

# Expert group joint opinion

Evaluation Procedure: Assessment of Study Field

Higher Education Institution: Vocational education competence center "Riga Technical College"

Study field: Power Industry, Electrical Engineering, and Electrical Technologies

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

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This document is a joint opinion of an expert team about the study field “Power Industry, Electrical Engineering and Electrical technologies” and study programme “Electrical Equipment” (code - 41522). The conclusions and decisions have been made on the basis of the self-evaluation report of the Vocational education competence center "Riga Technical College" (RTC), the documentation provided as supplementary materials for the self-evaluation report and visits took place from February 9th to February 11th of 2022, partly on-site and on-line.

RTC offers first-level professional higher education and provides 10 different study programmes in total. Generally, the overall conclusion is that the study field “Power Industry, Electrical Engineering and Electrical technologies” and the relevant study programme “Electrical Equipment” are in high demand because of the lack of such specialists in the labor market. The learning outcomes of the programme correspond to the demands of the profession in accordance with the professional standard. The teaching staff is highly educated and professional, trying to improve both the quality of the teaching process and their own qualifications.

However, there is no motivation system by the RTC management to improve teaching skills beyond the minimum sought by legal regulations. Furthermore, there seems to be a lack of systematic approach to human resources in general, i.e. there is no unified database about teachers’ competences and their data in general (e.g. workload), which could enable a better overview, analysis and planning of human resources.

Although in fact, the study programme is functioning well, there are some flaws and lacks in the development planning documents as well, especially regarding the correction of weaknesses and threats indicated by RTC itself. Study programme “Electrical equipment” also complies only partly with all requirements in assessment of the study programme.

The students, graduates and representatives of the industry highly evaluate the work of the college, programme “Electrical equipment”, its results, and especially opportunities after the graduation as it was underlined by students and graduates. The content of the study programme is in full compliance with the achievements of the learning outcomes as well as with the demands of the market. It is arranged in a logical, efficient, comprehensible way for students, teaching staff, and industrial partners.

The college has been developed a system (the system is described in 1.3. section) to determine the financial resources required for the implementation of the study field and the relevant study programmes. RTC has training facilities and laboratories with equipment and necessary technical support. Laboratories are equipped with the equipment necessary to work. RTC has identified the necessary support for students and has established a student support system.

Contrary to universities, colleges do not focus on scientific research, and this is also reflected in the approach of the RTC. However, interest in the scientific approach and R&D shown by students, teachers and partner companies could be better utilized in the development of the RTC.

In the area of cooperation, good links with stakeholders can be seen (SAR, p. 32-34), but there is still a lack of regular agreements, as everything is more on-demand than on a methodological strategic plan. RTC's cooperation within Latvia has considerable good contacts with companies and graduates, but international cooperation could be expanded, and it is advisable to cooperate more actively at the international level. At the same time, it should be noted that the RTC does not fully exploit areas where employers or former graduates could make a significant contribution to the quality of studies.

## **I - Assessment of the Study Field**

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### 1.1 Management of the Study Field

#### Analysis

The formulated aims of the study field are simple, well defined and attainable, focusing primarily on preparing specialists qualified for work with electrical equipment, satisfying the needs of the labor market (SAR, p. 13). The study programme "Electrical equipment" clearly complies with the strategic development of the higher education institution (Attīstības un investīciju stratēģija 2021.-2027.gadam. Projekts. <https://www.rtk.lv/?fails=1645204326.pdf>), providing high quality, dynamic and competitive professional education and improvement of professional qualification in engineering - technical specialties, in accordance with the necessities of the labor market and lifelong learning.

Study programme offered by RTC definitely meets the development trends of the society and national economics very closely which is proven also by the fact noted during student and employer interviews that practically all students in this study programme are already working in their field during the studies and have no problem with finding employment.

As the study field "Power Industry, Electrical Engineering, and Electrical Technologies" in RTC contains only one study programme "Electrical Equipment" there cannot be any interconnection other than interconnecting within the study programme, between the branches where it is being realized. The study programme "Electrical equipment" regarding the content of the programme is undoubtedly clearly included in the study field "Power Industry, Electrical Engineering, and Electrical Technologies".

According to SAR (p.14-15), RTC has identified and analyzed the strengths, weaknesses, opportunities and threats of the study field but they are poorly integrated in the development planning documents (Studiju virziena attīstības plāns ENG.docx), where none of the tasks respond to formulated weaknesses and threats. It can also be noted that some of the very few stated weaknesses are due to the Liepāja branch, which was closed down and therefore can be seen as solved.

The document file which was provided to experts regarding the study field management structure was corrupted, therefore unreadable, so it was impossible to reference it in the report. According to the information from the self-assessment report and on-site visits, management of the study field is fragmentarised with its center and director being in the main - Riga branch and working closely with the management of RTC. Heads of Daugavpils and Kandava branches are keeping in touch with the programme director and other cathedra members via calls. While the management structure is fragmentarised, from interviews with teaching staff and management representatives within all places of implementation of study programme, experts note that the structure is functional and oriented towards development. According to the information provided about the development plans of study field, the strategic goals mentioned in "Studiju virziena attīstības plāns ENG.docx" are formulated more like learning outcomes, than actual strategic aims, therefore it is hard to understand them clearly. The direction of the development of the study field could be assessed only from the context of the listed tasks, and contains aspects which could be interpreted as improving the methodological processes of teaching, improving the qualification of the teaching staff, increasing the research activities amidst the teachers, increase the cooperation with other HEI's and employers. Therefore, it can be concluded that the developmental strategy for the study field is existent and targeted towards real development.

After the visit it was clear that the administrative and technical staff truly provide for the needs of the study programme in all branches, but the administrative hierarchy in these matters is sometimes unclear. It could be noticed, that it is more based on the personal communication among the teaching staff and administration members, than on reglamented order. But despite that,

decision making within the programme is efficient, and more importantly dynamic. RTC has set up a system for admission procedure for reflectance, which is described in detail in SAR (SAR, p. 16). RTC admission system complies with the educational system of Latvia and is described in RTC website (<https://www.rtk.lv/?sadala=132>). RTC also recognises previous education obtained abroad, if the educational documentation is approved by AIC. The reflectance fee is also accordant with the Cabinet of ministers regulation No. 171 annex. RTC also recognizes previously acquired study experience, if there is documentation which can prove it. They have a specific process developed for recognising the previous education on course levels, which is being realized at the beginning of each semester, reviewing the submitted education documents, and deciding about recognition (SAR, p.16.). If necessary student opinion and description of the contents of finished study courses can be asked as well.

