APPLICATION

Study field "Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science" for assessment

Study field	*Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science*
Title of the higher education institution	*Rīgas Aeronavigācijas institūts*
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Self-evaluation report

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

Riga Aeronautical Institute

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I - Information on the Higher Education Institution/College

1.1. Basic information on the higher education institution/ college and its strategic development directions, including the following information:

Riga Aeronavigation Institute (hereinafter - RAI) was established on July 15, 1992 as a joint stock company, reorganizing Riga Higher Civil Aviation Aeronavigation School. RAI is a professional higher education institution that implements professional bachelor's and professional master's study programs, as well as is engaged in applied research.

The teaching staff of RAI is composed of elected academic staff and the guest staff associated on the base of contract. In the positions of guest docent and guest lecturer are employed high-skilled specialists of the Latvian transport sector and other universities teaching staff who have been elected to the academic positions in the corresponding higher education institution. Basically guest staff conducts theoretical basic courses and professional specialization courses of the branch.

In academic year 2019./2020. there are employed 55 representatives of teaching staff and 20 of them are elected to the academic position of docent or lecturer. 18 members of teaching staff have a doctoral degree.

RAI's vision: RAI is a professional higher education institution recognized in the Baltic region, which prepares specialists in the field of transport, especially in the field of aviation, and conducts applied research.

RAI's mission is to meet the needs of the Latvian national economy for aviation and other highly qualified specialists in the transport sector.

According to the RAI Development Strategy, the goal of RAI development is not to increase the number of study directions and implemented study programs, but to increase the quality of studies and academic work. In this regard, the activities of the Institute are aimed at the improvement of the content of study programs in cooperation with employers, modernization of infrastructure and information provision, rotation of the academic staff and improvement of professional qualification. RAI Development Strategy and other important RAI documents are available on RAI homepage www.rai.lv/en/doc

Study directions and study programs implemented by RAI

No.	Study direction	Study program
1.	"Information technology, computer equipment, electronics, telecommunications, computer control and computer science"	Professional bachelor study program "Electronic equipment maintenance"
2.	"Mechanics and metalworking, heat energy, heat engineering and mechanical engineering"	1. Professional bachelor study program "Aircraft Technical Operation"; 2. Professional bachelor study program "Air transport systems management"; 3. Professional master study program "Transport Systems Management".
3.	Transportation services	1. Professional bachelor study program "Air Traffic Management"; 2. Professional bachelor study program "International Transport Logistics"; 3. Professional bachelor study program "International Transport Company Management"; 4. Professional master study program "International Transport Company Management".

Changes in the number of students at RAI in academic years 2015/16 - 2020/21

Year	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Number of students	425	345	356	360	333	325

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

In accordance with the Law on higher education establishments, the RAI Constitution (Satversme) and the RAI governance structure attached in Appendix 2, the main RAI representative and management institutions are the following:
1) Convent,

2) Senate,

3) Rector,

4) Vice-Rector,

5) Dean of the Faculty of Engineering and Management,

6) Directors of study programs.

The management and administration of RAI are actually performed through the collegial cooperation of the mentioned institutions, as well as cooperating with the student self-government and academic staff.

The Convent is RAI's highest collegial representative and governing body and decision-making body in academic and scientific matters. The Convention is composed of 11 representatives, seven of whom are academic staff representatives, three student representatives and one general staff representative.

The Convent elects and removes the Rector, hears the Rector's work statement, elects and recalls the Senate, the Audit Commission and the Academic Arbitration Court, approves the Regulations of the Senate, the Audit Commission and the Academic Arbitration Court.

The Senate is a collegial staff management institution and decision-making body that approves the procedures and regulations that regulate all areas of activity of RAI. The Senate consists of 10 senators, 8 of whom are representatives of the academic staff and 2 are representatives of the students.

The Senate:

• examines and approves all internal regulations of RAI, except those that fall within the competence of the Convent;

• examines and approves academic and professional study programs, study plans and work plans;

• examines research topics and funding structure;

• approves the study final examination and state examination commissions;

• approves the methodological council, heads of structural units (deans of the faculty, heads of departments and laboratories, etc.);

• hears the report of the Vice-Rectors, heads of structural units and other officials on the course of studies and the activities of the relevant services, as well as makes appropriate decisions and recommendations to the Convent;

• makes decisions on the establishment, reorganization or liquidation of RAI structural units, approves their regulations;

• performs other functions specified in the regulatory enactments.

The main function of the Rector is the administrative management of the higher education institution, which manifests itself in the implementation of the decisions of the higher education institution collegial institutions, the Convent and the Senate, in accordance with the Law on Higher Education Institutions and other regulatory enactments. The Rector, as the administrative head of the Institute, represents the Institute in cooperation with the Cabinet of Ministers, the Ministry of Education and Science, the Rectors' Council, the Council of Higher Education and other public administration institutions. In cooperation with these institutions, the Rector expresses an opinion that corresponds to the strategy developed by the Institute and the decisions taken by the collegial institutions of the Institute. When implementing the decisions of the Convent and the Senate of the Institute, the Rector takes into account the opinions of the students (student self-government) and the academic staff of the Institute.

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

In recent years, RAI has significantly improved its quality management and assurance system - the Quality Management Manual, the Operations Organization Manual and the RAI Internal Rules of Procedure have been developed and implemented, all of which are published on the RAI homepage www.rai.lv/en/doc.The Quality Management Department has been established and the head of the department has been hired.

The quality management and assurance system was developed under the management of RAI Vice rector and Head of Quality Management Department, involving teaching staff
 and student self-government. The draft of quality management and assurance system was examined
and discussed at the RAI Senate hearing.

RAI has fully provided students with opportunities to continue their studies and financial guarantees in case the study program of the study direction is reorganized or liquidated, concluding appropriate cooperation agreements and specific agreements with Riga Technical University and Ventspils University College, which implements study programs similar to the RAI ones.

Mechanism and procedures of the Quality Management System are described in the Quality Manual. RAI rector, study vice rector and directors of the study programs are responsible for the introduction and implementation of the Quality Management System. Quality audits are orga-nized by the Head of the Quality Management Department. The main objective of the Quality Management System is to provide the compliance of the RAI studies, academic activities and research activities with the "Education Law" and international education standards "Standards and guidelines for Quality Assurance in the European Higher Education Area (ESG)". Quality policy implementation mechanism is based on the quality system audits, including study audits, personnel audits, methodological material, equipment, study and research activities premises au-dits. Audit results are reviewed at the Senate sessions, where the appropriate decisions are taken, including the decision on amending or qualifying the self-certification reports for the appropriate study direction or about the update of the study course.

1.4. Fill in the table on the compliance of the internal quality assurance system of the higher education institution/ college with the provisions of Section 5, Paragraph 21 of the Law on Institutions of Higher Education by providing a justification for the given statement. In addition, it is also possible to refer to the respective chapter of the Self-Assessment Report, where the provided information serves as evidence for the full compliance, partial compliance or non-compliance.

1.	The higher education institution/ college has established a policy and procedures for assuring the quality of higher education.	Complies
		RAI's quality assurance policy is set out in the Quality Management Manual and the Operations Organization Manual, which are published on RAI homepage www.rai.lv/en/doc.

2.	A mechanism for the creation and internal approval of the study programmes of the higher education institution/ college, as well as the supervision of their performance and periodic inspection thereof has been developed.	Complies
		The study programs have been developed on the basis of the European Qualifications Framework, the State Standard of Professional Higher Education (Cabinet of Ministers Regulations No 512 "Regulations on the state standard of second level professional higher education") (appendix 12) and the standard of the profession of electronic and radio electronic engineer (appendix 13). The elaboration of the study program includes the following information: study programs, the title of the obtained grade and professional qualification, the appropriate study direction; the program size, implementation duration, type and form; the content and structure of the program; objectives of the program and study results. Program structure and content are elaborated, based on the coordination of the results obtained from the program study courses with the programmes study results in accordance with the program objectives; requirements regarding the previous education; provision of the infrastructure; provision of the academic personnel. A working group for the elaboration of the study program has been created, which includes the representatives of both the academic and administrative personnel. The obligations of the vice rector include development and implementation of the study courses, implementation and registration of the theoretical and practical studies planned in the frame of the study program in accordance with the industry regulations being in force and RAI internal regulative documents and determined procedures, control of the study events as well as activity monitoring and review. The obligations of the academic personnel and lectors include the elaboration of the description and content of the study program study courses and preparation of the study content and study materials. The work of the academic personnel and lectors in the frame of the study process is connected with the conduct of the appropriate study course, participation in the elaboration of the state examination content, consultations and scientific research work.

3.	The criteria, conditions, and procedures for the evaluation of students' results, which enable reassurance of the achievement of the intended learning outcomes, have been developed and made public.	Complies
		Have been prepared and published on RAI homepage www.rai.lv/en/doc): 1) Admission rules for study programs at the Riga Aeronautical Institute in academic year 2020/2021; 2) Regulations on the assessment and recognition of study results achieved in previous education or professional experience at the Riga Aeronautical Institute; 3) Quality management manual; 4) Regulations on elaboration and defence of bachelor thesis and master thesis; 5) Other documents, see on RAI homepage.
4.	Internal procedures and mechanisms for assuring the qualifications of the academic staff and the work quality have been developed.	Complies
		RAI has developed and published on its homepage www.rai.lv/en/doc) clear and transparent personnel selection and recruitment rules: 1) Regulations on election to academic positions; 2) Internal Rules of Procedure; 3) Regulations on the organization of the scientific and methodological work at the Riga Aeronautical Institute.
5.	The higher education institution/ college ensures the collection and analysis of the information on the study achievements of the students, employment of the graduates, satisfaction of the students with the study programme, efficiency of the work of the academic staff, the study funds available, and the disbursements thereof, as well as the key performance indicators of the higher education institution/ college.	Complies
		RAI has implemented information and data storage systems "WinStudents" - student and staff database, "Moodle" - e-learning platform, study management system, course management system, user document database, etc. The e-solution "WinStudents" accumulates information about students' progress, incl. reflecting the average success in the group, which allows the comparative analysis. The data were discussed during the meetings of the methodological commissions and with the state commission, as well as were discussed in the meetings of the directors of the study programs in order to make a comparative analysis of the directions. Every year, RAI conducts a survey of students and a survey of graduates concerned satisfaction with the study program, study process, growth and employment. All the obtained data are stored in RAI databases and analyzed by preparing annual self-assessment reports.

6.	The higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study direction whilst implementing their quality assurance systems.	Complies
		Internal quality assurance is performed on an ongoing basis. RAI regularly conducts surveys of employers, graduates and students. Representatives of employers are chairmen and members of examination boards. RAI periodically accredits study directions not only in accordance with the Latvian Law on Education, but also periodically undergoes international certification by international organizations supervising the aviation industry.

II - Description of the Study Direction (1. Management of the Study Direction)

1.1. Economic and/or social grounds for the creation of the study direction and the relevant study programmes, the assessment of the interrelation among the study programmes, as well as the analysis of the significance (singularity) of the study programmes in comparison with other similar study programmes in Latvia and abroad.

The management and administration of the study direction "Information Technology, Computer Equipment, Electronics, Telecommunications, Computer Control and Computer Science" is implemented inseparably from the overall management of RAI as a higher education institution. The director of the study direction working at the Institute is at the same time the director of the only study program of the study direction - the Professional Bachelor's study program "Maintenance of Electronic Equipment". The director of the study direction is directly subordinated to the dean of the Faculty of Engineering and Management, who in turn coordinates the primary goals and tasks with the RAI vice-rector and rector. Resolutions, regulations, results of final theses, students' progress, faculty development and other issues of studies and academic work are under the supervision and responsibility of the RAI Senate. Conceptual issues of the development of the study direction are the responsibility of the RAI Convent and JSC "Riga Aeronautical Institute".
The development strategy of the study direction is determined by the significant contribution of the transport services sector to the Latvian economy, largely due to the advantageous geographical position of Latvia. The Transport Development Guidelines for 2014-2020 emphasize that transport in our country is one of the most strategically important sectors of the economy, which provides transportation of people and goods, promotes economic growth, as well as creates jobs. In its turn, the National Development Plan 2020 states that the growth of new jobs will not be created by productive, modernized industry, but by the companies serving it. Consequently, new specialists will be needed in the service trades, including the labour market of airports electronic equipment services.

