APPLICATION

Studiju virziena "Economics" for assessment

Study field	*Economics*
Title of the higher education institution	*Rīgas Tehniskā universitāte*
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Self-evaluation report

Study field "Economics"

Riga Technical University

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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 Technical University was founded in 1862 and is the oldest technical university in the Baltic States. Following the restoration of the Republic of Latvia in March 1990, Riga Polytechnic Institute was renamed Riga Technical University (RTU). Today, RTU has obtained a positive assessment of international experts and has been accredited by the Supreme Education Council of the Republic of Latvia.

RTU values include academic freedom, quality, stability, integrity, sustainable development and cooperation.

Academic and scientific staff of around 1,145 people work at nine faculties of RTU (Faculty of Architecture; Faculty of Civil Engineering; Faculty of Computer Science and Information Technology; Faculty of E-Learning Technologies and Humanities; Faculty of Electronics and Telecommunications; Faculty of Power and Electrical Engineering; Faculty of Engineering Economics and Management; Faculty of Mechanical Engineering, Transport and Aeronautics; Faculty of Materials Science and Applied Chemistry) and four study and research centers in Cesis, Liepaja, Ventspils and Daugavpils carrying out high-quality academic activities and scientific research at a contemporary level. RTU is the second largest university in the Republic of Latvia in terms of student number and has educated and trained more than 160,000 graduates in total.

RTU has now become the leading higher engineering education training institution in Latvia, acquiring new partners worldwide, working together on project implementation, student exchange and the development of joint study programs. Active development of a student campus is underway in Kipsala, where new faculty buildings are being built, while the old ones are getting a new shape and modern design.

Many research and scientific projects are being carried out in cooperation with RTU partners, which result in both new patents and successful business activities. RTU successfully develops cooperation to strengthen its role in the development of higher engineering education in the world and in the development of Latvia.

The mission of RTU is to provide the Latvian national economy and society with internationally competitive high-quality scientific research, higher education, technology transfer and innovation.

Vision: Riga Technical University – a modern and prestigious University, internationally recognized as the leading university of science and innovation in the Baltic States – a cornerstone of the development of Latvia. In order to implement this vision, the RTU Strategy defines three university objectives: (1) high quality study process; (2) excellence in research; and (3) sustainable innovation and commercialization activities. These three objectives define specific performance indicators that will allow RTU to realize its vision by 2020.

Study directions and number of study programs implemented by RTU in December 2019:

Study directions	Number of study programs
Architecture and Construction	19

Study directions	Number of study programs
Economics	3
Energy, Electrical Engineering and Electrical Technologies	13
Physics, Materials Science, Mathematics and Statistics	6
Internal Security and Civil Defense	6
Information Technology, Computer Engineering, Electronics, Telecommunications, Computer Control and Computer Science	35
Chemistry, Chemical Technology and Biotechnology	7
Mechanics and Metalworking, Thermal Energy, Thermal Engineering and Mechanical Engineering	24
Production and Processing	5
Translation	2
Management, Administration, Real Estate Management	22
Environment Protection	3
Total:	**145**

The offer of RTU study programs is in compliance with the forecasts with regard to the needs of the labor market in both Europe and Latvia as well as Riga Region in the coming decade. The RTU study program offer ensures education and training of the specialists in information and communication technologies (ICT) and engineering, for which a significant shortage the labor market is prognosticated.

In recent years, the number of foreign students studying to obtain a degree or qualification in Latvia has increased. In addition, the Organization for Economic Cooperation and Development (OECD) predicts that the number of people willing to acquire higher education could reach 8 million in ten years. In academic year 2015/2016, there were by 45% more foreign students studying at RTU in comparison with academic year 2014/2015. Taking into account the above mentioned, RTU has great opportunities to further increase the number of foreign students. It also provides an appropriate offer of RTU study programs in English – 16 Bachelor level study programs and 21 Master level study programs, moreover, this list is variable and is updated from year to year.

In December 2019, nearly 13,400 students studied at RTU. 9,628 students studied at full-time undergraduate study programs, regarding graduate and post-graduate studies, 3,228 students studied at Master degree programs and 509 – at the Doctoral study programs.

RTU has approved the Strategy and Development Program for 2014-2020. The main objective of the RTU Strategy is to ensure implementation of the leitmotiv referred to in the National Development Plan for 2014-2020 – to achieve the “economic breakthrough” in Latvia. RTU positions

itself as one of the cornerstones of Latvia's development, which ensures training of specialists necessary for the Latvian national economy, as well as the creation of new products and services, serving as the basis for sustainable growth in Latvia. The RTU Strategy includes the main objectives for the development of RTU for the period up to 2020, as well as the allocation of activities and responsibilities to be carried out for the performance of the planned tasks.

In order to implement the vision of RTU to become the leading science and innovation university of the Baltic States by 2020, the Strategy defines three University objectives: high-quality study process, excellence in research, and sustainable innovation and commercialization activities. Specific performance indicators have been defined for these three objectives.

The purpose of a high-quality study process is internationally competitive, analytically and creatively thinking specialists educated and trained in the course of prestigious, internationally recognized high-quality studies, who are able ensure the development of the Latvian national economy and who have the capacity for life-long learning. The aim of excellent research is high-quality scientific studies that meet the needs of the Latvian and international economy, widely involved in international, national and sectoral research programs and integrated in the study process. Sustainable valorization aims at creation of efficient environment for technology transfer and innovation development, which promotes establishment of new technological companies and creation of new products.

Six key priorities of the University include internationalization, smart digitalization, interdisciplinarity, organizational, financial and infrastructure efficiency, which pursue three main objectives mentioned above. RTU uses horizontal priorities as a prism to review achievement of its objectives and to ensure internationally competitive high-quality scientific research, higher education, technology transfer, commercialization and innovation for the Latvian economy and society.

The aim of internationalization is to ensure internationally competitive University activities in the fields of research, innovation and education. The aim of smart digitalization is to use modern technologies to improve efficiency of University activities. Interdisciplinarity aims at promoting cooperation between different sectors and specializations as a basis for creation of new and innovative products and development of modern study curriculum. Organizational efficiency aims at promotion of effective University management, ensuring development and implementation of modern education and research processes. The aim of financial efficiency is to ensure financial autonomy of the University and to establish a motivating internal financial system that promotes University development. The purpose of infrastructure efficiency is development of a modern academic, research and innovation environment with modern buildings and technical equipment.

The implementation of the RTU Strategy is approved by a decision of the RTU Senate. Following the approval of the Strategy, RTU Rector once a year ensures definition of the annual RTU aims and tasks with clear performance indicators set at the level of each RTU unit. RTU Strategy is implemented and the results achieved are analyzed annually with regard to the defined tasks.

RTU Strategy for the period from 2021 to 2025 is being actively developed under the leadership of the Vice-Rector for Development.

RTU Strategy for 2014-2020 is published at https://files.rtu.lv/public/ortus/Strategija_RTU.pdf.

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.

The structure and administration of RTU are established in compliance with the University vision, mission and objectives and taking into account the specifics of the University management. The administrative structure is based on a decentralized decision-making process and obligations arising from the Law on the Higher Education Institutions, the Constitution of RTU, resolutions of RTU Senate, the orders issued by the Rector, as well as other RTU documents. The functions of various organizational units have been approved in their regulations approved by the Senate. Overall, RTU management can be divided into three levels: university level, administration level and faculty level.

At the University level, there is the Constitutional (Academic) Assembly (200 representatives – 120 academic personnel representatives (60% of the total number), 40 student representatives (20% of the total number) and 40 general staff representatives (20% of the total number). The Assembly includes all members of the RTU Senate. The conditions for the formation of the Assembly are defined in Article 30 of the RTU Constitution - see the file of Annex 01 of the list of Internal regulations), the Senate (50 Senators – 38 academic personnel representatives (75% of the total number), 10 student representatives (20% of the total number) and two general personnel representatives (5% of the total number). The conditions for the election of the representatives of the Senate are defined in the attached Article 7 of the Regulation of the Senate of RTU - see the file of Annex 02 of the list of Internal regulations), Scientific Council (composed of Deputy Deans in for research, Vice-Rector for Research, Deputy Vice-Rector for Research; the Rector, Vice-Rector for Academic Affairs, Vice-Rector for Strategic Development, Vice-Rector for Finance and the Chair of the Senate also have the rights of membership of the Council). **At the level of administration**, the operational management of the university is exercised by the Rector, whereas the Board of the Rector plays an advisory role in the adoption of such decisions, with the participation of the Rector, Chair of the Senate, Vice-Rectors, Administrative Director, Deputy Rector for International Academic Cooperation and Studies, Director of the Legal Department, Director of Infrastructure Development Department, President of the Student Parliament; the Deans Council comprising the Rector, Deans, directors of studies and research centers, Director of Riga Business School, Chair of the Senate, Vice-Rectors, Deputy Rector for International Academic Cooperation and Studies, Director of Infrastructure Development Department, President of the Student Parliament; operational management meetings uniting the Rector, Administrative Director, Deputy Vice-Rector for Research in Scientific Work, the heads of administrative departments (department directors, unit managers). At the faculty level, the highest decision-making bodies are faculty councils whose composition depends on the size of the faculty.

External partners and stakeholders are involved in the University management through the RTU Advisory Board (27 members). It provides an opportunity to receive independent opinion on important issues and possible solutions from various perspectives. Each faculty also has its own Advisory Board, which provides its own vision for improving the supply of study programs in line with sectoral needs and market trends.

Each faculty also has its own student self-government, while RTU Student Parliament coordinates faculty student self-governments. Students are represented in all RTU decision-making bodies and can therefore participate in the University strategic decision-making.

The Rector, Vice-Rector for Research, Vice-Rector for Academic Affairs, Vice-Rector for Finance and

Vice-Rector for Development are the senior officials of RTU. The **Rector** is the top University official, who exercises the general administrative management of RTU and represents RTU without a specific mandate. The Rector is elected by the Assembly for a period of five years for not more than two consecutive terms. The Rector is elected, approved in office and removed from office pursuant to the regulatory enactments governing higher education institutions.

The operational management of RTU is exercised independently, in accordance with the delegation of the Rector, by the Vice-Rector for Research, Vice-Rector for Academic Affairs, Vice-Rector for Development and Vice-Rector for Finance. The Senate elects the Vice-Rector for Research, Vice-Rector for Academic Affairs, Vice-Rector for Development and Vice-Rector for Finance based on the recommendation of the Rector for the term of office of the Rector. The Rector may also delegate certain functions to other RTU officials and, on the basis of the Rector's proposal; other Vice-Rector positions may be created by a Senate decision.

The **Vice-Rector for Research** supervises and is responsible for Doctoral study programs and research work, including support to young researchers, research infrastructure, research funding, applied research, intellectual property protection, RTU scientific publications and scientific conferences. The **Vice-Rector for Academic Affairs** supervises and is responsible for the study process at the Bachelor, Master, first and second-level professional study programs, further education, including training programs, security and quality assurance in studies, credit points, determination of academic staff positions and workload, as well as the selection and admission of students. The **Vice-Rector for Development** is responsible for the development strategy and its successful implementation, supervises the implementation of projects important for the development of RTU, and represents the interests of RTU in interaction with public authorities, partners and the public. The **Vice-Rector for Finance** is responsible for the financial management processes of RTU and for allocating and planning financial resources to ensure the functioning of RTU and implementation of the development strategy.

The accounting, study administration, science administration and human resources administration at the university are centralized. Other administrative processes, such as procurement and project management, are centralized to the extent necessary to avoid institutional risks. At the same time, a decentralized management system has been provided at a high level at RTU, with a certain degree of autonomy for each academic unit. This means they have their own budget and self-governing structure, which allows defining and meeting the objectives of the organizational unit. This approach motivates the heads of departments to be proactive, to plan the development of the unit, and to apply for funding.

The University governance structure information is published at
https://www.rtu.lv/en/university/structure-and-administration

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.

RTU internal quality management system works in line with the “Excellence approach” (approved on 30 January 2017 at the meeting of the RTU Senate, Minutes No 606), as well as the “RTU Quality Policy” (approved by the Senate on 25 September 2017, Minutes No 612).