According to SAR (SAR, p.16), RTC has also prepared regulations for the recognition of study results gained as part of prior education or professional activities and as there have been no objections from any side, and the cases of implementation were mentioned in interview with students, experts conclude that the system is operational.

Methods, principles and procedures for assessing achievement of students are developed and can be seen in the descriptions of study courses "Studiju kursu apraksti - E - angļu val.7z", which have been adjusted to the new professional standard (<https://registri.visc.gov.lv/profizglitiba/dokumenti/standarti/2017/PS-139.pdf>). Assessment methods and procedures for achieving the aim of the study programme is analyzed mostly using student surveys at the end of every semester in all branches of the RTC, and student opinion obtained in situations, when students have problems within the study process and discuss it with the teaching staff, as it was revealed in interviews with teaching staff in all three places of implementation. Identified matters have been taken into account very dynamically, which was a positive aspect, underlined by the members of academic staff and students during interviews.

As this study field consists of only one study programme in RTC, analysis of this criteria strongly overlaps with the assessment of the study programme. More analysis regarding methods, principles, and procedures for assessing achievements of students are included in experts opinion chapter 2.2. "The Content of Studies and Implementation Thereof".

RTC is participating and using the infrastructure provided by University of Latvia for plagiarism control. (SAR, p.16) and has a certain order for compliance with academic integrity (<https://www.rtk.lv/?birka=%C4%92tikas%20kodekss>). During an interview in Riga it was revealed that the anti-plagiarism system is fully functional, and levels of detected plagiarism are low.

During the interviews in all implementation places (in Riga, Kandava and Daugavpils) it was also assessed that because the focus of the study field is quite practically oriented, there are no problems with internal academic culture in regard to plagiarism, as the students are internally motivated to specialize in their direction of interest, and according to interviews with students in all branches, teaching staff has informed them about the consequences of plagiarism.

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

The aims of the study field are defined and attainable and definitely in accordance with the strategy of RTC and the development trends of the national economy in Latvia. RTC has also formulated the strengths and weaknesses in the study programme, but has incorporated them in development planning documents very poorly. Some of the very few identified weaknesses are already averted in the existing situation, which could be assessed by the team of experts.

There are some serious issues with the quality and provision of the documents to the expert team for assessment, but the assessment made from the context of obtained information highlights that intentions for the development of the study field are existent and achievable. Although there is a noticeable lack in planning documents, again, from the context and the interviews it was clear that

the teaching and technical staff are providing the needs of the study programme.

Strengths:

- Teaching and technical staff are very responsive and actively involved in working with students and provide all formulated necessities for the study process.
- Students and teaching staff take the ethical codex of RTC very seriously, and follow it closely.

Weaknesses:

- Development planning documentation is created poorly and has serious systematic flaws in regard to the integration of noted weaknesses and threats in the developmental strategy.
- There is a lack of formally established order for dealing with administrative issues within the academic and administrative staff, like it, besides regular meetings, is mostly based on personal communication principles.

## **1.2. Efficiency of the Internal Quality Assurance System**

### **Analysis**

The college has a quality policy, it is publicly available on the web page of the college (<https://rtk.lv/?sadala=5082>). The quality assurance system also exists that was clear from the interviews with administration and staff, but it is not in a form of any kind of officially accepted document, but a series of regulations. A document fixing the basic points of the policy and describing the basic regulations of the QA system should be developed and accepted by the main administrative body of RTC. Generally, the QA system contributes to the achievements of the field and the program's learning outcomes at the Riga branch and is regularly managed at the Kandava and Daugavpils branches.

From the meetings with the administration and staff at all branches of the College it could be concluded that the procedures of the development and monitoring of the study programme are defined and they are logical, but could be supplemented with some other issues, like questionnaires of the industrial partners. From the meeting with the administration staff it became clear that the mechanism for the students complaints is developed, but no case to use it due to the absence of those in the everyday college routine, that could state a positive attitude of the students to the college learning process organisation as well as the positive attitude of the college representatives (teachers, direction, administration) to the students.

The higher education institution provides the statistical data collection in the self-evaluation report, but at the same time, there is a lack of analytical information on this statistical data as well as no analysis of the statistical dynamics during the period under consideration. Feedback from the students is collected each semester by means of a questionnaire. The results of these feedbacks in written form are still not available, but from the interviews the opinions are mostly positive. Despite the contacts and cooperation with the graduates and employers are obvious, the college administration does not organize their regular questionnaires for obtaining feedback and analysis for the further improvement of the study field and programme. The qualification and professional improvement of the teaching staff take place occasionally and from the side of teachers' self-motivation.

The information published on the website of the RTC about the study programme "Electrical Equipment" fully corresponds to that available in the official registers, providing the most important information for the applicants and students.

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

The quality assurance system exists in the RTC and is valid, the rules are available on the web page

of the RTC, the administration, students and teaching staff are informed about it and follow, as well as the results of QA management and feedback sufficiently influence the improvement of the education process. Some of the documentation is not available in the self-evaluation report as well in its supplementary documentation, e.g., the examples of the regular questionnaires for the students. However, the finalization and systematization of the QA system management and a more structural approach to its functioning from the side of the administration are required.

Strengths:

- QA system exists at the college as well as regulations of it are available on the web page of the college.

Weaknesses:

- The QA system requires a systematization on the level of administration of the RTC  
- The QA system requires improvement of the mechanism of the system of data collection and its analysis and usage for further improvement of the study field and program.

### **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

Not all the criteria are fully compliant: e.g.criterion 1.3 is partly compliant. The qualification and professional improvement of the teaching staff take place occasionally and from the side of teachers' self-motivation.

- 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

The policy and procedures exist and are available on the college's web page - exists at <https://rtk.lv/?sadala=5082> , but there is no available official documentation fixing the full QA procedure in the college.

- 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

The administration regularly completes these responsibilities in accordance with the information provided in the self-evaluation report, points 1.3, 1.4, table 3.