Compared to similar study programs of other universities, the main emphasis in the RAI study program is on the operation and maintenance of electronic equipment, therefore the study program is dominated by the specialized courses in the field. In turn, in such study programs as the Electronics Engineer program of Vilnius Gediminas Technical University and the Academic

Bachelor's study program "Electronics and Mobile Communications" of Riga Technical University, more emphasis is placed on theoretical courses in the field. Such an approach provides a more general and comprehensive training of specialists in this field with a good theoretical knowledge base, which is characteristic of high-profile university programs with large student flows.

1.2. Aims of the study direction and their compliance with the scope of activities of the higher education institution/ college, the strategic development directions, as well as the needs and the development trends of the society and the national economy.

The development strategy of the study direction is focused on increasing the quality of the study program and training new, highly qualified electronics specialists for the needs of the Latvian economy, especially the aviation industry. The aim of the study direction is to educate comprehensively developed electronics specialists with creative and analytical abilities in servicing airport electronic equipment and consumer electronics, as well as to prepare students for further studies in the Master's program.

The aim of the study direction corresponds to the aim and tasks of RAI, which determine that studies take place in professionally oriented study programs and practically usable scientific research is performed. The main tasks are the training of the international level specialists of aviation and other national economic sectors specialists with higher professional education, as well as the improvement of the qualification of specialists of aviation and other sectors.

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

Strengths	Weaknesses

Business and collegial interrelationships among the academic staff, as well as the staff and the management; Due to the small number of students, there are ample opportunities in groups to use an individual approach; Good co-operation with employers, involvement of employers in the development and improvement of study programs, examination and diploma thesis defence commissions; Historically, a recognizable specific niche of the Institute has been preserved.	There is no state budget funding; Insufficient attraction of foreign lecturers; Insufficient student exchange; Individual members of the academic staff should improve their English language skills.
Opportunities	Threats
The Institute has extensive experience and wide opportunities for implementing qualification upgrading courses, attracting additional funding; Increase the number of foreign students; To develop more widel cooperation with the Latvian and foreign universities; To attract more actively academic staff in collegial administrative institutions; Increase in the demand for new specialists due to transport sector development.	Further decrease in the number of school graduates due to demographic trends; Preference of the most capable school graduates to study in foreign universities; School graduates' insufficient knowledge in mathematics and science subjects; Impossibility to financially ensure a qualitative study process due to the further decrease in the number of students; The impact of the COVID-19 pandemic.

RAI strategy aim for 2021 and tasks necessary to reach it during the time period 2021-2027 are defined based on the SWOT analysis.

Aim: To increase the quality of education, which also includes not decreasing the quality when providing distant learning during the restrictions imposed by the Covid-19 pandemy.

In order to reach the aim the main tasks are defined which are described in RAI strategy
 www.rai.lv/lv/doc

In addition to above said, in order to eliminate the weak factors, RAI continuously improves personnel qualification skills and looks for cooperation possibilities both with Latvian and foreign educational estblishments. In order to improve the English language proficiency of the academic personnel, the English language courses are being conducted. Negotiations with the Ministry of Education regarding the budget financing are being conducted.

Development of the study direction is planned in cooperation with university students, graduates and employers. Planned activities are added to the study direction development plan in order to ensure the development of the study direction and the only study program of study direction. Information obtained from students, absolutes, employers is used. Labor market requirements, European and World trends in the industry are analyzed. Working group of RAI Convent and Senate evaluate the collected information and make the decision about practical implementation of plan.

1.4. The structure of the management of the study direction and the relevant study programmes, and the analysis and assessment of the efficiency thereof, including the assessment of the role of the director of the study direction and the heads of the study

programmes, their responsibilities, and the cooperation with other heads of the study programmes, as well as the assessment of the support by the administrative and technical staff of the higher education institution/ college provided within the study direction.

Taking into account that there is only one study program in the study direction, the management of the study direction is quite simple. The director of the study direction is at the same time the director of the study program and is directly subordinated to the dean of the Faculty of Engineering and Management and indirectly to the RAI vice-rector. The director of the study direction is directly responsible for the development of the study program, its management and the evaluation of the teaching staff. The management of the study direction schematically takes place in accordance with the RAI structural scheme.

The administrative and technical staff of the RAI is closely connected with the development and improvement of the direction of study. Rector, Vice-Rector, Dean, Study Department, Library, administration staff, Technical director and technical specialists within the framework of their competence and responsibility ensure the qualitative development of the study process.

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

The admission process and procedures are determined in the Quality Management Manual. Admission procedures and requirements for the current academic year are determined by RAI Admission Regulations, which have been developed on the basis of Cabinet Regulation No. 846 of 10 October 2006 "Regulations on Requirements, Criteria and Procedures for Admission to Study Programs". The minimum requirement for admission is a previously acquired secondary education, which is confirmed by a secondary education document - a certificate of general secondary education or a diploma of vocational secondary education, which certifies the acquisition of a secondary vocational education program.
RAI has the opportunity to recognize previously acquired non-formal education and professional experience, but so far it has not been used due to lack of interest from students and other stakeholders. The Quality Management Manual, the Admission Regulations and the Regulations on the Assessment and Recognition of Study Results Achieved in Previous Education or Professional Experience at the Riga Aeronautical Institute are published on the RAI website www.rai.lv/en/doc.

1.6. Assessment of the methods and procedures for the evaluation of students' achievements, as well as the principles of their selection and the analysis of the compliance of the evaluation methods and procedures with the aims of the study programmes and the needs of the students.

For the assessment of students' knowledge and quality control a continuous quality and volume evaluation system has been developed, which includes the operational accounting of performance - marks obtained in seminars, laboratory and practical works, homework and tests; examinations and tests after full or partial (stage) acquisition of the study course; complex evaluations of the work stage, defending study projects or qualification papers; practical training assessments in the speciality. Students are introduced to the expected results of each course and the report form, as well as tests at the beginning of the study course. Course content, expected results, recommended literature and other important information are provided in the description of each course. The results of the study process are analysed in discussions with the director of the study program, as well as in the meetings of the Senate.

Two scales are used to assess knowledge - two-point and ten-point evaluations. If the final result of the study course is evaluated in the form of an exam and it has an evaluation - a test, then it has two evaluations - passed or failed. If the final result of the study course is evaluated with a test, then it is evaluated like an exam on a 10-point scale. The test is then differentiated.
In the study program, in each study course and class the study results are determined - what the student knows, what he/she can, what he/she is able to do and how competent the student is. Study results are assessed for the entire qualification as a whole, as well as for each component - the theoretical course and practice separately.
Students' work is mainly evaluated on the basis of the progress shown in the session after the course. Students' knowledge is assessed after mastering the study course twice a year - in winter and spring sessions. During this time, students take exams in the study courses in accordance with the developed individual study plans. Usually the number of questions in a study course does not exceed 75. Exam questions are designed so that the student can prepare them to achieve the goal of the study course described in the description of each study course. Descriptions of study courses are attached in Appendix 16. If necessary, students demonstrate the acquisition of study content on stands, use posters and models. Explanations shall be given orally. Exam questions, based on the description of the study course, are prepared by the lecturer, whose responsibilities include the management of the respective study course.

The defence of study papers and bachelor's theses takes place orally, using presentation materials. Practical training on stands and simulators is led by RAI engineers and laboratory assistants, performing the functions of training masters. Technical staff of the respective profile of the companies are involved in the provision of the internship.

Students can get acquainted with the criteria, conditions and binding procedures for evaluating success in Moodle system, the Quality Management Manual and other RAI internal regulatory enactments, which are published on the RAI website www.rai.lv/en/doc. Unclear questions related to the performance evaluation criteria can be clarified by students at the study program director, the relevant lecturer, management of the Institute or at the relevant Convention or Senate meeting, where the students are represented.

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

The principles of academic integrity and the mechanism of their observance are set out in the RAI Code of Academic Integrity. The Code of Academic Integrity has been discussed at the meetings of the RAI Convent and Senate, and the RAI students' self-government was involved in its development and discussion. Every RAI student has been introduced to the basic principles of the Code of Academic Integrity, the types of violations of the principles of academic integrity specified therein and the liability if a violation has occurred. As an anti-plagiarism tool, the certificate of the author of the bachelor's thesis that verifies that the works of other authors have not been used in the work without reference can be mentioned. The certificate is attached to the bachelor's thesis. It is the responsibility of every lecturer of the Institute, especially the supervisor of the bachelor's thesis, to eradicate plagiarism. Taking into account the small number of students, the procedure for approving bachelor's thesis topics and the procedure for storing bachelor's theses defended in previous years in the RAI library, the probability of plagiarism should be assessed as very low. The Code of Academic Integrity is published on the RAI website www.rai.lv/en/doc.

1.8. Specify the websites (e.g. the homepage) on which the information on the study direction and the relevant study programmes is published (in all languages in which the study programmes are implemented) by indicating the persons responsible for the compliance of the information available on the website with the information published in the official registers.

Information about the study direction and study programs is published on the RAI website www:rai.lv/en/obuc/obuc_elec ; www:rai.lv/ru/obuc/obuc_elec. The Deputy Dean of the Faculty of Engineering and Management Anna Tiļļa and marketing and admission commission specialist are responsible for the compliance of the information published on the RAI website with the information available in the official registers.

II - Description of the Study Direction (2. Efficiency of the Internal Quality Assurance System)

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

RAI internal quality management and assurance system is set out in the RAI documents - the Quality Management Manual, the Operations Organization Manual and the RAI Internal Rules of Procedure www.rai.lv/en/doc.
The regulations of the RAI Internal Rules of Procedure not only determine the principles of organizing the study and study process, but also determine the quality of the entire higher education institution. The aspects of the study quality are specified in detail by the decisions of the Senate, which stipulate that a continuous quality and volume evaluation system has been

developed for knowledge assessment and quality control.

The proposal for the development of a new study program usually comes from employers, higher education institution management, staff or students. The idea is discussed at the Senate meeting taking into account the usefulness and necessity of the program, as well as the preliminary demand of the labour market for the relevant specialists. After the discussion, an appropriate decision of the Senate is made. In case of a positive decision, the Senate instructs the director of the study direction to prepare documents for licensing the study program. Draft documents, especially descriptions of study courses, after prior acquaintance and evaluation, are discussed at a separate Senate meeting. Similarly, the course of the program implementation and the need to update and improve the study courses are discussed and evaluated. These issues are considered at the Senate meeting at least once a year.

We believe that the quality management system implemented by RAI works sufficiently effectively, which is evidenced by the regular quality audits performed and the evaluation of their results at the Senate meetings and the adoption of the relevant decisions.

Thus, for example, the recommended expert recommendations on clarification and modernization of study course content as a result of the licensing process of the Professional Bachelor's study program "Electronic Equipment Maintenance" were evaluated at the Senate meeting and recognized as very professional, well-defined and well understood by the university. Consequently, RAI immediately implemented them, thus improving the quality of studies.

2.2. Analysis and assessment of the system and the procedures for the development and review of the study programmes by providing specific examples of the procedures for the development of new study programmes within the study direction (including the approval of study programmes), the review of the study programmes, the aims, and regularity, as well as the stakeholders and their responsibilities. Description of the mechanism for obtaining and providing a feedback, including with regard to the work with the students, graduates, and employers.

The self-assessment report of the study direction is reviewed once a year by the working group preparing the self-assessment report, in cooperation with the teaching staff, students and employers. Based on the proposals of the students, faculty, employers and university management, the working group prepares a draft improvement report, which is discussed and approved at the Senate meeting. In the process of improving the self-assessment report, issues regarding changes in the content of the study program and study courses, inclusion of new study courses in the program, as well as the need to develop new study programs or closing the existing programs are considered www.rai.lv/en/doc.

RAI organizes two different student surveys:

1. At the end of each semester, a survey on the evaluation of lecturers' work is conducted. It evaluates the study course and its content, requirements, compliance with the course description, materials available in Moodle and the use of e-environment tools, as well as the objectivity of the assessment and the lecturer's competencies according to the study course;

For the 2nd time a year, a survey on satisfaction with the study process at RAI is conducted. In the survey, students also evaluate the work of the Director of Study Programs according to several criteria and the work as a whole. Criteria such as the accuracy of the information provided, the

effectiveness in solving problem situations and providing answers, the availability of consultations both in person and in the e-environment, as well as the communication culture in general are evaluated separately.

Every year, a survey of graduates is conducted, in which the opinion of graduates about the studies and the possibilities of their improvement in the study program, as well as about the graduates' plans regarding the continuation of studies are ascertained.