The Quality Policy is focused on the implementation of the RTU mission and the achievement of the strategic objectives of scientific activities, studies, infrastructure, organizational excellence and recognition. The Quality Policy lays out the framework and pathways for development and improvements of the RTU Strategy, research, study process and organization. The University Quality Policy is aligned with the European Association for Quality Assurance in Higher Education (ENQA) standards and guidelines. The RTU Excellence Approach and quality policy are mutually integrated documents which require RTU to use the quality model of the European Foundation for Quality Management (EFQM).

The EFQM quality model assumes cooperation with student representatives, partners, professional associations, student organizations, other higher education institutions, businesses and organizations. RTU maintains an open dialogue to explore the needs of the parties involved and to respond appropriately by developing feedback to day-to-day and long-term cooperation.

By establishing links with the parties involved, the administration of RTU contributes to the development of excellence and ensures the clarity, unity, building of the work environment and diversity management of the objectives to be achieved.

RTU staff participates in quality assurance by providing suggestions and feedback to improve the RTU quality system. The heads of the RTU departments are responsible for carrying out internal quality assurance procedures and processes in their departments.

Based on the results of regular student and graduate surveys, improvements in the quality of the study process is being planned.

Cooperation with partners, suppliers and other stakeholders takes place in accordance with the RTU Strategy, establishing appropriate cooperation networks and identifying appropriate policies, activities and processes for effective cooperation aimed at ensuring the quality of the RTU and acquisition of feedback. To ensure the topicality and continuous development of existing study programs and before the introduction of new study programs the interests of all stakeholders in modern and interdisciplinary technology education are considered.

External stakeholders (public authorities, cooperation partners, representatives of the public) assess the study process and its results in State Examinations, practical placements (internships) and accreditation, and contribute in improving the content and quality of study programs.

More on this point is set out in Section 2.1.

RTU Excellence Approach is published at
https://www.rtu.lv/en/university/strategy/rtu-excellence-approach

RTU Quality Policy in Latvian is published at
https://www.rtu.lv/lv/universitate/dokumenti/kvalitates-politika (English translation is in the file of Appendix 03 of the list of Internal regulations.)

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 In line with the quality model introduced by RTU, process analysis and improvement are ongoing. Performance indicators and the results of the assessment of various surveys are analyzed. The quality report data are compiled after the end of the academic year. Annual agreements on the target study process performance indicators are signed with the faculties; the quality is assessed by analyzing the achievement of the defined objectives relative to the plan. For more details, see the 5th row of this table.
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 development of study programs takes place in accordance with the “Procedure for the application, elaboration and amendment of the study programs” (approved at the Meeting of RTU Senate on 30 November 2015, Minutes No 610). The departments and institutes implementing the study process, Faculty Councils, the Office of Vice-Rector for Academic Affairs, the Student Parliament and the Senate are involved in ensuring the internal study quality of RTU. These institutions carry out comprehensive assessment of the new study directions and study programs, the changes to the study directions and programs and the annual reports of the improvement of the study directions. At RTU, the operation of the internal quality assurance mechanism takes place at the level of the Rectorate, faculties, study directions and study programs. At the level of the Rectorate, the internal study quality control of RTU is carried out by the Office of Vice-Rector for Academic Affairs. The Study Department performs: (1) the maintenance and control of the Study Program Register, which involves control of the conformity of the study curriculum to the aims, tasks and learning outcomes of the study program, as well as the control of changes; (2) maintenance and control of the Study Course Register, which involves control of the conformity of study course descriptions with the learning outcomes, as well as quality control of study course descriptions; (3) periodical student polling at the University level.

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 The evaluation of learning outcomes takes place in accordance with the "Regulation on the Assessment of Learning Outcomes" (approved at the Meeting of RTU Senate on 29 May 2017, Minutes No 610) and "Regulation on Final Examinations at RTU" (approved at the Meeting of RTU Senate on 23 February 2015, Minutes No 587).
4.	Internal procedures and mechanisms for assuring the qualifications of the academic staff and the work quality have been developed.	Complies In order to ensure the qualification and performance quality of academic staff, professional advancement needs are regularly assessed when evaluating the results. Professional advancement training modules are developed by collecting information from: (1) academic staff surveys on professional advancement needs once in two years; (2) analysis of student polling results; (3) cooperation with student self-governments; (4) world trends and good practices of other Latvian universities in the field of professional advancement of academic staff; (5) information provided by academic staff on professional advancement topics of interest; (6) proposals from the heads of academic units for professional advancement of academic staff. The Centre for Academic Excellence (CAE), a teaching and learning center, was set up at the end of 2018; it primarily aims to develop a strategy for the professional advancement of academic staff, including in line with Article 16 of Cabinet Regulations of Ministers No 569. Other tasks of CAE are detailed in Section 3.5. Academic units organize regular or one-time professional advancement activities having assessed the need for professional training of academic staff. The units assess whether it is more appropriate to participate in a particular event for certain representatives of academic staff, all members of the unit or to invite also members from other units.

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 Student expectations and satisfaction with the curriculum and study process are identified in sequential and planned surveys at all stages of study. Student surveys are organized in accordance with the Regulations on “Student Polling for Assessment of the Study Process” (approved at the Meeting of RTU Senate on 27 January 2014, Minutes No 577). The aim of polling is to clarify the adaptation of first year students to the university system and the satisfaction of all students with the study process, lectures, and practical classes after each semester, the satisfaction of students with the services offered by the University, and the overall satisfaction of graduates with the study program. The results of the surveys are available to academic staff, heads of organizational units and students in a summarized form. Annually, the State Revenue Service provides information on employment of RTU graduates. The Total Quality Management System of RTU analyzes performance results of the study process, comparing the characteristics of the study programs, including the resulting performance indicators related to the study process in the overall EFQM quality model of RTU. At the beginning of September of each year, a faculty Activity Plan on study process indicators is drawn up: (1) number of students; (2) number of graduates; (3) number of students expelled from University; (4) number of foreign students in the total number of students; (5) average age of elected academic staff; (6) number of study programs implemented in English; (7) average indicator of the evaluation of faculty academic staff; (8) number of persons with a scientific degree elected to academic positions (%); (9) number of foreign guest lecturers. The established Faculty Study Activity Plans for the following year are drawn up by Faculty Deans, together with Deputy Deans for Academic Affairs and institute directors; they are approved by the Rector of RTU. RTU administration meets with representatives of faculties to evaluate the faculty activity plans on study process indicators, evaluating the progress in the previous academic year and defining the indicators to be achieved in the next two academic years. These indicators are used to monitor study process performance of the faculty. These indicators and other aspects influence the amount of performance-based funding allocated to the faculty and contribute to the achievement of the objectives set forward in the RTU Strategy.

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
		At the level of the faculty and study direction, internal quality is ensured by the Faculty Council, the Study Direction Committee and Directors of the study direction, Directors of the study programs, administration of the institutes and chairs implementing study programs. Within the framework of the study program, internal quality is ensured by the program director and by the academic staff implementing the program. Internal quality control at the level of the study program is carried out by the administration of the relevant institute or chair. In order to ensure continuous development of the study programs, RTU Study Direction Committees monitor academic activities in the relevant study direction and are responsible for the curriculum and quality of the study programs within the study direction, including the accreditation of the study direction. Inclusion of employer representatives in the Study Direction Committee is a mandatory requirement. Study Direction Committee acts in accordance with the “Regulation of the Study Direction Committee” (approved by the Resolution of RTU Senate Meeting on 03 December 2012, Minutes No 594). The basic tasks of the Study Direction Committee are: (1) to analyze the situation in the labor market and make suggestions for the development of new study programs as well as for the closure of the outdated study programs; (2) to carry out expert assessment of the curriculum and quality of the study programs, assess their compliance with the defined objectives and compliance with the research area represented and labor market requirements; (3) to organize and monitor the accreditation of the study direction and the licensing of study programs; (4) to analyze the assessment and recommendations made by external experts and organize elimination of identified shortcomings; (5) to carry out an analysis of the study direction self-assessment report as well as the annual reports on study direction development activities; (6) in order to achieve strategic objectives of the University, to assess the proposed changes to study programs with a view to increasing the quality of all study programs included in the study directions; (7) to analyze the results of student, graduate and employee surveys and organize elimination of identified shortcomings, as well as organize additional surveys.

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 study direction “Economics” includes three study programs: an academic Bachelor study program “Economics” (education classification code 43310), an academic Master study program “Economics” (education classification code 45310) and professional Master study program “Urban and Regional Engineering Economics” (education classification code 47310).

Both academic programs have been implemented since 1995 and 1996 and they were accredited for the first time in 1997 among the first ones in Latvia. The study programs were established considering the actual situation, when development of the national economy and labor market demanded educated specialists in line with the demands of the market economy. Although the study programs have been implemented for more than 20 years, they have not lost their topicality and importance as they are constantly developing.

The purpose of the academic Bachelor study program is to educate and train the specialists who are able to analytically understand economic processes and whose knowledge and expertise enable them to take decisions, plan and coordinate economic processes. The problems in our public administration are caused by the fact that working at this level requires profound academic knowledge of the regularities of economic development and the interaction between economic sectors. The study program is the only one at the University that is directed at studying these regularities at the national level. It includes study courses covering different themes, such as the public sector economy, economic activities of the territories and regional development of public investment; acquisition of these courses allows graduates to work successfully in the public sector and municipalities.

In turn, the academic Master study program aims to educate and train the analysts of economic processes and industry specialists to address economic challenges and decision-making in today's changing economic environment. Program graduates are already working successfully in the public sector. Within the study program, particular attention is paid to the development of econometric techniques, which at the Master level focus on the modelling of macroeconomic processes. The program is therefore up to date, as strengthening of the analytical capacity in the public sector is one of the most important tasks assigned to the Latvian State Administration. The public administration lacks economic experts; it mainly employs political scientists and sociologists. The OECD experts have also pointed out that in Latvia the implemented policies and cost effectiveness of various projects are not sufficiently assessed.

The professional Master study program has been implemented since 2003 and has experienced significant structural changes and the changes in its curriculum as it is constantly being updated and developed. The study program focuses on the training of specialists needed for Latvia who would have interdisciplinary knowledge, which is essential in addressing urban and regional development challenges. Involving academic staff from other faculties, it is possible to exploit the potential of RTU successfully.

Study programs in the field of economics are implemented in Latvia and abroad, but the programs

in question after the study courses on the theoretical basis of economics focus on the current problems of the public sector. The academic Master study program is popular in Latvia, since for several consecutive years, over a half of the students enrolling in this study program have acquired Bachelor degree at other higher education institutions. At the beginning of academic year 2019/20, such students constituted 65% (represented by the graduates of the University of Latvia, Latvia University of Agriculture, RISEBA University of Applied Sciences, Ventspils University College, BA School of Business and Finance, Riga Stradins University, University College of Economics and Culture, Transport and Telecommunication Institute). As the main argument, these Master degree students mention the good reviews they have heard from colleagues, acquaintances and elsewhere. It means that the study program is important for continuing education for the graduates of other higher education institutions as well. In turn, the professional Master study program is unique in Latvia, because it is interdisciplinary and provides knowledge not only in economics, but also to a certain extent in engineering.

Study programs with similar content and study time are implemented also in foreign universities. For example, the Bachelor's program in Economics is implemented at Klaipeda University in Lithuania (https://www.ku.lt/studies/english-degree-studies/bachelors-degree/economics/), at University of Split in Croatia (http://moj.efst.hr/old/content.php?k=studiji&p=72&l=eng); Master's Degree Program in Economics is implemented at the University of Ljubljana in Slovenia (http://www.ef.uni-lj.si/graduate/econ) and at the University of Split in Croatia (http://moj.efst.hr/old/content.php?k=studiji&p=80&l=eng). Similar study programs to the professional master study program “Urban and Regional Engineering Economics” are also offered at foreign higher education institutions. For example, the Master's Degree Program in Urban Economic Development at London's Global University (https://www.ucl.ac.uk/prospective-students/graduate/taught-degrees/urban-economic-development-msc) , as well as “Regional Development and Governance“ at the University of Pardubice in the Czech Republic (https://www.upce.cz/en/regional-development-and-governance).