- 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:** Partially compliant

The students are interviewed regularly about the quality of the programme implementation, but the questionnaire is still not available. The results of the questionnaires are annually analysed and discussed with the teaching staff for further development and improvement of the program, as well as the teachers themselves after each course and its results analyse and use the results for the application next semester.

- 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:** Partially compliant

The requirements for the teachers' qualifications exist and are obvious, they should have a minimum Master's degree (Supplement for SER 2.3 Iesaistītie mācību spēki un CV). The qualification and professional improvement of the teaching staff take place occasionally and from the side of teachers' self-motivation.

- 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

The RTC organizes the questionnaire of the students and industrial partners after the internship as well as informs the teaching staff about the results and regularly initiates discussions about the improvement of the programme on its basis. The questionnaire of the graduates is also required for the further development of the program.

- 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

The RTC regularly observes and takes into account the results of the feedback collected from the students, and industrial partners, this activity takes place at least once per academic year, if not required more.

### 1.3. Resources and Provision of the Study Field

#### Analysis

The college has developed a system to determine the financial resources required for the implementation of the study field and the relevant study programmes. The state budget grant from the general revenue for the provision of studies is 1,625,525 euros, of which 391,332.72 euros are provided for the provision of studies in the programme „Electrical Equipment”, providing 4891.66 euros per student in the programme. Funding is not divided into branches (Daugavpils and Kandava). Of all expenses, 18% were wages and salaries, 45% were fixed capital formation, 7% were goods and services, and 30% were compulsory employer social security contributions, social benefits and compensations (information sent additionally by RTC). No separate funding has been allocated for research work. In experts' opinion, RTC should consider providing some funding for applied research. Thus, the college could organize small research projects, increase the qualification of teachers and increase the competitiveness of graduates in further educational processes.

The college has training facilities and laboratories with equipment and the necessary technical support. The premises are suitable for people with disabilities. Laboratories that experts visited in Riga: electrical engineering laboratory, power system automation laboratory, programmable controller laboratory, Industrial electrical equipment laboratory, electrical installation training center. Laboratories are equipped with equipment necessary for work. Some classrooms (e.g. electrical installation training center) have been renovated with the support of employers. In the branches of the college, the study process is organized on the premises of Daugavpils Technical School and Kandava Agricultural Technical School, as well as the laboratories of these cooperation partners and the equipment contained therein are used. Laboratories that experts visited in Kandava: electrical

cabinet (27) and electrical installation cabinet. Laboratories that experts visited in Daugavpils: electrical laboratory and electrical engineering laboratory. There is no information specified about the equipment available in the branches. Although there is detailed information provided about the equipment available in the laboratories in Riga, it is not specified about the equipment available in regional branches. Therefore, it is not possible to fully determine whether there are relevant and sufficient technical resources to support and foster the learning process equally in Riga and in regional branches.

The information (sent additionally by RTC) provided about the process of improvement of the material-technical and methodological base does not sufficiently and clearly reveal the efficiency of the process. During the interviews, students and teachers confirm that they have all the necessary resources available. A unified system and procedures have been established for the improvement and purchase of material, methodological, informative, etc. provisions.

In the branches of the college, students and academic staff use the library of Daugavpils Technical School and Kandava Agricultural Technical School. College students have access to libraries and databases of other universities: Riga Technical University, Latvia University of Agriculture and Latvian Maritime Academy. The EBSCO database and Britannica Academic are available. An agreement has been concluded with the Cultural Information Systems Center on the use of the EBSCO database in the RTC library. An electronic database has been created in the college library (SAR p.22). Library resources and databases are available to students and meet the needs of the study field "Power Industry, Electrical Engineering, and Electrical Technologies".

Students and academics use Moodle system and other remote learning platforms (ZOOM, Team utl.). In addition, MOODLE is used to receive tasks. The active use of digital platforms began only with the onset of COVID, previously remote learning platforms were rarely used. During the site visit, experts were introduced to the operation principles of the developed Moodle system.

28 teaching staff are involved in Riga, 18 teaching staff are involved in Daugavpils and 15 teaching staff are involved in Kandava (information sent additionally by RTC). The academic staff at the college is elected as part of an open competition in the manner prescribed in the Law on Higher Education Institutions, and in accordance with the "Regulations on academic positions and their election procedure" adopted by the college council. In accordance with these regulations, the college determines the number of its academic staff positions to comply with the requirements of the Law on Higher Education Institutions, and the amount of state funding provided by the Ministry of Education and Science. The academic workload of the teaching staff is balanced.

Academic staff regularly participate in courses and seminars on the latest teaching, and pedagogical methods. Academic staff and the administration of the study programme participate in various experience exchange activities (sent additionally by RTC). For example, Rafail Rauhman has attended 13 professional training events in the last 3 years. However, there is no system that allows the evaluation of the effectiveness and results of professional development activities. A practice - reporting potential application of knowledge gained at professional development activities in the further study course and course content development - can be considered. Therefore, college administration can tailor the academic staff motivation system to foster participation in professional development. For example, extra paid free days, other bonuses, etc.

In scientific research papers, students and teaching staff are involved in the development of qualification papers. Scientific works are compiled annually in RTC editions (<https://www.rtk.lv/?sadala=470>). The academic, research and administrative workload of the teaching staff is balanced.

RTC has identified the necessary support for students and has established a student support system. The main types of support provided for students are scholarships. RTC provides a wide range of resources to ensure student learning: students have access to the study infrastructure with laboratory equipment, specialized classrooms and laboratories, including computer classes, free WIFI network. A curator has been appointed to support students to help solve various uncertainties.

The resources available to the College are sufficient to ensure a quality educational process.

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

The college has developed a system to determine the financial resources required for the implementation of the study field. No separate funding has been allocated for research work. The college has training facilities and laboratories with equipment and the necessary technical support. Although there is detailed information provided about the equipment available in the laboratories in Riga, it is not specified about the equipment available in regional branches (Daugavpils and Kandava). Therefore, it is not possible to fully determine whether there are relevant and sufficient technical resources to support and foster the learning process equally in Riga and in regional branches. The information provided about the process of improvement of the material-technical and methodological base does not sufficiently and clearly reveal the efficiency of the process. RTC has identified the necessary support for students and has established a student support system.