Every year a survey of employers is conducted, it is filled in the internship supervisor's feedback (until 2019 - a small survey in the internship diary), the aim of which is to find out the internship skills assessment in order to prepare students for labor market requirements.

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

Taking into consideration the small number of students and staff of the Institute, the students have a wide range of opportunities to receive information and consultations, as well as opportunities to express their proposals, complaints and suggestions. They can do this by personally addressing the lecturer, the director of the study program or the management of the Institute (rector, vice-rector, dean of the faculty, deputy dean), as well as proposing consideration of the issue in the student self-government, RAI Convent and Senate. It is in the student self-government, the Convent and the Senate, as well as at the mentioned officials that students can receive all information about the possibilities to submit proposals and complaints, as well as about the procedure for their review and receipt of answers. Students can also obtain the mentioned information from the Quality Management Manual and other documents published on the RAI website www.rai.lv/en/doc.

The procedure for submitting student complaints is specified in the "Riga Aeronavigation Institute Academic Integrity Code" www.rai.lv/en/doc .
Every year a survey of students is conducted, which includes a section for comments and suggestions. The comments are analyzed in an aggregated way by the directors of the study fields during the annual self-assessment.
RAI uses the "The Open Door Principle", therefore, outside the time of acceptance of RAI's management, it is possible to address small, operatively discussed proposals. According to the RAI director accept , students regularly use this opportunity both individually and in groups. After such meetings, two scenarios prevail: 1) the issue is resolved during the conversation, or 2) students are advised to write a formal application with a description of the situation in order to allow a longer period of time to consider the issue.
According to this principle, students' proposals (for example - modernization of RAI infrastructure) and complaints (for example - conflict between the lecturer and the student) are considered.
The following corrections are being made (RAI WI-FI modernization and conflict resolution through negotiation).

2.4. Provide information on the mechanism for collecting the statistical data, as developed by the higher education institution/ college. Specify the type of the data to be collected, the collection frequency, and the way the information is used to improve the study direction.

The study data processing and storage program Winstudents has been introduced for the review of the study assessment results. The database of Win students also contains statistical data of the Institute - students enrolled in the 1st study year, total number of students, graduates, outgoing students, teaching staff. The data is entered into the database continuously as soon as there is a change in the previously entered data. Thus, for example, information about the students admitted in the 1st study year is entered within 1-2 working days after the issuance of the order on the matriculation of the enrolled students at RAI. The analysis of RAI statistical data and student achievement indicators allow the Institute to successfully monitor the progress of studies and academic work. Therefore, this extensive and accurate information is quite an effective tool for the improvement of the field of study and the work of the entire Institute.

In the first place, this information is used for the planning of the study programs, including the elaboration of the optimum syllabus, in order to avoid unnecessary tasks.
In the second place, after the analysis of this information it is possible to plan more detailed marketing activities and increase the efficiency of the advertisements to be published, thus increasing the number of the enrolled students, which, in its turn, provides the possibility to have additional financing both for study direction and Institute development.

2.5. Description and assessment of the integration of the standards set forth in Part 1 of the ESG. Specify which of the standards are considered a challenge and which require special attention.

1.1. Quality assurance policy

RAI has developed a (officially documented) concept that defines quality assurance principles and implementation policy. The quality assurance components defined in it are integrated into RAI processes (management, core business and support processes) and RAI strategic development management, a continuous quality improvement cycle is developed.
1.2. Program development and approval
Qualitative provision of study programs plays a central role in the implementation of the RAI mission during the study process; the internal evaluation of the study program is performed regularly (self-evaluation and evaluation of the conformity of the quality culture in accordance with the ESG).
1.3. Student-centered learning, teaching and assessment
RAI provides student-centered learning, teaching and assessment. In the process of study implementation, students are provided with an individual approach (remote and face-to-face consultations with both administrative and academic staff), needs analysis (oral and written feedback, including course evaluation questionnaire, student satisfaction questionnaire)
1.4. Student matriculation, study process, recognition and certification of qualifications
During the study process, information is regularly obtained and analyzed for monitoring the study

process and identifying opportunities for improvement.

1.5. Teaching staff

Teaching staff have appropriate education and qualifications that correspond to the content of study programs, as well as the necessary professional experience that complements academic competencies.

1.6. Learning resources and student support

RAI provides a wide range of material-technical and human resources that contribute to the provision of appropriate learning environments and processes based on students' needs and diversity, as well as the principles of student-centered learning.

1.7. Information management

For the efficient program management and reasonable decision making, RAI has acquired and analyzed the data on the study programs and activities of other educational institutions.

Student recommendations related to program changes, recommendations for adding new courses, complaints about course content, if any, are discussed in the RAI Senate.

1.8. Public awareness

RAI regularly publishes information (using various communication and information transfer channels) on the current events in the college, incl. information on the existing and new study programs, various aspects related to the learning process (i.e., admission, examination, teaching methods, teaching staff competence, curriculum, career and employment opportunities, mobility, social campaigns, conferences and other educational activities, graduate activities, and other aspects).

1.9 Inspection and regular review of programs

The opinions of all the involved parties are taken into account and thus the development of the study programs is promoted in accordance with the requirements of the industry specialists and the labor market, as well as students' views and graduates' experience in starting or continuing their professional development.

1.10 Cyclical external quality assurance.

It does invest RAI with the important ability of reflecting how external QA processes can provide added value to RAI. With careful planning and coordination of both internal and external QA processes, an institution can take full advantage of the external processes, in order to stimulate further self-reflection, gain alternative perspectives and improve its activities. RAI regularly conducts external quality assessment of the direction of study, which is the basis for improvement of the Internal Quality Assurance System and development of study programmes.

The standard "Student-centered learning, teaching and assessment" can be considered a challenge, because the involvement of students in the development of the study process should be more active and broader. The standard 'Public awareness' could be mentioned as a standard that should be given more attention, as public awareness and promotion of the university are essential in a context of declining potential students, especially given the impact of the Covid-19 pandemic.

II - Description of the Study Direction (3. Resources and Provision of the Study Direction)

3.1. Provide information on the system developed by the higher education institution/ college for determining the financial resources required for the implementation of the study direction and the relevant study programmes. Provide data on the available funding for the relevant study programmes, as well as the sources of the funding for the scientific

research and/or artistic creation activities and their use for the development of the study direction. Provide information on the costs per one student (for each relevant study programme of the study direction) by specifying the headings indicated in the calculation of costs and the percentage of the funding among the indicated headings.

Taking into consideration the fact that RAI is a private higher education institution, which does not receive funding from the state budget, its financial resources consist of income from studies paid by students, as well as income from the implementation of in-service training courses and professional education improvement programs. Based on long-term experience in the training of aviation specialists and qualified staff, RAI is an internationally certified higher education institution, which has the right to implement in-service training courses in the field of aviation. RAI has entered into a cooperation agreement with the Government of Kazakhstan duly represented by the state-owned company "Kazaeronavigatsia" on the professional development of aviation specialists and their retraining for the state needs of Kazakhstan. Such financial synergy allows the university to ensure financial sustainability and stability in conditions when the total number of students is decreasing.

The above mentioned allows the higher education institution to ensure competitive remuneration of the academic staff, which complies with the norms specified in the Cabinet of Ministers Regulations No. 445 of 5 July 2016 "Regulations on Remuneration for Teachers' Work". RAI financially ensures the participation of the academic staff in scientific conferences, preparation of scientific publications, methodological materials, textbooks and teaching aids in accordance with the procedure established by RAI ("Regulations on the organization of scientific and methodological work at the Riga Aeronautical Institute"), www.rai.lv/en/doc.

Number of students in the study direction (study program) in study year 2019 /2020 is 14.
The average annual tuition fee per student is 2150 EUR.
Revenues from tuition fees make up 2150 x 14 = 30100 EUR;
Taking into consideration that in-service training courses, professional development programs and the bachelor's study program are implemented in the same premises, using the same infrastructure, equipment and facilities, the same teaching staff participates in the implementation of the bachelor's program and courses, 50 percent of the revenues from the implementation of courses and in-service training programs are used to cover the expenses of the bachelor's program.
Revenues from in-service training courses and professional development programs implementation in 2019 were 49171 EUR.
Thus, the total revenue of the bachelor's study program is:
    30100 + (49171 x 0,5) = 54686 EUR.
The total expenses of the study direction are formed by:
1) Salaries of the teaching staff are of 50% of the total revenues or 27343 EUR;
2) Salaries of the general staff are 25% from the salaries of the teaching staff – 6836 EUR;
3) Social tax – (27343+6836) x 0,24 = 8203 EUR.
 Total expenditure on salaries and taxes is:
27343 + 6836 + 8203 = 42382 EUR.
 The remaining part of the revenue – (54686 – 42382 = 12304 EUR) is used to renew equipment and hardware and to purchase literature.

Expenses per one student:
1. Academic personnel remuneration is 976 EUR , which constitutes 45%;
2. General personnel remuneration is 244 EUR (11%);
3. Taxes are 293 EUR (14%);

4. Expenses for facilities 193,50 EUR (9 %);
5. study literature purchase 150,50 EUR (7 %);
6. equipment modernization 193,50 EUR (9 %);
7. Other unclassified expenses – 5%.

3.2. Provide information on the infrastructure and the material and technical provision required for the implementation of the study direction and the relevant study programmes. Specify whether the required provision is available to the higher education institution/ college, availability to the students, and the teaching staff (the specific equipment required for the relevant study programme shall be indicated in Part III, Chapter 3 below the respective study programme).

RAI has been operating at a profit all this time since its founding in 1992, and is the owner of its own buildings and the land. RAI registered capital is more than one million EUR. This allows for constant modernization of the Institute's infrastructure and equipment. On the first floor of the Institute there is a conference hall (180 m2), an auditorium-amphitheatre (90 m2) and a reading hall (90 m2). For practical and laboratory works on the second floor there are three specialized laboratories and a computer room (90 m2), with 32 workplaces. The Consumer Electronics Laboratory (38 m2) and the Laboratory of Aviation Electronics (36 m2) have been established for practical works in electronics. The aircraft laboratory (42 m2) is equipped with computer software CBT (computer base training), which provides individual PCs and, if necessary, on-screen learning of structures, assemblies and components, in addition, the laboratory also has the appropriate posters and nodes for assembly designs. The new building has a total of 14 auditoriums and work rooms with an area from 44 m2 to 61 m2.

In the newly built study building there are lecture auditoriums and study laboratories with the necessary aggregates and visual aids. Lectures are provided with the necessary auditoriums, equipped with multimedia equipment, study course programs and the necessary visual aids in the form of posters and video information, as well as real nodes objects.

In the old building there are 13 auditoriums - rooms for lectures, practical work and seminars with a useful area from 16 m2 to 75 m2, equipped with audio-visual equipment, TV and computers. Auditoriums where lectures take place are intended for 20-30 large groups of students, but auditoriums for seminars and practical work - for groups of 10 to 14 students.

Developing the material and technical base of the direction in recent years 28 computers, 7 projectors, as well as peripherals and other equipment for the renovation and modernization of the computer classroom were purchased. An additional class with access to specific databases has been created. Win Students computer program for study process administration has been purchased and implemented, centralized transition to newer operating systems (Windows10 Professional and Windows 8.1 Professional) has been performed, professional computer programs such as ArcGI, ArcView 9.3.1, EAD (The European AIS Database) programs have been purchased and used to provide WGS-84. For practical work in air traffic control, an individual procedure simulator and complex simulators are used, which are located in two rooms with an area of 65 m2, each of which provides 12 workplaces.

 In order to conduct practical activities RAI has created Electronics Laboratory, Electrical Installation Laboratory, Aircraft Maintenance Laboratory and Metal Work Laboratory. Electronics Laboratory is used for conducting practical and research works for electronics and electrical engineering based

on simulation programs. Electric Installation Laboratory is used to conduct practical activities connected with creation of electrical and electronic circuits, soldering works, definition of parameters and research works connected with functioning of units and equipment.

In 2015 RAI has significantly increased its material and technical resources by purchasing a helicopter, which especially stregthens resources of the aviation training sphere. This purchase served as a basis for Aircraft Maintenance Laboratory, which has at its disposal the helicopter, different aircraft construction components and details together with appropriate documentation, electronic equipment and special facilities, providing the students with an opportunity to perform aircraft maintenance and practical repair works.