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 goal of the study direction “Economics” is to provide students with a competitive, scientific research-based, multi-level education in the field of economics that meets the requirements of the Latvian and European labor market. **The sub-goals** of the study direction are to shape, develop and maintain sustainable education based on research and cooperation with industry and public institutions in the field of economic and regional development:

1. ensuring the continuity of studies at all levels corresponding to the study direction;
2. implementing internationalization activities, involving foreign students in the study process, as well as promoting the participation of students and academic staff in exchange programs;
3. providing representation in professional organizations relevant to the study direction;
4. integrating research into programs at all education levels.

In turn, the goals of the study programs within the study direction are subordinated to the goal of the study direction, forming an integrated system, while at the same time reflecting the specificities of each study program.

The goals set for the study direction and the study programs therein stem from the strategic goals

of RTU: high-quality study process, excellence in research and sustainable innovation. The RTU Strategy is based on the three main objectives of the University and is related to the five major priorities of the University: internationalization, interdisciplinarity, organizational, financial and infrastructure efficiency. These five horizontal priorities are used by RTU as a prism to monitor achievement of its objectives and to provide the Latvian national economy and society with internationally competitive high-quality scientific research, tertiary education, technology transfer, commercialization and innovation. The strategic direction of RTU development is to be an international and the leading Baltic university of technology.

The RTU Strategy defines the strategic goal of the Faculty of Engineering Economics and Management (FEEM), which is to ensure excellence of the study process, excellence of research activity, excellence and visibility of the organization, as well as infrastructure excellence and development of the academic environment in the fields of management, economics and security.

Accordingly, the goals of the study direction are part of the common university development strategy and are consistent with common social and economic trends. Implementation of the study programs develops student understanding of economic and social issues in sustainable economic development, as well as their skills in identifying and addressing problems.

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.

In order to ensure the high quality of the study direction, a report on enhancing the academic quality is designed annually and is further evaluated by an expert appointed by the Vice-Rector for Academic Affairs. The report is approved by the RTU Senate. An integral part of the report is SWOT analysis, which allows to focus on what has been achieved and to highlight the challenges to be solved. It is an essential tool for achieving the goals formulated for the study direction. The SWOT analysis of the given study direction is provided in the table below.

Internal Factors	
Stengths	**Weaknesses**

– Democratic relationship between the administration, academic staff and students; the students participate in decision-making and the improvement of the study process; the policy of academic integrity is strengthened. – Developed infrastructure, modern, fully equipped classrooms, excellent digital infrastructure and the use of ORTUS study portal in the study process. – Versatile, professional and highly qualified academic staff who undertakes continuing professional development. – Integrated study and research process, extensive opportunities to participate in international scientific conferences and seminars are provided for both students and the members of academic staff. – Extensive, modern and accessible RTU library (working 24 hours a day) with the latest information resources. – The management of the study direction ensures continuous development and quality control of the study process. The quality system at RTU is elaborated to serve as one of the main priorities to achieve excellence, which is aimed at providing top quality study and research process, as well as at ensuring continuous improvement. – Continuous improvement of the study process involving the students. Maintaining a close relationship with students, which enables the administrative staff to deal promptly with issues related to the quality of the study process. – Opportunities for students to continue their studies at the higher level. – Extensive network of international partnerships and established cooperation with foreign universities, as well as opportunities to study abroad. – The implementation of the study programs within the given study direction in English makes it possible to attract more foreign students. – Students and graduates gain the necessary level of field-specific theoretical knowledge; the study process is designed finding the perfect balance between the number of theoretical and practical classes, as well as the students are provided with the university internship and traineeship opportunities at the companies. – Strong RTU Alumni Association, which builds sustainable cooperation with former students.	– Matriculated students sometimes demonstrate insufficient level of preparation and poor prior knowledge in some study courses, which cause challenges undertaking studies at the higher level. – Some students lack motivation to study. – The level of prior knowledge and preparation, understanding of culture and academic process, as well as motivation to study vary significantly among foreign students. – The academic staff members are overloaded; thus, the lack of capacity hinders the improvement of individual work with the student or makes it difficult to implement the student-centered learning approach. – The necessity to level off the students' readiness creates additional workload for academic staff and hinders the development of students' research skills and professional competence. – Due to unattractive potential salary the renewal pace of the academic staff at the University is relatively slow. – Insufficient funding hinders involving foreign academic staff and industry representatives into the study process efficiently. – Students have to work to make their living, which in turn hinders the study process. – Underdeveloped and internationally unrecognized RTU brand name hinders successful competition with foreign universities of similar level for attracting foreign students.

External Factors	
Opportunities	**Threats**

– Involvement of industry professionals and foreign lecturers in the study process, thus expanding cooperation opportunities (e.g. guest lectures, field trips, etc.). – Linking the development of the Thesis to solving the particular economic issue offered by the state institutions, industry associations and companies. – Studies abroad within the framework of the exchange programs and, participation in training mobility, gaining international experience in projects, etc. – Opportunity to attract engineering students of RTU and other higher schools to undertake their master studies. – Improvement of the existing study programs, assessing changes in the subfields related to the study direction, in accordance with the trends in the labor market. – Improvement of professional competence of the academic staff and their involvement in international scientific research. – To improve and develop the implementation of study programs in English, attracting more and more foreign students.	– Lack of sustainable strategy in Latvian Higher Education Policy. – Insufficient state funding and distribution of financial resources among study directions, as well as possible reduction of state budget funding for studies in the given study direction. – Insufficient number of individual scholarships to enable students to take full advantage of mobility programs can reduce student mobility, as the cost of living in many European countries is very high. – Since students combine full-time studies with work, they cannot fully engage in the study process. This creates challenges in achieving the planned learning outcomes, causes decrease in academic performance, as well as increases the risk of being exmatriculated. – The increased number of study opportunities offered by foreign universities, as well as the emigration of young people and the demographic situation in general, pose a potential threat to reduce the number of applicants. – Difficulties in attracting young professional staff due to insufficient level of remuneration and the aging of the academic staff. – Opportunities created by global technology have the potential to undermine academic integrity, and disregard of this trend can lead to a decline in the quality and prestige of the studies.

Taking into account the strategic goals of RTU and the performed SWOT analysis, a study direction development plan has been designed.

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.

The management of the study direction and the corresponding study programs is generally provided by the Council of the FEEM (Faculty of Engineering Economics and Management), the Study Direction Committee and the Head of the Study direction, the Heads of the study programs, the administration of the institutes or departments, implementing the study program, and the Student Self-government of FEEM.

Internal quality control at the faculty and at the level of the study direction is ensured by the Vice Dean for Academic Affairs. The quality of the study program is ensured by the Head of the study program and the academic staff involved in the implementation of the program, whereas the whole process is controlled by the administration of the responsible institute or department. Once in an academic year the abstracts and curriculum of the study program, the methodological materials, as well as recent study literature and methodological guidelines for study papers (reports, study papers, internship reports and graduation papers) are reviewed. The academic staff and the administration of the study program participate in various experience exchange activities, cooperating with the higher education establishments in other countries, participating in the

meetings with representatives of relevant institutions and entrepreneurs, as well as discuss the current developments in the field, analyzing the results of the students' research papers and projects.

The responsibilities and duties of the Head of the study program are provided in the job description. The most important of them include: management of study program development, improvement of the curriculum in compliance with the requirements of the scientific fields or the sectors of the national economy, implementation of quality assurance, supervision of study plan development, promotion of internationalization, cooperation with RTU Study Department providing the input of data in the Information system, as well as the cooperation with other departments of RTU that are involved in the implementation of the study program. The administration of the Faculty constantly monitors the compliance of the premises and technical equipment with the modern quality requirements, and appropriate classrooms have been created with the necessary multimedia equipment. Support functions for the development and implementation of study programs are provided by RTU Study Department. RTU Programs Management and Curriculum Design Unit plays an important role supporting the improvement of the study program.

The management of the study direction “Economics” is provided by the Study Direction Committee, which includes specialists in the field of Economics and comprises both the members of the academic staff and industry representatives. The Committee consists of: Professor, the Head of the Study Direction Dr. oec. Maija Schenfelde; Professor, the Deputy Dean of the FEEM Dr. oec. Inga Lapina; Professor, the Head of the Institute of Civil Engineering and Real Estate Economics Dr.oec. Ineta Geipele; RTU Emeritus Professor Dr. oec. Juris Saulītis; Assoc. Professor Dr. oec. Tatyana Survilo; Assoc. Professor Dr. oec. Ilze Judrupa; Business Advisor to the Latvian Association of Local and Regional Governments Dr. oec. Andra Feldmane; Mg. oec. Jūlija Burģe, as well as a student representative.

RTU has established a rigid system for the management and development of study programs. Proposals to introduce any changes in the curriculum are made by the Study Direction Committee based on the recommendations of the academic staff, references from employers, suggestions from student self-government, as well as observing the latest trends in the national economy and the labor market. The Study Direction Committee requests the Faculty Council to review and approve them. Based on the decision of the Faculty Council, the RTU Senate approves changes in the study direction. Amendments in the structure of study programs are approved by the order of RTU Vice Rector for Academic Affairs. Technical support of the study direction is provided by the study program record keeping as well as IT service. Such cooperation in the implementation of the study programs within the study direction is to be evaluated as efficient and stimulating the development of the study direction.

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 procedure of students matriculation is stipulated in the RTU Admission Regulations, which are elaborated based on the Law on Higher Education Institutions and

Regulations of the Cabinet of Ministers Nr. 846 issued 10 Oct 2006 ''Regulations on Requirements, Criteria and Procedures for Enrolment in Study Programs'', as well as the specific requirements of study programs and the industry. The RTU Admission Regulations are approved by the RTU Senate and published on November 1 each year (see the files of Appendix 29-34 of the list of Internal regulations).

Admission requirements are logical, understandable, and linked to the goals defined in the RTU Strategy.

Admission system is state-of-the-art, easily accessible, logically structured, and is evolving in line with today's digitalization trends, providing the potential students with the convenient and easy to use application to university registration tool.

Applicants are admitted to full-time and part-time undergraduate programs based on the results of the **Centralized Examinations** (CE) in Mathematics, the Latvian language and the Foreign Language, and the final grades in individual subjects obtained in the Secondary Education, and the entry test results. If, in addition to these CEs, the applicant has a CE in Physics or Chemistry, the results of these CEs are taken into account in the ranking calculation.

In order to participate in the competition for the state budget funded seats, the rating in Mathematics CE is calculated as the average value of all Mathematics CE rating sections, and must be at least 12 percent.

To determine the candidate's rank in the competition, each CE rating, calculated as an average of all CE evaluation sections, and each entry test (if any applies) is multiplied by the appropriate weighting factor and the resulting multiplications are added together. Some study program applicants must pass an entry test, the result of which shall be multiplied by an appropriate weighting factor and summed up in the total calculation of rank.

Applicants who have not passed the CE, are admitted to the undergraduate study programs based on their passing year grades in the secondary education document, which must be successfully completed. CE in the foreign language can be replaced with a foreign language examination conducted by an international testing institution the certificate of which must be presented to the RTU Admission Committee.

The applicants who have acquired a Bachelor Degree in a field relevant to the study program are enrolled to the graduate study programs. The applicants take part in the competition with a weighted average grade from the Bachelor or professional study program records. The weighted average grade is calculated as the sum of all the grades received in each study course multiplied by the credit points acquired in the study program, and is divided by the total number of credit points within the study program. If credit points are not verified, the number is calculated as the multiplication of the grades and contact hours obtained in each study course divided by the total number of contact hours.

There are two ways to apply for the state budget funded seats in undergraduate study programs:

1. Electronically in the Joint Enrolment Undergraduate Study Program information system, using the e-service portal (https://www.latvija.lv). Applicants must confirm their electronic applications by personally arriving at the designated locations within the deadlines and presenting the originals of the required documents;
2. Arriving at the RTU Admission Committee in person, presenting the originals of the required documents.

There are also two ways to apply for the state budget funded seats in the graduate study programs:

1. RTU undergraduate study program graduates can submit their applications online at RTU portal ORTUS or by visiting RTU Admission Committee;
2. Bachelor study program graduates from other higher education establishments can apply only in person at the RTU Admission Committee.

Applicants who do not qualify for the state budget funded seats and applicants who have received their education outside Latvia, as well as in other specific cases, must appear in person at the RTU Admission Committee within the admission deadline, with the required documents.