Strengths:

- The RTC has training facilities and laboratories with equipment and the necessary technical support.
- The premises are suitable for people with disabilities.

Weaknesses:

- The funding is not indicated specifically for separate branches.
- No separate funding has been allocated for research work.
- There is no information specified about the equipment available in the branches.
- The information provided about the process of improvement of the material-technical and methodological base does not sufficiently and clearly reveal the efficiency of the process.
- There is no system in RTC that allows the evaluation of the effectiveness and results of professional development activities.

## **1.4. Scientific Research and Artistic Creation**

### **Analysis**

The college does not have developed mechanisms for the involvement of the teaching staff in scientific research and/or applied research. Scientific research is mainly based on individual activities of teachers, i.e. there are no significant scientific projects conducted by RTC as an institution.

As a consequence of weak scientific activities, there are no examples that innovative solutions have a significant positive impact on the study process. The study process is carried out at a satisfactory level, with a view to the current needs of the labour market, but without any cutting-edge solutions/approaches applied. This is also a consequence of the profile and the needs of partner companies, which do not have emphasized R&D ambitions and activities.

There is an interest in more scientific work shown by teachers and industrial partners, which could be used more efficiently by RTC management. There are also elements of the scientific approach in students' qualification papers, but those have primarily the purpose of introducing students to the basics of scientific methods, i.e. the papers can not be used as a basis for long-term scientific activities.

According to the self-assessment document (point 2.4.3., page 28), there is a plan to continue participating in scientific conferences in the future. However, the meetings with RTC management and the teachers did not confirm any specific strategic goals or action plans to make it happen. Scientific activities are mainly left to the teachers and their personal interests and ambitions.

During the meeting with teaching staff it was confirmed that international cooperation is also primarily relying on teachers' personal contacts and initiatives.

For scientific activities and international cooperation, there is a lack of strategic support by RTC management. Thus, it is recommended to develop strategic documents, including action plans, measures, and indicators which should be followed to check if those areas are improving in years to come.

One way of boosting cooperation with the industry could be through guest lectures given by experts from the industry, where a practically relevant topic could be presented to students and a discussion with the teacher regarding possible cooperation could be initiated afterward (joint R&D projects, possibility that companies equip laboratories and/or give the newest equipment for temporary usage, etc.). In this way, companies could also be more actively included in the education process. Namely, at the moment companies participate in internships, but they do not seem to have a significant impact on the rest of the study program.

Students visited companies before COVID pandemic and this should be revived when the epidemiologic situation will allow it.

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

Contrary to universities, the college does not need to focus on scientific research, and this is also reflected in the approach of the RTC. Namely, scientific activities are based on individual effort, but could be improved, in terms of applied research, by including interested partner companies and students more intensively.

Strengths:

- Interest in scientific research is expressed by students and teachers.
- Scientific results by individual teachers.

Weaknesses:

- Students are usually employed and do not have spare time for scientific research as an extra-curricular activity.
- Lack of strategic goals (and corresponding activities, measures and indicators) related to scientific research and R&D activities.

### **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

RTC as a college has reached a sufficient level of scientific research, regarding the needs of labour market, but without any ambitions to improve it beyond this level, e.g. there are no strategic goals (and corresponding activities, measures and indicators) related to scientific research and R&D activities.

## **1.5. Cooperation and Internationalisation**

### **Analysis**

According to information provided in SAR, p. 32-34 and Annexes, as well as additional material, cooperates with RTU Faculty of Electrical and Environmental Engineering and the Latvian Association of Power Engineering and Power Construction. RTU staff participates in the preparation of students. "By participating in the graduation paper contests arranged by the Latvian Association of Power

Engineering and Power Construction, SIA Schneider Electric Latvija etc., RTC can compare the performance of graduates with those of RTU and LULST. The head of the 'Electrical equipment' study programme Juris Silarājs and docent Mārtiņš Silarājs have been on the jury of the graduation paper contests organised by the Latvian Association of Power Engineering and Power Construction, SIA Schneider Electric Latvija, AS 'Augstsprieguma tīkls' and AS Draka Keila Cables for years", and as the result of all that RTC actively uses the information received from such cooperation with RTU. As mentioned above, cooperation contributes to the achievement of the aims and learning outcomes of the study field, and helps to achieve the set goals and objectives in the field of the programme being accredited. Based on the SAR, p. 33 and during meetings with the administration and staff, it can be generalized that cooperation partners from RTU (for example, by directly participating in the study process) are selected taking into account the specifics of the field of study and relevant study programme "Electrical Equipment" and RTC needs.

According to the submitted documentary material (SAR, p. 33), some things can be stated: there is specified cooperation with employers in different ways. Their representatives participate in the assessment of the knowledge and skills of graduates as part of the State Qualification Exam Commission, involvement of best specialists in managing courses and advising the qualification papers of the most capable and motivating students etc. "For instance, the senior engineer of the relay service of AS 'Augstsprieguma tīkls' Mārtiņš Silarājs, and the senior engineer of AS 'Latvijas elektriskie tīkli' Nikolajs Brenets, as well as the project manager of AS 'Sadales tīkls' Andrejs Bubovičs, and the data analyst at the Latvian Environment, Geology and Meteorology Centre Ervīns Grebešs participate in the implementation of the study programme as instructors. A total of 16 credit points is provided for student internships in businesses". Unfortunately, all contacts (more than 26), provided by RTC, are only from Latvia, and no contacts were provided with foreign partners with whom the RTC could cooperate in the field of training specialists. Additional information available on the RTC website certainly shows cooperation with foreign partners in various fields within the framework of the study programme but only until 2014 inclusive. It can be stated that the cooperation partners from abroad are selected in view of the specific features of the study field and the relevant study programme only when participating in some international events but it happens more accidentally not systematically, so it should be activated.

International mobility and project activities are important aspects that undoubtedly have a positive effect on the quality of studies. Based on the data provided in the SAR, p. 33, during the 2018-2019 academic years, "teaching staff participated in many practical research conferences, workshops, meetings and workgroups (a total of 15, see p. 6), providing them with a good understanding about what is happening in the field of electrical engineering and electrical power engineering abroad". The RTC states that the findings of the reviews show the students' initiative to go abroad to gain professional experience. For some time, Covid-19 has been prevented from participating very actively in exchange programs, but there has been a lack of teachers and students' mobility until then. In the SAR, p. 33-34 is specified that teaching staff participated in many international events, however, both in meetings with staff, students and employers, it has not been observed that a high-quality system and procedure for attracting teachers and students from abroad to study has been established, so its effectiveness cannot be assessed. Cooperation in this area should be expanded and more efforts should be made to find suitable foreign partners and to create an efficient and sustainable system.

