Expert group joint opinion

Evaluation Procedure: Assessment of Study Field

Higher Education Institution: Alberta College

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

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

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The expert group found that the Alberta College (AK) has a well-defined ICT field and study programme with attainable aims and complies with the needs of society and the national economy and the programme has a strong emphasis on developing professional skills and giving respective basic knowledge. Taught by faculty members and industrial specialists, AK (Alberta Koledža) ensures that students receive a comprehensive education, which allows them to start a professional career or continue their studies. The study field (SF) has clear aims and objectives aligned with the strategic development fields and the needs of the society and the national and especially regional economy. Regulations and other documents show a willingness to have a comprehensive quality assurance system. The programme demonstrates notable strengths, including the provision of opportunities for interdisciplinary cooperation between students and teaching staff from various SFs. SWOT analysis is performed in detail. A system for plagiarism detection as well as regulations are introduced, which allow to control plagiarism risks. AK is well staffed with qualified personnel and teaching staff, is able to invite guest lecturers to differentiate studies while making them even more attractive and relevant and AK possesses all the resources necessary for the provision of the study program. Lots of resources that are needed are provided as "simulators" or "virtual appliances" using software emulators rather than actual hardware. Directions of applied research correspond to the development goals of the college and are relevant for the study field and industry, but at the same time directions could be declared in a more specific way (around subprograms, distance learning, innovative study technologies). College administration puts attention to applied research and innovation, but conducted activities are limited. International collaboration is a weak point of the college and should be improved, in terms of projects, publications and collaboration activities with, for example neighboring countries Lithuania and Estonia could be more intensive. Involvement of the teaching staff to the research activity in college is problematic, even proposing the support and developing motivation schemes. Management of the college is doing a lot to involve students into research, but the nature of the program included into the study field, limits excellence, while selected mechanisms can be considered as adequate and valid. College is successful in developing a comfortable digital environment for students, teachers' administration and effectively utilizing existing resources, while lack of innovation in teaching(methodology) could be considered as a gap, which requires additional efforts from college management and teaching staff. In overall it should be concluded that internship plays a significant role in the program to form necessary skills and competences. AK has successfully adopted and implemented a budgeting methodology that ensures that it operates as a financially sustainable organization. The main source of income is tuition fees as well as funding for various projects and Erasmus+, the contribution of cooperation with companies.

Experts found areas for further improvement which will be analyzed in more detail within the scope SP of this report. International cooperation needs development - few international cooperation agreements with international partners, no studies in English and no incoming mobility, no outgoing student mobility and insufficient teacher mobility during the reporting period. The teaching workload is uneven, especially for lecturers delivering specialization courses, and the publication activity, especially for international publications, is rather low.

In general, the AK Management and staff are aware of their strengths and deficiencies and this creates a good platform for further improvements of the study field and the programme.

I - Assessment of the Study Field

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1.1 Management of the Study Field

Analysis

1.1.1. The study field "Information technology, computer engineering, electronics, telecommunication, computer management and computer science" contains the short-cycle professional higher education study program "Information technologies" with two sub-programs, "Programming" and "Administration of computer networks" (SAR p.4). The SF field aim is to provide a high-quality study process, promoting the development and sustainability of study programmes, cooperating with the industry and following its current events (SAR, p.19).

The aims and goals of the SF are clearly defined and attainable (SAR p.5), (meeting with the HEI management, SF and SP directors, academic staff and employers) and they are aligned with the strategic development directions set out in the AKAS2023. The tasks of the SF are also clearly defined, which include providing students with basic fundamental knowledge and skills necessary for the profession, developing students' systematic thinking and promoting self-education, and providing students with a friendly, modern, multicultural, and encouraging environment for studies, research, and self-education (SAR, p.19). The SF and the relevant SP comply with the main directions of the strategic development of the AK and meet the needs and development trends of the society and the national economy according to the informative report of 2022 of the Ministry of Economics on medium and long-term forecasts of the labor market, which predicts that "a considerable shortage will be observed for specialists with vocational education", "the most significant shortage of labor in the higher education group is expected for specialists with education in the fields of engineering, life sciences and ICT (SAR p.18).

The practical goals and respective steps of SF are well defined in the strategy document (AKAS2023 p.9-25). AKAS2023 defines five directions of strategic development for 2019-2023 (SAR p.5) where the first goal is „preparing high-quality specialists fitting the current job market requirements to secure support functions for businesses and institutions, who can use their acquired knowledge and practical skills to quickly fit into the job market or continue their career growth". The goal follows well the society needs. The other goals are: provide an efficient study process by applying a student-centered approach, using modern teaching methods, supporting applied research, creative activity and strengthening practical skills; provide a professional team of academic professionals to implement the study process; ensure the efficient management and steady development of the College and to be an open and dynamic college, flexible towards market trends (SAR p.5).

The SAR provides information about the mechanism for cooperation between teaching staff, which promotes the development and interconnection of study courses. The development of study courses is carried out on a regular basis, based on suggestions made by students, industry development trends, and the latest results of research, scientific activities, and innovations. The knowledge acquired in other study courses is taken into account in the design or development of the content of the study courses, indicating it as a prerequisite. This shows that the study programme in the study field at AK complies with the main trends in the society and is managed in a logical manner.

1.1.2. AK has identified and analyzed the strengths, weaknesses, opportunities, and threats of the study field (SAR p.20) and integrated them into development planning documents. The SAR provides information about the annual self-assessment of the study field and programme, which includes an evaluation of the SWOT analysis of the study field and respective annual actions (Annex 6). The SWOT analysis is used to develop proposals for the improvement of the study field and the programme. The SAR also provides information on how AK expects to eliminate/improve weaknesses, prevent threats, and avail themselves of the given opportunities, etc. The SWOT analysis is prepared on the basis of discussions with teachers involved in the SF, the results of annual surveys of students and graduates, discussions with representatives of employers and feedback from internship supervisors over the past years (SAR p.19). Therefore all the stakeholders

were involved in compiling the SWOT analysis. It should be mentioned that the analysis is thorough and many further steps are planned on the basis of the analysis. For example, AK plans to reduce dropout rate, as well as the development of the internationalization and research activities of the staff (SAR p.22) and actively use opportunities for cooperation with employers and the attraction of scholarships funded by employers, cooperation with the EKA University of Applied Sciences, Erasmus+ projects (SAR p.22). Even so, some more steps might be needed to increase the attractiveness and efficiency of the SF. For example to attract more representatives of the industry who are interested in academic activity as lecturers, directly using the cooperation of partner companies to offer attractive and innovative lectures and lab classes and/or providing equipment to AK for student training and AK should review and revise the information, promotional materials, promotion lectures and other activities to ensure that it accurately reflects the nature of the educational programme offered, especially making SP more attractive to the high school (gymnasium) graduates. However, some opportunities sound more like plans than opportunities, e.g. "To strengthen the uniqueness and competitive advantage of the SP" and intensify Erasmus+ activities like student exchange and launching international projects sound more like a very good development plan than opportunity. Plans (or at least ideas) how to fight weaknesses and threats are provided. Plans, how to use listed opportunities are provided partially, but as it was mentioned above, some opportunities sound more like plans, than opportunities.

1.1.3. The management structure of the study field and the corresponding study programme is oriented towards the development of the study field, and decision-making takes place efficiently. The SAR provides information about the structure of the management of the study field and the relevant study programme, which involves the head of SF who is also the director of the study programme responsible for the management of the SF, the institutions included in the AK structure participating in the management of the AK study field, and the collegial bodies, such as the Council and Director of the AK, evaluating the efficiency of performance of the study programme (Annex 7 and SAR p.23). The head of the SF is responsible for ensuring for update and improving the content of the SF; in cooperation with the director and the deputy director of the college, recruitment of the teaching staff and organization of the cooperation between teaching staff, as well as participation in evaluation of the teaching staff and monitoring the quality of the teaching process, strengthening the practical orientation of the study process, including organizing internships, promoting the research based study process and promoting cooperation with employers and with the support of Erasmus+ coordinator, promotion of international mobilities (SAR p.23). As there is only one programme included in the study field, this SP is managed by the same person, i.e. the head of SF who is also the director of the SP, and he is responsible also for development, implementation, and improvement of the quality policy; the self-assessment of the SF and implementation of necessary changes for the improvement of the quality of the SP, providing recommendations for the improvement of the College functions, and coordinates research activity within the SP, providing recommendations for the expansion and updating of material and technical resources according to the needs of the SP and promoting collaboration with all the stakeholders in Latvia and abroad (SAR p.12). This seems quite a lot of responsibilities for one person who performs both the roles of head of SF and director of SP. The College Director performs the general management functions and the College deputy director is responsible for the organization and the development of the study process and methodical work, as well as ensuring and developing research and creative activities, and international cooperation (SAR p.8). The SAR also mentions the support provided by the administrative and technical staff of the AK within the SF for example: librarian; educational methodologist; IT administrator and programmer; head of the career and training centre; secretaries; lawyer; communication project manager, etc. (SAR p.23).

Therefore the SF management structure reflects well distribution of responsibilities between different stakeholders. It conforms to a more or less classical approach of the SF and SP

characteristic for small HEI´s and works well in AK. Documentation and discussions during the assessment visit show that the administrative and technical support is sufficient. Comments from assessment visit of the lecturers and students show that they get sufficient technical and administrative support, i.e. no issues were mentioned and the procedures are clear.

1.1.4. A system has been set up and procedures developed for the admission of students, for the recognition of the study period, and for the assessment of students' achievements and learning outcomes and the respective documents are accessible from the College website (https://www.alberta-koledza.lv/?parent=26&lng=eng) both in Latvian and in English. The admission rules for the specific academic year are published on the AK website and are available to everyone (Rules on Admission at Alberta College). The admission rules have been developed and admission proceeds in accordance with external laws and regulations, such as the Law on Higher Education Institutions, Cabinet Regulation No. 846 of 10 October 2006 "Regulations Regarding the Requirements, Criteria and Procedures for Admission to Study Programmes" (hereinafter - CR No. 846). The admission terms and procedure for citizens and non-citizens of the Republic of Latvia as well as foreigners holding a permanent residence permit in Latvia are determined in accordance with the general procedure and Paragraph 7 of CR No. 846. Admission to studies at AK is without any additional entrance examinations on the basis of successful results of all the compulsory general secondary education state examinations and the persons who have acquired their previous education abroad and who have no assessment in the Latvian language should certify their language skills at least at the level of B2, except in cases where a person has obtained other higher education in Latvian and the document Rules on Admission at Alberta College states also required level of state examinations. In addition to the SP "Information Technologies", a mandatory requirement is the centralized exam in mathematics (SAR p.25) and there is a test available on the AK website for choosing the most appropriate study programme and making sure that it matches students' interests.

The Study Department offers prospective students consultations on the admission process, including admission requirements, contesting admission results, rights, and obligations of the applicants. The head of the SP provides consultations on admission requirements. The acknowledgement of previous education and professional experience is regulated by the document "Regulations on the Acknowledgement of Knowledge Acquired in Previous Education and Beyond Formal Education or Accomplishments in Professional Experience" (Annex 2). All the list or regulatory documents is given in Annex 2.

Therefore, based on the information provided, it can be concluded that the system and procedures for the admission of students, and assessment of students' achievements and learning outcomes are logical and effective, and the involved stakeholders are informed about the system.

1.1.5. The methods, principles, and procedures for assessing achievements of students have been developed and are clearly defined. The report provides information about the criteria, conditions, and procedures for the evaluation of students' results, which enable reassurance of the achievement of the intended learning outcomes. The assessment methods and criteria of learning outcomes are included in the course descriptions and are available to students in the Moodle e-learning system. The assessment criteria and methods for examinations are included in the list of "Internal Regulatory Acts of AK" (Annex 2). Learning outcomes achieved in prior education or professional experience are recognized in accordance with the AK documents (Annex 2).

The SAR (Annex 34) also provides information about the assessment methodology developed by the lecturers of each course, which indicates the percentage of the total mark that each assessment criterion represents. The lecturers use assignments that give the student the opportunity to test themselves and receive feedback. The methods used in the study programme contribute to the achievement of the objectives and learning outcomes of the courses and the programme, ensure

student-centered learning, encourage students to take an active part in shaping the learning process, and ensure that students' performance is appropriately assessed. Study results are evaluated based on the two criteria: qualitative 10 points system and quantitative (credit points).

