professional information technology industry, whose knowledge, skills and abilities meet the demands of modern labor market. Reviewing the study field tasks it is seen that they comply with the tasks of the study programme: 1) Provide a study process that complies with the laws and requirements of the labor market 1) Ensure the process of study meeting requirements of legislation, labor market; 2) To involve field professionals in the implementation of the study programme 2) Ensure the pedagogical and scientific qualifications of the teaching staff; 3) Develop infrastructure and facilities under the study field implementation needs/4) To provide and develop infrastructure and facilities according to the study programme implementation needs; 5) To develop research activities in the study field 3) To provide and develop research activities in the study programme; 6) To develop international collaboration with related higher education institutions, enterprises and organizations/ 5) To develop international collaboration with related higher education institutions, enterprises and organizations. Study programme complies with the study files and the study field objective and tasks are formulated in the light of the Universities strategic goals and objectives, and contribute to their achievements.

2.1.2.

As it is presented in EKA University of Applied Sciences SAR, the name of the study programme is "Information technologies"(42484), only one study programme in the study field Information Technology, Computer Hardware, Electronics, Telecommunications, Computer, Management, and Computer Science. The qualification obtained after graduating is "Programming Engineer". The expected learning outcomes of the study programme is based on the knowledge, skills and competences defined in the Latvian Qualification framework level 6. The aim of the study programme is to prepare specialists - programming engineers for professional activities in the field of information technologies, whose knowledge, skills and abilities correspond to the requirements of the modern labor market, who know and use programming languages, and are able to solve practical problems in the framework of the programme, knowledge of the principles, methods, regularities of computer science in the field of IT is provided. The study programme includes relevant study courses like "Programming", "Data structure and Algorithms", "Artificial Intelligence" and etc. Study programme content is available in the official EKA website (<https://www.augstskola.lv/index.php?parent=272&lng=eng>).

As it is presented in EKA University of Applied Sciences SAR, Information Technologies (42484), only one study programme in the study field Information Technology, Computer Hardware, Electronics, Telecommunications, Computer, Management, and Computer Science. Eka offers various types of studies for a precise study programme: full-time studies 4 years, part-time and distance studies 4 years and six months. Admission requirements are set according to Latvia law to have a secondary education. EKA also offers the studies in English language only for full-time studies, and here enrolled students have to have a secondary education and also English, at least B2 level. All information about the admission available in the official EKA website (<https://www.augstskola.lv/?parent=96&lng=eng>). And specific information about the Information Technologies study programme types and content in the link:

<https://www.augstskola.lv/index.php?parent=272&lng=eng>.

2.1.3.

As it is presented in EKA University of Applied Sciences SAR, during the reporting period, changes were made in the formulation of the aim, tasks and study results to be achieved in the study programme. These changes have been made due to changes in the content of the study programme and implementation of the study process, taking into account the requirements of the qualification framework. Changes in the direction of the study programme are made on annual self-assessment, visit results, evaluating the submitted proposal by teaching staff, students, graduates and employers, and etc. The surveys are organized regularly, as it was stated by the HR management during the meeting: Annual survey about study process, twice a year survey for teaching staff. Once per year graduates. Twice a year - about the teaching process at the end of the study year. Survey results are analyzed and summarized (process done according to the EKA's Quality Management System). After analyzing, agree on implementation, assign responsible person, implement, follow up. During the meeting it was indicated that after the survey, a teacher was changed, more programming included in the programme as a demand from a student. Also as it is indicated in SAR (page 25), a new study course "Programming Languages has been created (Python), study course "Higher Mathematics" was supplemented with topics to help calculate artificial intelligence courses. In the direction to be accredited, new study programmes have not been licensed.

2.1.4.

As it is presented in EKA University of Applied Sciences SAR, the implementation of the study programme "Information Technologies" was started in Latvian in 2015, and in 2018/2019 in English language. The enrollment of the students during the analyzed period is described in Annex 22 "Statistics of students" and in SAR, Table. Total numbers of students (page 63). By analyzing the data, that is given in SAR and Annex 22, it can be seen that the total number of students is increasing in part-time studies and distance learning studies. This is also confirmed and this is seen also in analyzing the tables that are showing the statistics of enrollment in higher courses (there are enrollments into 1st - 3rd year in distance and part-time studies. This was also seen during the meetings with the students and graduates, since most of them are students of part-time or distance studies, and also they confirmed that a big part of them started the studies from 2nd or 3rd study year. Threatening factor is the enrollment of the full-time students, since the numbers are really low, compared with the other types of studies, and the same aspect is seen in the dynamics of the graduates (Annex 22), it is seen that during the analyzed period 2018/2019 this year there enrolled 12 full-time students, but this year there were no graduates. The situation is not so good with the part-time students, since in the same year 10 students were enrolled, and graduated only 3, and for distance learning it was also seen that 16 were enrolled and only 2 have graduated. This situation was discussed with the programme director and rector during the meeting and they have explained the situation, that data given in the first table (Annex 22) and dynamics is prepared according to requirements for the first of October (that has to be prepared according to the Latvian law), but there is additional enrollment in a spring semester. The drop out dynamics was stated to be 32% 2021/2022 study year, and for this year 2022/2023 it was stated that it is 18%. This year the total number of graduates is 10 students, and 30 is the enrolled average students. Full time students are not likely to graduate in expected programme length (4 years) - foreign students 100%. On average: $\frac{1}{3}$ of students graduate; $\frac{1}{3}$ of students drop out; $\frac{1}{3}$ have academic debts → continue study. Full time students are not likely to graduate in expected programme length (4 years) - foreign students 100%. As it is mentioned in SAR, every year, some students return to the university (on average 2-3 people) and resume their studies at later stages of studies, having previously carried out the recognition of the study results achieved in the previous stage of studies. The main issues and problems analyzing the drop out are lack of financial resources, migration to other countries,

difficulties to combine the studies and job duties, COVID-19 situation. This was also confirmed by the graduates and the students, but also they have indicated that the study programme is intense and hard to study, also it is hard to manage between work, family and studies afterwards. For the English students the main reasons for drop out are COVID-19 situation, war in Ukraine, since they are studying only full-time. These factors are the reasons for drop-out, indicated By the rector of EKA. As it is presented in SAR (page 61), the labor market in the medium and long-term forecast in 2022 says that the demand for professionals in the ICT sector is one of the largest, exceeding the supply. The shortage of specialists of the corresponding qualifications by 2030 could exceed 9 thousand specialists, mainly in such areas as computer science, and etc. During the meetings with students and graduates almost everyone (except few in the group attending the visit), stated that currently they are working in the IT sector, corresponding with studies.