Good cooperation with companies exists mainly in organisation of students' internships and students visiting the companies. However, it could be expanded on joint projects to develop innovative products and services (and/or improve existing ones). If the companies do not have production as a part of their business model, they could be a link to big manufacturing companies as possible partners in the future.

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

In summary, it could be stated that RTC participates in certain international programs, events, and conferences etc. This is mostly achieved by the visiting lecturers, as their performance at RTU is also listed at the college. The information provided on the website does show sufficient activity until 2014, but after that, unfortunately, on the basis of all the information received, it can be concluded that mobility could be improved. Cooperation within the country is noticeable and confirmed throughout the meetings.

Regarding local co-operation within Latvia, it is (all respondents confirmed it), but it is incidental, and systematic co-operation is needed to improve the quality of studies (this was to be emphasized as a weakness). In other words, in the case of such local cooperation, the achievement of study goals is possible (but its quality is identified as a weakness, i.e. there is a lack of systematization). Meanwhile, international cooperation is largely lacking.

#### Strengths:

- During the meetings, employers, graduates, staff and students confirm the importance of collaboration and there is no doubt that it has a positive effect on the quality of studies.
- Employers confirmed that they can help meet the needs of RTCs, and the college can count on their support.
- It is also emphasized that the recruitment of staff from RTU is a positive and encouraging phenomenon, and the qualification of incoming staff has a positive effect on learning outcomes.
- Particular emphasis should be placed on sufficiently close cooperation with employers in Latvia, as well as a very positive attitude of employers towards the specialists trained by RTC.

#### Weaknesses:

- Summarizing the report and other data provided, as well as communicating with staff, employers, graduates, it can be stated that international cooperation is insufficient.
- Cooperation is noticeable and confirmed throughout the meeting, but there is a lack of regular arrangements, as everything goes according to need and not through a methodical strategic plan.
- RTC does not make enough effort to take advantage of the willingness and opportunities of employers and graduates to help college to improve the quality of studies.

### 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

The cooperation implemented within the study field with various Latvian organizations ensures the achievement of the aims of the study field but with foreign institutions should be improved.

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

#### Analysis

The previous evaluation procedure - previous accreditation of the study field and programme - took place on March 31, 2012. During this event 15 activities have been recommended to the college for improvement of the implementation of the programme and the field. The recommendations have been completed mostly by 30.09.2015. Most of them were successfully implemented by this term. But there are also some drawbacks to this implementation. The most problematic recommendations for implementation were the following:

- The first one is regarding the improvement of the number of students within the programme in

Riga branch the number of the students during the period under consideration has decreased, but in the regional branches, on the contrary, this number has been increased during the period from 2013/2014 to 2020/2021 (Table 1 of the self-evaluation report, page 6).

- The next partly implemented recommendation is connected with the scientific and research activities that are still determined as not enough even during this accreditation process.
- During the previous academic years the guest lecturers were invited only from the other institutions of Latvia but not abroad, despite the recommendation, in 2012 was to attract more invited lecturers from foreign HEIs (3.pielikums, rekomendāciju (31.03.2012) izpildes pārskats), however, this recommendation could be fulfilled on the basis of students internship mobility.

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

Most of the recommendations have been fully completed on time, and some of them required additional conditions for implementation.

Strengths:

- The implementation of the recommendations takes place systematically and fast enough.

Weaknesses :

- Some of the recommendations are implemented only partly.

### **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

Some of the recommendations were implemented partly, for example, increasing the number of students within the programme, increasing the scientific and research activities and invitation of the invited lecturers from abroad.

### **1.7. Recommendations for the Study Field**

#### **Short-term recommendations**

Review the existing development planning documentation, in regards to integrating noticed weaknesses and threats of the study programme, into actual developmental strategy.

Information on the RTC website enrollment page should be updated, to reflect the current possibilities for enrollment in "Electrical equipment" study programme.

To introduce regular questionnaire (feedback) of the internship advisors from the enterprises at the end of the students' internship, of the graduates of the college as well as employers for the further improvement of the study program and field.

Develop a procedure for improvement of material, methodological, and informative provision. It is necessary to complement the list of work equipment available in laboratories (in all branches) by including the list of all the instruments available and indicating in the list information about the locations of the specific work equipment, and for implementation of what courses they are intended.

Cooperation should be based on regular arrangements, according to a methodical strategic plan.

It is recommended to make greater efforts to take advantage of the opportunities since feedback from employers and graduates shows that they would like and be able to help when improving the quality of studies.

Define strategic goals (and corresponding activities, measures and indicators) related to scientific research and R&D activities. Thereby utilizing interest shown by students, teachers and partner companies.

### Long-term recommendations

To improve the QA system in the college providing official documentation with the regulations of QA management and organizing a QA team to follow and monitor permanently the QA process.

To attract more invited lecturers/instructors from the industry.

It's recommended, when planning next year's budget, indicate funding for each branch and separately for the research work.

International cooperation should be improved by expanding the scale of measures to increase the motivation of students and teachers and more actively cooperate at the international level, especially with the Baltic or Scandinavian countries.

Establish a system that allows for the evaluation of the effectiveness and results of teachers' development activities.

To establish a clear mechanism of statistical data collection and analysis and its use for further development of the programme.

To find and provide opportunities for teachers' professional development.

To find the opportunities for students' international mobility within the frames of professional internship.