The relevance of assessment methods and procedures for achieving the aims of the study programme and the needs of students is analyzed. The information about the assessment methods and criteria of learning outcomes for each course are included in the course description (Annex 34) and are available to students in the AK Moodle e-learning system which was provided in the expert visit. The lecturers inform students about the knowledge assessment criteria and methods during the first class. The choice of assessment methods depends on the learning outcomes that a lecturer is planning to achieve. The applied methods are geared to the development of the students' abilities, specifically, to learning, creative use of knowledge, cooperation, self-evaluation, offering of alternative solutions to problems, to critical thinking and making responsible decisions. The methods of the assessment of the achievements of students are similar to other higher education institutions worldwide. From the discussion with lecturers and students it seems that both parties understand them well, and allow students to assess results, give them timely feedback, and time to improve it if necessary. Moreover, the evaluation process takes place throughout the semester on exercises, homeworks and tests, stimulating regular study work.

The very limited level of student ERASMUS activity at AK highlights an area in need of improvement and increased attention. During the expert meeting with the students it revealed that the students did not know all the ERASMUS options and especially the option to participate in short visits in which they might be interested and which does not contradict their job tasks in their companies.

As the number of students in SF who completely fill out the surveys is only 28% (SAR p.24) a need exists to enhance student engagement in filling in surveys across courses at AK. One of the reasons is that students do not have a feeling that their feedback has any impact on the SP (expert meeting with students). It seems that students should be more involved in defining the questions and also in subsequent analysis and changes made based on surveys. Majority of students at AK work alongside their studies to finance their education, which may negatively affect their academic performance and advancement. In general, the SP aims are met with AK methods, but a more systematic and attractive students involving approach is needed - with clearly defined actions and measurable outcomes.

1.1.6. AK has established the principles of academic integrity and mechanisms for their observance, effective anti-plagiarism tools that promote the development of the internal culture of AK, are applied, and the stakeholders involved are informed about it. AK has developed the Ethical and Academic Integrity Code of Alberta College, which defines the basic principles of ethics and conduct for administrative, scientific, and research staff, as well as students, creating a favorable, respectful, and responsible working environment at AK. The development of the Code involved teachers of the College and its strategic partner EKA, study programme directors and heads of study fields (SAR p.29). The Ethical and Academic Integrity Code of Alberta College includes core principles and standards of conduct to be complied with by students and employees in their attitude to the College, their work, and in relations with their colleagues, clients, and business partners. The AK Ethical and Academic Integrity Code of Alberta College defines basic ethical principles for students, including honesty, justice, responsibility, loyalty, respect, and collegiality. AK introduces students to the principles of academic integrity and adherence thereto during their studies, and any sanctions for non-compliance with these principles from the beginning of the study process in the first introductory lecture. AK also introduces their employees to the Ethical and Academic Integrity Code of Alberta College, and employees confirm becoming acquainted with the Code with their signature. The Ethical and Academic Integrity Code of Alberta College is available to all students, employees, as well as the public on the AK webpage.

For the plagiarism AK acts in accordance with the principles and rules of good faith and responsible

conduct described in the Ethical and Academic Integrity Code of Alberta College and the matters of the non-acceptability of plagiarism were included in the first-year student meeting, and the study agreement clauses (Annex 10) providing for sanctions in events of plagiarism and breaches of ethics were improved. The regulations set out the procedures for identifying plagiarism in the papers of AK students or teachers, including self-plagiarism, and the criteria on the identification of violation and on the applicable sanctions. AK also checks other papers for plagiarism, including all study lecture materials, course papers, written examinations of study courses, and specific tests of study courses, etc. and all the stakeholders are informed about the academic integrity requirements. It should be noted that the principles and requirements are developed in collaboration with EKA, which means they are common at any HEI. Moreover starting in 2020, all qualification papers in College are undergoing mandatory plagiarism checks before the defense and there is a section in Moodle where any lecturer can easily submit any independent assignment developed in a study course or study internship or qualification internship report for plagiarism check (SAR p.30).

Thus, principles of academic integrity and mechanisms for their observance are properly defined and described in the Ethical and Academic Integrity Code of Alberta College. It is applied as mandatory and stakeholders are informed properly (meeting with academic staff and students).

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

Conclusions
In conclusion, AK has a well-defined study programme with attainable aims and complies with the needs of society and the national economy. AK offers education programme in the field of ICT, with a strong emphasis on developing professional skills and giving respective basic knowledge. Taught by faculty members and industrial specialists, AK ensures that students receive a comprehensive education, which allows them to start a professional career or continue their studies. SWOT analysis is performed in detail. A system for plagiarism detection as well as regulations are introduced, which allow to control plagiarism risks. However, experts found areas for further improvement which will be analyzed in more detail within the scope SP of this report.

Strengths
1. SF and SP complies with the needs of national economy
2. Clearly defined aims and goals of the SF and SP.
3. Effective SF management.
4. Profound SWOT analysis.
5. Good strategic collaboration with EKA to share management experience and create further pathways for the students.

Weaknesses.
1. Some SWOT defined opportunities seem more on idea level and no planned activities visible, especially in increasing the attractiveness and uniqueness of the SF and SP and ERASMUS activity.
2. Weak and unfocused research/teaching to demonstrate the uniqueness and competitive advantage of the SP at AK.

1.2. Efficiency of the Internal Quality Assurance System

Analysis

1.2.1. The higher education institution has established a quality policy which is publicly available at its homepage (https://www.alberta-koledza.lv/upload/AK_Quality_Assurance_Policy_SPEKA_no_20221101.pdf). The policy is approved by HEI board and is in compliance with laws and regulations governing higher

education, as well as HEI strategy. The higher education institution/ college has developed and maintains a quality assurance system of which the policy is an integral part. The system contributes to the achievement of the aims and learning outcomes of the study field and the relevant study program. The system ensures continuous improvement, development, and efficient performance of the relevant study program. AK hires a part time Deputy Director for the Study Quality Issues, whose primary job tasks are related to keeping process and procedure documentation up to date and relevant for identified stakeholders. The position is combined with a study program director (Annex 3). The quality policy is the basis of AK quality assurance system that puts a well-defined graduate image as the center of its goals. Graduate image outlines hard and soft skills, as well as the attitude that the HEI graduate should possess. Quality system goal achievement is measured mainly by student and graduate satisfaction surveys. Student satisfaction survey is conducted twice a year, survey results are analyzed by AK higher management (interview with AK Deputy Director for the Study Quality Issues). Suggestions for improvement are concluded from student and graduates' surveys' results and acted upon, however no register of suggestions for improvement exists in HEI (meeting with AK deputy Director for the Study Quality Issues).

1.2.2. The procedures for development and review of feedback regarding relevant SPs are defined and documented in Quality Policy and SAR. Surveys, targeted for different groups of stakeholders, are conducted, including student surveys on teaching (every semester) and study process (yearly), graduate surveys (yearly and a one larger once in 5 years), employer surveys (SAR section 2.2.2). Analysis of surveys is conducted and measures taken (SAR section 2.2.2 and Annex 12). Feedback to the students and teachers is given mainly in the form of survey summaries, sent over e-mail, and changes to the content and organization of the study process are made as a reaction to survey input (SAR section 2.2.2). Students also mentioned their positive attitude towards informal communication channels with the teachers, where they are asked for their opinion on the courses (meeting with students). Students mentioned examples of positive changes to the programme as a reaction to their feedback (namely, teacher changes), though they did not get direct feedback on this (meeting with students).

1.2.3. According to AK SAR the procedure for submitting and review of student complaints is set out in the "Regulation on the Procedure of Studies and Examinations", which governs the complaint case and is complimented by "Ethical and Academic Integrity Code of Alberta College". (SAR, section 2.2.3), however the "Regulation on the Procedure of Studies and Examinations" (https://www.alberta-koledza.lv/upload/AK_Regulation_procedure_of_studlies_examination_full_SPEK A_no_20190123.pdf) does not cover complaint or suggestion for improvement submission except an appeal procedure against evaluation and administration decisions (Regulation of the Procedure of Studies and Examinations, section 11), and Ethical and Academic Integrity Code of Alberta College document is not publicly available from AK webpage in English (https://www.alberta-koledza.lv/?parent=26&lng=eng) and version in Latvian (https://www.alberta-koledza.lv/upload/011_AK_Etikas_kodekss_27102018.pdf) does not contain information how complaints and suggestions for improvements are handled.
Students mentioned examples of positive changes to the programme as a reaction to their feedback (namely, teacher changes), though they did not get direct feedback on this (expert meeting with students). Mechanism for formal feedback to all groups of stakeholders on the changes implemented as a result of survey input would be needed.

1.2.4. Since 2023, AK has implemented an ADA database for collected statistical and survey data, including data on the study process, student and staff satisfaction, employer input, financial and other indicators (SAR section 2.2.4). Such an approach of accumulating all the relevant data for analysis purposes is very positive.

The mechanism, developed for submission of student complaints and feedback results in 28% of survey rate participation (SAR, section 2.1.3) with AK own set goal of 51% participation (SAR, section 2.1.3). The mechanism in use doesn't ensure survey participation targets set by AK, and thus needs improvement due to the low participation rate.

In addition to student feedback, also employer feedback in a form of survey is collected from all internship providers once per semester (SAR, section 1.3). The questions towards employers are aimed at evaluation of preparedness of AK students for work, as well as getting to know industry trends (SAR, section 2.2.4.). The feedback serves as input to adjustments to the study programme. Moreover, employer focus groups are used upon necessity when AK performs an assessment of study programme contents.

1.2.5. The information published on the AK website https://www.alberta-koledza.lv/?parent=25&lng=eng is relevant to all interested in the corresponding study program and AK in general. Examples of useful information are, for applicants: Programme accreditation status; List of sub-programmes and qualification awarded upon graduation; Programme volume, aim and final examination description; Programme tasks and learning outcomes (https://www.alberta-koledza.lv/?parent=25&lng=eng).

For students: AK structure; Development plans; Internal regulations; Description of study process.

The information regarding the evaluated programme corresponds to the information available in VIIS register (https://www.viis.gov.lv/registri/iestades) and does match information available in AIKA register (https://eplatforma.aika.lv/index.php?r=site%2Fprogram%2Fview&id=879). Information on AK website is available in Latvian, English and Russian. That exceeds languages of study programmes that are delivered by AK. 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

Conclusions

AK 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. AK doesn't meet own set goals for student feedback collection (SAR, section 2.1.3) that indicates that HEI faces some difficulties regarding collecting well rounded feedback from students and working with the feedback in a systematic way as the centralized register of the feedback does not exist (Interview with Deputy director for the Study quality Issues on 2023-06-06).

Strengths

1. Simple Quality Assurance System oriented to continuous improvement.
2. Position of Deputy Director for the Study Quality Issues (part time).
3. Dedicated database for statistical data for analysis purposes.

Weaknesses

1. Low survey participation rates might give imprecise inputs to corrective actions.
2. Absence of centralized improvement suggestion register.
3. Mechanism for providing feedback regarding improvements made is not efficient for all stakeholder groups (students, employers).
3. No clear description how student complaint and suggestion for improvement process is implemented excluding appeals for study results and satisfaction surveys.
4. No 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: Partially compliant

    Partially compliant due to lack of well-described procedure for student complaint and improvement suggestion handling, absence of centralized improvement suggestion register and not quite efficient mechanism for stakeholder feedback collection.

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

    Assessment of compliance: Partially compliant

    AK has developed a quality policy that covers factors that assure the quality of higher education. AK additionally highlights the importance of higher education quality by having a part time position of Deputy Director for the Study Quality Issues. The procedure for student complaint and improvement suggestion handling is not described sufficiently, the centralized register of improvement suggestions is not in use and the stakeholder feedback collection mechanism does not enable AK to reach self-set goals survey participation goals.

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

    Justified in Quality Handbook and Regulations for Organizing Surveys of Students, Graduates and Employers documents.