2.1.5.

N/A

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

The interrelation of the analyzed study programme “Information technologies”(42484) of the analyzed elements title, code, degree to be obtained, professional qualification or degree and professional qualification of the study programme, aims, objectives, learning outcomes and admission requirements are interrelated. Changes in the field of the study programme are made on annual self-assessment, visit results, evaluating the submitted proposal by teaching staff, students, graduates and employers, and etc. The surveys are organized regularly and the results of the implemented aspect is seen in the updates of the study programme. EKA offers various types of studies for a precise study programme: full-time studies 4 years, part-time and distance studies 4 years and six months. It can be seen that the total number of students is increasing in part-time studies and distance learning studies. This is also confirmed and this is seen also in analyzing the tables that are showing the statistics of enrollment in higher courses (there are enrollments into 1st - 3rd year in distance and part-time studies. Threatening factor is the enrollment of the full-time students, since the numbers are really low, compared with the other types of studies, and the same aspect is seen in the dynamics of the graduates.

Strengths:

1. Changes in the field of the study programme are made and by analyzing the results, changes are implemented according to the needs of the students.
2. Big potential for part-time and distance learning studies, also increase enrollment in higher courses.
3. The programme title, degree, aims, objectives learning outcomes fully comply with the study field.

Weaknesses:

1. Threatening factor is the enrollment of the full-time students, since the numbers are really low according to the SAR Annex 22, compared with the other types of studies.
2. On average: $\frac{1}{3}$ of students graduate; $\frac{1}{3}$ of students drop out; $\frac{1}{3}$ have academic debts —> continue study. The drop-out was explained, but still the given numbers are showing different amount of students, also the number of students having academic debts and graduates is low in total.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1.

The goal of the SP is to prepare highly skilled computer professionals with profound knowledge in ICT, higher mathematics, and engineering fundamentals that would enable them to adapt independently to professional activities in the changing labor market conditions, as well as to prepare students for further studies in higher level professional programmes and further self-education. All the courses, their content and learning outcomes are mapped to the skills and knowledge and competencies provided by the SP (Appendix 25). The correlation of the aims and learning outcomes of the SP with the learning outcomes of specific study courses are described in each study course description. The goal of the SP is to provide a set of knowledge, skills and competencies according to Level 6 of the European Qualifications Framework of Latvian Education Classification. Annex 23 shows the compliance of the study programme "Information Technologies" with the State Standard of Second Level Professional Higher Education and Annex 24 shows the compliance of the study programme "INFORMATION TECHNOLOGIES" with the Profession Standard, including delivery of Latvian language (4 CP) in English version of the study programme. But, it is unclear how EKA is going to manage the situation, if someone local will decide to join the English version of the study programme. The students expressed their interest and strong desire to have at least some courses delivered in English on the Latvian language programmes too as English is very required in ICT professional life (expert meeting with students).

In the structure of the study programme, 56 CP are compulsory basic study courses (part A and B), 60 CP are industry professional specialization courses (part C) and 6 CP are free elective study courses and 26 CP is practice and 12 CP is Bachelor Thesis. The structure of the SP is the same for full-time and part-time programme. The compulsory part of the study and the industry professional specialization include the main and basic principles of ICT field knowledge. Part C introduces a certain flexibility to the programme allowing the students to choose some courses according to their future career needs or according to their interests. The content of the study programme is topical, the content of the study courses is interconnected and complementary, corresponds to the objectives of the programme and ensures the achievement of learning outcomes. It should be stated that the SP has a significant number of "small" courses (2 and 3 CP courses), which makes the SP hard to manage from the point of HEI and overloads students with assessments and small homeworks. The quality assurance of the SP is based on cooperation with the employers organizing the meetings for the discussion of requirements of the current industry situation and demands of the labor market. It was mentioned during the expert visit (meeting with the HEI management and director of the SF and SP) that one of the most valuable information for developing the SP is feedback from the employers collected at the end of the student practice. The SF management has put a lot of hopes and trust in the competencies and experiences of the teaching staff of the SP as most of them are working in the industry on a daily basis. For example, M. Pinnis, docent of the study courses "Artificial Intelligence", "Fundamentals of Systems Modelling", is a leading researcher of Tilde company, E.Treiguts, docent and lecturer of the study courses "WEB Programming" and "Mobile Application Development for iOS", is an iOS platform professional and application software developer; docent, lecturer of the study course "Higher Mathematics" P.Morevs is a practicing mathematician and WEB programmer (SAR p.63). It is worth mentioning that the SP contains necessary for the industry soft skill courses as: Business communication and professional ethics; Introduction to Entrepreneurship; Legal Regulation of Entrepreneurship; Presentation skills. The updated courses are coordinated, approved by the Study Council and included in the SP register at the beginning of the new study year. Every year there is an expanded meeting of the Study Council, where the results of the programme, its content, identified shortcomings are analyzed and opportunities for improvement and its integration into the study programme are examined (SAR

p.64).

The study programme is developed in accordance with the requirements of the Minister Cabinet Regulations No 512 "Noteikumi par otrā līmeņa profesionālās augstākās izglītības valsts standartu" (<https://likumi.lv/ta/id/268761-noteikumi-par-otra-limena-profionalas-augstakas-izglitibas-valsts-standardu>), which has recently lost its power, as well as with the old version of the term "credit point" definition. According to the new definition given in the Law on Higher Education Institutions (<https://likumi.lv/ta/id/37967-augstskolu-likums>) Clause 1 Article 8 "credit point is accounting unit that expresses the amount of study work based on the study results defined in the study programme or part of it and the study load related to their achievement. 60 credit points correspond to the study results acquired in full-time studies in one academic year in accordance with the European credit transfer and accumulation system. Credit points are expressed in whole numbers. One credit point corresponds to 25-30 hours of study work". According to the amendments in Article 1, Clause 8 of this law regarding the wording of the term "credit point" in the new version, the university must ensure the transition to the amount of credit points specified in Article 1, Clauses 9 and 10 and the second, third, fourth and fifth parts of Article 57 of this law by 2024 for December 31 (Law on HEI, Clause 93). In addition, these amendments to Article 1, Clause 3 of the Law on its wording shall enter into force on January 1, 2025 (Law on HEI, Clause 94).