Recognition of previously acquired formal and non-formal education at RTU is carried out in accordance with the "Regulation on the Recognition of the "Courses Completed at Other Universities and RTU Study Programs" (Resolution of RTU Vice-Rector for Academic Affairs No 02000-1.1/29 as of 4 April 2016) and the "Procedure for Recognition of Competencies Developed Outside Formal Education or From Professional Experience and Learning Outcomes Achieved in Previous Education at Riga Technical University" (approved at the Meeting of RTU Senate on 23 September 2019, Minutes No 632).

To date, there have been no cases of recognition of non-formal education in the Study Field "Economics", while the procedure for recognition of formal education is applicable to all study programs. The procedure is carried out in accordance with the previously mentioned Order issued by RTU Vice-Rector for Academic Affairs. The student submits an application to the director of the study program with a request for recognition of a previously acquired study course. A study course recognition form is created.

Recognition, depending on the situation, is performed by the director of the study program or by the member of academic staff responsible for the study course. For example, the study course "Regional Policy" (5CP) previously acquired by the student of the academic Master study program at Rīga Stradiņš University was recognized as the study course "Regional Economics and Policy" (4CP). For the student of the academic Bachelor study program study courses "Microeconomics" (4CP) and "Mathematics for Economists" (4CP) previously acquired at the University of Latvia were recognized, as the program has analogous study courses with the same volume in credit points. For the part-time student of the same study program study courses previously acquired at the University of Latvia were recognized: the study course "English" (4CP) was recognized as an analogous study course in the volume of 3CP, study course "Education Management and Entrepreneurship" (2CP) was recognized as the study course "Management Theory (basic course)" (2CP) and the study course "Research Process Organization" (4KP) previously acquired at Riga Higher School of Pedagogy and School Management was recognized as the study course "Methodology of Economic Research" (2CP).

RTU admission regulations are published at https://www.rtu.lv/lv/studijas/uznemsana/uznemsanas-noteikumi (for local students) and at http://fsd.rtu.lv/ (for foreign and exchange students).

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.

Summative assessment system is used in appraisal of student achievements, it implies that the

final grade is composed of numerous components. Assessment of student learning outcomes is carried out in accordance with the "Regulation on the Assessment of Learning Outcomes" (approved at the Meeting of RTU Senate on 29 May 2017, Minutes No 610), which is available on Studies Regulations page of RTU web page https://www.rtu.lv/writable/public_files/RTU_1_studiju_rezultatu_vertesanas_nolikums.pdf (English translation is in the file of Appendix 04 of the list of Internal regulations). Pedagogical methods used in the implementation of study courses, as well as assessment forms and methods are selected by the instructors responsible for the study courses in compliance with course curriculum and specifics of the program, as well as student needs. A member of academic staff should inform students about particular assessment criteria at the fist lecture/practical class.

The main advantage of the summative assessment system is that the final grade is made up of several components. Therefore, the students may contribute to their final grade working during semester. Criteria for assessment of the study courses and individual/home tasks are published in ORTUS portal beforehand. During semester, the assessment for each home task, test, report, presentation and any other task is ascribed certain weight in the final grade. Exam grade may not exceed 50% of the final grade. Academic staff may take into consideration and also assess student attendance. Assessment structure for the study course is determined by the academic staff themselves, abiding the resolution of RTU Senate that the exam grade may not contribute more than 50% to the final grade. Selecting assessment criteria and methods for evaluation of student achievements, specifics of each study program and learning outcomes are taken into consideration.

The summative assessment system is also used in the Study Field "Economics". The following examples of how this system is applied to individual study courses are provided as an illustration:

- the summative assessment in the study course "Macroeconomics" is composed of grades for 3 assessment tests, each with a 20% weight in the final grade, and examination grade with a 40% weight in the final grade;
- the summative assessment in the study course "Public Sector Economics" is composed of the attendance with a 5% weight in the final grade, 9 individual tasks each with a 5% weight in the final grade and examination grade with a 50% weight in the final grade;
- the summative assessment in the study course "Modelling of Macroeconomic Processes" is composed of grades for assessment tests with a 15% weight in the final grade, grades for practical tasks with a 20% weight in the final grade, attendance and activity during class with a 15% weight in the final grade and examination grade with a 50% weight in the final grade;
- the summative assessment in the study course "Sustainable Development of Spatial Environment" is composed of teamwork and discussions with a 20% weight in the final grade, assessment test with a 20% weight in the final grade; report with a 30% weight in the final grade and examination grade with a 30% weight in the final grade.

In order to advance professional pedagogical competences of the academic staff, courses and seminars on the newest pedagogical methods are organized regularly. Qualification advancement is provided at both the University and faculty level, organizing academic conferences and methodological seminars. The Center for Academic Excellence has been established and successfully operates at RTU; it organizes various events aimed at professional advancement of academic personnel at the University level.

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.

RTU has approved the “Code of Academic Integrity” (approved at the Meeting of RTU Senate on 29 February 2016, Minutes No 597; see the file of Appendix 38 of the list of Internal regulations) with an aim to promote academic culture and integrity in the academic environment of RTU and to define the main procedures for consideration of the breaches of academic integrity. Provisions on the consideration of the breaches of academic integrity and the types of plagiarism are set out in the document “Breach of Academic Integrity and Breach Consideration Procedures” (prepared by the Study Department, 2016; see the file of Appendix 39 of the list of Internal regulations). RTU or faculty administration considers the breaches of academic integrity based on the “Statement of the Breach of Academic Integrity by a Student” (see the file of Appendix 40 of the list of Internal regulations) filed by a member of academic staff. Students have the lectures on the efficient use of library resources, publications and *Mendeley* software are organized. Within the framework of the study programs, students learn how to conduct research. In parallel with educational activities related to academic writing and ethics, all student graduation papers are checked for similarity using an anti-plagiarism tool. If plagiarism is suspected, papers are forwarded for additional examination.

Since 2010 all students that gradate from any RTU study program should upload electronic versions of their graduation papers in ORTUS portal in order to improve the quality of graduation papers, create a bibliographic database of the graduation papers and introduce an automated control system for detecting plagiarism. RTU uses two major plagiarism control tools in the study process – since 2015 a part of graduation papers within some RTU study programs has been checked in the joint plagiarism control system, which unites numerous Latvian universities and colleges. Since 2018, RTU has used a world leading text similarity checking tool *TurnitIn*, which is used to check electronic versions of all graduation papers submitted for public presentation. Further control measures are operatively implemented for potential plagiarism detection. The developed Doctoral Theses are in a similar way controlled with extreme scrutiny. Since 1997, the Researcher Code of Ethics has been effective at RTU (see the file of Appendix 19 of the list of Internal regulations).

RTU participates in different initiatives that bring forward and solve academic integrity related issues. RTU is a member and one of the founders of the European Network for Academic Integrity (ENAI), where it is involved in active work sharing experience, keeping updated about academic integrity related issues, and organizing conferences. The Dictionary of Academic Integrity Terms and Guidelines is one of the newest aids that has been developed and will soon be published by RTU Press. In the framework of Specific Support Objective (SSO) 8.2.3 of the project “Development of Efficient Management of Riga Technical University”, RTU, in cooperation with the University of Latvia (UL) and Riga Stradins University, develops educational aids, as well as participates in the establishment of the Latvian national academic integrity organization and development of plagiarism control tools.

Specific control tools and detailed procedures to be applied in case of academic integrity breaches have also been developed by separate RTU faculties. For example, the FEEM has established and in cooperation with the UL maintains the Joint Computerized Plagiarism Control System.

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.

Detailed information on the study direction and the study programs pertaining to it with the indication of the languages of instruction is available at RTU web page:

1. RTU web page in the section on education opportunities in the Latvian language (https://www.rtu.lv/lv/studijas) (responsible person – I. Bušovska, Head of the Admission Department);
2. RTU web page in the section containing comprehensive information on education opportunities in the English language (https://www.rtu.lv/en/studies) (responsible person – I. Tipāns, Director of the International Cooperation and Foreign Students Department);
3. Interactive web pages dedicated to RTU study directions, study programs therein, as well as the detailed description of the offered study courses in the Latvian and English languages (https://stud.rtu.lv/rtu/vaaApp/sprpub) and (https://info.rtu.lv/rtupub/disc2/list) (responsible person – G. Alksnis, Head of the Program Management and Curriculum Design Unit);
4. Web page designed for the foreign student target audience on RTU study programs implemented in English and student mobility opportunities (https://fsd.rtu.lv/) (responsible person – I. Tipāns, Director of the International Cooperation and Foreign Students Department).

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.

RTU operates pursuant to the regulatory enactments of the Republic of Latvia and “Constitution of Riga Technical University” (adopted at the Meeting of RTU Academic Assembly on 25 November 2013) and approved by the Law “On the Constitution of Riga Technical University” as of 23 October 2014 (English translation is in the file of Appendix 01 of the list of Internal regulations.)

“RTU Strategy and Development Program for 2014–2020” (approved at the meeting of RTU Senate on 28 October 2013, Minutes No 573) laid out the key principles of RTU development in the period until 2020 (see https://www.rtu.lv/en/university/strategy). Three aims of the University are defined in the Strategy: (1) high quality study process; (2) excellence in research; and (3) sustainable innovation and commercialization activities, as well as definite tasks and qualitative indicators pertaining to these aims, for example, development and implementation of competitive study programs in cooperation with foreign universities. In order to efficiently control implementation of RTU Strategy, RTU Strategy Management System has been established, which provides that strategic aims, activities and tasks are cascaded to the level of definite organizational units and their staff. Study direction “Economics” is one out of 12 study directions implemented by RTU, and its internal quality system is closely related to RTU Quality Management System.

RTU internal quality management system works in line with the “Excellence approach” (approved on 30 January 2017 at the meeting of the RTU Senate, Minutes No 606), as well as the “RTU Quality Policy” (approved by the Senate on 25 September 2017, Minutes No 612). RTU Quality Policy is aimed at implementation of RTU mission and achievement of strategic aims – scientific research, academic, infrastructure and organizational excellence, and recognizability. The Quality Policy provides the framework for implementation of RTU Strategy, and the paths for development and improvement of research, study process and organization. RTU Quality Policy is reconciled with the ENQA standards and guidelines. RTU Excellence Approach and Quality Policy are reciprocally integrated documents, which determine that RTU employs the EFQM quality model.

Starting with December 2018, RTU has been a member of the European Foundation for Quality Management, having joined the global quality cooperation network.

RTU Excellence Approach (see the attached figure "RTU Excellence Approach") has been elaborated in order to promote purposeful development of the University as an excellent organization, and RTU Constitution, Strategy and Quality Policy are integrated therein; it is based on the Standards and Guidelines for Quality Assurance in European Higher Education Area (ESG) developed by the European Association for Quality Assurance in Higher Education and the basic principles of the EFQM Excellence Model.

The structure of RTU Excellence Approach (see the attached figure "Structure of RTU Excellence Approach") is designed in accordance with the criteria of the EFQM Excellence Model and forms the basis for the maintenance of performance at a high level, a prerequisite for its continuous improvement, as well as for achievement of sustainable results of RTU activities and excellence. Student results are a separate criterion, they are also in part transferred to the main activity results; thus, the quality of the study direction is closely related to RTU quality management.

To promote introduction of the model of the EFQM total quality management system, as well as to assist in the compilation of a self-assessment report, a working group was established at RTU on 29 September 2017 (Rector’s order No 01000-1.1/225), which comprised representatives of RTU administration, faculties and Student Parliament (18 in total). Potential problems were identified and suggestions for improvement of RTU Quality Policy, including improvement of academic quality, were made at the meetings of the working group. In the period of one year, the working group considered compliance to nine criteria of the EFQM model and analyzed 101 sub-criteria, having identified 133 problems in total and having made 146 suggestions. The priority problems were included in RTU Development Plan as tasks set for a definite term to be solved by the respective organizational units. Quality model review report is drawn up with regard to the Quality System, which identifies the areas that should be improved. Performance indicators and results of student polling are integrated in RTU Quality System.