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

    Justified in Quality Handbook and Quality Policy and Regulations for Organizing Surveys of Students, Graduates and Employers documents.

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

    Justified in Quality Handbook and Quality Policy and Regulations for Organizing Surveys of Students, Graduates and Employers documents.

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

    Assessment of compliance: Partially compliant

    Justified in Quality Handbook and Regulations for Organizing Surveys of Students, Graduates and Employers.It is advised to involve the Student Council in conducting the student surveys to increase the participation rate.

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

Justified in Quality Handbook and Regulation on Management of Study Direction documents

1.3. Resources and Provision of the Study Field

Analysis

1.3.1. A system for funding scientific or applied research is defined and implemented and it is effective. Small size of AK and simple management structure (SAR, Annex 3) help the HEI to keep the system efficient. All funds allocations for material resources are approved by AK management. The study fee and contributions from various cooperating firms are the primary sources of income. Taking into account Cabinet of Ministers Regulation No. 994 "Procedure for financing universities and colleges from the state budget," the board established a new budgeting approach. The management approves the budget annually, taking into account the number of students, planned income and expenses, funding requests for the restoration of the material and technical base and the increase of the library stock, and the funding intended for student self-government, as it was mentioned in the SAR (SAR, section 2.3). Study field resources and facilities (SAR p.41-42). The budget also contains money to pay tuition for three orphans and children from large families, however the maximum number of concurrent students at the College's expense is nine. Projected budget of the College without external funding is 699 029,49 EUR and 25% from the total amount is earmarked for funding the study field (SAR, section 2.3). The planned external funding is estimated to be at least 23% (SAR p.41).

1.3.2. All necessary material resources are available to students and teaching staff. Resources, such as computers, operating systems, and open source software for software development and network device emulation software as well as study management software "Moodle" are adequate to meet the conditions for the implementation of the study programme and for the achievement of the learning outcomes (interview with the study field "Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science" director; in facility tour).

In the provision of study programme, AK heavily relies on software emulators of hardware components. Lots of resources that are needed by study programme are provided as "simulators" or "virtual appliances" using software emulators rather than actual hardware. For example all network appliances for Computer Network Administration subprogramme are software simulated, rather than actual hardware available for AK in a network laboratory. It was mentioned in several interviews with students, graduates and teaching staff that AK having access to actual network device laboratory would increase the quality of the study programme and was expressed as a wish for AK management. In addition, not all problems and situations can be adequately simulated using network appliance simulators, e.g. problems and corresponding troubleshooting of cable connectors, incorrect cable patching etc can't be simulated realistically.

Programming subprogramme in a similar way lacks actual devices for Internet of Things (IoT) programming, such as microcontrollers. Simulators are used. Using actual hardware, that, once programmed, can perform certain visible operations can increase engagement with the study programme and programming in general.

A unified system and procedures have been established for the improvement and purchase of material, methodological, informative, etc. provision. The college is spread over three floors and also for students who need resources from the strategic partner EKA are available. For example, the premises of EKA and their laboratories, but mainly students choose to use their own resources, for

example computers, because everything they need to study is available online, as it was stated during the on site visit. On site resources, such as Virtual Box, etc., are enough for implementation of the study programme.

1.3.3. Library resources such as books on various topics and selected graduates' works are available to students and complement the needs of the study field. Library content is more focused on other study programmes rather than the evaluated one. The library does not contain periodicals but contains an extensive set of literature on laws, business administration, personal productivity and other topics that might be interesting also for the students of the accredited programme.
Library catalog is available in Latvian publicly at AK website (https://www.alberta-koledza.lv/?parent=10001) with search across book titles, authors and topics available. Search by ISBN is not available on the website. Using the search it can be discovered that the library contains many books on programming in such languages as C++, C#, JavaScript in English, Latvian and Russian. The library and databases of the strategic partner EKA are also available for college students, for example, online library O'Reilly. Also lecturer published textbooks, notes and teaching materials are available in an education management system "Moodle".
Every year, the student works (internship reports, qualification works, etc.), which have been evaluated with a grade not less than 8 (eight) are added to the collection of the best works of AK. This collection contains 7 works and is publicly available (https://www.alberta-koledza.lv/?parent=10002). With the introduction of stricter rules for the protection of personal data, many students do not allow the publication of works publicly, mainly for confidentiality purposes, however, additional works are available for viewing in the Library in paper format (in premises visit).

1.3.4. The information and communication technology tools and solutions (Internet access, internal premises network, computers, operating systems and software) are appropriate and efficient for achieving goals and the outcomes of study programme as well as for provision of distance learning (Moodle learning management system enabling remote access to study materials, tests, communication with study personnel and peers as well as access to recordings made via Big Blue Button system and stored using AK own network and server infrastructure). AK has sufficient hardware, software and systems in place to manage both distance and on-site learning efficiently while giving extras such as online storage and access to study materials and lecture recordings to students (facilities tour, learning management system Moodle presentation).

1.3.5. The HEI is staffed with teachers and other staff adequately, there are no currently open vacancies (interview with AK management and https://www.alberta-koledza.lv/?parent=1332&lng=lva). Currently 18 members of teaching staff are involved with the study programme implementation. 16 out of 18 teaching staff members hold Master's degrees in a field related to the study course they teach, two teaching staff members hold doctor's degrees (SAR, section 3.4.1 and Annex 13). Needs for new hires are evaluated yearly before the start of education programmes as well as on demand. HEI is able to invite guest lecturers, including HEI graduates, who give lectures on industry hot topics and give students business perspectives allowing them to feel what the future work might be like. AK staff have all the necessary qualifications and skills to perform work duties (SAR, section 3.4.1). When the need for new teaching staff arises, HEI announces the open vacancies in the "Latvijas vēstnesis" and online platforms such as CV.lv, as well as on the college webpage, section "Vacancies", at least a month prior to elections. According to the College Statutes, persons shall be elected to academic and elected administrative positions by open competition in accordance with the 'Regulations on Academic and Administrative Positions', which shall set out the requirements for candidates and describe the application and selection procedures. Cooperation with strategic partners also gives

additional staff (SAR, section 2.3.5.). In addition, according to Regulation of Alberta College on Academic and Administrative Posts, The Council may elect a person with a doctoral or master's degree and a higher education qualification without a degree to academic posts if he or she has at least five years of practical work experience and teaching experience appropriate to the course of study concerned. Elections to academic and elected administrative positions are closed. After consulting the Board, the Principal of the College shall enter into an employment contract with the person elected for the term of the election. During an on site visit it was stated that every potential employee has to undergo a round of interviews, where the decision on whether or not to recruit will be taken.

1.3.6. The process of further education and development in AK is driven by AK staff. The teaching staff is actively encouraged by AK management to find relevant courses, conferences and other possibilities for professional development, then apply for the participation. Every request is reviewed individually by AK management and once approved - AK covers conference participation or tuition costs and provides its staff possibilities to develop professionally (interview with AK management).

1.3.7. The workload of the academic staff includes the development and updating of study courses, including e-courses, lecturing and conducting seminars, organizing study excursions (e.g. entertaining excursions or visiting IT field companies), consulting, applying exams and tests, as well as research work. To ensure quality work with students, the maximum number of supervised course works and qualification works per semester is defined for each lecturer, these are calculated in addition to the basic workload (SAR, section 2.3.7). Academic and administrative workload of the staff is balanced, 8 members of staff have scientific publications (SAR, section 3.4.1) but AK didn't provide information whether research works were completed while research authors were working in AK or if the research was done while working in other HEI, independently from AK. AK notes a small number of teaching staff scientific publications as their weakness in SWOT self-analysis (SAR, section 2.1.2). HEI works quite efficiently thinking not to create excess administrative workload where it is not necessary (interview with AK management).

1.3.8. HEI provides students with informative and methodological support for studying, working in the e-environment, finding internship, pursuing a career, and starting their own business, as well as mentoring for studies and self-development (SAR, section 2.3.8). An introductory meeting for first-year students face-to-face and in e-environment utilizing live stream and presentation (power point, screen sharing) via Big Blue Button conference system available for everyone is held, and it covers the following topics: AK, e-environment, website, staff and its areas of responsibility, support options, consultations, job safety, ethics and academic integrity, key terms and conditions of learning agreement, conditions of study interruption, the study process and plan (SAR, section 2.3.8). Online presentation is recorded and is available for all students in Moodle education management system for anytime view or review.
Material and technical resources of HEI meet the needs of students. Significant number of students of HEI do not use AK computers, preferring to use their own computers instead (meeting with the Director of the study field and the director of study programme), it might be an effect of HEI resources not being relevant for students or just a matter of preference.

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

Conclusions
AK is well staffed with qualified personnel and teaching staff, is able to invite guest lecturers to differentiate studies while making them even more attractive and relevant. AK possesses all the resources necessary for the provision of the study program. Lots of resources that are needed are

provided as "simulators" or "virtual appliances" using software emulators rather than actual hardware.

Strengths
1. Ability to attract guest lecturers including AK graduates;
2. Flexibility in provision of distance studies;
3. Ability to search for a book availability in the library using title or author;
4. Systematic collection of Student's works into the library.

Weaknesses
1.No access to network laboratory with physical network devices and infrastructure for practical work.
2.Students have no access to physical microcontrollers for Internet of Things (IoT) programming and device prototyping (e.g. ESP8266 and similar controllers, Arduino microcontrollers and accessories).
3. Search across the library catalog using ISBN is not available.

1.4. Scientific Research and Artistic Creation

Analysis

1.4.1. SAR indicates clearly the goal of the scientific research in the following way "advancing the competitiveness of the College and its study programmes by achieving the study results set for the SP in research, thus promoting the implementation of research-based studies, developing competencies and results of academic staff and students, especially in the area of applied research, and developing cooperation with employers and other interested parties." In addition, the higher-level goal, which could be treated as a vision, is the following: "... to become the leader among Latvian colleges in terms of development of science and research and come as close as possible to the university level..." (SAR section 2.4.1). Both goal and vision (higher-level goal) are inline with college strategy, while at the same time they are formulated in a very generic manner, without reference to the study field direction. The primary focus of the college is not fundamental research, but applied one, which is relevant to the college (SAR p.54-55 and meeting with the AK management). Key partners in the domain of research and science are mentioned: industry associations, non-governmental organizations (NGOs), partners, public administration institutions (unfortunately no specific titles are provided in SAR) (SAR section 2.4.1). Based on the SAR statement, the college considers all mentioned partners as initiators of the applied research, while a more active position should be taken by the college (proposals to industry), if the college would like to reach its stated goal. SAR reports that the college has approved scientific directions for the period until 2024 (SAR p.54). According to the SAR the research directions are formulated by the management with involvement of academic staff, students, and partners, considering interests and Latvian and European Union policies on research and higher education and development trends of the economy and public administration. The last part of the statement is confusing as economy and public administration is not in scope of the study program direction. Following research directions are listed in SAR: use of information technology tools in the company's internal control system; application of information and communication technologies in solving business problems; development prospects of the information technology industry in Latvia. Listed research directions are generic ones and do not highlight specific priorities and domains of the college (in the frame of the study field) (SAR p.54-55). They could be organized around sub-programs and distance learning (which was presented during the visit as a strong part of the college). Also, it is recommended to pay attention to the methodological issues in delivering ICT programmes in college and innovative solutions used during implementation of the study program. College supports activities related to

projects. Each research project is granted funding, subject to approval by the College Board. A set of criteria is mentioned in the SAR, of how projects are receiving funding (SAR section 2.4.1). The set of the criteria is relevant, while it will be hard to have projects which would satisfy all bullets (or at least several bullets). SAR did not report examples of the projects approved following mentioned criteria. The college website has a dedicated section "Science and research", which presents basic information about research in college. While this section is available only in Latvian. It would be recommended to have a section in English (with at least basic information), this would help to establish international collaboration (visability). More details are published in the hidden section of the website, which is available for teaching staff and students. The Director of the College prepares a "Yearbook", which includes a report on scientific and research activities; it is published in the section "Self Evaluations" of the College's website. In overall it should be stated that directions of applied research correspond to the development goals of the college and are relevant for the study field and industry, but at the same time directions could be declared in a more specific way (around subprograms, distance learning, innovative study technologies).