From June 21 of this year, new regulations of the Minister Cabinet No 305 "Noteikumi par valsts profesionālās augstākās izglītības standartu" (<https://likumi.lv/ta/id/342818-noteikumi-par-valsts-profionalas-augstakas-izglitibas-standardu>) came into force. Along with the transition to the amount of credit points specified in the previously mentioned Articles of the Law on HEI, EKA should review the mandatory content of the professional Bachelor's study programme according to the requirements specified in Clause 22 of the MC Regulation No 305. The mandatory content must include:

1. study courses in the mandatory amount of not less than 30 credit points - humanities and social sciences study courses, including study courses that develop basic social, communicative and organizational skills, including a study module for building business professional competence;
2. basic theoretical knowledge courses and information technology courses of at least 54 credit points in the field (professional field of activity);
3. specialization study courses corresponding to the industry (professional field) in the amount of at least 90 credit points;
4. elective part study courses in the amount of at least nine credit points;
5. practice in the amount of at least 30 credit points;
6. state test in the amount of at least 18 credit points.

According to the changes in previously mentioned regulatory enactments, experts invite EKA management to review the content of the study course, which must include the content requirements stipulated in the Law on Environmental Protection and the Law on Civil Protection and Disaster Management, while the Law on Civil Protection (<https://likumi.lv/ta/id/146474-civilas-aizsardzibas-likums>) has lost its force and instead the Law on Civil Protection and Disaster Management (<https://likumi.lv/ta/id/282333-civilas-aizsardzibas-un-katastrofas-parvaldisanas-likums>) has been adopted. Experts invite the EKA management to review the form of evaluation of the achievement degree of study results for study courses. According to the new version of the MC Regulation No 305, the degree of achievement of study results within the final examination of the study course can be evaluated with the rating "passed/failed" if the amount of the study course is not more than three credit points (MC Regulation No 305, Clause 57).

Experts invite the EKA management to pay careful attention to Clause 28 of the new version of MC regulation No 305. According to the new up-to-date version after completing bachelor's studies, a bachelor's degree and a sixth-level professional qualification are awarded. According to the old version MC regulation No 512, the fifth level professional qualification was awarded.

2.2.2.

N/A

2.2.3.

The study process is mainly implemented in the format of interactive lectures, seminars, workshops and student-independent work. Courses include workshops, discussions, teamwork and project work focused on professional tasks and problems. The basic principles and procedure for the assessment of the acquisition of the study programme comply with the requirements. The part-time and part-time extramural distance education students learn and take the examinations using digital online study tools or attending the classes on weekends, with reduced in-person attendance at the EKA. Each study course implemented in the SP has a corresponding English language course and respective study materials (in the Moodle E-learning system) including lecture videos and interactive learning materials (knowledge tests, etc.). Communication with the lecturer is organized mostly via the E-learning system for the part-time and part-time extramural distance education students (expert meetings with the teaching staff and students). It is worth mentioning that tests or exams are taken orally using the Moodle resource Big Blue Button which is essential in making sure the student acquired the study materials. The rest of the study courses in distance learning mode are organized in synchronous mode where the students and teacher meet in the e-learning system. Therefore a flexible study process is provided - various forms of study (on-site full-time, part-time, distance learning), which gives students the opportunity to combine work with studies. For the SP part-time extramural studies distance education similar methods are used in the organization of the study process as for full-time and part-time students, using the capabilities of the EKA Video Conferencing System (SAR p.66). There are available study plans for full-time and part-time studies (Annex 27a and 27b) but not for the part-time extramural studies distance education SP, which leads to the assumption that part-time and distance studies share the same study plan with the part-time studies with only difference that distance studies students use only EKA Video Conferencing System and Moodle with respective lecture materials. Experts did not have access to Moodle course materials but SAR mentioned that teaching staff places the requirements for the acquisition of the study course, independent work and other information necessary for the acquisition of the course on the e-course Moodle. Students submit their papers onto Moodle, as well as participate in seminars, practical classes and online discussions using the EKA Video Lecture System and assessment of the student work is performed also in the e-learning system (SAR p.22). There is not mentioned any kind of short time course sessions in-place at EKA or any other in-place training for the distance studies students, e.g before the examination session, etc. Experts express doubts whether the study form where there are no scheduled classroom meetings at all with the students during the semesters could be right even for distance education students as full SP and equal to full-time and part-time SP. It might be reasonable to change this kind of full distance education to professional continuing education courses separate from accredited SP. The students from the full-time programme have the opportunity to change the form of studies to part-time or distance learning in order to combine studies and work. Not looking to the fact that mentioned implementation methods correspond and contribute to the study programme, it would be recommended to put more attention to learning-by-doing approach, flipped classes etc. (expert meetings with students, graduates and employers). The course content and teaching process assessment are realized by collecting feedback from the employers and students through surveys and regular meetings organized by the Director of the SP, though the experts noticed that none of the employers met had not filled in this kind of the survey (meeting with the employers). Though it seems filling the survey is not popular among the students and among the graduates too. During the meetings graduates and employers stressed the importance of increasing more informal communication. The survey's analyses show that the content of the SP is relevant and overall aims and outcomes of the SP are achievable. EKA has set the requirement in the course Research methodology where the course includes a study paper,