## II - "Electrical Equipment" ASSESSMENT

### II - "Electrical Equipment" ASSESSMENT

#### 2.1. Indicators Describing the Study Programme

##### Analysis

The study programme "Electrical Equipment" is in full compliance with the study field "Power Industry, Electrical Engineering and Electrical Technologies", as the study courses of the programme fully correspond to the requirements and demands of the content of the study field, containing all topics and subjects necessary for the best mastering of the profession and providing in full extent the achievement of learning outcomes stated in the description of the programme. The title of the programme "Electrical Equipment" fully corresponds to its aims, learning outcomes and content of the programme; the code of the programme corresponds to the LR education classification code 41522, EKI/LKI level 5, the 1st level of professional higher education. The obtained professional qualification fully corresponds to its aims and objectives as well as the full description of the programme including the aims, objectives, learning outcomes (stated in SER, page 37, as specified in details) and admission requirements are in compliance with one another and give a full overview of the main purpose and achievements of the programme and in accordance with the demands of

the market in this area. The experts consider the learning outcomes of the programme full correspondent to the requirements of the profession and labor market, stated in accordance with the required knowledge, skills and competences, generally the LOs for this programme are well developed. This is stated and proved by the description of the study courses available in Supplement 3.2 for the self-evaluation report, their content, learning outcomes as well as by the compliance of the study programme with the Professional standard (Elektrisko iekārtu speciālists PROFESIJAS STANDARTS <https://registri.visc.gov.lv/profizglitiba/dokumenti/standarti/2017/PS-139.pdf>) and the correspondence of the courses to knowledge, skills and competences required for the professionals. It should also be noted that teaching staff was directly involved in the updating of a professional standard that was clear from the meeting with teaching staff in Riga and the branches, therefore they have an in-depth understanding of its contents and requirements for specialists. The programme also is almost in full compliance with the National Education Standard (<https://likumi.lv/doc.php?id=6397> , Supplementary document 6 for SER), except for the block of Business Economics study course in its credit points volume - the program contains 3 CP, but the Standard requires 6 CP.

The existence of the study programme is fully justified within the economic and social aspects as the specialists of this profession are demanded a lot in the market in Latvia and expected by the employers in a much larger degree than the programme could provide at the moment that is proved from the interviews with the employers and graduates of the college. The number of students during the last observed period has decreased. Therefore, some specific attempts and actions should be taken for balancing and providing the market with a necessary number of specialists on a regular basis. In this regard, the implementation of the study programme “Electrical equipment” in all three branches is justified and economically reasonable, as the graduates of the programme are sought after and highly valued by employers in all regions of Latvia.

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

All the requisites of the programme, including code, title, etc, are in compliance with the aims, objectives and learning outcomes of the programme and the demands of the professional standard.

Strengths:

- High demand for specialists in this field by the labor market.
- Qualitative and correspondent content of the study programme as a whole and study courses particularly.

Weaknesses:

- Lack of ability for the programme to provide the necessary amount of graduates in this profession to full extent as the number of students decreased during the last years.
- Lack of correspondence of some courses volume in KP to the National educational standard, as mentioned before, Business Economics study course should contain 6 CP.

## **2.2. The Content of Studies and Implementation Thereof**

### **Analysis**

The content of the study programme is topical that is justified by such documents as a general description of the programme, formulation of its aims and objectives, and learning outcomes, it is also strictly required by the labor market of this area. Analysis of the study courses description shows that it is interconnected and complementary, for example for the beginning of the study course Electrical Drives Automation, the prerequisites are Electrical Engineering, Electrical Machines

and Electrical Drives (theoretically) which are also proposed in the programme before mastering this specific course. The courses correspond to the objectives of the programme and ensure the achievement of learning outcomes, justified by the map of the study courses for achieving the LOs of the electrical equipment programme as well as meeting the needs of the industry. It is also facing in full extent the needs of the industry, labor market and scientific trends that are concluded for the analysis of the compliances with the Professional standard, National Education standard and needs of the employers.

The course descriptions do not specify the work equipment (resources) necessary for the implementation of the courses, such as equipment, and laboratories used.

The methodology of the studies implementation - lectures, practical classes, laboratory works, that are proposed in the study courses description and were mentioned at the meetings with teaching staff and students, as well as the organisation of the internship (see Supplementary document 3.2. Mācību prakses organizēšana) - contributes to the achievements of the basic goals of the programme. The lectures are necessary for mastering the theoretical basics of the courses as well as for the beginning of the practical or laboratory classes for a full understanding of the nature of all the processes and the objectives of the labs and/or calculations. The division among the lectures and practical classes as well as the independent work is well-balanced and the subjects for the laboratory classes correspond to the labor market necessities and demands.

The implementation of the study program is realised in accordance with all the state and institution (College) regulations and rules, in full compliance with the study plans of the program and study courses description. The realisation of the program in the branches is regulated from both the local administration and from the side of centralised administration at Riga branch. The program realisation in the branches fully corresponds to the plans of the program, with no differences from that realised at the Riga branch. The program's realisation is regularly (annually) controlled from the side of the central administration together with the administration and teaching staff of the branches.

Generally, the student-centered teaching approach is considered, but a much clearer understanding and formulation of its principles could be expected from the teaching staff and administration.

The procedure, organisation, documentation, reporting, etc. of the internship is strictly stated by the college rules, that are provided in the special official regulations. The analysis of this documentation as well as all the information about the organisation of the internship obtained during the interviews with the teachers and administration gives an opportunity to conclude that the organisation of it is effective for the achievement of the program aims and objectives, the goals of the internship correspond to the program LOs and to the requirements of the national standards.

The relevance of the topics of the students' final theses could be concluded only from those examples that have been provided during the interviews with the teaching staff. It gave an opportunity to conclude that the topics correspond to the basic aims and objectives and are relevant to the subject of the professional area. Moreover, in some cases the topics of the final thesis are taken from the internship period and are connected with the solution to the industrial questions. The full list of the topics is still not provided by the college.

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

The content of the study courses including the internship and mostly the topics of the final theses are in compliance with the objectives of the programme "Electrical Equipment" and the demands of the industry.

Strengths:

- Correspondence of the program's content and methodology to the requirements and demands of the labor market.

Weaknesses:

- Partly implementation of a student-centered approach into the learning-teaching process.
- The course descriptions do not specify the work equipment (resources) necessary for the implementation of the courses.

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

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

**Assessment of compliance:** Not relevant

### **2.3. Resources and Provision of the Study Programme**

#### **Analysis**

For the implementation of the study programme and achievement of results, the infrastructure of the RTC, material and laboratory base is used. In general, the material and technical base of studies is sufficient and corresponds to the specifics of the study programme. The informative and methodological materials base is provided by the library of RTC.