1.4.2. The linkage between research and study process is the biggest challenge in the college, as the college implements a short-cycle professional study program (SAR section 2.4.2). The study program duration, scope and profile of the existing students (significant part of them are part-time students) prevents intensive activities in applied research and science. While it shall be considered that still there is a space of introducing applied research to the study program using different approaches, which are listed in SAR and reported during the meetings (SAR p.55-56 and expert meetings with management of the college and SF director). As an example every year the college, in cooperation with the strategic cooperation partner EKA, organizes a teaching methodical conference, the focus of which is also the connection of research activity with the study process. A website of the college has a section dedicated to the conferences (https://www.alberta-koledza.lv/?parent=1226&lng=lva), section presents a number of the conferences (including conferences for students). In addition the section provides examples of some topics in ICT domains (students conference). Also SAR reports about internship organization and preparation of the final works which in many cases are linked with some applied research (as completed based on internship company requests) (SAR section 2.4.2). Examples of the collaboration are listed in Annex 24 (Annex_24_Examples_of_Cooperation_LV_Foreign_Institutions_IT.pdf). Analysis of the reported collaboration shows that the college is promoting applied research and tries to present to students and staff the recent industrial trends in the domain, as example topics related with cybersecurity, testing etc, which are inline with study field and included study program. Also during meetings with students, it has been reported that time-to-time students and graduates are receiving invitations to different events organized by college. During the meeting with industry representatives, it was also confirmed that some of them delivered open lectures regarding trends in the ICT domain. SAR mentions several courses ("Computer Networks", "Web Technologies") (SAR section 2.4.5) which include the research activities. Strange that this section of the SAR report says nothing about the MAKE IT project running under ERAF, while during the meeting it has been reported several times that such a project exists and college students are involved. This is a good example of how research could be integrated in the study process even in the case of a short-cycle program. The section has a reference to the research strategy until 2024, while analysis of it shows that only minor activities are targeted to introduce applied research to the study process. Report states that "The College is improving the grant system for research groups, supplementing it with research support tools to motivate students, employers, and foreign cooperation partners. The College finances the research grants from its own resources.", but no examples or specific data is presented in SAR or reported during the meeting with the management. In overall it should be concluded that college administration puts attention to applied research and innovation, but conducted activities are having

limited impact to the study process (expert meeting with the management of the college and SF director).

1.4.3. SAR reports and recognizes the importance of international collaboration and states "International collaboration for research is encouraged at a college, staff and student level." (SAR section 2.4.3). In 2019, 2020, 2021, the International Academic Week: "Advanced Research and Teaching Methods (for Academic Staff)" was organized to promote the establishment of contacts between the teaching staff of the college and foreign researchers (SAR p.58). But the report does not provide the description of the results or impact of this activity. Also during the meeting no details were provided about this activity. The only reported project at the international level is Erasmus+ KA107 project "Personnel mobility between program countries and partner countries in the higher education sector" (SAR section 2.4.3) implemented by the college with the Eurasian National University named after L. Gumilyov of Kazakhstan (ENU). Also in this section again mentioned the set of the conferences which are available for students and teaching staff, some of the conferences are visited by international staff from a set of countries: USA, Germany, Poland, Lithuania, Kazakhstan, Bulgaria, the Czech Republic, Belarus, Ukraine. Usually the conference is organized with support of strategic partner EKA. Evidence of international collaboration and topics of the students delivered during international conferences over years could be found in SAR Annexes, but the majority of the records refer to the local nature of the collaboration (Annexes 24 and 19). The list of publications, and publications in international level are foreseen for some specific staff members, as example for Mg.sc.ing. Aivo Jasevičs and in many cases reported publications are completed at a local level (Annex 17). In overall it should be concluded that international collaboration is a weak point of the college and should be improved, in terms of projects, publications and collaboration activities with as example neighboring countries Lithuania and Estonia should be established.

1.4.4. SAR reports the importance of the development of teachers' scientific and research activities (SAR section 2.4.4). Several core activities are listed: participate in international scientific conferences, seminars and discussions in Latvia and abroad as reporters and listeners (SAR p.59). The obtained new information is used in teaching study courses and supervising papers, as well as in preparing teaching materials; preparing publications on industry innovations, summarizing the results of conducted research. Collecting research information involves students to the possible extent, and they summarize the information and present data; conduct research in cooperation with employers with the involvement of students; participate in projects. Project results are used in updating study course contents. All mentioned activities are vivid, but lack of the examples in SAR and during the meeting with management and teaching staff, shows that mentioned bullets are rather generic and presents the overall activities which should be completed by teaching staff, when a specific intensive activity. Also considering the significant number of the invited staff, implementation of all activities seems complicated. According to the section (SAR section 2.4.4) and meetings with teaching staff, administration of the college is open and supporting teaching staff, by providing the ability to visit and participate in conferences. Also, SAR reports the following: "Financial support is provided through participation in various projects, as well as through the research grant system" (SAR p.60). Such ability is a good thing, but at the same time, SAR reports that it is a challenge of the college of how to involve teaching staff in ICT domain to produce publications and participate in the projects. To improve the situation, in 2022 the college improved the staff evaluation and motivation system, focusing not only on financial support for the results achieved in the previous year but also on the development of individual development plans for the academic staff for the coming period. The individual development plan will include an agreement with the relevant lecturer on the expected results in a perspective of at least two years, indicating support (administrative, informational, financial) for the implementation of the plan (SAR Section

2.4). Positive is that the college administration recognizes the issue with involvement of the staff to the research activity, and is able to propose some activities to improve the situation. But as the new motivation system has been presented only in 2022 it is still not possible to record some positive impact of the proposed activities. In overall it is clear that involvement of the teaching staff to the research activity in college is problematic, even proposing the support and developing motivation schemes. Seems that the bottleneck here is not a significant number of the permanent staff. During meetings it has been reported that some teaching staff have several working places, some are from industry etc. Not looking at the fact that administration of college is doing a lot and the motivation scheme is in place its effectiveness is still questionable.

1.4.5. As can be seen from the SAR the key mechanism to involve students into research are annual conferences organized within strategic partnership with EKA - "Student research activity: theory and practice (SAR section 2.4.5). SAR reports some figures as follows: "... results of two studies were presented at the conference in 2017, one in 2018, and five in 2019, in 2020 college students participated in the conference only as auditors, and in 2021 one report was presented, and seven in 2022" (SAR p.56-63). Also, SAR demonstrates the examples of the abstracts delivered by students. Another important mechanism mentioned in the report and confirmed by students is internship and final works. It has been reported during a meeting with management and study director, that in many cases students are conducting their final works based on real problems from industry. In many cases internship helps students to define interesting topics and collect the data. The only significant projects mentioned (SAR section 2.4.5) are KA107 in the frame of ERASMUS + and Nordplus Horizontal international project "Skills on Demand: Meeting Labour Market Needs" (NPHZ-2014/10084) in collaboration with Kauno Kolegija University of Applied Science (Lithuania) and the Estonian Entrepreneurship University of Applied Sciences (Estonia). SAR reports that both projects are targeted to students and some of the students were involved as representatives of the focus group. Unfortunately nothing is stated in SAR (in this specific section) regarding the running project MAKE IT (https://www.alberta-koledza.lv/?parent=1482&lng=lva), which is very significant for involving students in research and innovation. Overall it should be stated that management of the college is doing a lot to involve students into research, but the nature of the program included into the study field, limits excellence, while selected mechanisms can be considered as adequate and valid.

1.4.6. The key bullet reported in this section as an innovative solution is distance learning implemented in college for a significant amount of the years (SAR section 2.4.6). During the meeting it was demonstrated how Moodle system is implemented, and as additional materials the guidelines and specifications for e-courses have been presented. Records of classes exist and are available for students (BBB platform). Beside active use of the Learning Management System (LMS) Moodle, there has been reported intensive usage of different simulators as example (for the course Computer Networks), which is also considered as application of the innovative solutions. In addition, it has been reported by SAR and later confirmed by the administration that the college uses NEXUS, E-Nexus, Business Calendar (SAR section 2.4.6 and expert meeting with the teaching staff). During the visit the electronic schedule has been demonstrated, which is useful not only for students, but also by the teaching staff. During the meeting with management, it was confirmed that the college tries to digitize all paperwork and has some successes, for example final works in many cases are signed electronically. So, efforts in these directions are significant and are developing a digital environment comfortable for teachers, administration, and students. SAR states also the collaboration with EKA in the frame of the ESF project "Automation tools for creative industries AutoRade" (SAR section 2.4.6), while there is no evidence that college is a part of the consortium. Not looking to the fact that IT solutions are well developed in the college, less attention is put to the innovative methodological approaches used during the education process, like flipped-classes, usage of rubrics/grading

schemes during evaluation of the students' deliverables etc. Overall it should be concluded that college is successful in developing a comfortable digital environment for students, teachers' administration and effectively utilizing existing resources, while lack of innovation in teaching(methodology) could be considered as a gap, which requires additional efforts from college management and teaching staff.

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

Conclusions
Based on the presented analysis following conclusions could be presented:
Directions of applied research correspond to the development goals of the college and are relevant for the study field and industry, but at the same time directions could be declared in a more specific way (around subprograms, distance learning, innovative study technologies).
College administration puts attention to applied research and innovation, but conducted activities are limited.
International collaboration is a weak point of the college and should be improved, in terms of projects, publications and collaboration activities with, for example neighboring countries Lithuania and Estonia could be more intensive.
Involvement of the teaching staff to the research activity in college is problematic, even proposing the support and developing motivation schemes. Seems that the bottleneck here is not a significant number of the permanent staff. During meetings it has been reported that some teaching staff have several working places, some are from industry etc. Not looking at the fact that administration of college is doing a lot and the motivation scheme is in place its effectiveness is still questionable.
Management of the college is doing a lot to involve students into research, but the nature of the program included into the study field, limits excellence, while selected mechanisms can be considered as adequate and valid.
College is successful in developing a comfortable digital environment for students, teachers' administration and effectively utilizing existing resources, while lack of innovation in teaching(methodology) could be considered as a gap, which requires additional efforts from college management and teaching staff.

Strengths
1. Presence of the research strategy, which is systematic and clear. Published on a website and available for teaching staff, students, and the general public.
2. Well developed IT resources and digitalisation of some paperwork, which creates a comfortable e-environment for administration, teaching staff, students.
3. Annual conferences for teaching staff and students organized within strategic collaboration with EKA.

Weaknesses
1. Research directions are presented in a generic form, and could be formulated in a more specific and clear way (around sub-programmes, distance learning, innovative teaching technologies).
2. Research section is available only in Latvian language, while to have international collaboration in the research some basic information could be presented also in English (visability).
3. Low involvement of the teaching staff to the research activities (projects, publications etc), which probably related with low level of the permanent staff.
4. Low level of the innovative methodological approaches utilization during study and teaching.
5. Low level of international collaboration in the field of applied research.

Assessment of the requirement [2]

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

Assessment of compliance: Partially compliant

Not looking to the fact that research development strategy exists, defined research domains corresponds to the overall goal of the college, there are a significant number of the factors which prevent the successes/excellence in the field of applied research. The international collaboration is limited and not strategic (continuous), low level of teaching staff involvement into the research (projects, international publications etc), nature of the study programme included into study field limits students involvement, using classical mechanisms. At the same time, it is clear that college management considers research as an important part of the study process and performs activities targeted to overcome the situation. Well developed IT resources for students, teaching staff, administration, but lack of innovation in teaching (methodological approaches).

1.5. Cooperation and Internationalisation

Analysis

1.5.1. AK has established cooperation with 38 education institutions in Latvia (Appendix 20). This includes cooperation with universities regarding the continuation of education for graduates and cooperation with secondary schools oriented towards promoting AK studies and helping school graduates to choose their further study direction (SAR section 2.5.1). These activities include the organization of training seminars for school management and teachers, development seminars for pupils and their parents, olympiads for pupils. Strategic partnership has been established with EKA (SAR section 2.5.1), covering the methodology transfer, resource sharing, study continuation for college students, participation in joint research projects.
Cooperation is also established with 82 organizations from Latvia, the majority of them covering internship issues relevant to the study field (Appendix 20). Apart from internship organization, agreements with business companies include cooperation on joint projects. 2 companies ("innoWate" and "CatchSmart") provide scholarships for AK students, and Micro Tik provides hardware for AK computer network infrastructure and related course delivery (SAR section 2.5.1).
Summarizing, AK has wide cooperation links with educational institutions and organizations in Latvia, contributing to the achievement of aims and learning outcomes of the study field. Cooperation agreement with educational institutions and organizations in Latvia are in line with the strategic directions of AK, aimed at preparing high-quality specialists fitting the current job market requirements, also at providing a professional team of academic professionals, practical industry experience, as well as close cooperation with employers and strategic partner schools.