which includes an annotation and the development of a scientific article for a student conference. Unfortunately the Participation of students in research activities table (SAR p.42) shows very low number of the students participating and presenting an paper in this student conference yearly (1-8 students participated the conference yearly and 3-8 students published their abstracts) (SAR p.42) though the number of the students on each year is declared to be roughly 100 (SAR p.62). In particular cases would be needed to update the teaching materials according to the newest tools and technologies used in companies nowadays, e.g. Git whenever possible. Many courses list mandatory literature and sources 20-30 years old, which seems very old for the ICT related programme (e.g. COMPUTER NETWORKS I; COMPUTER NETWORKS II; DATABASE TECHNOLOGIES II; PROGRAMMING II; BASICS OF COMPUTER GRAPHICS AND IMAGE PROCESSING, etc.) (Annex 26 and EKA Moodle course descriptions) and needs an urgent update. The target should be to have the study literature used in the courses not more than 10 years old. Also the usage of LMS is not at a high level in all courses (Moodle presentation). Therefore the problems with the SP implementation might be connected with the low number of the SP graduates reported in Annex 22 (7 graduates in study year 2020/2021 and 5 graduates in study year 2021/2022 on the SP). SAR reports about availability of the teaching staff for consultancy and help in the frame of the consulting hours (expert meetings with students and teaching staff). The principles for the implementation of the SP and the methods used are identical in implementing the programme in Latvian and English. The basic principles and procedure for the assessment of the acquisition of the SP comply with the requirements of the National Academic Education Standard.

2.2.4.

The programme includes an internship in the amount of 26 CP. The goal of the internship is to strengthen the student's knowledge, to improve his professional skills in accordance with the requirements of the profession of the programming engineer. Each student has 2 internship supervisors: one from EKA and the other one from the company (SAR p.67). Internship supervisors help the student clarify and focus on the internship tasks for the correct execution of these tasks. The internship is divided into three parts: practice I (dating), internship II (basic practice) and practice III (programming) (SAR p.67). The students have to write a review of the internship and defend it at EKA in front of the supervisors and the SP director. EKA helps the students with the provision of internships places using the contacts with companies and institutions. Working students can complete the internship at their workplace if the job responsibilities are related to the tasks and aims included in the internship programme. The guidelines for the internship are available on the EKA's web page (<https://www.augstskola.lv/?parent=354&lng=eng>) under the section Studies and Internship.

The SP director will have consultations in the semester in which the internship is scheduled on specifying the internship task, preparation of the content of the internship report and the approval of the place of internship (SAR p.67). Respective internship tasks include database development, application development or improvement, website development, information system prototype development and the aim of the task is to show and strengthen the student's programming skills. For international students, internships are provided by EKA's collaboration partner LATA or the SP director helps students to find internships. During the meeting employers confirmed their ability to take international students too for internships.

Full information about the organization and conducting the traineeship are given in the traineeship guidelines in the Appendix 21.

2.2.5.

N/A

2.2.6.

There is an option for the students to choose the topic of the final thesis by themselves or the students can contact and ask the academic staff or bring the topic from a company (SAR p.68). The proposed topics will be discussed and agreed upon with the director of the SP, which assures that the topics are relevant to the programme. It should be mentioned that EKA has on their website an available list of examples of bachelor thesis topics to help the students to choose their topic (<https://www.augstskola.lv/?parent=10002&lng=eng>). This helps the students interested in the research options to find suitable final thesis topics. The document "List of examples of bachelor thesis topics that were defended in recent years" lists the defended final year thesis topics for the last three years. The topics are ranging from web applications and respective services to novel sensor applications and robot control algorithms and data and network services, therefore covering a wide scope of the Computer Science field. This should be considered a good indicator referring to the broad scope and contemporary content of the programme. Approval and discussion of the topics of the final works is carried out in a meeting together with the representatives from the LATA and employers. Examples of the topics of defended theses are: Testing scripts for a web application; Development and implementation of WEB components in the company; Development of a draft app for defection acts for construction supervision for companies; Development of an electronic sign-up app for beauty companies; Development of a study management information system for an educational institution (SAR p.69). All the theses are evaluated by representatives of industries and the IT association (e.g. LATA). The Theses are defended in front of the State Examination Commission, composed of representatives of the state and local governments and private companies from the ICT sector, as well as EKA teaching staff (SAR p.69) Therefore the defended thesis topics should be considered relevant to the programme.

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

The study programme complies with Level 6 of the European Qualifications Framework of Latvian Education Classification and the basic principles and procedure for the assessment of the acquisition of the study programme comply with the requirements of the National Academic Education Standard. Considering SAR and evidence collected during the meeting it shall be concluded that the presented study programme fulfills formal requirements, is inline with the requirements of the industry and labor market. The content of the SP supports reaching the aim and learning outcomes of the programme. There are some problems with use of very old study literature as well as the LMS system could be improved. In the same among learning outcomes the practical research component is not very well indicated and there are quite few applied research projects students can take part. Also EKA provides support in terms of finding internship places, if a student has some problem with it. During the meeting employers confirmed their ability to take international students for internships. The defended theses are inline with the study programme.

Strengths:

1. The BA Information Technologies study programme is balanced between the necessary knowledge, skills and competencies required to perform the duties after graduation.
2. The SP is necessary for the industry soft skill courses.
3. The content of the programme is relevant to the field of the ICT industry.
4. Teaching staff have a good practical background in the field of ICT.

5. Well functioning internship system.

6. Offering a variety of study programme forms: full-time, part-time and distance learning fills the gap for those who are unable to attend the full-time and part-time programme due to their work restrictions or family issues.

Weaknesses:

1. Too many small courses in the programme (2- 3 CP), which decreases manageability of the study programme (from HEI side) and in the same time overloads students with the assessments.

2. Collecting the student and employers' feedback by filling up surveys is not very effective as the students and graduates stress more importance of informal personal and periodic feedback and the surveys do not reach the employers in many cases.

3. Very old study literature is used in some courses.

4. Very low participation of the students in the student conference despite it being mandatory in the course Research methodology.

5. Low involvement of the employers and graduates in regular development of the SP.

6. No fixed classroom or in-place training/test times at all for part time extramural studies distance education students.

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

-

2.3. Resources and Provision of the Study Programme

Analysis

Overall EKA material and technical resources are valued as sufficient for the implementation of the study field.

2.3.1.