The financial basis necessary for ensuring study processes is formed from the State budget, study fees, and EU structural foundation financing. (sent additionally by RTC). The college has developed a system to determine the financial resources required for the implementation of the study programmes. Funding is not divided into branches. The study programme has the minimum number of students to ensure the profitability of the study programme. The minimum number of students allowed in the programme is 18. The number of state budget places in the study programme „Electrical Equipment” is 80. On average, 90 students study in the programme, from which 30 of them study in Kandava, 12 of them study in Daugavpils, and 48 of them study in Riga (sent additionally by RTC).

In the branches of the college, the study process is organized on the premises of Daugavpils Technical School and Kandava Agricultural Technical School, as well as the laboratories of these cooperation partners and the equipment contained therein are used in the study process. Material, informative and technical provision in all branches can be rated as equal. In a conversation with the academic staff from Daugavpils it was mentioned that several laboratory works are also performed in Riga.

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

The infrastructure of the RTC, material and laboratory base is used for the implementation of the study programme in all branches. Material, informative and technical provision in all branches can be rated as equal. The technical base is sufficient and corresponds to the specifics of the study programme. The college has developed a system to determine the financial resources required for the implementation of the study programmes. Funding is not divided into branches.

Strengths:

- The material and technical base of studies is sufficient and corresponds to the specifics of the study programme.

Weaknesses:

- The Funding is not indicated for separate branches into branches

## 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 material and technical base, and informative provision of studies is sufficient and corresponds to the specifics of the study programme.

## 2.4. Teaching Staff

### Analysis

In the self-assessment report (point 2.3.7, pages 25 and 26) there are listed in total 37 teachers involved in the implementation of the study programme, 25 part-time employed:

- Assist. 18 (BA 5, MA 13), Doc. 5 (Doctorate 5), Lect. 2 (MA 2), and 12 full-time (“primary”) employees:
- Assis. 4 (BA 1, MA 3), Doc. 4 (Doctorate 1, MA 3), Lect. 4 (MA 4).

From the meetings with teachers, graduates, students and employers, it is clear that the teachers are technically and pedagogically competent to deliver the learning outcomes. This is also confirmed by teacher CVs (sent additionally by RTC, i.e. after experts’ request, in folder “CV-E-angļu va”) and the list of training courses and which teachers have attended/completed them (sent additionally by RTC, i.e. after experts’ request, in the file “Izglītība\_un\_prof\_pilnveide\_Enerģētika\_ENG- Annex 1”).

Teaching staff is informed about the possibilities for improving their teaching skills. Usually, they use it as requested by legal regulations, i.e. there is no mechanism to motivate teachers to improve beyond the legal minimum. In general, the management does not have a systematic approach to human resources issues, i.e. unified databases about their competences and data in general.

Teachers confirmed at the meetings that the management takes care of their workload in general and during the changes in the composition of the teaching staff in a satisfactory manner. In general, communication with the management seems good, within the branches, but also towards the Riga management.

There is no data delivered in the self-evaluation report regarding the scientific publications and research-related projects, i.e. it is not applicable to the RTK. It should be noted that research activities are encouraged among the teachers, and sometimes even involve students, but as the programme focus is deeply practical, such cases are rare. Nevertheless, please see the chapter “1.4. Scientific Research and Artistic Creation” for comments related to scientific research.

According to the information from the meetings with the teaching staff, mutual cooperation of teaching staff is mainly functioning as direct contact. It could be supported by, for instance, periodical meetings during which the aims of the study program and the interconnection of study courses within the study programme (and possible utilization of scientific topics and R&D activities) could be discussed more regularly between teachers and communicated towards the management if needed.

The students’ qualification papers are also an opportunity for collaboration of teachers, due to a procedure of defending the paper which includes more teachers. Thus, it should be used more often in this way, also by defining multidisciplinary paper topics.

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

Teachers are technically and pedagogically competent to deliver the learning outcomes. They

participate in activities for improving their teaching skills according to the defined legal minimum. Significant scientific activities are not expected in case of a college, and thus there are no data provided regarding the scientific publications and research related projects. However, some conclusions can be found in this expert opinion under chapter "1.4. Scientific Research and Artistic Creation".

Strengths:

- Teaching staff has a good connection with students.
- Teachers are technically and pedagogically competent to deliver the learning outcomes.
- The RTC management takes care of the teacher workload, i.e. there are no reported discrepancies.

Weaknesses:

- Teachers participate in activities related to improving teacher skills, but usually just as requested by legal regulations, i.e. there is no motivation system for activities beyond the minimum.
- Improving the skills related to scientific research is not systematically supported by the RTC, and seems to be neglected by the RTC management completely.
- Management does not have a unified database about teachers' competences and their data in general (e.g. workload), which could enable a better overview, analysis and planning of human resources.

## 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

Teachers are technically and pedagogically competent to deliver the learning outcomes. They fulfill the requirements set out in the regulatory enactments.

## 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:** Partially compliant

Justification can be found in annex P6\_EN as well as section 2.1 of the experts' report.

- 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

Justification can be found in Elektrisko iekārtu speciālists PROFESIJAS STANDARTS (12.08.2020) <https://registri.visc.gov.lv/profizglitiba/dokumenti/standarti/2017/PS-139.pdf>

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

**Assessment of compliance:** Fully compliant

Although the language of implementation of study programme is only Latvian, after repeated request from the expert panel descriptions of the study courses in English were provided as well. Justification for this can be found in annex "studiju kursu apraksti -E- angļu val.7z"

- 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

Justification can be found in annexes "Diploms\_RTK28022022181221.pdf" and "Diploma pielikums\_paraugs-E.docx"

- 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

Study programme is being implemented only in Latvian. Justification can be found in the annex "CV-E-angļu va.7z"

- 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

Justification can be found in annex "Studiju līgums\_līgums.doc".

- 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:** Non-compliant

Provided information in the annex "Sadarb\_Univ.zip" regards acceptance of students only after they have graduated and regulates the recognition of part of their courses. Nothing is said about the case of termination of the study programme in none of the agreements.

Despite that, as it was noticed during interviews, RTC has an inner system of allowing students to continue their studies, in case their branch is terminated by the college, which is the case for previous Liepāja branch students in Kandava.