1.5.2. AK has cooperation links with educational institutions from abroad, mainly from neighboring countries (Lithuania, Estonia), as well as several from other regions (Cyprus, Kazakhstan, USA) (SAR section 2.5.2). Being a rather small institution with only 1 study programme in the field, the College cooperates with other partners (namely, the strategic partner EKA) in attracting foreign partners - e.g. in joint organization of International Academic Week (IAW) and Staff Training Week (STW), as well as in participation in the organization and implementation of the International Scientific Conference etECH, and Erasmus+ mobility project implementation (SAR Section 2.5.2).
One of strategic goals of AK provide an efficient study process by applying a student-centered approach, also including the opportunity to gain international experience while studying. Though there are good examples of international cooperation, more attention should be paid to this

direction of activities, and international cooperation should be expanded. This could be done by signing additional or expanding current cooperation agreements with educational institutions abroad, with specific focus on Erasmus exchange and other mobility options.

1.5.3. During the reporting period, no student mobility has taken place in the study field (SAR section 2.5.3). The main reasons, that are given for this by AK, is the short period of studies, and also the majority of working students (SAR section 2.5.3). AK tries to introduce different measures, like traineeship mobility, project-related mobility (SAR section 2.5.3), but this does not change the picture much. In order to provide the opportunity to gain international experience while studying, as set in the AK strategic goals, AK should advertise Erasmus mobility options better to students, as students seem to be unaware of all the possible mobility options, like short-time mobility visits (expert meeting with students).
Incoming mobility is also problematic, as AK does not deliver SF related study programmes in English.
Cases of teacher mobility, mostly research-oriented, were mentioned during the expert meeting with the teaching staff (Slovenia, Kazakhstan), however these are rather few cases, and teachers mentioned that though they are aware of mobility options, it is not always enough time to use them.

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

Conclusions
Cooperation with institutions in Latvia is well-developed - various forms of cooperation with both educational institutions and organizations, strategic partnership with EKA. However, international cooperation needs development - few international cooperation agreements with international partners, no studies in English and no incoming mobility, no outgoing student mobility and insufficient teacher mobility during the reporting period.

Strengths
1. Extensive cooperation with Latvian educational institutions and organizations.

Weaknesses
1. Few International partnerships that need to be revised of the cooperation content and focused on more diverse and attractive mobility options to involve more students in mobility.
2. Low teacher mobility and no student mobility over the reporting period.
3. Insufficient advertising of mobility options among students.

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

Few international partners and very low student mobility (SAR chapter 2.5).

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

Analysis

Here it should be noted that Annex 25 has been delivered by the college only in Latvian language, which limited the expert commission to complete the analysis of the annex data.
Following 5 recommendations are mentioned in SAR (SAR p.70-71) and in the report prepared by

the experts in 2012. Here it should be noted, that expert recommendations were done in general for all HEI in Latvia, which implements study programmes in ICT domain.

Library and study material availability for the study process should be improved.

Annex 25 highlights several activities implemented in the frame of this recommendation, among them 1) intensive usage of the Moodle to make materials open for students, 2) conclude the agreement with EKA library; 3) setup strict requirements regarding list of obligatory literature (in EKA library, in college, in internet).

A bit confusing that among mentioned activities the increase of budget dedicated to the literature renewal was not mentioned. Because there is an issue with translation, experts are writing about availability, while colleges are writing about accessibility. Meaning that key issues indicated by the experts during previous evaluation was absence of the materials, but not the accessibility of it. In any case the action has been performed by the college, and it was reported and demonstrated (during visit) that Moodle courses contain all materials necessary to study (presentations, assignments, additional links, videos etc).

The college reports that agreement with EKA library has been concluded and as stated catalogs were merged (SAR section 2.6.1). This has been confirmed, by the management of the college and by the head of the library (during visit). Also during the visit the librarian reported that each year an amount of 1000 EUR a year is dedicated to renewing literature in the library, but this amount is not only for ICT direction. Therefore it should be concluded that the budget dedicated to ICT is even less. Considering prices for the modern literature for ICT, it could be 2-4 books per year, which is not significant input. The college webpage has a section dedicated to library and the access to the catalog of the books (it was mentioned that college united catalogs with EKA), browsing catalog it could be concluded that additional efforts should be done to enrich the collection of the books, used during the study process. Filtering the catalog of the books (available online), it should be concluded that a significant number of books are not recent, while some are recent and valid for the study process. As an example in the category "Computer Science": 6 published in 2017, 10 in 2018, 3 in 2019, 7 in 2020, 6 in 2021, 2 in 2022. Also it would be good to structure the existing catalog in a more clear way (for students). Overall, it shall be stated that the recommendation is implemented only partly and still requires attention of the college management to improve the situation.

Participation in mobility programs should be increased.

Set of the activities has been used by the college to improve the situation with the mobility (Annex 25: 1), establishment of Staff Training Week (annual) and International Academic Week (annual), which should impact incoming flow of the mobility; 2) implementing collaboration projects in frame of the ERASMUS programme; 3) to increase incoming flow, students were also attracted for practice, not only for study; 4) informing students and teaching staff using different channels (emails, events, promotional materials etc); 5) use of own funding. Not looking at the fact that college representatives are evaluating this activity as Completed, annex still indicates that students' outgoing mobility level is low and they are searching for the solution (Annex 25). In addition, a section about the ERASMUS programme is in place, but there is no English version, which could be useful if someone would like to visit college. Overall, execution of this recommendation was implemented only partly.

The number of academic staff's publications at scientific conferences should be increased, especially at international scientific conferences.

According to Annex 25 several activities were performed: 1) establishment of the research groups; 2) funding for research groups is placed in budget; 3) methodological seminars on research issues; 4) attending conferences dedicated to the research (as example, information resources usage Google Scholar, ResearchGate etc). Analysis of the results, shows that not looking at the fact that some steps were made by the college management the issue is still in place. The number of publications in international journals, conferences is still low. One of the seen key reasons is the low

number of the permanent staff, who are willing to deal not only with academic issues, but also with the research (but some examples exist, according to the provided lists of the publications). College has developed the strategy ZPJAS 2024, which is setting the framework, but more activities should be completed in this direction. Overall, execution of this recommendation was implemented only partly.

All lecture materials should be prepared in English.
As the college is implementing the programme only in Latvian language, it is not economically reasonable to implement this recommendation. This one recommendation should not be considered, as the college implements the study programme only in Latvian language.
The E-learning system Moodle should be used in full potential for the study process.
SAR and visit results demonstrate intensive utilization of the Moodle, as a key resource to organize the study process. Demonstrated courses are rich in terms of materials and it is foreseen that they are actively used. It has been demonstrated that there are developed requirements for courses and the quality audit of the courses exists. In addition the new position was open in college - e-coordinator, who is responsible for Moodle. To improve the quality of the courses teaching staff in their evaluation have a criteria - the quality of Moodle courses. During visits students confirmed that Moodle is utilized by teaching staff and students are satisfied with materials they are able to find in Moodle. Overall it should be recognised that the recommendation was fully implemented, at the same time, it should be noted that not all functionality (as groups, advanced grading schemes etc) is used and there are places for improvements, as mentioned in Annex 25 this is a continuous process.

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

Conclucions
Overall it should be stated that the majority of the recommendations was completed only partly and additional efforts should be put by management of the college to improve the situation, with library, research and students' outgoing mobility.

Strengths:
1. Electronic catalog with the books, which is merged with EKA is available in a webpage and could be accessed by students.
2. Intensive utilization of the Moodle platform, which is reach with materials and existing quality checking process, dedicated person, and staff motivation scheme (which includes criteria regarding Moodle courses).
3. The strategy ZPJAS 2024 was developed and is operating.

Weaknesses:
1.The amount of the modern literature in ICT domain is poor, majority of the literature in the catalog is old (<2020y).
2. Only basic functionality of the Moodle system is used.
3. Low student outgoing mobility level, and no plans on how to improve the situation.
4. Section dedicated to ERASMUS + is not available in English, which limits international students/teachers to consider college as a destination.
5. Lack of the permanent staff, who would be able to increase the number of research publications.

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: Partially compliant

AK have mostly implemented previously given recommendations and it is clear that they had only a positive impact on the study field. The recommendations implemented partially such as intensifying student exchange have not been achieved due to difficult situations AK cannot directly impact (student employment parallel to studying etc.). Unfortunately AK still needs to improve the encouragement of teachers to write articles for journals and to start and take part in collaboration projects with companies, to improve the student and staff mobility.

1.7. Recommendations for the Study Field

Short-term recommendations

Consider to have a Research section of the webpage in English, with some at least basic information, this should help in finding and establishment international collaboration.
To conclude at least 2 strategic collaboration agreements with activity plan with international colleges (in the domain of the research).
Consider to reformulate current applied research directions, to have them in more specific and clear way (for public and business) and introduce this in the College web site.
Increase the budget for library and consider to significantly upgrade the literature in the ICT domain, or conclude the contract with technical universities/institutes on their library use or consider to buy access to some online academic libraries. There have to be in-place or accessible literature for each course not older than 5 years.
Advertise the whole spectrum of Erasmus mobility options among students. Consider having at least 1 BIP (Blended Intensive Programme) per year. Conduct respective introductory seminars each semester and put additional information to Collge web page.
Introduce measures for increasing teacher and student mobility. Make the teacher mobility obligatory for certain period (5 years or less) and set the yearly student target mobility numbers for the programme.
ERASMUS section on the College web page should be implemented also in English language, with basic information about accepting ERASMUS mobility in college.
Define clear steps in new period AK strategy to solve the problems/tasks/ideas risen in the SWOT analysis.
Make filling in the survey obligatory and involve the student council in adjusting the survey questions and conducting the survey.
Introduce and conduct more attractive lectures for highschool students, introduce some attractive and practical activities in highschools (open highschool competitions, games, practical demos etc.) introducing AK and SF.
Attract more motivated students (connected with the previous recommendation) and provide more attractive and future ICT oriented lectures and activities from local and international lecturers to have at least 2-3 guest lectures per year on the topics of ICT future trends and achievements.

Make an analysis of the social groups of the students exmatriculated (for example recent highschool graduates, people updating their outdated ICT knowledge, family people etc) and provide respective different support and learning options for each social group to reduce drop-out rate.

Long-term recommendations

Introduce to the SP and get access to a network laboratory with sufficient set of network hardware, cabling and accessories for practical work with computer network setup and troubleshooting.

Implement search functionality to the web page.

Put measures in place to increase satisfaction survey completion rate amongst students as ask for survey before giving away HEI diploma and advancing the student to next year.

Ensure efficient feedback mechanisms for informing all groups of stakeholders about the changes made in the programme.

Enable students with possibilities to program and try to code on actual microcontrollers (ESP, Arduino or similar) for IoT programming thus making the education programme more interesting and engaging for the students, where the respective activity have to be incorporated to a course.

Sign more cooperation agreements with international partners, especially with focus on mobility options and quality of the partners. Increase the agreement number at least five new agreements.

Consider to employ at least two more permanent teaching staff (substitution of the visiting staff), to improve the research capacity in the field of ICT.

Continue to develop Moodle environment utilizing advanced functionality (like grading rubrics/schemes and respective learning analytics both for the students and teachers, more effective interactive teaching/learning options etc).

Introduce some ICT field test and highschool completion math minimal grade requirement as the entrance criteria etc. and introduce pre-enrollment preparatory course to choose more motivated and prepared students, not everyone.

Introduce Python or/and Java as the first programming language into the Programming course.