RAI has at its disposal an Air Traffic Control Simulator which is based on computers integrated into a common network and which provides a possibility to create an Air Traffic Control Center and to simulate its functionality and service in real-time mode. Simulation process includes different facilities for data display and processing and different communication types. Students are using the Simulator in order to master the methods of providing maintenance for ground aviation electronic equipment.

In order to manage and operate modern communication systems as well as to organize the training efficiently, RAI uses fibre optic internet with transmission rate of 100 Mbit/s. RAI has 20 Wi-Fi points of contact and due to high performance routers almost the whole of the territory is covered by Wi-Fi.

RAI has a mail server with RAI domain name which is modernized on the basis of advanced technology platform, has a high level of security and provides reliable storage and exchange of information between structural units of the Institute.

We use modern learning and teaching devices in the study process, including Moodle system. BigBlueButton allows the teaching staff to cooperate with the students on-line, using audio and video communication, chats, etc.

9 overhead projectors, 15 multimedia projectors, 74 computer sets, 23 printers, 9 scanners, 5 audio loudspeaker sets, sound mixing console, 8 computer loudspeaker sets, 2 wireless intercom kits, 2 camcorders, a camera and 35 TVs are available in practical workshops, seminar rooms and classrooms.

  Most computers are connected to a single computer network with limited access to centrally located information, as well as access to Moodle system. One auditorium is set up as a computer classroom with 13 computers, printers and scanners and one computer classroom with 24-hour access. Students also have free access to computers in the RAI library. Free Wi-Fi is available to students throughout the Institute. Two training laboratories in the area of 50 and 25 m2 are equipped with the necessary laboratory stands, 10 physics measuring instrument stands and equipment, 10 electrical engineering stands and 10 radio engineering stands, which ensure the acquisition of physics and professional specialization study courses. A remote control for remote computer control has been purchased for more convenient demonstration of presentations.

The offices of the administration and academic staff (16 and 32 m2) are equipped with good furniture and the appropriate office equipment. Six computers with printers, a photocopier, a binding and perforating machine, as well as other necessary office equipment are available for the needs of the administration, management and control of the study process, as well as internal and external work organization.

3.3. Provide information on the system and procedures for the improvement and purchase of the methodological and informative provision. Description and assessment of the availability of the library and the databases to the students (including in digital environment) and their compliance with the needs of the study direction by specifying

whether the opening times of the library are appropriate for the students, as well as the number/ area of the premises, their suitability for individual studies and research work, the services provided by the library, the available literature for the implementation of the study direction, the databases available for the students in the respective field, the statistical data on their use, the procedures for the replenishment of the library stock, as well as the procedures and options for the subscription to the databases.

Methodological and informative provision of the study direction - study materials, descriptions of study courses in Latvian and English, as well as the informative base of study programs fully correspond to the aims of the study direction and program, their type and study language. The informative and methodological provision of studies is sufficient to fully meet the requirements specified in the State Standard of Professional Higher Education and the Professional Standard of Electronics Engineers (Appendices 12 and 13, respectively).

The library of the Riga Aeronautical Institute as a library of a private higher education institution has been registered in the Library Register in accordance with the procedures specified in the Library Law and has been issued a registration certificate. The aim of the library is to provide students, academic staff and the Institute management with study, reference and scientific literature.

The reading room of the library with modern equipment and modern interior is located in the new building of the Institute. The total area of the library premises is 120 m2, the part reserved for readers is 90 m2. The former library premises of 35 m2 are used for the needs of the fund's storage. The reading room is equipped with 21 workplaces, seven of which are computerized. In 2019, the library hardware was replaced with the newer models. The library is equipped with Wi-Fi, Internet access (100 Mbit/s), two scanners, a copier and a printer for the study process.

The library serves full-time and part-time students and the teaching staff by providing a reading room and home subscription. The library provides the following services: ordering books, using computers, printing documents, copying and scanning, using databases. The library performs consulting work in training users and using information resources. In academic year 2019/2020 the following databases are used: Zentralblatt MATH, SpringerLink, De Gruyter, Cambridge University Press, Emerald Publishing, Open Access.

The library fund consists of books, CDs, DVDs, audio cassettes, periodicals, final theses developed by students and samples of practical training reports. The collection of the library is supplemented in accordance with the study programs of the study directions. In the library, literature is available in the Latvian, English and Russian languages, which fully meets the needs of the students and academic staff. The entire collection of the library fund is placed in the library's local catalogue "Library". The total number of library resources consists of 6305 units, 5328 of which are books. In 2019, the RAI library supplemented its collection by 102 units, including the latest publications of foreign publishers in English and Latvian for the study direction "Information Technology, Computer Equipment, Electronics, Telecommunications, Computer Control and Computer Science" for the total amount of 1150 EUR. Students and lecturers are informed about the new acquisitions of the library once in four months on the RAI website. The works of RAI lecturers and the materials of scientific conferences organized by RAI are regularly published.

The library fund is regularly supplemented. The purchase of the necessary literature is decided at the Senate meeting after discussing the proposals. Proposals for the purchase of literature are usually made by the teaching staff, students, the director of the study program, the head of the library and the management of the Institute.

The library working hours are from 9:00 to 17:30 on weekdays, but during part-time classes, including holidays, the working hours are extended according to the list of part-time classes.

• RAI and its lecturers publish textbooks, lecture notes and study materials for seminars. Course descriptions, educational methodological complex and books in Russian are available in the Moodle system www.estud.rai.lv/moodle.

• The library has more than 2,960 titles, of which 337 titles are in Russian, and 6,173 books, of which 793 are books in Russian, excluding periodicals. The library book catalog is available on the RAI website: www.rai.lv/en/libr and in Moodle:
www.estud.rai.lv/moodle/course/index.php?categoryid=20,

• For study and research work, students have the opportunity to use various electronic databases and Internet information resources in foreign languages (Russian), for example, "Лань":
www.e.lanbook.com/books, the catalog is available in RAI Moodle:
www.estud.rai.lv/moodle/course/index.php?categoryid=20

• Catalog of the best works of RAI students with student works in Russian (practice reports, qualification works, etc.) is also available in the RAI library.

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

The teaching staff is elected to the academic position by the RAI Senate in accordance with the Regulations on Election to Academic Positions at the Riga Aeronautical Institute www.rai.lv/en/doc. An open competition is announced for the vacant academic position on the RAI website. According to the results of the competition, an employment contract is concluded with the elected lecturer in accordance with the procedures established by RAI.

RAI teaching staff consists of the elected academic staff and contracted guest staff. The guest staff consists of highly qualified specialists of the Latvian transport industry and teaching staff of other higher education institutions, who mainly deliver the basic theoretical courses of the industry and professional specialization courses of the industry.

The implementation of the study direction is ensured by 15 representatives of the teaching staff, 10 of whom have been elected to the RAI academic positions of a docent or a lecturer. Nine of the RAI faculty members hold a doctoral degree. Most of the RAI teaching staff have extensive experience of academic and professional work outside the Institute, as well as scientific work experience. The qualification and professional experience of the teaching staff fully complies with the requirements of regulatory enactments and the conditions for the implementation of the study program.

The ratio of the students and the teaching staff in the study direction is 14/15. However, in this regard, it should be taken into account that practically every lecturer is involved in the implementation of other study directions and study programs, and in addition participates in the implementation of in-service training courses and professional development programs. In addition, some lecturers, especially those employed as guest lecturers, work part-time. Taking this into account, for a study direction with such a small number of students and in general for a small higher education institution such as RAI, a more objective indicator would be the ratio of the total number of students to the total number of teaching staff, and this in academic year 2019/2020 there is 333/55 or 5.6 students per lecturer. Such a ratio of students and lecturers is quite appropriate for a higher education institution of engineering and technology studies direction.

When starting to implement the study program of the study field in 2015, 12 lecturers worked in the study field. Throughout this time, the number of lecturers has increased to 15. Several lecturers have left RAI due to the fact that they reached their retirement age and because of other reasons.

They have been replaced by new ones, including lecturers with practical work experience in the electronics industry. In general, it has allowed to reduce both the number of the delivered courses per lecturer, as well as to improve the delivery of the theoretical basic courses and professional specialization courses in the field, taking into account the experience of the invited lecturers in the relevant field. www.rai.lv/en/doc.

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

All RAI academic staff regularly improve and supplement their knowledge in the relevant in-service teacher training program. Thus, for example, in 2016, the academic staff of RAI acquired the continuing education program "Innovations in the Higher Education System", which was led by the teaching staff of the Faculty of Education and Management of Daugavpils University in an interesting and qualified manner.

RAI teaching staff whose English language skills need to be improved have the opportunity to attend the RAI English language licensed professional development program.

RAI has developed and implemented a motivation system for the academic staff with the aim to promote creative and high-quality academic and scientific activities, preparation and publication of scientific publications, teaching and study materials ("Regulations on the organization of scientific and methodological work at the Riga Aeronautical Institute", see RAI website, www.rai.lv/en/doc. In turn, regarding the organization of the study process, each lecturer responsible for the study course discusses and evaluates the improvements to be made in the course delivered by him/her with the director of the study program before the beginning of the study year. RAI management, by financially supporting the creative activity of the academic staff, has ensured more active participation of the staff in scientific conferences and facilitated the preparation of publications, which is evidenced by the increase in the number of publications in recent years.

3.6. Provide information on the number of the teaching staff members involved in the implementation of the relevant study programmes of the study direction, as well as the analysis and assessment of the academic and research workload. Provide the assessment of the incoming and outgoing mobility of the teaching staff over the reporting period, the mobility dynamics, and the issues which the higher education institution/ college must tackle with regard to the mobility of the teaching staff.

The implementation of the study direction is ensured by 15 representatives of the teaching staff, 10 of whom have been elected to the RAI academic positions of a docent or a lecturer. Nine of the RAI faculty members hold a doctoral degree. Most of the RAI teaching staff have extensive experience ofacademic and professional work outside the Institute, as well as scientific work experience. The

qualification and professional experience of the teaching staff fully complies with the requirements of regulatory enactments and the conditions for the implementation of the study program.

Information on the mobility of the teaching is provided in Appendix 7.

The mobility of the teaching staff is manifested in the mutual exchange of teaching staff, inviting to conduct separate study courses, experience exchange trips, as well as organizing joint scientific conferences.

Thus, for example, within the framework of the Erasmus program, in the autumn of 2019, three RAI lecturers participated in the events of "Training week" at Klaipeda University. The events, which were attended by the representatives of higher education institutions from 15 countries, included an exchange of experience on issues of student and faculty mobility, acquaintance with the organization of studies and academic work of Klaipeda University, as well as an agreement on further cooperation. In 2020, an exchange visit of the teaching staff of the Faculty of Informatics and Electronics of Klaipeda University to RAI was planned, which was postponed due to the Covid-19 pandemic.

In 2018, three RAI lecturers visited Vilnius Gediminas Technical University, where they got acquainted with the organization of the study process and the equipment of the electronics and electrical engineering laboratories. This year, two RAI lecturers visited Klaipeda University regarding concluding a student exchange agreement and the organization of student mobility between the two universities.

In 2017, one RAI lecturer participated in a scientific conference at Vilnius Gediminas Technical University.

In 2016, three RAI lecturers paid an experience exchange visit to the Kielce University of Technology (Poland), where they got acquainted with the informative and material provision of the study programs in the field of electronics. This year, one RAI student stayed at the Kielce University of Technology as part of an exchange, where he collected information on the topic of his bachelor's thesis.

During the reporting period, several lecturers from Vilnius Gediminas Technical University and Kielce Technological University attended RAI and conducted separate lectures, as well as participated in the scientific conferences organized by RAI.

RAI faces the following difficulties related to teaching staff mobility:

- The problem of flexible replacement of teachers involved in the academic mobility program in the educational process
- Program "Maintenance of electronic equipment" specifics due to the peculiarities of specialization.
- Specifics the main job employment contracts of academic staff.

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

Due to the small number of students, studies at RAI are in fact individual training. Consequently,

students have quite wide opportunities to receive the support of the Institute staff in solving both study and household issues. This is especially related to foreign students, work with whom is the relevant RAI official's job responsibility. Students are provided with assistance in the issues related to the recognition of educational documents, processing of entry and residence documents and resolving issues of residence, including the provision of RAI service hotel services. Despite the fact that due to the specifics of RAI, there are no students with special needs at the Institute, RAI has all the necessary equipment to enable persons with special needs to participate in the events organized by RAI - scientific conferences, seminars and graduation events.