Application of RTU Excellence Approach is based on process-oriented activities and includes clear process flow and their interaction. Striving for excellence, RTU actively works on process planning, definition of its aims and interaction analysis. RTU has developed criteria and methods for ensuring efficient process operation and management. RTU conducts the process analysis and provides recommendations and suggestions on process improvement, which are discussed with process managers and persons responsible for process procedures; later they are approved as performable tasks with a definite completion term. Task creation and control tools inbuilt in the Document System, reports on task performance at the organizational unit level provide the necessary support for achievement of performance indicators of the annual aims and tasks set in RTU Strategy. For example, development of the uniform study program application structure and assessment criteria is one of the tasks for the process “Provision and Organization of Studies” approved in the system with the completion term set until academic year 2019/2020; they were improved and approbated

on the study programs developed within 8.2.1. SSO project.

In order to analyze study directions and to receive feedback, RTU has developed a polling cycle:

- Each semester, the polling of the students at a study program is conducted to find out student opinion about instructor's work quality and obtain evaluation of the study program. Polling is conducted electronically in ORTUS portal, the results are received by each instructor personally and the head of the organizational unit;
- After each graduation round, polling of the graduates of Bachelor and Master programs is conducted. It is also planned to run regular polling of employers. The results are taken into consideration in the improvement of the study programs within a study direction.

Quality assurance procedures of the Study Field "Economics" are closely related to the RTU Quality Management System. The Study Field Committee has been established and operates, the Committee monitors academic activities in the study field, is responsible for the quality of the content and its relevance to the intended aims and tasks of the study programs within the study field, as well as for the self-assessment of the study field. The Study Field Committee carries out an expert examination and sends changes to the structure or content of the study programs for approval at the Faculty Council, approves the self-assessment report of the study field, the representative of the Committee also works in the working group for the elaboration of the report.

Since 2017, the Faculty Advisory Board has been operating; the Board deals with important issues related to the study curriculum. For example, the Board approved the aims and tasks of the Study Field "Economics" and the aims and tasks of its study programs.

The Faculty Council reviews and approves changes to the content of the study programs submitted by the Study Field Committee, as well as self-assessment reports.

To ensure the quality of studies, the study field improvement report is drawn up each year, reflecting major changes, assessing the quality of the study process and its sustainability. In order to qualify for the accreditation of the study field, a working group for the elaboration of the self-assessment report was set up at the meeting of the Study Field Committee on 25 March 2019, which includes representatives of RTU and the study field administration, academic staff, as well as representatives of students and employers.

A meeting with the monitors of all groups and the director of the study program is held each semester. These meetings are very productive, topical issues are discussed and the director of the study program presents the activities performed. During these meetings minutes are taken.

Regular methodological seminars for academic staff, as well as discussions on topical issues related to the content and quality of studies are organized.

Members of student self-government are involved in ensuring the quality of the study direction and study programs implemented therein; they actively participate in the work of the decision-making bodies of the University: RTU Academic Assembly, RTU Senate, RTU Senate commissions and faculty councils.

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.

Study program development and revision processes are regulated according to the "Procedure for Application, Elaboration and Amendment of the Study Programs" (see the file of Appendix 06 of the list of Internal regulations), which in detail specify activity sequence and parties involved, starting with drawing up an application for new study program elaboration and finishing with study program closure. Procedures are reconciled with the effective national regulatory enactments pertaining to study program licensing and amendment.

Revision of the study program curriculum is the responsibility of the Study Direction Committee. The responsibilities and activities of the committees are regulated by the “Regulation on the Study Direction Committee” (approved by the Resolution of RTU Senate Meeting on 03 December 2012, Minutes No 594; see the file of Appendix 07 of the list of Internal regulations).

The process of developing a new study program begins with the submission of an application by the Study Field Committee to the Faculty Council. Upon receipt of the approval, a program development group is formed involving both the academic staff and the representatives of employers and students. The process is supervised by the Study Field Committee, which also approves the draft of the program and sends it to the Faculty Council. Upon a positive verdict from the Council, the project of the program is reviewed by the Study Quality and Programs Commission of RTU Senate and directed for approval at the Senate, where a final decision is made. Programs of the Study Field “Economics” have been developed before the reporting period, but they have been modified to take into account the realities of Latvia and the world economy and labor market requirements. For example, significant changes have affected the professional Master study program “Urban and Regional Engineering Economics”, which has been developed on the basis of the former professional Master study program “Economics”, by radically changing its aims, tasks, learning outcomes and, consequently, the program curriculum.

Feedback within study programs is received through graduates and every semester student polling, regulated by the “Regulation on Student Polling for Assessment of the Study Process” (approved at the Meeting of RTU Senate on 27 January 2014, Minutes No 577; see the file of Appendix 20 of the list of Internal regulations). The Study Direction Committee analyzes recommendations from employers and external experts, which are used as the basis for improvement of the study programs.

The following mechanisms are used to obtain feedback from employers.

RTU Council Convention, composed of representatives of different sectors, advises RTU Senate and Rector on the RTU Development Strategy. It has the right to propose an issue to the Senate and the Constitutional Assembly.

The RTU Strategy and its development program are presented in the RTU Council Convention, the decision-making bodies, as well as to cooperation partners, industry associations and leading companies, with feedback and suggestions being incorporated into the RTU documents.

The involvement of stakeholders and the realization of major projects is the responsibility of the Vice-Rector for Strategic Development. He clarifies existing needs, coordinates key priorities and activities, implements recommendations and promotes the sustainable development of the RTU.

Employers, as providers of the internship of RTU students, after completing the practice, prepare online feedback on the knowledge and skills of the student, thereby also assessing the relevance of the knowledge provided by the study program to the needs of the industry.

Employers' feedback is obtained also from the Council Convention, composed of representatives of different sectors and industry associations, as well as from the assessments provided by employers on the portal https://www.prakse.lv (RTU is the most recommended university at https://www.prakse.lv/top for several consecutive years).

In order to receive feedback from RTU graduates, RTU Alumni Association has been established. It actively operates at the University (http://alumni.rtu.lv/, https://www.facebook.com/RTUAlumni/) and runs an online community platform (https://rtuconnect.net/), which aims at developing alumni traditions. The Association organizes various events, which bring graduates back to the University, allow for networking, cooperation among the graduates and with the University, and integration in University activities. RTU Grand Graduation Ceremony is a major event introduced by the Association; it gathers the respective year graduates from all nine RTU faculties, academic and general staff, as well as guests.

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.

Student complaints and proposals are considered in compliance with "Procedure for Submission and Examination of RTU Students' Proposals and Complaints" (published at https://www.rtu.lv/en/university/suggestions-and-complaints and attached in the file).

The Procedures stipulate how RTU students may submit suggestions and complaints concerning the study process and other issues and determine the terms for consideration of applications and summary of application statistics.

A total of 50 complaints/proposals have been received between 12 August 2019 and 13 January 2020, four of which have been submitted anonymously. Of the submissions 13 were complaints, 27 were problems and 10 were suggestions across eight topics (subject: the number of complaints or problems / the number of proposals received):

- Study process: 19 / 5
- Sports: 3 / 1
- IT issues: 3 / 2
- Maintenance of infrastructure issues: 7 / 0
- Accommodation related: 4 / 0
- Scholarships: 1 / 0
- Foreign students' questions: 2 / 0
- Other: 1 / 2

Regarding the study process issues, six of them were related to the study planning, another six were related to the communication issues between teacher and student. Suggestions have also been received for new study programs and the introduction of additional classes.

Complaints about sports issues concern the amount of money awarded to sports undergraduate (100 euros) and graduate (10 euros) students.

IT issues and suggestions were related to improving ORTUS or inserting incorrect schedules.

Other complain were about alleged harassment and two suggestions for infrastructure improvements – the construction of roofed bicycle sheds, the lack of facilities around faculties and student accommodations.

Complaints about maintenance of infrastructure issues were about the cleanliness of shared facilities at faculties.

Of the submitted complaints / suggestions and suggestions, seven are related to the faculty implementing the study direction.

Administration of the Study Field "Economics" continuously supervises the study process, always listens to student complaints and proposals, and makes sure that all issues are resolved.

It should be noted that the meetings with the monitors of all groups and the director of the study program held each semester mentioned in Section 2.1 are very effective and productive and make it possible to prevent complaints. All issues are addressed quickly, and in recent years, there have been no written complaints from students in the Study Field "Economics". Prior to the introduction of this practice, a written complaint was received in the spring semester of academic year 2014/2015 regarding the implementation of the study course "Fundamentals of Regional Planning and Forecasting", as the content of the lessons did not correspond to the course description available to students. Whereas in the autumn semester of academic year 2016/2017, a complaint was received about the academic staff of the study course "Public Sector Economics", who had not placed materials in ORTUS portal. In both cases, the shortcomings were resolved after the director of the study program discussed the issues with the respective academic staff members. That same semester, there was a complaint that Bachelor study program students one day a week were scheduled to take classes in the late afternoon. It was explained to the students that the guest lecturer who implemented study course "Real Estate Economics" was an industry specialist who could take classes only after his work. After this case, at the beginning of the semester, the director of the study program asks to confirm in writing that students do not object to such time of classes. As the academic staff is highly evaluated from the student side, conflict situations do not occur.

There have been no complaints, which would have required organization of committee for its consideration in the study field.

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.

RTU Quality Policy provided the framework for implementation of the Strategy, the paths for development and improvement of research, study and organization processes. RTU Quality Policy and implementation thereof employ a fact-based approach – decisions are based on the acquired objective data, information analysis and monitoring.

RTU draws up quality reviews based on the analysis of processes and their results. Quality reviews are drawn up once a year, summarizing the data on performance indicators of RTU administration, core activities and support processes.

28 performance indicators characterizing process quality are set for one of the core RTU activity

processes “Organization and Management of the Study Process”. The data are summarized once a year for the previous academic year by study level and study program.

Performance indicators characterize the quality of entrant enrollment process, study process planning and education management – implementation of the initial admission plan, number of matriculated entrants vs. number of entry applications, number of entry applications with RTU as the first priority vs. all matriculated students, number of graduates vs. total number of students, number of exmatriculated students (except for graduates) vs. total number of students, number of students with academic arears vs. total number of students, number of students exmatriculated due to academic failure vs. total number of exmatriculated students, number of timely signed learning agreements vs. all signed learning agreements, etc.

Observing the current study program performance, reachable qualitative or quantitative aims are set for the indicators when possible, e.g., 65% of RTU Bachelor program graduates continue studies at Master programs.

The data in the quality review that is submitted to RTU administration are analyzed by study level, by faculty and study direction. Indicators of numerous study programs are compared with the general average RTU level.

The Study Department organizes further review and data forwarding to the faculties and directors of the study programs, whereas process managers introduce the necessary improvements. Changes to the approved processes occur in cooperation with quality management specialists.

In addition to performance indicators characterizing study process quality, which are summarized in the review, a study program quality visualization tool has been created in *Power BI* environment, which is used to reflect Bachelor and Master study program performance in an academic year with the help of radar chart. In the chart, study program results at each study level are presented comparatively – in relation to the best performance at the respective level. The tool is envisioned for the directors of the study programs and faculty administration to facilitate collection of transparent information on each study program performance considering numerous indicators simultaneously, as well as to rank the program in relation to the best performance. It is also possible to compare the program performance in several academic years.

Performance indicators of 11 study programs are summarized in the radar chart: academic staff vs. number of students, academic staff with scientific degree, ratio of graduates to the number of matriculated students, number of students who continue studies (not exmatriculated), proportion of foreign students, number of outbound mobility students, Bachelor program graduates who continue studies at RTU, number of matriculated students from the respective Bachelor study programs, average assessment of the study programs in student polls, number of study materials published in ORTUS learning environment and applicability thereof, as well as financial revenue generated by study programs per student. Comparative reviews of the study programs results are available to directors of all RTU study programs.

For examples of radar diagrams see attached Radar_diagram_akad.bak._Economics.png and Radar_diagram_akad.mag._Economics.png.

It is planned to develop and improve the tool for collection of statistical data necessary for evaluation of the study program performance and data visualization within the framework of 8.2.3 SSO project.

In addition, RTU Study Department summarizes and annually submits until 15 October to the Central Statistical Bureau and the Ministry of Education and Science a statistical review “Review of the University, College at the Beginning of Academic Year 20_/20_” (Cabinet Regulations No 812 of

20 December 2016, Appendix 5 (https://likumi.lv/doc.php?id=287576). The Review contains the following information (sources of information and/or RTU employees responsible for data collection are indicated in parentheses).