II - "Information Technologies" ASSESSMENT

II - "Information Technologies" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1.The first level professional higher education study programme "Information technologies" (41484) (first level professional higher education study programme) is in compliance with the study field "Information Technology, Computer Engineering, Electronics, Telecommunications, Computer Management, and Computer Science" as well as with the AK Development Strategy 2019-2023 (Annex 6). The first level SP belongs to the Engineering and Technology branch group Electrical Engineering, Electronics, Information and Communication Technologies, which is part of the study field and is designed to prepare computer systems and network administrators and programmers in accordance with the requirements of the fifth qualification level (5th LQF) for professional activity

and to continue their education on higher level. The first level study programme covers a wide range of topics related to software development main principles, software design and structures and writing software code according to programming guidelines, network structures and protocols and communication. Since April 21, 2022 the amendments to the Law on Higher Education Institutions entered into force "within the study programme, a study sub-programme (sub-programmes) can be created…." (Law on HEIs, Article 55 paragraph one), two sub-programmes "Programming" and "Administration of Computer Networks" were introduced according to the professional qualification "programmer" and "computer systems and network administrator" to be awarded after completion of the programme. This first level SP in both sub-programmes is offered only in Latvian as 2 years full time 80 CP programme and 2 years 6 months part time 80 CP study and 2 years 6 months part time extramural 80 CP studies. Both the sub-programmes follow the new professional standards from 8 June 2022 (SAR p.81).

2.1.2.The first level SP is designed to prepare professionally educated specialists in ICT and especially programming and network administration specialists. The first level SP aim and objectives, as well as the learning outcomes and admission requirements, are all aligned with the professional qualification to be obtained, which is Programmer (sup-programme Programming) and Computer Systems and Network Administrator (sub-programme Computer Systems and Network Administrator). The admission requirements are based on the Law on HEI. The duration of the programme implementation is reasonable and justified, as it is based on the normative acts, including the Law on Higher Education Institutions and the Cabinet of Ministers Regulation No. 846 of October 10, 2006 "On Requirements, Criteria and Procedures for Admission to Study Programmes". All of these elements are interconnected and work together to ensure that the study program is effective in achieving its goals and preparing students for their future careers. Three SP forms (full-time, part-time and part-time extramural) allow students to choose the option that best suits their needs and circumstances. On the other hand the diversity of the programme study forms might make the teaching complicated and highly teaching resource demanding. The report also notes that the content and implementation of the study program are focused on students' skills in applying the main basic ICT technologies and providing needful for professional career soft skills and developing their competencies in line with the demands of the global labor market. The aim, objectives, learning outcomes and admission requirements of the SP (SAR p.76-77) are mutually agreed and developed in accordance with the (LQF), the European Qualifications Framework, as well as the Cabinet of Ministers Regulation No 141 "Regulations regarding the State Standard for First Level Professional Higher Education". Study programme code: 41484, established in accordance with the SP content and Regulations of the Cabinet of Ministers No. 322 "Regulations on Latvian education classification" (https://likumi.lv/ta/id/291524-noteikumi-par-latvijas-izglitibas-klasifikaciju), corresponding to the thematic group "Natural sciences, mathematics and information technology". Cabinet Regulations No. 322 of 13 June 2017 "Regulations on the Classification of Education in Latvia" correspond to different educational groups, i.e., 483 "Computer systems, databases and computer networks" and 484 "Programming", the study programme is assigned two classification codes – 41 483 and 41 484 (SAR p.82).
Overall, the programme's title, code, qualification to be obtained, aims, objectives, learning outcomes, and admission requirements are all interrelated and aligned with each other.

2.1.3.Two sub-programmes "Programming" and "Administration of Computer Networks" were introduced in 2022 according to the professional qualification "programmer" and "computer systems and network administrator" to be obtained after completion of the programme (SAR p.81). This means two education classification codes were assigned according to the study programme and its sub-programmes, respectively - 41483 and 41484, which means occupational classification codes respectively Programmer – 2512 05 and Computer Systems and Network Administrator – 2522 01-

(Annex 29). Following the demand of students and current situation in the education market, the study programme has been prepared for implementation in two new forms – part-time extramural and distance learning (SAR p.81).

No other changes have been made to the parameters of the first level study programme (in terms of its title, duration, scope, form, aim, objectives).

2.1.4.The first level SP is aligned with the Latvian Smart Specialization Strategy (RIS3) (https://www.izm.gov.lv/en/smart-specialisation-strategy-ris3?utm_source=https%3A%2F%2Fwww.g oogle.com%2F) and the development plans of the Republic of Latvia, which highlight the need for specialists in the field of ICT and with professional programming and computer systems skills. The growing demand for specialists in this field is also reflected in the projected labor shortage and number of graduates in the STEM field, where there is a significant shortage of ICT specialists. The first level study programme specializations "Programming" and " Computer Systems and Network Administrator" is designed based on the demands of companies that develop or service ICT systems. The inclusion of these specializations ensures that the program meets the needs of the economy and provides students with the necessary competencies for successful professional activity in these areas. The main target group of the SP is people who would like to update their knowledge in ICT and who have graduated some other specialty and also recent graduates of high-schools who would like to start their education on the first level professional programme. This first level SP includes group practical programming and network management related courses and two internships, which contribute to the development of students' practical professional competences and improve interdisciplinary communication in the program as the programme includes also courses like Business Communication and Professional Ethics; Business Information Exchange; Introduction to Business; Project Management. These courses should be considered very important, giving young people essential knowledge and skills to be successful in today's world. While this SP is offered only in Latvian, efforts to attract and recruit international students may need to be increased in the future to foster a more diverse and multicultural learning environment. It was mentioned (meeting with the students and employers) that they would be happy to have some courses in English (if needed in parallel with a Latvian translation). While only some lecturers are involved in research projects and activities, there could be more opportunities for the teaching staff to engage in research and innovation and to bring their findings and expertise into the classroom. On the other hand the meeting with the teaching staff revealed that some of the staff are working in some company with very interesting topics (Cyber security, AI related software development, etc), which might open options for new attractive courses/training/lectures for the students.

There is a stable tendency for a higher demand for part-time studies in the College compared to full time studies (SAR p.85). The impact of work on study results is an important factor to consider for many students, as they often work alongside their studies to secure funding for their education, which can have an impact on their academic performance. Students who work usually have less time to attend lectures, complete assignments, and engage in other academic activities, which can further affect their grades and academic progress and this is one of factors influencing the high drop-out rate (Annex 28). The indicators that the high drop-out rate reasons are lack of students' prior training in exact sciences and inability to fulfill obligations and lack of motivation (SAR p.85) refer to the need to increase work efficiency with high-school students prior to the admission implementing more attractive and effective means in attracting and motivating the further students. The statistics of student dynamics (Annex 28) shows that over the last five years, an average of 60-100 students have been enrolled per year, but only an average of 20-25 of those graduate (Annex 28). Almost no student participation in the ERASMUS mobility programme and lack of information about different ERASMUS options (confirmed on meeting with the students and graduates) may indicate a lack of awareness of the benefits of international experience and/or barriers such as financial constraints.

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

Overall, the Information Technologies study programme at AK meets the needs of both Latvia's smart specialization and the national economy, and prepares students for a promising future in the ICT industry offering a strong foundation in programming and network administration, with professional specialization that meets the needs of the labor market. The first level study programme practical approach and alignment with national and regional economic strategies make it relevant and practical.

Strengths
1. 2 years and 2 years and 6 month programmes are appropriate for beginners updating their ICT knowledge
2. Variety of the SP forms - full-time, part-time, part-time extramural to suit student needs
3.High demand for graduates on the market.

Weaknesses
1. Lot of admitted students are weakly motivated and not well prepared for the SP.
2.Weak student participation in ERASMUS mobility programme.
3.High drop-out rate

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1.As indicated in SAR (SAR p.76) the goal of the study program is "To prepare qualified and competitive Computer Systems and Network Administrators and Programmers in accordance with the requirements of the fifth qualification level (5th LQF), who are oriented towards further education, acquiring the necessary knowledge and skills that would allow to successfully enter the labor market and independently adapt to the changing socioeconomic situation". SAR (SAR p.77) indicates following results of the study in the frame of the study programme "Information technologies": Knows and understands the theories, regularities and technologies of computer science and the information technology industry; Is able to discuss practical issues and solutions with colleagues, clients, and management in the chosen profession; Is able to work individually and in a team, planning and organizing, as well as evaluating and improving own work and the work of others, to perform certain tasks in the chosen profession; Is able to formulate, describe, and analyze practical problems in the chosen profession; Knows and understands the regulatory acts and standards. In total 5 study results are indicated in a level of the programme. Indicated study results are in the frame of the study field and correspond to the indicated goal of the study programme. For each sub-programme additional study results are presented as follows:

For the sub-programme: "Programming": Can develop software in accordance with the rules of functionality, quality, and resource capacity, preparing and configuring an environment for developing; Can evaluate the requirements of the programme, create the design, and write its code in accordance with the programming guidelines; Can analyze the source of software errors, debug the programme, and improve software performance.

For the sub-programme "Computer Network Administration": Can ensure the optimal performance of the computer technology and software, as well as the computer network for the needs of the users. Can design, configure, and administer computer systems and computer networks. Is able to ensure information protection and safety. Is able to provide technical and advisory support to the users; Is able to prepare the necessary technical documentation.

Presented study results per each sub-programme corresponds to the nature of the sub-programs and fits study programme and study direction. In overall presented study results are inline with

industry requirements. This statement was also confirmed by graduates, and industry representatives.

The study courses included in the first level SP cover the Introduction to IT Legislation and Standards, basic guidelines, principles, algorithms of software and programming on the base of C/C++ language. The selected language should be considered difficult for the beginners and many students mentioned (meetings with the students) that they would prefer Java, which is widely used in companies nowadays and easier for the beginners.

The analysis of the submitted by college study plan, which contains study courses and credit points, description of each course and mapping of the course study results with program study results is adequate and ensures reaching the goal of the study program. The list of the study courses corresponds to the requirements of the industry. At the same time it should be stated that the presented study plan has a significant number of small (2-3CP) courses, which makes it hard to manage the program and overload students with assignments. In addition, presented descriptions of the study programmes do not have a calendar plan, which is asked in Law on Higher Education Institution. Analysis documents given (Annex 30) prepared in the frame of SAR shows that it presented study programme follows the requirements, except for a typo/mistake for criteria Industry-specific study subjects not less than 36 credits. Indicated information in position is Common to both sub-programmes (20 credits), while summing-up credit points it is 19.

In overall it should be concluded that a presented study program with sub-programs corresponds to the need of the industry, and presented courses ensure reaching of study results and goal of the study program. Study programme follows the requirements of the Professional Higher Education standard. This conclusion is based on the analysis of documents (Annex 30) and requirements stated in Regulation No. 141 Regulations regarding the State Standard for First Level Professional Higher Education. To note the mentioned regulation is not in force any more, while new regulation is a c t i v e (https://likumi.lv/ta/id/342818-noteikumi-par-valsts-profesionalas-augstakas-izglitibas-standartu).

2.2.2.
N/A

2.2.3.The analysis of study implementation methods is based on SAR (SAR section 3.2.3) and meetings with study field director, teaching staff and students. As SAR reports the variety of the methods is utilized to deliver the program, in total 11 are mentioned: lectures and guest lectures; independent work; work in small groups; dialogue and discussions; practical classes; internship; seminars; student conferences; business and situational games; study tours; eLearning. All mentioned methods are valid in the frame of the study program and contribute to the study results in the program and selected sub-program. During meetings with teaching staff and students the methods reflected above were mentioned by both parties. The student-centred approach in college implemented in the following way: integrating into the study process, practically orientated assignments, training, internship; providing opportunities for students to engage in discussions, attend seminars, guest lectures, and workshops, work individually and in groups, engage in research and creative work, prepare scientific papers and present them at conferences, participate in project development and implementation, and participate in creative activities; organizing meetings with experienced professionals; promoting access to education and personalization of studies, integrating modern teaching methods, actively digitizing the study process, providing informative and material support to students; designing result-orientated study courses, aiming at the achievement of the planned learning outcomes at the level of the study course, study program, profession standard, education standard, and European and Latvian Qualifications Frameworks (EQF/LQF); ensuring the availability of information; providing various forms of study in all study programs: full-time and part-time, face-to-face and e-learning, preparing individual study plans and providing consultations;

ensuring the recognition and equivalence of prior education and practical experience; providing a possibility to study isolated study courses from other study programs of the College, providing study and internship mobility opportunities in Latvia and abroad, and providing possibilities for further studies; involving students in the work at institutions of all levels, providing opportunities for real participation in decision-making; providing opportunities for further studies at the next (undergraduate, bachelor) level.