II - Description of the Study Direction (4. Scientific Research and Artistic Creation)

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

RAI is a professional higher education institution, which is mainly focused on preparing qualified specialists for the labour market. Research is not fundamental, but it is of an application nature, usually related to the solution of a specific, practical problem in the field of transport. The total number of publications of the academic staff involved in the study direction in the last six years is 50, which is a recognizable indicator for a vocational higher education institution.
The teaching staff carries out research work in several directions. The main topics are as follows:

possibilities of using and applying mathematical methods in economics,

optimization of various types of freight and passenger transportation,

aircraft design and strength calculation methods,

algorithms and programming of aviation tasks,

educational methodology and teaching methodology issues.

The results of the research work of the teaching staff are reflected in their scientific publications

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

Research work is carried out on the topics included in the courses delivered by the lecturers, as well as on other topics. If the research projects carried out by the lecturers coincide with the issues of a course, then the lecturers usually inform and demonstrate the results of the scientific work, as well as, if possible, involve the students in the research work. Thus, the study work is enriched with additional information and examples of application of practical knowledge. Taking into account that

RAI is a highly professional higher education institution, where only professional study programs are implemented with an emphasis on training qualified specialists for the needs of transport companies, research at the Institute is practical, but the scope of research and science is not so large compared to other universities. The necessary connection with the modern development trends and technical innovations is largely implemented by attracting knowledgeable, experienced specialists from transport companies with a master's or doctoral degree.

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

The scientific activity of RAI staff and students is reflected in scientific and practical conferences. RAI organizes a student scientific conference every year and every two years an international scientific conference. Peer-reviewed collections of publications are published on the results of the conferences. Thus, for example, in 2018, an international scientific conference "ENGINEERING AND TRANSPORT SERVICES - 2018" with participants from Lithuania and Poland and the annual student scientific conference were organized. The teaching staff of the Institute regularly participate in conferences organized by other institutions. A list of RAI faculty publications is attached in Appendix 5.

The international scientific conference planned in 2020, dedicated to transport education, logistics and engineering, has been postponed to 2021 due to the Covid-19 pandemic. The conference will cover the following topics:
Aviation equipment. Maintenance technologies and applications;
Aeronautical navigation. Air traffic organization;
Transport system management;
Electronics and robotics;
Integrated risk management: innovative management models;
Transport logistics, economics, marketing;
Information technology. Cyber security;
Aircraft and aerodynamics. Strength and safety of structures;
Unmanned aerial vehicles;
Composite materials and materials technology;
Environmental ecology and safety;
Transport security;
Sustainability and the use of renewable energy in transport;
Trends in education.

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

examples and the summary of the quantitative data on the activities in the field of scientific research and/or artistic creation relevant to the study direction over the reporting period, for instance, the publications, participation in conferences, activities in the field of artistic creation, participation in projects by the academic staff members, etc., by listing the aforementioned according to the relevance.

In order to promote the research activities of RAI teaching staff, a motivation system for academic staff has been developed and implemented wwwrai.lv/en/doc. The scientific activity of RAI staff and students is reflected in scientific and practical conferences. RAI organizes a student scientific conference every year and every two years an international scientific conference.

Lecturers perform methodological, scientific and research activities. The main scientific and research works as well as publications are reflected in the lectures biographies (Europass CV), which are available in Annex 5. Scientific results of lecturers are the following: Publications 53; Conferences and seminars: 50; Awards and prizes: 12; Other activities: 15.

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

The involvement of students in scientific research is promoted in such a way that students' scientific conferences offer and review topics that are close and related to the topics of possible bachelor's theses. Thus, the student has already gained some practical experience in information processing and analysis, calculations and conclusions before the development of the bachelor's thesis.
The following research topics are offered at student scientific conferences (the list is updated every year):

10 students of the evaluated study field have participated in scientific conferences (as RAI graduates in the annual student conference)

1. Assessment of the Latvian aviation transport market;
2. International transport management;
3. Transport development forecasts in freight and passenger transport;
4. Analysis of the operation of the transport organization security system and its improvement;
5. Analysis of the human factor principle in the air traffic management system;
6. Comparative risk assessment and vehicle insurance in Latvia and other European countries;
7. Analysis of compliance with the European standards for ecological transport regulations in Latvia;
8. Defecting and control process of aircraft wing and alignment problems;
9. Determination of the effect of externally suspended cargo on helicopter flight dynamics.

4.6. Provide a brief description and assessment of the forms of innovation (for instance, product, process, marketing, and organisational innovation) generally used in the study

direction subject to the assessment, by giving the respective examples and assessing their impact on the study process.

The following can be considered as innovations in study process:

BigBlueButton bimodal education system use for teaching staff and student collaboration in the Moodle environment - online audio, video, chat, etc. way;

"Brainstorming" methods use to solve the problems in student classes and staff meetings;

Use of "Crawford map" methods for conflict resolution.

In accordance with our experience the appropriate innovations provide the possibility to organize the study process in a more efficient manner and students can in a more profound and sound way master the subjects included in the study process. We would like to put a particular emphasis on the advantages of using BigBlueButton system for distant cooperation between the students and academic personnel when restrictive measures were applied during the Covid-19 pandemy.

II - Description of the Study Direction (5. Cooperation and Internationalisation)

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

RAI has a sufficiently wide and close cooperation with employers and professional organizations in Latvia and abroad. The main criteria for selecting cooperation partners are the field and area of activity- these are universities that implement similar study programs and companies that are interested in specialists trained by RAI and who can provide appropriate internships.
RAI cooperation with employers takes very different forms throughout the implementation of the program, from the idea of developing a new program and licensing it to ordering new specialists and receiving them at workplaces.
According to RAI's long-term and successful educational experience, the participation of employers in the implementation of the study programs is reflected in the following way:
 negotiations on the usefulness and necessity of the program, as well as on the preliminary demand for the relevant specialists from the employers;
 consultations on the content and structure of the programs, in particular on the emphasis on professional specialization courses and practical training;
 proposals and recommendations for the improvement and development of study programs;
 participation of employers' representatives in the implementation of programs as guest lecturers;
 provision of internships;

participation of employers' representatives in the position of the chairman and members of the examination commissions;

participation of employers with reports in scientific conferences organized by RAI;

participation of employers in surveys organized by RAI on the quality of the prepared specialists.

Cooperation in the preparation and training of specialists also takes place with the airlines RAF-AVIA, SIA "VAM-Trans", the International Aviation Academy "PAN AM", as well as the State Agency of the Ministry of Transport of the Republic of Latvia „Civilās aviācijas aģentūra".

With regard to foreign employers, a co-operation agreement has been concluded with the Kazakhstan state-owned company "Kazaeronavigacija", which provides for the training of specialists in the field of aviation services, internships and internships organization, as well as scientific and practical co-operation.

RAI main cooperation partners are: industry professionals; employers - companies, organizations, public administration institutions. Associations, societies of higher education institutions and industries; higher education experts. Representatives of other higher education institutions; higher education institutions. Secondary general and secondary vocational education institutions.

Cooperation takes place in a wide range, it is implemented both in Latvia and abroad. When choosing cooperation partners, attention is paid to the partner's reputation, activity, connection with the needs of the study field, the specialty of the study program.

Cooperation partners with whom regular cooperation takes place ensure the achievement of the goals of the direction and study results, using their experience. They provide guest lectures, study tours, internships or review of bachelor's theses and participation in the state final examination commission, improvement and updating of the study program content and study course content, as well as staff training in research, resource sharing, implementation of joint projects, etc.

5.2. Specify the system or mechanisms, which are used to attract the students and the teaching staff from abroad and provide a description of the dynamics of the number of the attracted students and the teaching staff.

In order to attract foreign students RAI has signed the Cooperation Agreement with student recruiting agency Baltic Center Ltd. (Annex 6). RAI prepares and sends out advertising materials, as well as participates in exibitions organized abroad with Baltic Center assistance. Foreigners make up 30% of students in RAI. There are no foreign students in the Professional Bachelor's study program "Maintenance of Electronic Equipment".

The recruitment of lecturers from abroad usually takes place on the basis of mutual contacts, meeting at international conferences. Lecturers from abroad convene some lectures to RAI students. Data about foreign students see in annex 11.

5.3. In the event that the study programme entails a traineeship, provide a description of the traineeship options offered to the students, as well as the provision, and work organisation. Specify whether the higher education institution/ college provides assistance in finding traineeships.

Practical training is meant to be used for acquiring and strengthening practical skills. Internships in companies are organized by dividing the total load by semesters (Appendix 8). The director of the study program, a representative of the enterprise of the practical training and the trainee enter into a practical training agreement. For the successful course and management of the practical training, a description of internships has been developed, which includes the aim and tasks of the practical training, its content and a report on the practical training. Internships are provided in companies with which a cooperation agreement has been concluded (Appendix 9). The estimated number of internships in each company is 2-3 students per year.

Practical training tasks are related to the achievement of such study program outcomes as:
- skills in operation of equipment, its maintenance, ability to understand elements of circuits, read functional, principal and assembly diagrams, perform calculations;
- skills in equipment diagnostics, testing, repair and adjustment, ability to perform preventive and regulated works.
In order to achieve the mentioned results of the program more fully and successfully, the total amount of practical training in the study program is divided into three parts of practical training - electrical installation works (3 CP), repair, adjustment and tuning of radio equipment (5 CP) and enterprise-based practical training (12 CP).

Practical training in electrical installation, repair, adjustment and tuning of radio equipment, in accordance with the study program, takes place in the Laboratory of Electrical Installation and Locksmiths. The laboratory is equipped with the necessary materials for electrical installation work, technological maps and schemes. Each student is issued an individual task and a technological map of the route.

During the internship, the student gets acquainted with the technology of manufacturing products and their peculiarities. The internship takes place under the supervision and guidance of an instructor, the student hands over the finished product to the teaching staff, who accepts and evaluates it.
During the internship, an internship supervisor-consultant is assigned to support the student during the period of his/her practical training, who coordinates the internship, advises the student and solves the issues related to the internship with the respective company.

5.4. In the event that joint study programmes are implemented in the study direction, provide the justification of the creation of the joint study programmes and a description and assessment of the selection of the partnering higher education institutions by including information on the principles and the procedures for the creation and implementation of these joint study programmes. In the event that no joint study programmes are implemented in the study direction, provide a description and assessment of the plans of the higher education institution/ college for the creation of such study programmes within the study direction.

There is no any joint study program included in study direction

II - Description of the Study Direction (6. Implementation of the

Recommendations Received During the Previous Assessment Procedures)

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

The previous assessment of the professional bachelor study program "Maintenance of Electronic Equipment" was performed in 2015 as a result of the licensing process. The expert recommendations were very professional, well-defined and well understood by the Institute. Consequently, RAI immediately started implementing them. As a result of the implementation of the recommendations, the content and organization of the study courses and the study program clearly improved, which in turn improved the quality of the studies. An overview of the results of the implementation of the recommendations is attached.

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

The following improvements have been made:

-The lists of literature are updated and supplemented with English language sources, which cover all the topics included in the specific study course in the descriptions of the study courses,;
-Descriptions of study courses are supplemented with a description of students' independent work in order to reflect the essence of work in each specific study course;
-The study courses EIA314 "TV and video equipment, their maintenance and repair" are reviewed and updated, including theoretical and practical works on current technologies;
-The study course EIA207 "Electrical Engineering" is planned before EIA208 "Electronics", EIA209 "Electronic Measuring Devices";
-The number of study courses for teaching staff who implement many study courses is reduced. If the number of courses implemented for individual teaching staff reached as much as 15-16, then after the reduction the number of courses per teaching staff usually does not exceed 3-4. The maximum number of courses (6-7) is for three teaching staff.