All resources, such as premises, classrooms, computers, operating systems and software, internet connection and internal networks, education management system "Moodle", storage for lecture video recording etc. are available to students and teaching staff. EKA has sufficient resources for the implementation of the study programme (in premises visit).

There's a small number of Mac computers that allow development for iOS and MacOS platforms that are included in the study courses. On - site students have to share these resources to be able to develop software for the Apple environment; this might be considered an inconvenience that is not blocking the study process. Currently EKA is in the process of acquiring a new Apple computer room (in premises visit). Additionally, many students prefer to work with their own devices in EKA premises. Bring your own device policy is supported by EKA infrastructure, but wide usage of own devices might indicate that EKA ICT resources are not sufficient for students.

There are 318 books titles available (136 in Latvian, 182 in English; 578 copies) (SAR, section 2.3.3; in library visit). Library funding to replenish the stocks is planned from EKA's annual budget, which amounts to 2-3% a year, depending on the depreciation of books and the demand of the teaching

staff for the latest literature (SAR, 2.3.3).

2.3.2.

N/A

2.3.3.

Revenues from the implementation of all study programmes are used in solidarity to finance the costs of the academic, scientific and administrative process of the entire university. According to the approved budget, the division of costs by their main types is carried out. Currently, each study field provides sufficient revenue and attraction of external financing, so that the implementation of the field is ensured and profitability is determined (SAR, section 2.3.1). Funding of the study programme consists of the revenue from the study fee and the financing of projects. The budget of the programme includes funds for the remuneration and upskilling of staff, maintenance and development of infrastructure, the purchase of information resources, research and creative activities, the implementation of projects, participation in associations, and also expenses necessary for attracting students. In order to ensure the profitability of the study programme and to maintain its competitiveness, project funding opportunities are used, the opportunities of the Erasmus+ programme (incl. by participating in international projects). In addition, it is planned to increase the tuition fee from 2023/2024, evaluating the planned amount of revenue and expenditure when planning the budget for the 2023/2024 academic year. (SAR, section 3.3.3). In SAR and interviews with management EKA suggests that current income from tuition fees and projects cover expenses and provision of each study programme is profitable, but at the same time states that there's a plan to increase tuition fee evaluating the planned amount of revenue and expenditure that might indicate that EKA either wishes to receive higher profit from operations or does not have full control over profitability.

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

Conclusions:

EKA has sufficient resources for the implementation of the study programme but its library size is relatively small and part of it is old literature. During practical programming work some computers (MacOS) might need to be shared between one course students as there's currently not enough Mac computers to cover all needs conveniently without sharing, but a new computer class with Mac computers is in process of equipping. EKA uses resources in an efficient manner, utilizing systems such as Big Blue Button and Moodle efficiently. Every student, disregarding of teaching form can benefit from resources available to EKA.

Strengths:

1. Availability of periodicals in the library (in library visit).

Weaknesses:

2. Relatively small library containing old literature (outlined in 2.3.1).

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: Fully compliant

The funding available for the study programme is sufficient to cover basic programme needs and in addition invest in attracting guest lecturers to differentiate the study process which is highly appreciated by students and supported by employers.

2.4. Teaching Staff

Analysis

2.4.1.

The SAR (p.70-71) and attached annexes Basic information on the teaching staff involved in the implementation of the study field 9_Annex_ICT_Involved_teachers.docx, Biographies of the teaching staff members (10_Annex_CV_IKT_ENG_2022.zip), the knowledge of the state language of the teaching staff involved in the implementation of the study programmes within the study field and the respective foreign language skills of the teaching staff involved in the implementation of the study programme (11_Annex_Confirmation_staff_languages.docx) affirms that the qualification of the teaching staff involved in the implementation of the professional study programme "Information Technologies" complies with requirements for the implementation of study programme, the requirements set forth in the Law on Higher Education Institutions available on the website <https://likumi.lv/ta/id/37967-augstskolu-likums>. The qualification of the teaching staff enables the achievement of the aims and learning outcomes of the study programme.

According to the SAR (p.70) 24 teaching staff members are involved in the implementation of the study programme. According to the Basic information on the teaching staff involved in the implementation of the study field (Annex 9_Annex_ICT_Involved_teachers.docx) the composition of teaching staff includes 1 elected professor, 2 elected associate professors, 19 assistant professors (from whom 7 are elected assistant professors in EKA) and 2 elected lecturers. The academic staff have the necessary academic education. There are 6 doctors of science, where 5 of them are elected to EKA) and 18 teaching staff with a master's degree, where 8 of them are elected to the EKA.

According to the SAR (p.71) professional study courses are taught by professionals from industry with pedagogical experience, that ensure the offer of up-to-date content, latest trends and developments in study courses, acquisition of the necessary knowledge and skills in the field of information technologies (especially in programming) and achieve the defined study results, while theoretical courses in the field are taught by the teaching staff who have both pedagogical and research experience.

In addition, EKA has involved 2 visiting assistant professors from foreign universities in the implementation of study programme for foreign students (1 from Ireland, 1 from Germany) that facilitate the acquisition and share of international experience (Annex 9_Annex_ICT_Involved_teachers.docx).

The attached annex of the knowledge of the state language of the teaching staff involved in the implementation of the study programmes within the study field (11_Annex_Confirmation_staff_languages.docx) affirms the compliance with the regulations on the state language knowledge and state language proficiency test for professional and official duties.

The attached annex of the knowledge of state and foreign languages of the teaching staff involved in the implementation of the study programme within the study field (11_Annex_Confirmation_staff_languages.docx) affirms the compliance of state language knowledge level with the regulations on the state language knowledge and state language proficiency test for professional and official duties. The respective foreign language skills of the teaching staff involved in the implementation of the study programme in English is at least at B2 level that corresponds to the European Language Proficiency Assessment levels.

2.4.2.

According to the SAR (p.71-73) EKA has made several changes in the composition of the teaching staff during the reporting period that were related to the recommendations of experts after accreditation in 2017 for improvement, combination and modification of courses, increase of the workload of teaching staff members in their main job and inability to combine it with teaching, due to health, retirement and family reasons, as well as the results of the students' assessment. Detailed description of changes made by EKA is summarized in the table "Changes in academic staff" of SAR (p.72-73). During the reporting period EKA invited a new person to the position of visiting assistant professor and 3 persons were elected to the position of assistant professors.