All mentioned were confirmed by the students, with emphasis on the very fast reaction of administration on any requests from students' side. During the visit, it was demonstrated as a study department, which is a key contact point for students and teaching staff. Of course, it should be clear that such a collaboration scheme is possible with a small number of the students, having more students would require more formal procedures. Also students were asked about mobility opportunities, but they reported that they are do not have a possibility to leave a country for a long time (family, works etc), while presenting them the concept of BIP (blended intensive program) made them very interested in such opportunity, so in future collaboration it could be considered by college administration.

In distance learning, contact hours have been replaced by watching video lectures, group work and seminars are not organized for students, because each student learns the study plan independently in an individual way, using the study materials offered by the College, which are available in the Moodle environment for each course of study (for example, self-learning tests to control the progress of learning), various technical and electronic means of communication to contact the instructor if consultation is required. Skills that students of other study forms learn in group work and seminars (working in a team, as well as communicative, argumentation, presentation skills, etc.) students learn during internships, working in industry institutions and companies. During the visit the Moodle system was demonstrated and reported how the study process happens for distance learning students (including demonstration of the recorded videos).

At the same time confusing is the fact that distance learning students are not "physically" separated from the rest of the students. In demonstrated examples of the courses, it has been stated with text, that the following set of the assignments is for distance learning students and the following set for full-time students. It would be recommended to use standard functionality of the Moodle and manage access to the materials using groups in Moodle. This would avoid confusion. Additional documents regarding the policy of Moodle course development and validations were presented by the college.

In overall utilized and confirmed tools/methods/approaches/techniques in the frame of the program are relevant and ensure reaching study results.

2.2.4. The organization of the internships offered to students is implemented in compliance with College "Guidelines on Independent Assignments" (SAR section 3.2.4). College student internships are an integral part of the study process. The internship is divided into two parts: the study internship and the qualification internship. The internship is intended for students in the last two semesters of college according to the study program plan. Under the study agreement, the student is obligated to search for their own place of internship. If the student's search is unsuccessful, the College gives recommendations for searching places for the internship. In choosing an internship position, it is considered whether the student is provided with the opportunity to fulfill their internship assignments fully and well. If the student's work duties correspond with the chosen qualification, the student may choose their workplace as the place of internship. The internship position is approved by the internship supervisor at the College. During the internship, the student:
1. completes internship assignments developed by the head of the study field, the study programme director in collaboration with the methodological commission and approved by the College Council;
2. prepares an internship report describing the completion of all internship assignments (SAR section 3.2.4). The leading strategic partner of the SF in providing places for internships is TestDevLab Ltd.,

n-fuse Ltd., Ministry of Defence of the Republic of Latvia, as well as partner businesses and public administration institutions (SAR p.92-94).

Before and during the internship, the director of the study programme organizes a consultation for the students (face-to-face and in the e-environment), informing them of the general conditions for choosing the most appropriate internship place, the procedure of the internship, key deadlines, and explains the internship tasks, their content, and internship report structure. The main criterion for choosing the internship place is that it provides the student with the possibility to complete the internship tasks fully and efficiently (expert meeting with the students and programme director).

Internship assignments are divided into topics and sub-topics which are included in the study course description and available via the Moodle system. To complete the internship tasks the student needs to apply their soft skills, digital skills, and professional skills identified in the image of the College graduate. Completing the internship task, preparing and defending the internship report require using and developing all these skills, thus fully achieving the outcomes of the SP (SAR p.92-94).

In overall it should be concluded that internship plays a significant role in the program to form necessary skills and competences. Not looking at the fact that internship is under students' responsibility, college management can assist students in finding the internship place, and during meetings with the graduates, it has been stated that internships were organized in an effective way. But the open question are students who currently have a workplace in the industry. SAR reports that students can take internships in their working place. It is not clear why professional experience recognition cannot be applied here, to save students time and money.

2.2.6. SAR mentins the "templates" of the final works, to give students the general impression, while a specific topic is selected by students considering his/her sub-program, interests, internship experience (SAR section 3.2.6). All "templates" correspond to the study program and study field. Also during the visit the final works were demonstrated in paper format and experts had the ability to see the content of work. The real titles of the final works were demonstrated, they follow the "template", but at the same time it is foreseen that some of the topics are industry-proposed (SAR p.95).

At the same time it shall be noted, that it seems that colleges do not ask students to have a final thesis in hard-binding, it is recommended to consider this option, this would make the thesis more valuable for students.

In overall it shall be concluded that "templates" for final thesis presented in SAR and real topics corresponds to the study program (sub-program) and study direction.

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

Presented study programme with sub-programs correspond to the needs of the industry, presented courses ensure reaching of study results and goal of the study program.

Study programme and subprograms does not comply with the new regulation https://likumi.lv/ta/id/342818-noteikumi-parvalsts-profesionalas-augstakas-izglitibasstandartu." but it shall be noted, that self-evaluation report has been submitted before the new regulation entered to the force, therefore management of the college should complete the analysis of the new regulation and study programme and take any corrective actions to reach compliance. Utilized and confirmed tools/methods/approaches/techniques in the frame of the program are relevant and ensure reaching study results.

In overall it should be concluded that internship plays a significant role in the program to form necessary skills and competences. A "template" and real topics correspond to the study program (sub-program) and study direction.

Strengths:

1. Experience in usage of distance learning technologies, and a variety of options for students regarding study mode.
2. The proposed sub-programmes are of demand in the market

Weaknesses:
1. Workplace experience is considered as internship, information about the regulation of professional experience recognition should be communicated more widely to the students as some students were uncertain about this.

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

   N/A

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1.All necessary material resources are available to students and teaching staff. Resources are adequate to meet the conditions for the implementation of the study programme and for the achievement of the learning outcomes. A unified system and procedures have been established for the improvement and purchase of material, methodological, informative, etc. provision.

Library resources consist of over 4000 books, out of which 168 are on Information technology and computer science (SAR, section 2.3.3). The last time books were purchased and added to the library was August of 2022. The library is equipped with an electronic books catalog in Latvian that is publicly available on AK website (https://www.alberta-koledza.lv/?parent=10001). Library resources such as books and graduates' works are available to students and complement the needs of the study programme that mostly relies on online publications. Library content is more focused on other study programmes rather than the evaluated one. The library does not contain periodicals but contains an extensive set of literature on laws, business administration, personal productivity and other topics that might be interesting also for the students of the evaluated programme.

The information and communication technology tools (computers, internet connection, network infrastructure and storage, Operating Systems and software) as well as solutions (education management system Moodle, conference system Big Blue Button) are appropriate and efficient for achieving goals of the outcomes of study programme as well as for provision of distance learning. AK has sufficient hardware, software and systems in place to manage both distance and on-site learning efficiently while giving extras such as online access to study materials and lecture recordings to students. Recording and other materials are stored and backed up on site using own AK network and server infrastructure. Implementation of the study programme heavily relies on software simulators of hardware devices, e.g. network appliances (switches, routers, access points) and microcontrollers while not providing students with the experience of working with real devices in the laboratory. For example all network appliances for Computer Network Administration sub-programme are software simulated, rather than actual hardware available for AK in a network laboratory. It was mentioned in several interviews with students, graduates and teaching staff that AK having access to actual network device laboratory would increase the quality of the study programme and was expressed as a wish for AK management. In addition, not all problems and situations can be adequately simulated using network appliance simulators, e.g. problems and

corresponding troubleshooting of cable connectors, incorrect cable patching etc can't be simulated realistically.

Programming sub-programme in a similar way lacks actual devices for Internet of Things (IoT) programming, such as microcontrollers. Simulators are used. Using actual hardware, that, once programmed, can perform certain visible operations can increase engagement with the study programme and programming in general.

To ensure the study process, AK has 122 personal computers, (including staff, library and student self-government council), 8 laptop computers for teaching staff (SAR, section 2.3.2), in addition there are 11 beamers for presentations, 2 smart TVs, several wireless access devices and routers, camcorder, 2 photo cameras, 1 voice recording device, 6 printers, 2 photocopiers and 4 scanners (SAR, section 2.3.2).

2.3.2. N/A

2.3.3.According to AK budgeting methodology, the majority, i.e. about 75% of the expenses intended for the implementation of the study programme of the study field are constant expenses independent of the number of students in each specific group, incl. renovation and maintenance of premises, material and technical base, methodical work, promotion of research activities in the study field, staff training and competence development, remuneration of administrative staff, etc. Considering the amount of constant expenditures, which are calculated for each year, the tuition fee for the complete study programme differs for full-time students (duration of studies - 2 years) and part-time students (duration of studies - 2 years and 6 months). A smaller part of expenditures are variable expenditures, which are affected by the number of groups and students in them, incl. remuneration of academic staff, renewal of library resources, availability of premises, etc. Evaluating the available resources before the admission of each study year, AK Director decides on the number of groups and the permissible number of students in each group (not only the minimum but also the maximum number) for each study programme (sub-programme) and form of studies. (SAR, section 3.3.3). 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 (Interview with students). The study programme is popular amongst AK students, programme profitability is ensured by tuition fees. In the last academic year finances of the study field are sufficient (SAR, section 2.3.1).

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

AK executes budgeting successfully AK has successfully adopted and implemented a budgeting methodology that ensures that it operates as a financially sustainable organization. The main source of income is tuition fees as well as funding for various projects and Erasmus+, the contribution of cooperation with companies.

Strengths:
1. Ability to attract guest lecturers including AK graduates to give guest lectures about industry hot topics, e.g. cybersecurity. Lectures of this type even more strongly connect AK students to the industry and keep them informed about things that are going on in the industry as well as provide a glimpse of what a job in the industry is like. Guest lectures are highly valued amongst students and graduates (in interview with students; in interview with graduates).In case the guest lectures are delivered via distance education platform - the record is made, kept and made available for all course students to view and review as necessary.
2. Flexibility and system readiness to provision distance studies quickly and efficiently as the demand for the studies of this kind grows. AK has all material and technical resources as well as

competences and know-hows to provide distance learning efficiently. Ability to receive college education via distance learning is popular amongst students and open additional growth possibilities such as attracting students who do not live in Riga or for some reason can't attend lectures in person.

Weaknesses:
1. No access to network laboratory with physical network devices and infrastructure for practical work;
2. Students have no access to physical microcontrollers for Internet of Things (IoT) programming and device prototyping (e.g. ESP8266 and similar controllers, Arduino microcontrollers and accessories).

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. 18 academic staff members are involved in the implementation of the SP, of which seven are College employees and 11 are guest lecturers (SAR section 3.4.2 and Annex 13). Six staff members have doctoral degree or are currently in doctoral studies, 12 are holding a master's degree (SAR section 3.4.2). 14 staff members have 5 or more years of professional experience in IT or management fields, corresponding to the study course(s), that are delivered in the study programme (Annexes 13 and 14). Four staff members have 12 or more years of academical teaching experience in delivering study subjects of the same field as in AK study programme (Annexes 13 and 14). Also, guest lecturers from industry are invited for separate lectures, though this opportunity could be used better, as there is willingness from industry to participate (expert meeting with employers). All this enables to achieve aims and learning outcomes of the study programme.
Summarizing, the qualification of teachers complies with the requirements and is sufficient for the implementation of the study programme.

2.4.2. The number of lecturers involved in the programme has decreased from 24 to 18, compared to year 2011/2012, including 2 of them with doctoral degree (SAR section 3.4.2 and Annex 37). However, AC encourages teachers to raise their qualifications in different forms - by participating in corresponding training programs, seminars, conferences. According to the CV information, 15 out of 18 academic staff members were raising their qualification during the reporting period (Annex 14), the main forms of qualification development being seminars, professional training programs, participation in conferences, related to the delivered courses. Favorable conditions for professional development were mentioned during expert meeting with academic staff. However, mobility opportunities are not exploited in this perspective - only 4 academic staff members listed mobility activities in their CV (Annex 14). Teachers are aware of such possibilities, but cannot make it due to the large workload (expert meeting with academic staff).