Annexes

I. Information on the Higher Education Institution/ College		
List of the governing regulatory enactments and regulations of the higher education institution/ college	1_app_List of Internal Regulations.pdf	1_piel_Iekšējo normatīvo aktu saraksts.pdf
Information on the implementation of the study direction in the branches of the higher education institution/ college (if applicable)		
Management structure of the higher education institution/ college	2_app_RAI Structure 2020.pdf	2_piel_RAI struktūra 2020.pdf
II. Description of the Study Direction - 1. Management of the Study Direction		
Plan for the development of the study direction (if applicable)	RAI_ development_ plan .docx	attistibas_plans_RAI.docx
Management structure of the study direction	Management structure of Electronic equipment maintenance.png	Elektronisko iekārtu apkalpošana vadības struktūrā.jpg
II. Description of the Study Direction - 3. Resources and Provision of the Study Direction		
Basic information on the teaching staff involved in the implementation of the study direction	3_List Teaching Staff_.pdf	3_piel_Mācībspēku saraksts_.pdf
Biographies of the teaching staff members (in Europass Curriculum Vitae format)	Staff Curriculum Vitae.zip	Mācībspēku biogrāfijas.zip
Summary of the statistical data on the incoming and outgoing mobility of the teaching staff over the reporting period	7_app_Statistics ForeignTeaching Staff.pdf	7_piel_Statistikas dati par ārvalstu mācībspēkiem.pdf
II. Description of the Study Direction - 4. Scientific Research and Artistic Creation		
List of the publications, patents, and artistic creations of the teaching staff over the reporting period	5_app_List of Teaching Staff Publications (2)_.pdf	5_piel_Mācībspēku publikāciju saraksts.pdf
II. Description of the Study Direction - 5. Cooperation and Internationalisation		
List of cooperation agreements	6_app_List of Cooperation Agreements.pdf	6_piel_Sadarbības līgumu saraksts.pdf
Statistical data on the teaching staff and the students from abroad	11_app_Statistical data_.pdf	11_piel_Statistikas dati_.pdf
Statistical data on the mobility of students (by specifying the study programmes)	7_app_Statistics Foreign Students.pdf	7_piel_Statistikas dati par ārvalstu studējošajiem.pdf
Description of the organisation of the traineeship of the students	8_app_Placement Regulations.pdf	8_piel_Prakses nolikums.pdf
Information on the agreements and other documents confirming the traineeship of the students in companies	9_app_List of Practise agreements.pdf	9_piel_Prakses līgumu saraksts.pdf
II. Description of the Study Direction - 6. Implementation of the Recommendations Received During the Previous Assessment Procedures		
Overview of the implementation of the provided recommendations	10_app_Report Implementation Recommendations.pdf	10_piel_Rekomendāciju izpildes pārskats.pdf
Description of the Study Programme - Other mandatory attachments		
Confirmation signed by the rector, director or the head of the study programme or the study direction of the higher education institution/ college which states that the official language proficiency of the teaching staff involved in the implementation of the relevant study programmes of the study direction complies 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.	21_app_apliecinajums_EN.pdf	21_piel_Apliecinājums valsts valoda.pdf
III. Description of the Study Programme - 1. Indicators Describing the Study Programme		
Compliance of the joint study programme with the provisions of the Law on Institutions of Higher Education (table)		
Statistics on the students over the reporting period		
III. Description of the Study Programme - 2. The Content of Studies and Implementation Thereof		
Compliance of the study programme with the State Education Standard		
Compliance of the qualification to be acquired upon completion of the study programme with the professional standard (if applicable)		
Compliance of the study programme with the specific regulatory framework applicable to the relevant field (if applicable)		
Mapping of the study courses/ modules for the achievement of the learning outcomes of the study programme		
Curriculum of the study programme (for each type and form of the implementation of the study programme)		
Descriptions of the study courses/ modules		
Description of the Study Direction - Other mandatory attachments		
Sample of the diploma to be issued for the acquisition of the study programme.		
Description of the Study Programme - Other mandatory attachments		
Document confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued		

Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme		
Confirmation of the higher education institution/ college that 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 according to European language levels (see the levels under www.europass.lv), if the study programme or any part thereof is to be implemented in a foreign language.		
If the study programmes in the study direction subject to the assessment are doctoral study programmes, a confirmation that at least five teaching staff members with doctoral degree are among the academic staff of a doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field or sub-field of science, in which the study programme has intended to award a scientific degree.		
If academic study programmes are implemented within the study direction, a document confirming that the academic staff of the academic study programme complies with the provisions set out in Section 55, Paragraph one, Clause three of the Law on Institutions of Higher Education		
Sample (or samples) of the study agreement		
If academic study programmes for less than 250 full-time students are implemented within the study direction, the opinion of the Council for Higher Education shall be attached in compliance with Section 55, Paragraph two of the Law on Institutions of Higher Education.		
Description of the Study Direction - Other mandatory attachments		
Electronically signed application form for assessment of a study direction	RAI-Iesniegums_novertesanai_newENG.edoc	RAI_Iesniegums_novertesanai_new.edoc

Other annexes

Name of document	Document

Electronic equipment maintenance

Title of the higher education institution	*Information Technology, Computer Hardware, Electronics, Telecommunications, Computer Management, and Computer Science*
ProcedureStudyProgram.Name	*Electronic equipment maintenance*
Education classification code	*42523*
Type of the study programme	*Professional bachelor study programme*
Name of the study programme director	*Vladimirs*
Surname of the study programme director	*Reiskarts*
E-mail of the study programme director	*v.reiskarts@rai.lv*
Title of the study programme director	*Dr.comp.sc.*
Phone of the study programme director	*67677831*
Goal of the study programme	*To prepare highly qualified, comprehensively developed specialists with creative and analytical capabilities in the maintenance, repair and operation of electronic equipment.*
Tasks of the study programme	*1. To provide the student electronics engineer with the necessary theoretical knowledge (natural sciences, information technology, technical, humanities and professional study courses);* *2. To provide students with practical skills mastering opportunities that allow servicing, operation and repair of a wide range of aviation and electronic household appliances;* *3. Develop the ability to formulate and solve the problems of the electronics industry, as determined by the theoretical knowledge, practical skills and competence required by the electronics engineer.*
Results of the study programme	*Students obtain:* *The student has obtained:* *- knowledge in electronics fundamentals, digital technology, information transmission, processing and reproduction, computer technology, parameters of airport radio-electronic equipment ,their constructions and circuits;* *- knowledge of employment relations, business fundamentals, safety and environmental protection issues, foreign language, management and communication skills;* *- skills in the management of equipment, their maintenance, the ability to understand the elements of schemes, read functional, principled and assembly diagrams, perform calculations;* *- skills in the diagnosis, testing, repair and regulation of equipment, skills in preventive and regulatory works.*
Final examination upon the completion of the study programme	*Bachelor Thesis*

Study programme forms

Full time studies - 4 years - latvian

Study type and form	*Full time studies*

Duration in full years	*4*
Duration in month	*0*
Language	*latvian*
Amount (CP)	*160*
Admission requirements (in English)	*General secondary or vocational secondary education*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Bachelor degree in electronic equipment maintenance*
Qualification to be obtained (in english)	*Electronics engineer*

Places of implementation

Place name	City	Address
Riga Aeronautical Institute	RĪGA	MEŽKALNA IELA 9, ZEMGALES PRIEKŠPILSĒTA, RĪGA, LV-1058

Full time studies - 4 years - russian

Study type and form	*Full time studies*
Duration in full years	*4*
Duration in month	*0*
Language	*russian*
Amount (CP)	*160*
Admission requirements (in English)	*General secondary or vocational secondary education, English language skills corresponds to B2 level.*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Bachelor degree in electronic equipment maintenance*
Qualification to be obtained (in english)	*Electronics engineer*

Places of implementation

Place name	City	Address
Riga Aeronautical Institute	RĪGA	MEŽKALNA IELA 9, ZEMGALES PRIEKŠPILSĒTA, RĪGA, LV-1058

Full time studies - 4 years - english

Study type and form	*Full time studies*
Duration in full years	*4*
Duration in month	*0*
Language	*english*
Amount (CP)	*160*
Admission requirements (in English)	*General secondary or vocational secondary education, English language skills corresponds to B2 level.*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Bachelor degree in electronic equipment maintenance*
Qualification to be obtained (in english)	*Electronics engineer*

Places of implementation

Place name	City	Address
Riga Aeronautical Institute	RĪGA	MEŽKALNA IELA 9, ZEMGALES PRIEKŠPILSĒTA, RĪGA, LV-1058

Part time studies - 4 years, 5 months - latvian

Study type and form	*Part time studies*
Duration in full years	*4*
Duration in month	*5*
Language	*latvian*
Amount (CP)	*160*
Admission requirements (in English)	*General secondary or vocational secondary education*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Bachelor degree in electronic equipment maintenance*
Qualification to be obtained (in english)	*electronics engineer*

Places of implementation

Place name	City	Address
Riga Aeronautical Institute	RĪGA	MEŽKALNA IELA 9, ZEMGALES PRIEKŠPILSĒTA, RĪGA, LV-1058

Part time studies - 4 years, 5 months - russian

Study type and form	*Part time studies*
Duration in full years	*4*
Duration in month	*5*
Language	*russian*
Amount (CP)	*160*
Admission requirements (in English)	*General secondary or vocational secondary education, English language skills corresponds to B2 level.*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Bachelor degree in electronic equipment maintenance*
Qualification to be obtained (in english)	*Electronics engineer*

Places of implementation

Place name	City	Address
Riga Aeronautical Institute	RĪGA	MEŽKALNA IELA 9, ZEMGALES PRIEKŠPILSĒTA, RĪGA, LV-1058

Part time studies - 4 years, 5 months - english

Study type and form	*Part time studies*
Duration in full years	*4*
Duration in month	*5*
Language	*english*
Amount (CP)	*160*
Admission requirements (in English)	*General secondary or vocational secondary education, English language skills corresponds to B2 level*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Bachelor degree in electronic equipment maintenance*
Qualification to be obtained (in english)	*Electronics engineer*

Places of implementation

Place name	City	Address
Riga Aeronautical Institute	RĪGA	MEŽKALNA IELA 9, ZEMGALES PRIEKŠPILSĒTA, RĪGA, LV-1058

III - DESCRIPTION OF THE STUDY PROGRAMME (1. Indicators Describing the Study Programme)

1.1. Description and analysis of changes in study programme parameters that have taken place since the issue of the previous accreditation certificate of study direction or the license of study programme if study programme is not included in the accreditation page of the study direction

There are no significant changes in the parameters of the study program, but the new course Latvian language for foreign students in the amount of 2 credits has been added in the section "General education study courses" of the professional bachelor study program "Maintenance of electronic equipment". RAI constantly expands the range of use of modern technologies in its work based on expert recommendations, taking into account today's changing requirements and adapting to the current situation.

1.2. Analysis and assessment of the statistical data on the students of the respective study programme, the dynamics of the number of the students, and the factors affecting the changes to the number of the students. The analysis shall be broken down in the different study forms, types, and languages.

Statistical data on the students in the Professional Bachelor study program "Electronic equipment maintenance" are attached in Appendix 11. As can be seen from the tables, the number of students is very small, which allows for the actual provision of individual training. Despite the demand of employers and the labour market for electronics specialists, the number of applicants and thus the number of students is not increasing. In our opinion, this is mainly related to the sufficiently complex content of the study program, which requires a sufficiently good prior knowledge in mathematics and natural sciences at the secondary education level. This is evidenced by the opinions of students in the study program, graduates and especially dropped out students, who point to the difficulties of successfully acquiring study courses precisely due to prior knowledge of mathematics and physics. For details pls see annex 11.

1.3. Analysis and assessment of the interrelation between the name of the study programme, the degree or professional qualification to be acquired or the degree and professional qualification to be acquired, the aims, objectives, learning outcomes, and the admission requirements.

The study program has been developed in accordance with the Cabinet of Ministers Regulations No. 512 of 26 August 2014 "Regulations on the state standard of the second level professional higher education" (Appendix 12), the Electronics Engineer Professional Standard (Appendix 13), the Cabinet of Ministers Regulations No. 795 of 11 December 2015 "Regulations for Licensing of Study

Programs", as well as the Law on Higher Education Institutions and the Constitution of RAI (Latv. - Satversme). As a result of licensing of study programs, three experts evaluated it and gave a positive opinion. The above-mentioned confirms that the title of the study program, the entitled degree and professional qualification, the study program objective, its tasks, outcomes to be achieved and admission requirements are mutually agreed, logically combined, meets the requirement of the Law and labor market. The requirements for admission in Russian and English fully correspond to the internal documents of the RAI and the parameters of the study program.

III - DESCRIPTION OF THE STUDY PROGRAMME (2. The Content of Studies and Implementation Thereof)

2.1. Assessment of the relevance of the content of the study course/ module and the compliance with the needs of the relevant industry and labour market and with the trends in science. Provide information on how and whether the content of the study course/ module is updated in line with the development trends of the relevant industry, labour market, and science. In case of master's and doctoral study programmes, specify and provide the justification as to whether the degrees are awarded in view of the developments and findings in the field of science or artistic creation.