- Distribution of students by study program (Study Management System| Reports | University Review at the Beginning of the Academic Year).
- Enrollment results (University Review at the Beginning of the Academic Year).
- Students having obtained a degree or qualification in the academic year (University Review at the Beginning of the Academic Year).
- Distribution of enrolled students by age (University Review at the Beginning of the Academic Year).
- Distribution of students by age (University Review at the Beginning of the Academic Year).
- Distribution of students having obtained a degree or qualification by age (University Review at the Beginning of the Academic Year).
- University staff in the reporting year as of 1 October (Administrative Office);
- Premise floor area (the Unit of Legal Provision in Real Estate Issues).
- University revenues in the previous year (*Planning and Economic Analysis Unit*).
- Budget expenditure of the University in the previous year (*Planning and Economic Analysis Unit*).
- Number of students, who reside in student hostels (Study Organization Unit).
- Number of students by the language of instruction.
- Distribution of enrolled students by place of residence (University Review at the Beginning of the Academic Year).
- Number of mobility students in the total number of students (University Review at the Beginning of the Academic Year; International Cooperation and Foreign Students Department).
- Number of mobility students in the total number of students who have obtained a degree or qualification (University Review at the Beginning of the Academic Year; International Cooperation and Foreign Students Department).
- Own revenue from allocation of the mobility student tuition fees by country in the previous year (International Cooperation and Foreign Students Department).
- Revenue from allocation of foreign financial study grants by country in the previous year (*Project Financial Management Unit*).
- Revenue from allocation of foreign financial study grants for research by country in the previous year (*Project Financial Management Unit*).

Summarized statistics on the number of students/graduates is used for the following purposes:

- Improvement of the study direction. For example, if at some study program the annual number of student dropouts is much higher than the number of graduates who obtained degree/qualification, the causes of such a situation are sought for with scrutiny.
- If at some study program the number of enrolled students decreases annually, the cause should be identified, and potential program closure should be considered.
- Allocation of financing (for state budget funded seats).
- Compilation of RTU information materials, press, etc.

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.

In the context of the study quality assurance policy, one of the challenges to be emphasized is the organization of the RTU working environment so as to motivate the staff and students to realize the mission, vision and goals of the university and to ensure the excellent quality of the University activities. In the context of study program development and validation, one of the challenges is to reach agreement on the common structure and curriculum of separate sections for the study programs submitted for licensing. It is promoted by the Study Department, which deals with developing the study program description template and completing the sections applicable to the RTU in general. In the context of student-centered learning, teaching and assessment, perceiving the development of curriculum and study forms as one of the most significant challenges of today's higher education, RTU has established the Center of Academic Excellence, which acts as a bridge between teaching and learning cultures. The challenge lies in a relatively low activity of local students in using exchange programs for studies abroad. To compensate for it RTU promotes international opportunities by inviting guest lecturers and conducting study courses with foreign students. In the context of information management, it is considered how the data on employment of graduates from the State Revenue Service could be linked to specific study programs. In addition, in this context, the question of choosing the most appropriate method for mapping study programs is evaluated taking into account the great variety of RTU study programs. Active professional development of the academic staff is also taking place within 8.2.2. SSO project “Strengthening the academic staff of Riga Technical University in the areas of strategic specialization”

The description of the integration of the standards included in the first part of the ESG is given in the appendix "Integration description of the first part of the ESG standards".

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.

According to the Conceptual Report “Introduction of a New Higher Education Financing Model in Latvia” approved by the Cabinet of Ministers on June 29, 2015 (http://likumi.lv/ta/id/274944-par-jauna-augstakas-izglitibas-finansesanas-modela-ieviesanu-latvija), Latvia has introduced structural reforms in the sector to ensure the development of an efficient and sustainable higher educational system. A three-pillar funding model has been introduced to reconcile the supply offered by higher education with the needs of Latvia's economic development and labor market, high-quality research-based higher education content and performance management in higher education institutions. The base funding for provision of the study process is

the 1st pillar, performance funding is the 2nd pillar, and development funding is the 3rd pillar.

The first pillar, or base (base funding), is implemented through state budget funded study seats. Determination of the number of state budget funded study seats is regulated by Sections 51 and 52 of the Law on Higher Education Institutions (http://likumi.lv/ta/id/37967-augstskolu-likums#p-50515).

RTU funding from the basic state budget is made up of the study base financing corresponding to the list of study programs and the number of students; it is used to cover such expenses as utilities, taxes, infrastructure maintenance (including data for the Student and Graduate Register), purchase of equipment and supplies, staff remuneration, and funding for research activities.

The number of study seats is allocated after discussions with the Ministry of Education and Science. Funding from the state budget is allocated for full-time studies.

The amount of study base funding is determined on the basis of the number of study seats determined by the state at RTU, as well as the state-defined study seat basic expenses and study cost coefficients in the thematic areas of education.

Study cost coefficients for thematic areas of education are indicators that determine the amount of study seat costs in the respective thematic area of education in relation to the basic costs of the study seat.

The cost coefficients for the study programs in the thematic areas of education for Bachelor and professional study programs are set by Cabinet Regulations of December 12, 2006 “Procedure for Financing Higher Education Institutions and Colleges from the State Budget” (https://likumi.lv/doc.php?id=149900) ((the "Terms") in Appendix 1.

Values of study cost coefficients are 1.5 times higher for Master study programs and three times higher for Doctoral programs than the study cost coefficients specified in Appendix 1 to the Regulations for the respective thematic area of education.

The amount of the study funding granted to the institution of higher education or college from the state budget for the implementation of Bachelor, professional and Master study programs is calculated using the following formula:

Fs = Tb x [S(ki x ni) + 1,5 x S(ki x mi)] + Sb x S(ni + mi), where

Fs – amount of study financing;

Tb – basic costs of the study seat;

ki – coefficient of the study costs in the relevant field of education (Appendix 1 to the Regulations);

ni – the number of study seats for a higher education institution or college at undergraduate and professional study programs in the relevant thematic area of education;

mi – the number of study seats at the Master study programs in the relevant thematic area of education;

Sb – study seat social security expenses at undergraduate, professional and Master study programs (Appendix 2 to the Regulations).

The basic costs of a study seat and the social security expenses of a study seat are determined in accordance with Appendix 2 to the Regulations.

Each year, the Ministry of Education and Science calculates the basic costs of a study seat for the following budget year and, by November 1 of the current year, coordinates the calculations with the Ministry of Finance and those Ministries which have higher educational institutions and colleges subordinated to them.

RTU funding from the state basic budget for the provision of study seats in the respective academic year is distributed in accordance with the decision of RTU Senate "Methodology for Allocation and Application of Basic Budget, Performance-Based Funding and Tuition Fees to RTU Units" (see the file of Appendix 16 of the list of Internal regulations; hereinafter – the Methodology). The Methodology is reviewed and revised every year and is subjected to any necessary changes.

As the study direction "Economics" is implemented at the Faculty of Engineering Economics and Management, the issue of financial provision of studies and respective study programs is considered in the context of the Faculty, which also implements the study programs of three other study directions.

The FEEM consists of five institutes with their subordinate departments and several independent organizational units: the International Programs Unit responsible for the implementation of the study program "Innovations and Entrepreneurship" and BALTECH Study Center.

RTU has a decentralized budget, and each organizational unit is allocated a separate budget. In a general sense, a budget is a plan of revenues and expenditures for a specific period of time, work, event or function. The revenues and expenditures of RTU shall be administered in accordance with principles approved by the Senate or as stipulated by the Vice-Rector for Finance.

Revenues can be divided into those allocated to the organizational unit for carrying out certain tasks for which it is responsible, such as consultancy, organization of training; and those allocated to the organizational unit as a result of calculations based on the envisaged workload (e.g., funding for the implementation of the study course "Innovative Product Development and Entrepreneurship" at different study programs or funding for the administration and development of the study program) and/or indicators achieved in previous periods (e.g., research support).

According to the Budget Allocation Methodology, the financing is allocated to the organizational units either according to the financial or budget year or immediately after receiving the financing. The financial or budget year of RTU organizational units is from October to September of the following year, and for this period the financing is calculated and distributed:

- Subsidy or basic budget funding (training of state budget funded students) is divided into monthly limit – 1/12 of the estimated annual funding per month is allocated to the organizational unit;
- Tuition fee funding (training of tuition fee-paying students, including funding paid by students for settling academic arrears) is allocated twice a year (in October and April) as a monthly limit – 1/6 of the estimated funding per semester is allocated to the unit monthly;
- Performance funding (research support funding) is allocated as a monthly limit – 1/12 of the estimated annual funding is allocated to the unit per month;
- Research base funding (research support funding) is allocated as a monthly limit – 1/12 of the estimated annual funding is allocated to the unit per month;
- Foreign student tuition fee funding is allocated several times a year, taking into account that most of the funding for the envisaged workload is allocated to the organizational unit at the beginning of the semester – it is planned in the forthcoming periods, by adjusting the allocation process with the allocation of tuition fee funding to facilitate the unit's operation during the budget planning process.

Each head of RTU organizational unit is provided with remote access to operational financial

information on the unit's budget, including the envisaged workload and correspondingly allocated funding for the implementation of study programs and study courses in subsequent periods. Based on this information, the head of the organizational unit plans the work of the unit at the beginning of each financial or budget year, including remuneration issues for academic staff members who are subordinate to the head of the unit, and develops a procurement plan for the following year in compliance with the implementation and development of the study program or study course, etc.

According to the World Bank research on higher education governance in Latvia, which was conducted in 2017 and 2018, the World Bank concluded that RTU used the opportunities offered by the system-level funding model reform to gradually adjust the internal distribution of decision-making powers by strengthening the position of deans. Prior to the introduction of the second pillar of the state funding model, RTU funding was provided to units below the level of faculties. To address the issue of weak positions of deans, more than half of the new 2nd pillar performance income is used to provide funds to faculties where the dean is the budget holder. First, it opens up new opportunities for faculty-level strategic development. Second, deans now have greater opportunities to ensure the development of faculties, which is their responsibility.

In academic year 2019/2020, RTU intends to make changes in the Methodology in order to ensure that the basic state budget funding for the provision of study seats is distributed by study programs and thematic study directions courses, ensuring even more precise distribution of funding according to the indicators by which RTU receives the state budget funding. In addition to the seats financed by the state basic budget, the study program financing also consists of tuition fee revenue, which can be divided into two subgroups:

1. revenue from local fee-paying students;
2. revenue from foreign fee-paying students.

Funding from local fee-paying students is allocated in compliance with the Methodology where, in order to provide greater opportunities for the development of fee-based study programs, for several academic years, a significant amount of the funding received has been channeled to the Head of study program, who may appropriately use this funding to renew facilities and attract higher level specialists for the implementation of the study process, etc.

Funding from foreign fee-paying students in a respective academic year is allocated in accordance with the Resolution of RTU Senate On Approval of the "Methodology for Allocation of Funds for Study Process Provision at the International Cooperation and Foreign Students Department" in the Respective Academic Year (see the file of Appendix 41 of the list of Internal regulations; hereinafter – Methodology2). Methodology2 is revised and approved every year taking into account necessary changes.

In academic year 2019/2020, RTU made significant changes to Methodology2 with an aim to bring it closer to the Methodology governing budget allocation, thus facilitating the work process of the persons responsible for the implementation of the study programs – both by aligning funding allocation periods and principles.