There are rather big differences in workload distribution among the academic staff - 2 of the teachers deliver 5 courses each (namely, specialization courses), while the workload of other lecturers is 1-2 courses (Annex 13). 10 out of 20 specialization courses are delivered by 2 teachers. Moreover, a lecturer delivering 6 specialization courses in the programme, is a visiting teacher, also engaged in teaching activities in 2 other educational institutions. More even distribution of workload among programme teachers, for example by attracting more guest lectures from industry, would be recommended for maintaining the implementation quality of the study programme.

2.4.4. Eight out of 18 academic staff members have publications during the reporting period (SAR section 3.4.1) - 5 of them having 4-6 publications each, and 1 staff member having 15 publications. Teaching staff, that does not have scientific publications, has 5 years or more of either practical or academical professional experience, related to the courses delivered in the study programme.
Only 4 of 8 publishing staff members (22% from the overall teaching staff), have published in peer-reviewed international journals, others mainly publish in local academic journals. 3 out of 4 lecturers, publishing in peer-reviewed journals, are from humanities and social science fields, delivering corresponding humanities and social sciences courses in the study programme (Annex 14). Only one staff member, delivering 2 specialization (IT) courses, has publications (4) in peer-reviewed journals (Annex 14). AC definitely needs to better promote publishing activities among the academic staff, give more weight on publication activities in the yearly assessment framework for academic personnel, allocate larger financial support for publishing activities.

2.4.5. Academic staff members cooperate in implementing and updating the content of the study courses, coordinating topics to avoid duplication (SAR section 3.4.5, meeting with academic staff). Lecturers cooperate in developing extra-curricular activities for students, organizing field visits and guest lectures, corresponding discussion and ideas exchange forum has been created in the Moodle (SAR section 3.4.5).

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

The qualification of the academic staff complies with the requirements, and is sufficient for the implementation of the programme, achieving aims and learning outcomes of the study programme. There was a decrease in teaching staff over the reporting period, however AC is able to keep the quality of the implementation of the study programme through active involvement of the teaching staff in different form of professional development. Teachers are cooperating in preparing course content and in carrying out academic activities. However, the teaching workload is uneven, especially for lecturers delivering specialization courses. Only 22% of teaching staff are publishing in international peer-reviewed journals.

Strengths
1. Staff qualification corresponds to the requirements and is adequate for the implementation of the study programme.
2. AK supports and promotes professional development of the academic staff.
3. Academic staff members cooperate in preparing course content and organizing study activities.

Weaknesses:
1. Uneven teaching workload, 5 course workload too high for teachers delivering specialization courses.
2. Low publishing activities, especially in international peer-reviewed journals and for specialization course teachers.
3. Low teacher mobility.

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

Qualification of the academic staff is sufficient for the implementation of the programme. (SAR section 3.4.5, SAR Appendix 14)

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

The study programme follows the requirements of the Professional Higher Education standard, according annex 30.

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

In the Self-assessment report annex 31 "Mapping qualification compliance with professional standard IT" states that study field "Information technology, computer engineering, electronics, telecommunication, computer management and computer science" study program "INFORMATION TECHNOLOGIES" including
sub-programme: Programming (1st) complies with Professional standard of programmer (occupational code - 2512 05) and sub-programme: Administration of computer networks (2nd) complies with Professional standard of Computer Systems and Network Administrator (occupational code - 2522 01)

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: Partially compliant

The Law on Higher Education Institutions states that the description of the study courses should have a calendar plan of how the course will be implemented. This one is missing in the presented study course descriptions.
Corresponding requirement in the Law on Higher Education:
3) outline the content of the study course necessary for the achievement of learning outcomes, contain the study course calendar, mandatory and supplementary literature, indicate other sources of information.

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

According to the SAR (Annex 14.6 "Sample diploma to be issued for completion of studies") complies with the regulations of the Cabinet of Ministers of April 16, 2013 No. 202, "The procedure for issuing state-recognized documents certifying 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

   Full compliance. The academic person teaches study courses in Latvian, which is the native language and it corresponds to the parameter of the SP - Latvian language.

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

   Assessment of compliance: Not relevant

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 study agreement example available in Annex 10 to SAR fully complies with the Cabinet of Ministers regulation "Rules to be included in the study agreement". Also complies with the Law on higher education institutions article 44, 45, 46, as well as 49, 50, and 52.

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

SAR Annex 9 "Conformation on Recovery of Loss" states that students will be given the opportunity to continue their studies in another programme or will be provided the same education, in case of loss of accreditation.

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

SAR Annex 9 "Conformation on Recovery of Loss' states that students will be given financial compensation for the resulting losses in case of termination of study programme. The amount of financial compensation is not provided in the documents.

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: Partially compliant

The study programme complies with the requirements set in national regulatory enactments, but minor mistakes should be fixed in the diploma and its annex, considering "Regulation of the Cabinet of Ministers No. 202 on the procedure for issuing the state-recognized documents certifying higher". The minor mistake refer to the section 7.3 of the diploma annex, instead of the section title "Capacity" it should be: "Position(s) of the person(s), certifying the Supplement

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

The programme demonstrates notable strengths, including the provision of opportunities for interdisciplinary cooperation between students and teaching staff from various SFs. This collaboration fosters a rich learning environment and promotes the exchange of diverse perspectives. The teaching staff provisions are evaluated as being conform to the requirements of the Higher Education Law of Latvia. The student/teaching staff communication works very well (in various, mostly non-documented and informal ways). The teaching staff is active in implementation of the study programme though the activity in research and publication needs strengthening as well as a AK promoting activity to get more motivated students.

Strengths:
1. 2 years and 2 years and 6 month programmes are appropriate for beginners updating their ICT knowledge
2. Variety of the SP forms - full-time, part-time, part-time extramural to suit student needs
3. High demand for graduates of both sub-programmes in the market.

4. Flexibility and system readiness to provision distance studies quickly and efficiently as the demand for the studies of this kind grows.

5. Staff qualification corresponds to the requirements and is adequate for the implementation of the study programme.

6. AK supports and promotes professional development of the academic staff.

7. Academic staff members cooperate in preparing course content and organizing study activities.

8. Staff experience in usage, distance learning technologies, and a variety of options for students regarding study mode.

9. Ability to attract guest lecturers, including AK graduates, to give guest lectures about industry hot topics, e.g. cybersecurity. Lectures of this type even more strongly connect AK students to the industry and keep them informed about things that are going on in the industry as well as provide a glimpse of what a job in the industry is like.

10. Staff qualification corresponds to the requirements and is adequate for the implementation of the study programme.

Weaknesses:

1. Weak student participation in ERASMUS mobility programme.

2. Lot of admitted students are weakly motivated and not well prepared for the SP

3. High drop-out rate

4. Students have no access to physical microcontrollers for Internet of Things (IoT) programming and device prototyping (e.g. ESP8266 and similar controllers, Arduino microcontrollers and accessories)

5. Uneven teaching workload, 5 course workload too high for teachers delivering specialization courses.

6. Low publishing activities, especially in international peer-reviewed journals and for specialization course teachers

7. Low teacher mobility

8. Programming I and Programming II courses are hard for the students and teaching on the base of C/C++ language might be too complicated for the first level SP.

9. Workplace experience is considered as internship, information about the regulation of professional experience recognition should be communicated more widely to the students as some students were uncertain about this.

10. No access to network laboratories with physical network devices and infrastructure for practical work.

The short-cycle professional higher education study programme "Information technologies" has insignificant deficiencies which mostly could be corrected in short term and as a short-cycle professional study programme it gives to students all necessary first knowledge and skills to choose and start their further professional or academic career to acquire more deeper experiences in their professional life of continuing on BA level in some other HEI. The students and employers expressed satisfaction with the programme and knowledge the graduates are getting. Therefore the assessment as the short-cycle programme is "Good".

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.Consider to provide changes to the study course description to meet requirements of the new National professional higher education standard MK 305.
2.Introduce and conduct more attractive lectures for high school students, introduce some attractive and practical activities in high schools (open high school competitions, games, practical demos etc.) introducing AK and SF.
3.Introduce some test or high school completion math minimal grade requirement as the entrance criteria etc. or introduce pre-enrollment preparatory course to choose motivated and prepared students, not everyone.
4.Introduce different ERASMUS options to students, especially for shorter visits that might suit to students who work in some company and also for longer visits as internships and project work at ERASMUS partners and attractive EU companies, which might be attractive and suitable for students wishing to work in parallel to their studies
5.Make an analysis of the social groups of the students ex-matriculated (for example recent high school graduates, people updating their outdated ICT knowledge, family people etc) and provide respective different support and learning options for each social group to reduce drop-out rate.
6.Consider changing the Programming I and Programming II courses to replace the base programming language from C/C++ to Phyton or/and Java.
7.Introduce and apply applying detailed professional experience recognition regulations to consider workplace experience as an internship.

Long-term recommendations

1.Provide access for students to a network laboratory with sufficient set of network hardware, cabling and accessories for practical work with computer network setup and troubleshooting.
2.Implement search functionality to the web page.
3.Put measures in place to increase satisfaction survey completion rate amongst students (e.g. make the survey mandatory; ask teaching staff to dedicate special time during a lecture for survey completion, ask for survey before giving away HEI diploma).
4.Enable students with additional practical possibilities in the programme, allowing to code on actual microcontrollers (ESP, Arduino or similar) for IoT programming thus making the education programme more interesting and engaging for the students.
5. Intensify the practice of inviting guest lecturers and set the target number of guest lectures per year, at least 2-3 and preferably more guest lectures per year and collect the student feedback about these lectures to get ideas for inviting new guest lecturers and choose topics to increase the attractiveness of the study process.
6.Promote teacher mobility, using Erasmus and other mobility options.
7.Distribute teaching workload more evenly for specialization courses specifying a limit of the maximum number of courses per year for teachers.
8.Promote publication activities, specifically in international peer-reviewed journals and set a target number of publications for the staff members.

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

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Assessment of the Requirements for the Study Field

Requirements	Requirement Evaluation	Comment
R1 - Pursuant to Section 5, Paragraph 2.1 of the Law on Higher Education Institutions, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study field whilst implementing its internal quality assurance system:	Partially compliant	Partially compliant due to lack of well-described procedure for student complaint and improvement suggestion handling, absence of centralized improvement suggestion register and not quite efficient mechanism for stakeholder feedback collection.
R2 - Compliance of scientific research and artistic creation with the level of development of scientific research and artistic creation (if applicable)	Partially compliant	Not looking to the fact that research development strategy exists, defined research domains corresponds to the overall goal of the college, there are a significant number of the factors which prevent the successes/excellence in the field of applied research. The international collaboration is limited and not strategic (continuous), low level of teaching staff involvement into the research (projects, international publications etc), nature of the study programme included into study field limits students involvement, using classical mechanisms. At the same time, it is clear that college management considers research as an important part of the study process and performs activities targeted to overcome the situation. Well developed IT resources for students, teaching staff, administration, but lack of innovation in teaching (methodological approaches).

Requirements	Requirement Evaluation		Comment
R3 - The cooperation implemented within the study field with various Latvian and foreign organizations ensures the achievement of the aims of the study field.	Partially compliant		Few international partners and very low student mobility (SAR chapter 2.5).
R4 - Elimination of deficiencies and shortcomings identified in the previous assessment of the study field, if any, or implementation of the recommendations provided.	Partially compliant		AK have mostly implemented previously given recommendations and it is clear that they had only a positive impact on the study field. The recommendations implemented partially such as intensifying student exchange have not been achieved due to difficult situations AK cannot directly impact (student employment parallel to studying etc.). Unfortunately AK still needs to improve the encouragement of teachers to write articles for journals and to start and take part in collaboration projects with companies, to improve the student and staff mobility.

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 (41484)	Not relevant	Fully compliant	Fully compliant	Partially compliant	Good

The Dissenting Opinions of the Experts

n/a