Professional Bachelor study program "Electronic equipment maintenance" has been developed on the basis of the proposal of employers in accordance with the demand of the labour market. The program was launched in 2015 on the basis of a license issued by the Study Quality Commission in the accredited study direction "Information Technology, Computer Engineering, Electronics, Telecommunications, Computer Control and Computer Science".

The potential jobs of the graduates of the program are airports, the development of which in Latvia is ensured by their quite favourable geographical position, while the continuous development of electronic equipment and hardware, as well as increasing complexity, creates an increasing demand for specialists who are able to maintain such equipment (repair work is gradually replaced by maintenance). New electronic equipment companies are slowly developing and the need to properly service increasingly sophisticated electronic complexes is growing. Consequently, a significant increase in the demand for electronics engineers is expected.

The customer of the study program is either the respective company or organization, or the student himself. The student, being a customer, is able to influence the study process. The student demands from the higher education institution constant improvement of the study program, as well as renewal and improvement of material provision and methodological developments. Students influence the demand of the education market, which determines the requirements for study programs, study plans and study quality.

Taking into account the opinion of employers' representatives and labour market development trends, it can be tentatively forecasted that at least 10-15 new electronics engineers are needed in Latvia per year.

The participation of employers in the development of the study program reflected in the following way:

- discussions on the usefulness and necessity of the program, as well as on the preliminary demand for electronics specialists from employers;
- consultations on the content and structure of the program, especially on the emphasis on professional specialization study courses and practical training;
- evaluation and analysis of the prepared study program, proposals and recommendations.

Employers have repeatedly emphasized that there is still a demand in the labour market for electronics specialists who not only have good professional skills and abilities, but who also have comprehensive and deep theoretical knowledge. Acquisition of the professional bachelor study program "Electronic equipment maintenance" ensures the acquisition of a professional bachelor degree in maintenance of electronic equipment and the qualification of an electronics engineer, which confirms the theoretical and professional training of the future specialist.

In addition, the signed cooperation agreements with employers and their involvement in the implementation of students' internships and in the selection of bachelor's thesis topics and coordination of thesis development allow for continuous improvement of the content of study courses, especially professional specialization courses.

2.2. Assessment of the interrelation between the information included in the study courses/ modules, the intended learning outcomes, the set aims and other indicators, the relation between the aims of the study course/ module and the aims and intended outcomes of the study programme. In case of a doctoral study programme, provide a description of the main research roadmaps and the impact of the study programme on research and other education levels.

The objective and tasks of the study program are coordinated with the objectives and tasks of the study courses forming the content of the program. General education study courses provide students with such a theoretical knowledge base that allows them to successfully acquire basic theoretical courses in the field. In turn, the theoretical knowledge of the field is the basis for the acquisition of professional specialization courses in the field. Basic theoretical knowledge of the field and knowledge of professional specialization allow students to successfully acquire practical work skills and abilities that they perform during practice.

The structure of the study program is organized so that at the beginning of the studies there are mostly study courses that ensure the acquisition of knowledge necessary for obtaining a professional bachelor degree, but at the end of the studies - study courses that ensure the acquisition of the courses necessary for qualification. Such a set of theoretical and professional knowledge, skills and abilities allows the student as the future electronics engineer to perform maintenance, operation and repair of the airport and consumer electronic equipment.

The content of the study courses is organized in such a way that the courses focused on obtaining a professional degree are located in the section of general education study courses and theoretical basic courses in the field. General education study courses and basic theoretical courses in the field are mainly conducted in the first three semesters. The courses of the study program include topics not only with the current situation in the field of electronics, but also the peculiarities of solving perspective problems and issues in the directions of electronics development, as well as the ability to work in a team of electronics specialists.

The described study course organization which concerns separate blocks gives the possibility to join

successfully results obtained from different courses. For example, results obtained from theoretical basic course „Electronics" provide a possibility to master successfully professional specialization courses such as "Electrical and Electronic Equipment Maintenance and Repair of Motor Vehicles", "Radar Surveillance System Design Principles", „The Basics of Robotics" and other courses which help to implement successfully such study projects as „Electronic Devices", „Maintenance and Operation of Electrical Appliances" and study project „Transmitters, Receivers".

2.3. Assessment of the study implementation methods (including the evaluation methods) by providing the analysis of how the study implementation methods (including the evaluation methods) used in the study courses/ modules are selected, what they are, and how they contribute to the achievement of the learning outcomes of the study courses and the aims of the study programme. Provide an explanation of how the student-centred principles are taken into account in the implementation of the study process.

Various methods are used to acquire and evaluate the courses and practical skills of the program - situation analysis, group work, problem-oriented studies, use of information technology. By applying individual teaching and study methods and technical means, students are provided with a real operating environment for acquiring practical skills. Professional higher education is provided with a broad view of professional ethics, as well as an understanding of the impact of the industry on the environment and society, the possibility to choose study courses according to their interests and needs is provided.

The principles of student-centred education have been taken into account in the implementation of the study program - students' representatives have participated in the development of the program, its discussion and approval. The schedule of classes and examination times have been developed taking into account the possibilities of the students as employed persons. Students are informed about the examination methods, criteria and the procedure for appealing the assessment. This information is set out in the Quality Management Manual (http://rai.lv/lv/doc). Students have a veto right in the Senate on issues that affect the interests of students.

The main form of studies at the Institute is a lecture. Lectures are implemented in contact classes with students. Student working hours consist of contact classes and independent work. Usually the ratio of contact time and student's independent working time in full-time studies is 4/6, but in part-time studies 2/8 or 1.5 / 8.5. Depending on the specifics of the study course, the ratio between the contact time and the student's independent working time can be changed. It is determined by the director of the study program in coordination with the course lecturer and approved by the RAI Senate.

In addition to lectures, seminars, practical work, discussions, situation analysis, debates and tests are used to present the study course. Lectures are given to all students of the study course together, but other forms of studies are implemented in small groups. Each lecture of the course indicates the objective of the presented content, tasks and achieved outcomes.

Laboratory works are organized in accordance with the study program. Laboratory work is performed in specialized classes. Execution of laboratory work includes four stages: preparation for laboratory work; performing laboratory work in the laboratory; analysis of the results, preparation and defence of the work report. No more than 2-3 students develop a laboratory work of the same topic at a time.

The study program uses the e-learning environment Moodle. The system is constantly updated with electronic study materials.

Practical training is meant to be used for acquiring and strengthening practical skill

2.4. If the study programme entails a traineeship, provide the analysis and assessment of the relation between the tasks of the traineeship included in the study programme and the learning outcomes of the study programme. Specify how the higher education institution/ college supports the students within the study programme regarding the fulfilment of the tasks set for students during the traineeship.

Internships in companies are organized by dividing the total load by semesters. The director of the study program, a representative of the enterprise of the practical training and the trainee enter into a practical training agreement. For the successful course and management of the practical training, a description of internships has been developed, which includes the aim and tasks of the practical training, its content and a report on the practical training. Internships are provided in companies with which a cooperation agreement has been concluded . The estimated number of internships in each company is 2-3 students per year.

Practical training tasks are related to the achievement of such study program outcomes as:

- skills in operation of equipment, its maintenance, ability to understand elements of circuits, read functional, principal and assembly diagrams, perform calculations;
- skills in equipment diagnostics, testing, repair and adjustment, ability to perform preventive and regulated works.

In order to achieve the mentioned results of the program more fully and successfully, the total amount of practical training in the study program is divided into three parts of practical training - electrical installation works (3 CP), repair, adjustment and tuning of radio equipment (5 CP) and enterprise-based practical training (12 CP).

Practical training in electrical installation, repair, adjustment and tuning of radio equipment, in accordance with the study program, takes place in the Laboratory of Electrical Installation and Locksmiths. The laboratory is equipped with the necessary materials for electrical installation work, technological maps and schemes. Each student is issued an individual task and a technological map of the route. During the internship, the student gets acquainted with the technology of manufacturing products and their peculiarities. The internship takes place under the supervision and guidance of an instructor, the student hands over the finished product to the teaching staff, who accepts and evaluates it.

During the internship, an internship supervisor-consultant is assigned to support the student during the period of his/her practical training, who coordinates the internship, advises the student and solves the issues related to the internship with the respective company.

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

The student usually chooses the topic of the bachelor thesis from the list of topics offered by RAI in the second semester of the 3rd study year or in the first semester of the 4th study year. The list of topics is compiled by the Institute together with employers, including the managers of the companies of students' practical training, in accordance with the most current trends in the industry and the labour market and the current topics recommended by the European Aviation Safety Agency. RAI implements in-service training courses for aviation specialists certified by the European Aviation Safety Agency on the current topics.

The development of a bachelor thesis with a project part is the final stage of professional bachelor studies and qualification acquisition. On the basis of the defending the bachelor thesis, the relevant professional bachelor degree is entitled. The bachelor thesis is an analytical study, the conclusions of which are based on a review of the literature on a problem formulated within the bachelor study program, creating a technical solution to the analysed problem. Completion of the bachelor thesis is based on the knowledge, skills and abilities acquired during the study program. The internship task includes a section on collecting specific materials on the current topics. Third- or fourth-year students choose and coordinate the topics of the bachelor thesis with the supervisor-consultant and also coordinate the materials for work obtained in companies. The topics of bachelor theses and their supervisors are approved by the RAI Senate. The bachelor thesis is prepared in accordance with the Regulations on the development and defence of bachelor and master theses www.rai.lv/en/doc. A fully completed and bound bachelor thesis is signed by the student and the supervisor. After reviewing the thesis, the supervisor determines the reviewer of the bachelor thesis. The bachelor thesis with the project part is defended at the State Examination Commission, the composition of which is approved by the Rector. One of the employers' representatives, usually in the position of the head of the commission or his/her deputy, must participate in the bachelor thesis defence commission.

The sample topics of the bachelor's theses are based on the current tendencies in electronics, the recommendations of the employers and the assessments of the students during the qualification practice.

In apendix - the table "List of Thesis topics (2020)" there are examples of Bachelor thesis topics with assessments chosen by students and approved in previous years (2020).

Name / Surname	LV	ENG	RU	Marks (0-10)
Bauyrhanova Almagul	Aviācijas mobilo telekomunikāciju frekvences sintezatoru analīze	Analysis of Frequency Synthesizers for Means of Aeronautical Mobile Telecommunications	Анализ синтезаторов частот средств авиационной подвижной электросвязи	8 (ļ labi)
Konopets Konstantin	Aviācijas radiosakaru iekārtu raidīšanas diapazona palielināšanas iespējas	Research of Increasing the Range of Radio Communications of Transmitting Devices of Aviation Radio Stations	Исследование увеличения дальности радиосвязи передающих устройств авиационных радиостанций	7 (labi)
Slabkovsiy Vladislav	Primārās un sekundārās radiolokācijas sistēmu raidītāju salīdzinoša analīze	Comparative Analysis of Transmitters of Primary and Secondary Radar Systems	Сравнительный анализ передатчиков систем первичной и вторичной радиолокации	7 (labi)
Lukash Stanislav	Naftas produktu daudzuma uzskaites analīze komerciālos mezglos un tās precizitātes paaugstināšanas veidu optimizācija	Analysis of Oil Product Metering at Custody Transfer Points and Optimization of Ways to Increase its Accuracy	Анализ учета количества нефтепродуктов на коммерческих узлах оптимизация путей повышения его точности	8 (ļ. labi)
Gepdikovs Andrejs	Biroju ēku apsardzes un ugunsgrēka trauksmes sistēmas analīze ar mērķi to modernizēt	Analysis of Security and Fire Alarm System of Office Building with a view to its Modernization	Анализ охранно-пожарной системы сигнализации офисного здания с целью её модернизации	7 (labi)
Vladislavs Borkovskis	Ugunsdrošības signalizācijas sistēmas projekta optimizācija pirms būvdarbu uzsākšanas	Optimization of the Fire Alarm System Project before the Beginning of Construction Works	Оптимизация проекта системы пожарной сигнализации перед началом строительных работ	7 (labi)

"List of Thesis topics (2020)"

As can be seen in the table, the evaluations of qualification papers in the reporting period are at a good level (Average 7 (good)), which indicates the stability of the study program, the diversity of topics and students' competence. The choice of the subject indicates the observance and relevance of the modern trend.