Analyzing the financing procedure of the study programs and the study directions at RTU as a whole, it can be seen that the state basic budget and local fee-paying student funding in the long run are determined taking into account the basic principles established by the state. In the process of determining the amount of funding, the study cost coefficients of the thematic areas of studies and the values of the study cost coefficients according to the level of the study program, as well as the number of students at the study program and the study courses implemented therein are taken into account. As mentioned above, by using study cost coefficients of the thematic areas of studies, it is possible to determine the amount of financing required for the implementation of a particular

study program and study course. In the Methodology for academic year 2018/2019, RTU Senate approved that in the future the study cost coefficients of the thematic areas of studies would be applied individually to each study course of the study program, thus ensuring even more appropriate amount of financing for the implementation of study courses included in the study programs. In order to implement this system, the Expert Committee was established by order of the Vice-Rector for Academic Affairs, who determined thematic areas of studies for each study course. RTU has the following thematic areas of studies and the applicable coefficients:

Thematic areas of studies of RTU study courses	**RTU coefficient**
Architecture and Urban Planning	3.5
Aviation Transport	4.2
Construction	2.9
Civil Construction and Real Estate Management	1.71
Civil and Occupational Safety	2.9
Civil Safety	4.2
Computer Science	2.9
Computer Studies	242
Economics	1.4
Electronics and Telecommunications	2.9
Power and Electrical Engineering	2.9
Physics	3.2
Geodesy and Cartography, Geomatics	2.9
Innovations	2.9
Engineering Graphics	2.9
Quality Management	2.9
Chemistry and Chemical Technology	3.2
Applied Art and Design	3.5
Mathematics and Statistics	2.42
Materials Science	3.2
Medical Engineering	2.9
Mechanics, Mechanical Engineering, Machine Building	2.9

Thematic areas of studies of RTU study courses	RTU coefficient
Customs and Taxation	2.9
Pedagogy	1.67
Heat Engineering, Heat, Gas and Water Technology	2.9
Social sciences	1.4
Sports	2.0
Textiles Technology	2.9
Law	1.4
Transport	2.9
Management and Administration	1.4
Languages	3.2
History and Philosophy	1.4
Environmental Engineering and Management	3.2
Logistics	1.8

From academic year 2019/2020, it is envisaged to incorporate similar principles in Methodology2 and apply them to study programs, where the total number of foreign students in all academic years is greater than or equal to 90. The study programs with less than 90 foreign students have a support mechanism, which envisages financing from the total funding of the foreign students, in order to ensure an adequate amount of funding for the implementation of the study courses of the study programs.

In order to ensure the functioning and sustainable development of study programs, RTU has been improving the Methodology and Methodology2 for each academic year in accordance with changes in the external and internal environment, thus also eliminating possible risks in the implementation process of the study program or its study courses. The transition process involves all stakeholders, thus ensuring transparency, as well as a transparent decision-making process. The required changes are at first initiated by RTU Vice-Rector for Finance, and additional changes can be initiated by any RTU employee by submitting a request to RTU Vice-Rector for Finance or to the Finance and Budget Committee of RTU Senate. The Finance and Budget Committee of RTU Senate consists of 21 senators (deans, heads of organizational units of faculties, professors, as well as student representatives) who have voting rights, as well as nine RTU Senate advisors, who are mainly representatives of various administrative units, such as vice-rectors, heads of departments etc. Once the Finance and Budget Committee of RTU Senate has considered and evaluated the proposals, it shall propose amendments to the Methodology or Methodology 2 or develop a new version of the document(s) for the next academic year for approval by the RTU Senate (50 senators). It should be noted that historically changes in the Methodology or Methodology 2 have been proposed after performing a thorough analysis, including mitigation of their possible negative impact on the implementation of study program courses, for example, Methodology 2 stipulates

that the financing for a study course may not be less than 90 % of the amount allocated for the implementation of a study course of the same volume in the previous academic year.

The financing of FEEM has been stable in recent years, even with a tendency to increase. Taking into account the increasing workload with foreign students, financing of the FEEM study process (basic budget, tuition fee, performance and foreign tuition fee funding) in financial year 2018/2019 reached almost 2.8 million EUR, i.e., an increase of 8 % or almost 0.25 million EUR.

Since the beginning of financial year 2018/2019, in addition to information on the budget of each subordinate unit, the heads of the FEEM organizational units are provided with a regularly updated overview of the overall financial results of the faculty study process, thus the objective information on performance is made available not only to the Dean but also to the Heads of institutes, departments and other organizational units. The provision of such a report ensures not only transparency of information, but also an opportunity for the FEEM Dean and Council to react promptly in situations where it is necessary, for example, to review individual expenditure items within the framework of joint financing.

The attached file "Financial resources of study direction "Economics" study programs" provides information on financial resources of the study programs included in the study direction “Economics” for the period of 2013–2019.

Research base funding (base funding provided by the state) is allocated among faculties according to the performance-based output indicators, i.e., number of publications (weighted by impact and citation), money attracted by research projects and industry contracts, and defended Doctoral Theses (considering also the time it takes to complete Doctoral studies). The calculation is made based on the transparent methodology, which was approved by the Scientific Council (the document: “Methodology for Allocation of Research Base Funding to RTU Organizational Units”) on 20 November 2018. A decision regarding allocation of the budget among faculty institutes is made within faculties (by the Faculty Councils).

RTU also makes 3 project calls a year with internal funding. The 1st project call aims at supporting publication activities of young scientists. The 2nd call supports projects where RTU cooperates with industry partners, and this call is aimed at promoting inter-faculty and inter-disciplinary research within six research platforms of RTU. The goal of the 3rd call is to involve graduates in the research process. The regulation documents are usually approved by the Scientific Council of RTU. However, the decisions regarding selection of particular researchers or projects are made by expert groups organized by the Office of Vice-Rector for Research, on the faculty level or the research platform level (Council of Coordinators of Research Platforms; decision of RTU Senate No. 600 “On Approval of the Regulation of Coordinators’ Board of the Research Platform at Riga Technical University” as of 23 May 2016. Projects are administered by the Office of Vice-Rector for Research. The Office also coordinates administration of the externally funded research projects, e.g., within Horizon 2020 program and other. Research projects funded by the EU Structural Funds are administered by the Office of Vice-Rector for Strategic Development.

The Internal Research Excellence Grant for young scientists is a new initiative, with an aim to attract talented young researchers to RTU and provide with funding, which allows establishing new research groups in a prospective research field. Funding for a 3-year period is based on international competition under conditions similar to EC ERC grant, and international call and evaluation performed by external, i.e., foreign well-recognized researchers. The final decision for awarding the grant is made by the Scientific Council of RTU.

RTU Research Support Fund (decision of RTU Senate No. 585 “RTU Regulation of Research Support Fund” as of 15 December 2014) aims at providing financial support for various research related

activities, such as support for maintenance of research equipment, protection and licensing of intellectual property, covering of expenses related to the Doctoral study process, publishing of scientific journals, participation and organization of scientific conferences, support to researchers in establishing new laboratories in a prospective research field. The Research Support Fund is an instrument to support research activities, which foster the development of the strategically important research fields. 10 % of the research base funding (state budget funding) is allocated to the Research Support Fund every year. Establishment of five new laboratories or centers has already been supported by the Fund by June 2019, e.g., RTU High Energy Particle Physics and Accelerator Technology Center (for cooperation with CERN), Biochip Laboratory, Scientific Laboratory of Experimental Mechanics of Materials, Scientific Laboratory of Electromechatronics, Research Center of Communication System Technologies.

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).

The construction of RTU Ķīpsala campus began in 1965 with the aim to create a unified study and research center. The construction process is underway and it is envisaged to host the majority of university students in Ķīpsala by 2021. After completion of the construction, RTU Ķīpsala campus will become the most modern engineering study center in the Baltic States.

The issue of sustainable development is taken into account in the construction process of the campus. Recognizing its concern for sustainable development and demonstrating its willingness to engage in the promotion of sustainable development, RTU has joined the Sustainable Development Solutions Network, which seeks to achieve the 17 UN Sustainable Development Goals (SDGs) by 2030. RTU is currently the only organization in the Baltic States that has been admitted to the network.

Through its networking activities, RTU, as a higher education and research institution, has prioritized the achievement of seven UN SDGs that coincide with RTU research platforms. RTU considers the provision of quality education and the promotion of lifelong learning to be its primary goal. RTU also intends to contribute to research and innovation in sustainable and modern water technologies, power systems, infrastructure and urban environment. The University is also committed to promoting the creation and distribution of sustainable products.

RTU buildings are equipped with state-of-the-art climate control equipment, technical solutions that are remotely controlled and provide the opportunity to track energy consumption to make buildings more comfortable for students, academic staff, researchers and guests. One of the results achieved in the development of RTU infrastructure is the participation in the GreenMetric Ranking, which recognizes RTU Ķīpsala campus as the 59th greenest campus in the world and RTU – as the 129th greenest university in the world (http://greenmetric.ui.ac.id/detailranking2018/?univ=rtu.lv). In the Baltic region, RTU is a leader in terms of green thinking infrastructure.

The infrastructure of Ķīpsala campus provides students, staff and guests with all the necessary services and utilities, e.g., it is possible to park a bicycle and a car, quench one’s thirst at water drinking points. Developing the infrastructure, care is taken of all groups of people, including people

with disabilities: each building has parking lots, easy access to classrooms, laboratories and other facilities, the use of Braille to provide essential information, as well as all sanitary facilities are designed according to the requirements. The association of people with disabilities and their friends APEIRONS (https://www.apeirons.lv/) commends RTU for its achievements in infrastructure related issues for people with disabilities.

In RTU Ķīpsala campus, there are currently 54 classrooms, 187 laboratories, 19 special training rooms, 10 computer classrooms, 12 workshops and several research centers of national importance. The campus also houses a hostel with 950 beds and a special area for people with disabilities.

The Faculty of Engineering Economics and Management is located at 6 Kalnciema Street, Riga. The FEEM has a well-developed infrastructure with easy access to public transport stops, cafes, shops and a sports center.

The total area of the building is 6627 m2 with five floors and a basement. Bicycle parking and over 50 parking lots are also available. People with disabilities have physical access to the FEEM. Landscaped area with paved driveways and pedestrian sidewalks, lawn, and benches ensures a cozy atmosphere.

On each floor of the FEEM building, there are amenities and a specialized water dispenser. There are also a lift, an open wardrobe, a reading room, several lounges, student study rooms, classrooms and instructors' offices, meeting rooms, the Museum of Customs and Tax History, as well as a cafe.

Building at 6 Kalnciema Street

No.	Type of use	Quantity	Useful area m2
1	Auditorium	30	2425.6
2	Laboratory	1	50.7
3	Dean's Office	2	87.5
4	Room	62	1533.7
5	Academic staff room	3	120.0
6	Resource room	1	52.2
7	Premises of the Institute of Building Entrepreneurship and Real Estate Economics	1	52.4
8	Student Parliament premises	1	33.9
9	Meeting room	1	35.7
10	Museum premises	1	71.5
11	Canteen premises	8	172.4
12	Auxiliary room	4	71.1

No.	Type of use	Quantity	Useful area m2
	Total:	**115**	**4706.7**

Owing to a high level of digitalization, the available infrastructure and material and technical facilities for the implementation of the study direction and corresponding study programs provide an opportunity to increase the University's competitiveness, improve operational quality and efficiency, as well as to make information available by integrating IT solutions into administrative, academic and research processes of the University and providing administrative and academic staff with modern, reliable, secure and unified IT infrastructure and quality IT services.

The IT Department of the Administrative Service works in three areas:

1. Creation, development and maintenance of an integrated information system of RTU providing support for administrative, academic and research work of RTU;
2. Provision of high-quality and uninterrupted voice and data communication services throughout the territory under the control of RTU, as well as maintenance of RTU data centers and key network resources;
3. IT service support, incl. providing information on new IT solutions, giving necessary consultation and organizing IT training.

To ensure easy and efficient identification of IT users, an IT user identity management system has been introduced; as a result, each IT user has a unique electronic identity that is valid in all information systems. In addition to the aforementioned, a user session management system is ensured in IT systems, which means that there is no need for IT users to re-authenticate when logging in to RTU information systems. It gives the experience of using a unified integrated information system without having to memorize different identification data and re-enter them, implementing different IT application scenarios.

All IT users are provided access to the centralized portal ORTUS (https://ortus.rtu.lv – screenshots of the interface are attached in "RTU IT sistēmu saskarnes / Screenshots of RTU IT systems"), which functions as a single digital gateway, combining information from all RTU information system components and providing users with an easy-to-use way of accessing the directory of all IT services in one place.

The Centralized Study Management System is used for efficient administration of the study process, which ensures digital provision of the study life cycle, incl. Electronic Register of Study Programs (its public part is available at https://stud.rtu.lv/rtu/vaaApp/sprpub – screenshots of the interface are attached in "RTU IT sistēmu saskarnes / Screenshots of RTU IT systems"), drawing up learning agreements and enrollment of students in study programs, Register of Study Courses (its public part is available at https://info.rtu.lv/rtupub/disc2/list – screenshots of the interface are attached in "RTU IT sistēmu saskarnes / Screenshots of RTU IT systems"), designing student's individual study plans, drawing up orders, implementing study courses and study process, registering grades, recognizing study courses, awarding qualifications, administering payments, hostel information, gathering information to issue diploma supplements, etc. This system is one of the main cornerstones in the administration of RTU study process.