EKA has established "REGULATIONS ON ELECTIONS FOR ACADEMIC POSITIONS IN THE EKA" (Approved by EKA Senate 28.04.2021., Min.No.158) to ensure attraction of qualified teaching staff who qualification and/or professional experience comply with the requirements specified in regulatory enactments,

https://www.augstskola.lv/moodle/pluginfile.php/49770/mod_resource/content/2/Nolikums_velesanas_akademiskie_amati_12042021.pdf) where the requirements for applicants for academic positions, Election procedure for the position of professor and associate professor, Election procedure for the position of assistant professor, leading researcher, lecturer, researcher and assistant, as well as the Dismissal procedure are defined.

According to SAR (p. 9) and information provided by university management during the meeting EKA makes a set of measures to ensure the compliance of teaching staff's composition involved in the implementation of study programme with the requirements specified in the Law of Higher Education Institutions, the Minister Cabinet Regulation No. 129 and other regulatory enactments. EKA evaluates pedagogical work, scientific and creative activities, international activities, results of student surveys and performance of the e-study course in accordance with the existing requirements.

According to the EKA regulation "Procedure for assessing the performance of employees of the EKA University of Applied Sciences" and "The EKA University of Applied Sciences Quality Management System Handbook" a set of requirements and the evaluation of employees are determined by the following documents:

the contract establishing the employment relationship with the University;

job description;

Ethical and Academic Honesty Code at the EKA University of Applied Sciences (https://www.augstskola.lv/moodle/pluginfile.php/49780/mod_resource/content/1/EKA_etikas_kodeks_s_EN.pdf);

orders of the Rector setting out the requirements for the duties of position;

Guidelines of the EKA University of Applied Sciences for the development of the study course description

(https://www.augstskola.lv/moodle/pluginfile.php/49775/mod_resource/content/1/13_EKA_Nolikums_studiju_realiz%C4%81cijas%20apraksts_2019_EN.pdf);

E-study template;

Procedure for organizing distance education at the EKA University of Applied Sciences (https://www.augstskola.lv/moodle/pluginfile.php/121170/mod_resource/content/1/14_EKA_Talmacibas_organizesana_2022_ENG.pdf);

Minutes of the evaluation commission on employee performance evaluation results. - Report on the performance of the University's employees;

Classroom observation procedure (Title VII of the Quality Management System Handbook);

Overview - Results of the EKA academic staff classroom observation;

and other rules and procedures of the University, for example, Quality policy (https://www.augstskola.lv/moodle/pluginfile.php/119942/mod_resource/content/1/Kvalit%C4%81tes_Politika_2_EN.pdf), Regulations on Research and Artistic Activities (approved by EKA Senate

15.08.2022,

Min.No.174,

https://www.augstskola.lv/moodle/pluginfile.php/115615/mod_resource/content/1/EKA%20Zin.darbibas%20nolikums_groz.2022_ENG.pdf), Personnel policy (Approved by EKA Senate 16.02.2022., Min.No.168,

https://www.augstskola.lv/moodle/pluginfile.php/119941/mod_resource/content/1/EKA_personala_politika_EN.pdf), Regulation on election academic positions at the EKA (https://www.augstskola.lv/moodle/pluginfile.php/49770/mod_resource/content/2/Nolikums_velesanas_akademiskie_amati_12042021.pdf)

EKA implements the procedure for evaluating the performance of employees (Procedure for assessing the performance of EKA employees, Protocol of the EKA Senate meeting No. 175 of October 12, 2022). According to the procedure the employee shall submit his performance report for the previous period by 21st June of the current year using the evaluation form attached in the Annex to the Procedure. Personnel evaluation is organized by individual groups: professors and associate professors; the rest of the academic staff; administrative staff and general staff, using a specific set of requirements summarized in the evaluation form. The academic staff performance is also characterized by the teacher's study course description and created E-studies course in the Moodle environment of the University.

When evaluating the performance of an employee, several aspects are taken into account as follows: information on evaluation forms completed and submitted by the employee; a description of the established study courses and the E-study course; results of student surveys (survey after course completion (each semester), questionnaire about the satisfaction with study process at the end of study year); results of surveys of teachers and administrative staff (if applicable); results of negotiations (if negotiations have taken place) and results of hospitation (if necessary).

EKA has developed and implemented regulations on the assessment of professors and associate professors in accordance with the Cabinet Regulation No. 129 of 25.02.2021. The EKA Scientific Council measures the performance of professors and associate professors using an assessment scale.

EKA organizes administration meetings and study council meetings (SAR, p.74), where the results of surveys, student's recommendations, moodle courses, employers' feedback (their satisfaction with students) are analyzed and taken into account developing the action plan for the next study year (meeting with EKA management and study field director).

Summarizing the above mentioned, EKA has developed and implemented necessary procedures for selection of qualified teaching staff and their performance evaluation ensuring the compliance of teaching staff's composition involved in the implementation of study programme with the requirements of regulatory enactments. EKA purposefully takes measures so that changes in the composition of the teaching staff do not negatively affect the quality of the implementation of the study programme.

2.4.3.

N/A

2.4.4.

The attached List of the publications and artistic creations of the teaching staff over the reporting period (13_Annex_List_publications.docx) confirms that the members of teaching staff have published in peer-reviewed editions, including international editions, but their activity of publishing articles in the ICT field could be improved.

According to the attached Data about research and creative activities of academic staff (12_Annex_Quantitative_data_research_creative_activities.docx) during the reporting period teaching staff have published publications. The numbers of totally published publications indexed by SCOPUS and Web of Science per each specific year are as follows: 6 publications in 2017./2018., 17 in

2018./2019., 5 in the 2019./2020, 12 in the 2020./2021 and 8 in the 2021./2022, as well as other scientific publications: 10 publications in 2017./2018., 9 in 2018./2019., 10 in the 2019./2020, 7 in the 2020./2021 and 14 in the 2021./2022.