2.6. Analysis and assessment of the outcomes of the surveys conducted among the students, graduates, and employers, and the use of these outcomes for the improvement of the content and quality of studies by providing the respective examples.

For the purposes of development and improvement of the study program, RAI regularly conducts surveys of students, graduates and employers. The results of the surveys are summarized, reviewed and analysed at the Senate meetings. In accordance with the results of the analysis, as well as the recommendations of experts provided during the previous evaluation of the program, the content of the program and study courses is updated. Thus, for example, based on the employers 'recommendations on the need to strengthen the acquisition of students' practical skills and abilities, the internship was divided into three separate internships with specific, individual tasks clearly defined for the internship, internship diary and internship report defence at the end of the internship.

Two different surveys of students are organized in RAI:
1. at the end of each semester, a survey is conducted on the evaluation of the work of lecturers. Within the framework of the Study Course and its content, requirements, compliance with the course description, Moodle available materials and use of e-environment tools, as well as the objectivity of the evaluation and the competence of the lecturer in accordance with the conducted study course;
2. once a year, a survey is conducted on satisfaction with the study process in RAI. Students also evaluate the work of the director of study program in the survey, according to several criteria and the work as a whole. Criteria such as accuracy of the information provided, efficiency in solving problem situations and providing answers, availability for consultations both in person and in the e-environment, as well as culture of communication in general are evaluated separately.
In general, the results of the survey of students show a positive trend in satisfaction with the study program and its content, teaching staff and RAI study environment and infrastructure. Students also assess the quality of the work of the study part and the library and the accuracy and timeliness of the provision of information. Most students indicate that they are satisfied. The main advantages in various aspects are the provision of information, availability for consultation, kindness, as well as an individual approach to each student.
Every year a survey of graduates is conducted, which ascertains the opinion of graduates about studies and their improvement opportunities in the study program, as well as plans of graduates regarding the continuation of studies. It can be concluded, evaluating the results of the survey that, in general, the satisfaction of graduates with their studies is assessed with the rating "good" and "very good". The worse-rated sections were for library compliance, so in recent years the library's stock base has been seriously replenished with current educational literature for study programs, and the availability of WI-FI in RAI has been significantly improved in recent years.
As advantages of study programs graduates have pointed out learning opportunities in e-environment, engaging guest lectures, study tours, as well as erudition and individual approach of study program lecturers. Most graduates indicated that they plan to continue their studies at higher levels of study.
Every year, a survey of employers is conducted, inviting to fill the internship diaries in the form of review of the head of practice (until 2019). a small survey in the practice diary), the purpose of which is to clarify the assessment of the trainee's skills at the place of practice for the purpose of preparing students for the requirements of the labor market and to clarify the future prospects of the profession.
In general, potential employers have given RAI students a high rating, Mostly noting the first or

second answer to the question " How could you describe the trainees of recent years in general?":
* good theoretical and Practical Training, able to immediately independently perform their job duties;
* after a short training/introduction at the workplace is able to perform their job duties;
* the trainees were well prepared in theory but did not have enough practical skills;
* trainees had good practical skills but poor theoretical knowledge;
* in general, to express an assessment difficult, because the trainees are very different.

Summarizing the results of the survey of employers, it can be concluded that employers consider important and necessary the knowledge, skills and competencies provided by the study program to their students, which means that the study program is designed thoughtfully and oriented to the best results. However, in the further implementation of study programs, it is necessary to improve the theoretical knowledge of students.

2.7. Provide the assessment of the options of the incoming and outgoing mobility of the students, the dynamics of the number of the used opportunities, and the recognition of the study courses acquired during the mobility.

Information on incoming and outgoing student mobility is attached. Student mobility is very low, which has stopped in recent years. This is, firstly, due to the small number of students in the study program and, secondly, all students are working at the same time. Courses acquired during mobility are recognized and credited to the student workload.

Due to above mentioned reasons, there have been only two students in mobility during the reporting period – one student studied at a foreign university and one student from Poland studied at RAI

III - DESCRIPTION OF THE STUDY PROGRAMME (3. Resources and Provision of the Study Programme)

3.1. Assessment of the compliance of the resources and provision (study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision) with the conditions for the implementation of the study programme and the learning outcomes to be achieved by providing the respective examples. Whilst carrying out the assessment, it is possible to refer to the information provided for in the criteria set forth in Part II, Chapter 3, sub-paragraphs 3.1 to 3.3.

Taking into account that only one study program is implemented in the study direction, information on the resources and material and technical provision of the program, including the teaching staff, is presented in Section 3 of the second part - Resources and provision of the study direction.

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

III - DESCRIPTION OF THE STUDY PROGRAMME (4. Teaching Staff)

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

When starting to implement the study program of the study field in 2015, 12 lecturers worked in the study field. Throughout this time, the number of lecturers has increased to 15. Several lecturers have left RAI due to the fact that they reached their retirement age and because of other reasons. They have been replaced by new ones, including lecturers with practical work experience in the electronics industry. In general, it has allowed to reduce both the number of the delivered courses per lecturer, as well as to improve the delivery of the theoretical basic courses and professional specialization courses in the field, taking into account the experience of the invited lecturers in the relevant field.

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

The academic and scientific qualification of the teaching staff of the study program, professional work experience in the respective field, regular supplementation and improvement of knowledge in the respective continuing education program of higher education teachers fully comply with the study program implementation conditions and regulatory requirements.

The above mentioned helps to achieve study results not only by stimulating students with modern level knowledge, but also serves to plan and implement the study process in compliance with both the current world trends in Education and Science and market requirements.

Teaching staff in total 15 pers. from them:

Docent - 9 pers;

Guest docent - 1 pers.;

Lecturer - 3 pers.;

Guest lecturer - 2 pers.

Teaching staff with a doctor's degree - 9 pers, with a master's degree - 6 pers.

See Annex 3 for details.

4.3. Information on the number of the scientific publications of the academic staff members, involved in the implementation of the doctoral study programme, as published during the reporting period by listing the most significant publications published in Scopus or WoS CC indexed journals. As for the social sciences, humanitarian sciences, and the science of art, the scientific publications published in ERIH+ indexed journals may be additionally specified (if applicable).

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

4.5. Provide examples of the involvement of the academic staff in the scientific research and/or artistic creation activities both at national and at international level (in the fields related to the content of the study programme), as well as the use of the obtained information in the study process.

RAI supports the active participation of the teaching staff of the study program in scientific research and the publication of the obtained results. The Institute has introduced a motivation system that stimulates the participation of lecturers in scientific conferences and the preparation of publications for this purpose, . A list of faculty publications is attached. The results obtained in the research work, their analysis and conclusions are used in practical classes with students, in the development and improvement of study courses.

Riga aeronautical Institute Scientific Research Center consists of:
Lead researcher: Dr.comp.sc. Vladimir Reiskart;
Researchers: Dr. oec. Konstantin Savenkov; Dr. sc. ing. Dmitri Ulanov; Dr. sc. ing. Ibrahim Arandas and Dr. sc. ing. Vyacheslav Orekhov;
Scientific Assistants: Mg.OECD. Asnate Venckava; Dr. sc.ing. Igor Petukhov has been participating in different international projects during recent years due to plans for development of scientific activity and strengthening of quality of education.
For example, a project called "Smarthub for marine monitoring and bioresources supply using UAS, CALS and Blockchain technologies-"SmartHubMarBioSup" focused on bioresources delivery with the use of UAS, CALS and Blockchain technology in collaboration with colleagues from Romania and

Greece was prepared and presented in 2020.

A plan for scientific work 2020-2021 is being created:

- Participate in European projects;
- Review a selection of Bachelor's and master's topics;
- Create an annual competition of scientific works for students and lecturers, providing a prize fund;
- Organize students scientific circle;
- To keep records of cooperation agreements with a view to possible participation in conferences and scientific events.

RAI actively uses the program Erasmus + for the development of scientific activities; exchange visits to universities in Lithuania, Poland were organized.

In recent years, opportunities for modernizing the research base are being actively sought.

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

The implementation of the study program "Electronic equipment maintenance" is ensured by 15 representatives of the teaching staff, 10 of whom have been elected to the RAI academic positions of a docent or a lecturer. Nine of the RAI faculty members hold a doctoral degree. Most of the RAI teaching staff have extensive experience of academic and professional work outside the Institute, as well as scientific work experience. The qualification and professional experience of the teaching staff fully complies with the requirements of regulatory requirements and the conditions for the implementation of the study program.

The ratio of the students and the teaching staff in the study direction is 14/15. However, in this regard, it should be taken into account that practically every lecturer is involved in the implementation of other study directions and study programs, and in addition participates in the implementation of in-service training courses and professional development programs. In addition, some lecturers, especially those employed as guest lecturers, work part-time. Taking this into account, for a study direction with such a small number of students and in general for a small higher education institution such as RAI, a more objective indicator would be the ratio of the total number of students to the total number of teaching staff, and this in academic year 2019/2020 there is 333/55 or 5.6 students per lecturer. Such a ratio of students and lecturers is quite appropriate for a higher education institution of engineering and technology studies direction.

There is ensured the proportionality of the teaching staff of the professional and academic environment during the implementation of the study program, thus forming a balanced staff that helps to achieve the objective and results set by the study programs.

The cooperation of the teaching staff is formed during meetings of methodological commissions, individual conversations with the director of study program, conversations with the teaching staff among themselves, as well as joint meetings of the RAI teaching staff, discussing various current issues in the field of higher education and professional.

Study program staff, cooperate in the implementation and updating of the content of the study courses, coordinate topics to avoid unnecessary and duplication. Teaching staff also cooperate within research groups to offer ideas for sample subjects of qualification works, improvement of study programs and development of RAI. At the same time, faculty members jointly participate in

the development of offers of extra lecture activities for students, for example, to provide student study tours to employers or to attract guest lecturers from the industry.

Annexes

III. Description of the Study Programme - 1. Indicators Describing the Study Programme		
Compliance of the joint study programme with the provisions of the Law on Institutions of Higher Education (table)		
Statistics on the students over the reporting period	11_app_Statistical data_.pdf	11_piel_Statistikas dati_.pdf
III. Description of the Study Programme - 2. The Content of Studies and Implementation Thereof		
Compliance of the study programme with the State Education Standard	12_app_Compl_Education Standard.pdf	12_piel_Salīdzin_izglītības standarts.pdf
Compliance of the qualification to be acquired upon completion of the study programme with the professional standard (if applicable)	13_app_Compl_Profession Standard.pdf	13_piel_Salīdzin_profesijas standarts.pdf
Compliance of the study programme with the specific regulatory framework applicable to the relevant field (if applicable)		
Mapping of the study courses/ modules for the achievement of the learning outcomes of the study programme	14_app_Study Course Mapping.pdf	14_piel_Studiju kursu kartējums.pdf
Curriculum of the study programme (for each type and form of the implementation of the study programme)	15_app_Plan for Study Program.pdf	15_piel_Studiju programmas plāns.pdf
Descriptions of the study courses/ modules	16_app.rar	16_piel.rar
Description of the Study Direction - Other mandatory attachments		
Sample of the diploma to be issued for the acquisition of the study programme.	17_Diploma_supplement.pdf	17_piel_Diploma paraugs.pdf
Description of the Study Programme - Other mandatory attachments		
Document confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued	19_app_Agreement RAI_VeA.pdf	19_piel_Vienošanās RAI_VeA.pdf
Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme	20_app_Information on Guarantees for Students.pdf	20_piel_Informācija garantijas studējošajam.pdf
Confirmation of the higher education institution/ college that 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 according to European language levels (see the levels under www.europass.lv), if the study programme or any part thereof is to be implemented in a foreign language.	22_app_Confirmation of English.pdf	22_piel_Apliecinājums angļu valoda.pdf
If the study programmes in the study direction subject to the assessment are doctoral study programmes, a confirmation that at least five teaching staff members with doctoral degree are among the academic staff of a doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field or sub-field of science, in which the study programme has intended to award a scientific degree.		
If academic study programmes are implemented within the study direction, a document confirming that the academic staff of the academic study programme complies with the provisions set out in Section 55, Paragraph one, Clause three of the Law on Institutions of Higher Education		
Sample (or samples) of the study agreement	23_piel_Studiju līguma paraugs.pdf	23_piel_Studiju līguma paraugs.pdf
If academic study programmes for less than 250 full-time students are implemented within the study direction, the opinion of the Council for Higher Education shall be attached in compliance with Section 55, Paragraph two of the Law on Institutions of Higher Education.		