- 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

Justification can be found in the annex "AIC\_90.edoc"

- 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

Requirement 11. is not compliant, because of the lack of documentation which proves that students will be provided with the possibility to continue their studies in other study programme or in other HEI, in case the study programme is terminated.

The programme is not in a full compliant with the state educational standard.

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

The code 41522 and title "Electrical Equipment" of the study programme are in compliance with the aims, objectives and learning outcomes and the demands of the professional standard.

The content of the study courses including the internship and mostly the topics of the final theses are in compliance with the objectives of the program and the demands of the industry.

The infrastructure of the RTC, material and laboratory base are used for the implementation of the study programme, is sufficient and corresponds to the specifics of the study programme. The college has developed a system to determine the financial resources required for the implementation of the study programmes. Funding is not divided into branches.

Teachers are technically and pedagogically competent to deliver the learning outcomes. They participate in activities for improving their teaching skills according to the defined legal minimum. The implementation of the study programme is realised in accordance with the program's plans and study courses. The process is strongly regulated and controlled by the central administration from Riga as well as at the places in branches of Kandava and Daugavpils. The control takes place regularly (annually) in strong co-operation with the branches administration and teaching staff. In general, RTC fulfills requirements corresponding to the study programme, but there is a very important deficiency regarding the possibility for students to continue their studies in other HEI, in case their study programme is terminated. This matter can be eliminated during the 2-year period, by specifying it in existing cooperation agreements presented to experts. Other than the mentioned issue, the study programme "Electrical equipment" is fully possible to implement in all RTC branches.

#### Strengths:

- High demand for specialists in this field by the labor market.
- Qualitative and correspondent content of the study program as a whole and study courses particularly.
- Full correspondence of the program's properties to the requirements of different types of national regulations.
- Correspondence of the program's content and methodology to the requirements and demands of the labor market.
- The material and technical base of studies is sufficient and corresponds to the specifics of the study programme
- Teachers have a good bond with students.
- Teachers are technically and pedagogically competent to deliver the learning outcomes.
- The RTK management takes care of the teacher workload, i.e. there are no reported discrepancies.

#### Weaknesses:

- Lack of ability for the program to provide the necessary amount of graduates in this profession.
- Lack of correspondence of some courses volume in KP to the National educational standard.
- Partly implementation of student-centered approach into the learning-teaching process.
- The course descriptions do not specify the work equipment (resources) necessary for the implementation of the courses.
- The funding is not indicated for separate branches into branches
- Teachers participate in activities related to improving teacher skills, but usually just as requested by legal regulations, i.e. there is no motivation system for activities beyond the minimum.
- Improving the skills related to scientific research is not systematically supported by the RTK, and seems to be neglected by the RTK management completely.
- Management does not have a unified database about teachers' competences and their data in general (e.g. workload), which could enable a better overview, analysis and planning of human resources.
- Cooperation agreements provided to the experts do not provide all necessary information about the possibilities of students to continue their studies in other HEIs in case of termination of the programme.

### **Evaluation of the study programme "Electrical Equipment"**

Evaluation of the study programme:

Good

## 2.6. Recommendations for the Study Programme "Electrical Equipment"

### Short-term recommendations

To allocate the necessary volume of CP for the study course (module) of Business Economics in accordance with the requirements of the Cabinet of Ministers (for the 1st level of professional higher education).

To clarify the idea of the student-centered approach to the teaching staff.

The learning outcomes in all the study courses descriptions should be formulated in accordance with Bloom's taxonomy - the framework for the universities and colleges in their work and development of the study programmes and courses ([www.bloomtaxonomy.net](http://www.bloomtaxonomy.net) ).

Review the existing cooperation agreements, and update them in order to directly include such aspects as providing the possibility for students to finish their studies in operational RTC in case the study programme is terminated.

Establish periodical meetings during which the aims of the study programme and the interconnection of study courses within the study programme (and possible utilization of scientific topics and Research and Development activities) could be discussed more regularly between teachers and communicated to the management if needed.

The students' qualification papers are also an opportunity for collaboration of teachers. Thus, it should be used more often in this way, also by defining multidisciplinary paper topics.

### Long-term recommendations

To increase the number of graduates in accordance with the requirements of the labor market, to find out additional solutions and platforms for attracting more students for the study program, to find more additional ways/instruments for the professional popularisation among young people in Latvia.

To improve moodle system and to initiate the students and teachers to use it more actively for everyday study routine.

To improve/elaborate a unified form for the study courses descriptions.

Establish a unified database about teachers' competences and their data in general (e.g. workload), which could enable a better overview, analysis and planning of human resources.

Establish a system to motivate teachers to improve their teaching skills beyond the minimum defined by legal regulations. The motivation system is needed for scientific and R&D activities as well.

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

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

#### Assessment of the Requirements for the Study Field

Requirements	Requirement Evaluation		Comment
R1 - Pursuant to Section 5, Paragraph 2.1 of the Law on Higher Education Institutions, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study field whilst implementing its internal quality assurance system:		Partially compliant	Not all the criteria are fully compliant: e.g.criterion 1.3 is partly compliant. The qualification and professional improvement of the teaching staff take place occasionally and from the side of teachers' self-motivation.
R2 - Compliance of scientific research and artistic creation with the level of development of scientific research and artistic creation (if applicable)		Partially compliant	RTC as a college has reached a sufficient level of scientific research, regarding the needs of labour market, but without any ambitions to improve it beyond this level, e.g. there are no strategic goals (and corresponding activities, measures and indicators) related to scientific research and R&D activities.
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	The cooperation implemented within the study field with various Latvian organizations ensures the achievement of the aims of the study field but with foreign institutions should be improved.
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	Some of the recommendations were implemented partly, for example, increasing the number of students within the programme, increasing the scientific and research activities and invitation of the invited lecturers from abroad.

### 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)

<b>No.</b>	<b>Study programme</b>	<b>R5</b>	<b>R6</b>	<b>R7</b>	<b>R8</b>	<b>Evaluation of the study programme (excellent, good, average, poor)</b>
1	Electrical Equipment (41522)	Not relevant	Fully compliant	Fully compliant	Partially compliant	Good

### **The Dissenting Opinions of the Experts**

nav atšķirīgu viedokļu