However, only part of them are related to the ICT field. The numbers of totally published publications indexed by SCOPUS and Web of Science in the ICT field per each specific year are as follows: 3 publications in 2017./2018., 5 in 2018./2019., 1 in the 2019./2020, 7 in the 2020./2021 and 5 in the 2021./2022, as well as other scientific publication in the ICT field: 5 publications in 2017./2018., 5 in 2018./2019., 7 in the 2019./2020, 6 in the 2020./2021 and 4 in the 2021./2022. The number of published publications vary significantly among separate

members of teaching staff. Four members of the teaching staff have published only one publication in 2017, 2018 or 2021 during the reporting period. One of them has published only abstract in EKA organized conference. There are two members without publications, but they have more than 7 years of practical experience in the field that corresponds to the requirement of the Law on Higher Education Institutions.

Summarizing the above mentioned, the most part of teaching staff members have published in peer-reviewed editions, including international editions, but the activity of publishing articles vary significantly among separate members of teaching staff, as well as the number of published publications.in the ICT field should be improved, taking into account the quartile indicator of scientific journals and choosing the most prestigious and high quality journals in the field (Q1 and Q2).

2.4.5.

EKA has established a mechanism for mutual cooperation of teaching staff that operates successfully and ensures the achievement of the aim of the study programme It includes several activities (SAR, p.74-75):

the director of the study programme organizes discussions with the teaching staff about the content of the programme to ensure interconnection between study courses;

the meetings of IT Council are organized at least twice a year, during which the results of the survey of students, the results of the examination of e-study courses, the topicality of the final theses and topics of study papers and other questions are discussed;

the teaching staff of the study programme coordinate the course content, course acquisition requirements, bibliographic sources, create e-courses in the e-environment by cooperation together if several teachers conduct one study course for different flows in Latvian and English;

the teaching staff collaborates by jointly developing and improving the content of study courses, preparing study course descriptions, determining and supplementing necessary topics in case of related study courses where specific knowledge are needed to study another course;

the teaching staff collaborates by working in research projects.

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

The qualification of the teaching staff complies with the requirements set forth in the Law on Higher Education Institutions, is appropriate for professional bachelor study programme "Information technologies" implementation, allow to achieve the aims and ensure the learning outcomes of the study programme IT in both Latvian and English languages. The members of teaching staff have published in peer-reviewed editions, including international editions, but their activity of publishing articles in the ICT field could be improved. EKA has established a mechanism for mutual cooperation

of teaching staff to ensure the achievement of the aim of the study programme.

Strengths:

1. The teaching staff involved in implementation of the study programme have the necessary academic (higher) education and/or professional experience.
2. The teaching staff collaborates by jointly developing and improving the content of study courses.
3. Part of the teaching staff members are industry professionals, who teach industry specific courses that allow to include the up-to-date information related to the industry, topical issues in the content of study courses, latest developments and trends in the field.
4. Guest lecturers from foreign universities are involved in the study programme implementation that facilitates the acquisition of international experience, share of foreign academic and professional experience.

Weaknesses:

1. During the reporting period teaching staff have published publications, but only part of them are related to the ICT field. The activity of publishing articles vary significantly among separate members of teaching staff.

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

Experts invite management of EKA to pay attention to the scientific activities of teaching staff. Although the members of teaching staff have published in peer-reviewed editions, including international editions, their activity of publishing articles in the ICT field could be improved.

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

From 13.06.2023. There is a new Professional Higher Education Standard which uses the new definition of "Credit Points". The Law on Higher Education Institutions states that there is a transitional period till 31.12.2024. to implement the new credit point system. Besides that in all the other aspects the study programme is compliant what the Professional Higher Education 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

The study programme complies with a valid professional standard or the requirements for the professional qualification (Annex no. 23).

- 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

The descriptions of the study courses and materials are available in Latvian and English (annex no. 26) and comply with the 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 sample of the diploma (Annex no. 20) complies with the procedure according to state recognised documents of higher education.

- 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

The attached list of the teaching staff involved in the implementation of the study programme within the study field (11_Annex_Confirmation_staff_languages.docx) affirms that the knowledge level of official/state language of teaching staff complies with the Regulations on the extent of knowledge of the state language and the procedures for testing official language proficiency for performing professional duties and office duties.

- 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

The attached list of the teaching staff involved in the implementation of the study programme within the study field (11_Annex_Confirmation_staff_languages.docx) affirms that the English language knowledge level of teaching staff is B2 and higher.

- 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

The sample of the study agreement (Annex no. 7) complies with the mandatory provisions to be included in the study agreement.

- 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

There are two agreements (Annex no. 5) that guarantee that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college - one with the University of Daugavpils, the second one with the Transport and Telecommunication Institute.

- 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

The study agreement (Annex no. 7) point 4.12. and the confirmation letter Nr.2-24/23/20 (Annex. no 6) guarantee that students are compensated 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 college and the student does not wish to continue 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

The study programme is compliant with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

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

The interrelation of the analyzed study program “Information technologies” of the analyzed elements title, code, degree to be obtained, professional qualification or degree and professional qualification of the study programme, aims, objectives, learning outcomes and admission requirements are interrelated. Changes in the field of the study program are made on annual self-assessment, visit results, evaluating the submitted proposal by teaching staff, students, graduates and employers, and etc. It can be seen that the total number of students is increasing in part-time studies and distance learning studies. This is also confirmed and this is seen also in analyzing the tables that are showing the statistics of enrollment in higher courses (there are enrollments into 1st - 3rd year in distance and part-time studies. Threatening factor is the enrollment of the full-time students, since the numbers are really low, compared with the other types of studies, and the same aspect is seen in the dynamics of the graduates. The study programme complies with Level 6 of the European Qualifications Framework of Latvian Education Classification and the basic principles and procedure for the assessment of the acquisition of the study program comply with the requirements of the National Academic Education Standard. Considering SAR and evidence collected during the meeting it shall be concluded that the presented study programme fulfills formal requirements, is inline with the requirements of the industry and labor market. The content of the SP supports reaching the aim and learning outcomes of the programme. There are some problems with use of very old study literature as well as the LMS system could be improved. In the same among learning outcomes the practical research component is not very well indicated and there are quite few applied research projects students can take part. Also EKA provides support in terms of finding internship places, if a student has some problem with it. EKA has sufficient resources for the implementation of the study programme but its library size is relatively small and part of it is old literature. During practical programming work some computers (MacOS) might need to be shared between one course students as there’s currently not enough Mac computers to cover all needs conveniently without sharing, but a new computer class with Mac computers is in process of equipping. EKA uses resources in an efficient manner, utilizing systems such as Big Blue Button and Moodle efficiently. The qualification of the teaching staff complies with the requirements set forth in the Law on Higher Education Institutions, is appropriate for professional bachelor study program “Information technologies” implementation, allow to achieve the aims and ensure the learning outcomes of the study programme IT in both Latvian and English languages. The members of teaching staff have published in peer-reviewed editions, including international editions, but their activity of publishing articles in the ICT field could be improved. EKA has established a mechanism for mutual cooperation of teaching staff to ensure the achievement of the aim of the study programme.

Strengths:

1. Changes in the field of the study program are made and by analyzing the results, changes are implemented according to the needs of the students.
2. Big potential for part-time and distance learning studies, also increase enrollment in higher courses.
3. The program title, degree, aims, objectives learning outcomes fully comply with the study field.
4. The BA Information Technologies study programme is balanced between the necessary knowledge, skills and competencies required to perform the duties after graduation.
5. The SP is necessary for the industry soft skill courses.
6. The content of the program is relevant to the field of the ICT industry.
7. Well functioning internship system.

8. Offering a variety of study programme forms: full-time, part-time and distance learning fills the gap for those who are unable to attend the full-time and part-time programme due to their work restrictions or family issues.

9. Availability of periodicals in the library (in library visit).

10. The teaching staff involved in implementation of the study programme have the necessary academic (higher) education and/or professional experience (allow to include the up-to-date information related to the industry), also guest lecturers from foreign universities are involved in the study programme implementation.

Weaknesses:

1. Threatening factor is the enrollment of the full-time students, since the numbers are really low, compared with the other types of studies.

2. On average: $\frac{1}{3}$ of students graduate; $\frac{1}{3}$ of students drop out; $\frac{1}{3}$ have academic debts → continue study.

3. Too many small courses in the programme (2- 3 CP), which decreases manageability of the study programme (from HEI side) and in the same time overloads students with the assessments.

4. Collecting the student and employers' feedback by filling up surveys is not very effective as the students and graduates stress more importance of informal personal and periodic feedback and the surveys do not reach the employers in many cases.

5. Very old study literature is used in some courses.

6. Very low participation of the students in the student conference despite it being mandatory in the course Research methodology.

7. Low involvement of the employers and graduates in regular development of the SP.

8. No fixed classroom or in-place training/test times at all for part time extramural studies distance education students.

9. Relatively small library containing old literature (outlined in 2.3.1).

10. During the reporting period teaching staff have published publications, but only part of them are related to the ICT field. The activity of publishing articles varies significantly among separate members of teaching staff.

Evaluation of the study programme "Information Technologies"

Evaluation of the study programme:

Good

2.6. Recommendations for the Study Programme "Information Technologies"

Short-term recommendations

1. Create a strategic plan with measurements to increase the enrolment of the full-time students and to monitor a drop-out, especially in the first study year.

2. Set a monitoring system assuring that the employers will receive the survey and the feedback will reach to EKA and involve more Student Council in improving the survey questionnaires and conducting the surveys. Document employers feedback and respective meetings with the Student Council.

3. Make a revision of all the study literature used in all the courses and use in the courses as obligatory and recommended study literature which is not older than 10 years and strongly recommendable not older than 5 years.
4. Make it mandatory for the students to present a paper either to the student conference or eTECH as a course work or prerequisite for the defense of their Thesis.
5. Set up regular annual meetings with the graduates and employers discussing the SP matters and document all the problems raised and later solutions giving respective feedback to them
6. Add scheduled short-time classroom or training/test times to the schedule for part time extramural studies distance SP or change the part time extramural studies distance SP into the set of continuing education courses.
7. Replenish the library with modern literature and databases access, especially related to modern and most recent literature in the IT field, IEEE repository, etc. If needed create a collaboration with other HEI's to provide the access to modern literature in ICT field

Long-term recommendations

1. Promote and monitor the development of publications in the ICT field, taking into account the quartile indicator of scientific journals and choosing the most prestigious and high quality journals in the field (preferring Q1 and Q2).
2. Till 31.12.2024. implement the new credit point system and do all the needed changes to the course descriptions.
3. Merge 2-3 CP courses into 4-6 CP courses.
4. Along with the transition to the implementation of new creditpoint system, review the mandatory content of the professional Bachelor's study programme according to the requirements specified in Clause 22 of the MC Regulation No 305.
5. Change the awarded qualification level to the sixth-level professional qualification.
6. Ensure the publication of at least one publication or article every 2-3 years. in peer-reviewed editions.

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:	Fully compliant		Fully compliant on all subsequent criteria.
R2 - Compliance of scientific research and artistic creation with the level of development of scientific research and artistic creation (if applicable)		Partially compliant	Very small number of ICT related research projects - only 2 EU level R&D projects during last 6 years) and only 2 Erasmus+ projects during the reporting period with very low SP student participation, only few local R&B projects and very low participation of the SF students in R&D projects and international conferences.
R3 - The cooperation implemented within the study field with various Latvian and foreign organizations ensures the achievement of the aims of the study field.		Partially compliant	EKA has established cooperation with many local and international HEI's, which is considered to be a significant benefit for the SF and could to achieve the objectives of the SF, to train ICT specialists with international mobility experiences and good practical applied research skills, but there is relatively weak cooperation with national and international industry and very low number of related international and local research projects. However, its potential is not completely reached nor there are clear activities to reach it. Furthermore, the applied research projects activation is a minimum for the further success of the SF.

Requirements	Requirement Evaluation			Comment
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			Using the provided documents and the interview it is possible to conclude that 13 out of 16 of the recommendations were implemented fully, 2 were implemented partly and 1 recommendation was not relevant.

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	Information Technologies (42484)	Not relevant	Fully compliant	Fully compliant	Fully compliant	Good

The Dissenting Opinions of the Experts

-