To ensure effective implementation of the study process, Moodle e-learning environment is used, where all relevant information is compiled in an automated way (study courses, users, groups, access rights, etc.). This system ensures student-instructor communication. The academic staff members place various electronic materials, assessment tests, homework assignments, information on a particular study course, etc. in the system. Students can also view their financial information on the ORTUS portal, as well as make request for documents (references, transcripts of records,

copies of a learning agreement, etc.).

Since 2007, more than 120,000 unique study course sites have been generated in the e-learning environment of RTU. Students can access electronic learning resources anytime and anywhere.

Digitization of classrooms and schedules has been carried out to ensure efficient premises management and study planning (https://telpas.rtu.lv; https://nodarbibas.rtu.lv/ – screenshots of the interface are attached in "RTU IT sistēmu saskarnes / Screenshots of RTU IT systems"). Each RTU student and academic staff member can access their schedule, which provides information on the venue, time, instructor, room, title and type of lecture. In addition, for user's convenience purposes, the system greatly facilitates lecture planning and scheduling, as well as optimizes the use and efficiency of premises.

Electronic Staff Management and Record-keeping Systems, which cover the circulation of record-keeping and personnel documents at RTU (https://docs.rtu.lv/ – screenshots of the interface are attached in "RTU IT sistēmu saskarnes / Screenshots of RTU IT systems"), are also used to ensure the efficient administrative work. Electronic document coordination and document e-signing functionality have been introduced, thus reducing print-based document circulation and significantly increasing document circulation speed. Since fall semester 2019, students have been provided with electronically signed learning agreements. Since 2016, RTU graduates have been receiving electronically signed transcripts of records.

In terms of quality assurance, a digital student survey system is used, with the help of which the quality control of study courses and study programs is implemented each semester. Based on the results of quality control, regular measures are taken to improve study programs and the study process, in general.

For additional convenience of RTU students, academic and general staff members, RTU leases Microsoft Windows and Microsoft Office software, which provides all IT users with access to the latest Microsoft software. RTU students can use the licensed Windows operating system and the Microsoft Office productivity suite provided by RTU for study needs. All IT users have access to Microsoft Office 365 cloud computing platform with one terabyte of storage space available to each user and access to a variety of additional collaboration and productivity tools (Microsoft Teams, SharePoint Online, Forms, OneNote, OneDrive, Outlook, etc.). RTU students, academic and general staff have access to the University's email system.

To support research activities, RTU has developed the Centralized Research Support System, which records all information on publications, patents, commercialization applications, Doctoral Theses, RTU scientific journals, research staff, etc. The system provides access to information according to OpenAccess principle (https://science.rtu.lv – screenshots of the interface are attached in "RTU IT sistēmu saskarnes / Screenshots of RTU IT systems"). RTU students and academic staff also have centralized access to research software.

RTU has the high-speed fiber optic Internet and extensive wireless network infrastructure with over 400 access points, including the international Eduroam service. In addition, desk phones and mobile communications are provided for fast and easy communication.

To ensure a stable and secure operation of the information technology infrastructure, continuous monitoring of the IT infrastructure and systems is performed, resulting in proactive incident control. Data backup is also ensured.

The Information Systems Security Policy has been developed and implemented with the primary goal of ensuring the secure use of RTU information systems by establishing and maintaining a sufficient set of measures to reduce or prevent potential or resulting harm. Implementation of the

Information Systems Security Policy envisages security checks, data transmission network monitoring, as well as preventive measures. Regular IT security and personal data protection training is organized for IT users. Automated security incident management and risk management have been implemented. Statistics demonstrate that the number of IT security incidents dropped significantly over the last five years.

The IT User Support Center provides IT user support, by applying a one-stop approach to process applications based on ITIL guidelines. Since 2007, the IT User Support Center has processed and resolved more than 150,000 IT user applications.

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.

Library plays important role in the provision of methodological guides and educational resources to students. RTU Scientific Library (SL) (https://www.rtu.lv/en/studies/scientific-library) is a library of national importance, which has acquired its status in the process of library accreditation. The SL provides the necessary information to ensure RTU study process and research activities, as well as provides library, bibliographic and information services to RTU students, academic and general staff. The Library holds 1.4 million printed documents and e-resources in RTU industry specific databases. The Library stock is located at the Central Library, the Study Material Subscription, the Chemistry Affiliation, the Transport Affiliation and Study and Research Centers in Daugavpils, Liepāja, Cēsis and Ventspils.

In 2016, significant investments were made in the development of the SL infrastructure by building additional premises (2240 m2). The total area of the SL premises is 6393 m2, of which 3417 m2 are reader service premises. There are 713 working places for SL users. The SL has four group rooms and six individual booths, a rare book reading room and a conference room. The SL is accessible for users with disabilities.

In order to improve the SL activities and to meet the information needs of academic and research staff, the Library Council has been established, which decides on replenishing the library collection with printed publications and subscribing to the necessary databases. The Library Council has approved the Compilation Policy of RTU SL Collection, which sets the basic principles of the collection development in accordance with the areas of RTU academic and research activities.

After the SL receives its funding from RTU, it calculates funding for the information resources for each study program. The collection is replenished taking into account the recommendations of the heads of the study program and researchers, in compliance with the allocated funding. By contacting the SL Collection Development Department regarding replenishment of collection, the

desired editions can be ordered at the Library website by filling out an order form, an application form, contacting by phone 67089353, or visiting the Library at 5-105 Paula Valdena Street. The SL offers a guide, which includes websites of various Latvian and foreign publishing houses and bookstores for searching publications and e-resources.

Database subscription agreements are concluded both directly with the supplier and through the Cultural Information Systems Center, which is the Latvian national representative for the international non-profit organization *Electronic Information for Libraries* (EIFL). The EIFL Licensing Program offers libraries of state importance to subscribe to internationally recognized databases at a significantly reduced subscription fee that is not offered to individual subscribers, thus saving the financial resources of libraries.

At the request of the academic staff of the study direction "Economics", 114 new books were purchased by the SL amounting to 6822.40 EUR in the period of 2013–2019. Every month, the list of the newly-received literature is published in the newly-received literature bulletin under the section "Economics and Management".

The list of databases subscribed by the Scientific Library is available at https://www.rtu.lv/en/studies/scientific-library/electronic-resources. Subscription to such databases as ScienceDirect, SCOPUS (Elsevier) and the Web of Science is funded by the Ministry of Education and Science of the Republic of Latvia. The following databases are relevant for the study programs of the study direction "Economics":

- **ProQuest Ebook Central** contains approximately 51,700 full-text ebooks published by the world's leading scientific publishing houses – Elsevier, Wiley, Springer, Oxford Press, Emerald etc. in various fields of science, as well as in **economics, finance, and business**.
- **ScienceDirect** – a database of scientific, technical and medical articles by Elsevier. Over 2,500 full-text journals (Freedom Collection) have been made available since 2002 and 354 full-text books in various fields of science, as well as in **economics, finance, business, management and accounting**.
- **Academic Search Complete EBSCOhost** – 8,800 full-text periodicals in various fields of science, as well as in **economics, finance, business, management and accounting.**
- **Applied Science & Technology Source EBSCOhost** – 1,200 full-text periodicals (applied mathematics, computer science, artificial intelligence, robotics, mechanical engineering, aeronautics, power engineering, chemical technology, and textile industry).
- **Business Source Ultimate EBSCOhost** – 5,100 full-text periodicals (management information systems, management, production management, marketing, **economics, finance**, accounting, international trade, and insurance).
- **EBSCOhost eBook Academic Collection** contains approximately 180,000 full-text ebooks in English, published by the world's leading scientific publishing houses in various fields of science, **including economics, finance, business, management, and accounting**.
- **Wiley Online Library** has more than 1,360 full-text journals (Full Collection) since 1997 in various fields of science, as well as in **economics, finance, business, management, and accounting**.
- **SpringerLink** has approximately 13,100 books published by Springer in the period of 2014–2018 in various fields of science, as well as in business and economics.
- **The International Monetary Fund** (IMF) eLibrary offers access to important global economic information – IMF resources, periodicals, books, statistical databases and studies on **macroeconomics, financial crisis**, globalization, trade, international relations, politics, etc.
- **LETA** fields: Construction and Real Estate, **Macroeconomics**, Industry, Trade and Services, Transport and Transportation, Tourism, Hotel Business.

- **Latvian Standards Database.**

The use of SL databases has been growing since 2016. E-resource allocation has increased from 75,391 units to 525,194 units per year.

The SL new premises have made it possible to expand the range of services available to users. Since the opening of the new premises, the number of library visits increased from 103,825 to 235,600 in 2018. The SL Central Library is open to users from Monday to Saturday. There is a 24-hour reading room. During the summer period, the Central Library is open every working day with reduced hours.

The SL information sources are open access resources. Books and periodicals relevant for the study direction "Economics" are located in the main building of the Scientific Library (5 Paula Valdena Street) in compliance with UDC indexes. The last copy of the oldest editions that comply with RTU profile is stored in the library repository. They are always available to users.

The on-duty librarian helps find the necessary resources. More detailed information and consultations are provided by bibliographers. The SL has librarians responsible for particular fields of science.

Searching for library resources is ensured by the PRIMO search tool (https://primolatvija.hosted.exlibrisgroup.com/primo-explore/search?sortby=rank&vid=371KISCRTU_VU1&lang=en_US). It allows searching for the information in the library catalog, subscribed databases, as well as in databases created by the Scientific Library. Searching for the information in the electronic common catalog (https://kopkatalogs.lv/F), one can simultaneously obtain information about the available resources in 12 libraries in Latvia. Both the electronic catalog and RTU portal ORTUS can be used to reserve the library resources remotely. Remote access to databases is also provided. Since the introduction of RFID technology, users have been able to use five book-dispensing self-service vending machines and return books to a book-sorting vending machine around the clock.

The SL provides students, academic staff and other interested parties with different types of individual consultations and group training in information literacy. Editions that are not available in the Scientific Library are delivered through an interlibrary subscription or international subscription. Internet access is provided throughout the library. The SL provides copying, scanning, printing and binding services, as well as there is a self-service canteen.

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 implementation of RTU personnel policy is stipulated in the Human Resources Development Plan, which focuses on three main goals within the professional development of the academic staff: renewal of the academic staff, by promoting academic work of Doctoral students, improvement of the professional competence of the existing academic staff and attraction of foreign academic staff. The action plan sets out, for each goal, the activities and sub-activities to be carried out, defines the results to be achieved, the responsible organizational units and the implementation schedule.

Elections of RTU academic staff are held in accordance with the requirements of the Law on Higher Education Institutions and Cabinet regulations based on the recommendations of the Council of

Higher Education, in accordance with the Constitution of RTU and the regulations approved by the Senate "On the Procedure of Electing Professors and Associate Professors" and "On the Procedure Of Electing Assistant Professors, Lecturers and Assistants" (see the file of Appendix 42-43 of the list of Internal regulations), as well as in compliance with other internal laws and regulations.

At the proposal of organizational units, the faculty council or the institute board shall consider and approve a reasoned proposal made by the head of a respective organizational unit for announcement of the competition for vacant academic positions, which expire in the respective academic year. The faculty council or the institute board shall submit the proposal under consideration to the RTU Personnel Unit together with the job description and qualification requirements, including the workload (full-time or part-time).

The Personnel Unit announces a competition for academic staff positions at RTU website, the Euraxess vacancy portal and at least in one mass medium distributed throughout Latvia. The applicant shall personally submit or send by email the signed application documents no later than one month after the date of competition announcement.

The employment relationship shall be established by means of a written employment agreement between the Employer and the Employee at least two working days before the commencement of employment. The employment agreement shall be drawn up in duplicate. One copy shall be kept by the Personnel Unit of the Department of Personnel and Working Environment (in accordance with RTU Case Nomenclature) and the other shall be issued to the Employee. Prior to entering into the employment agreement, the applicant is acquainted with RTU Rules of Procedure.

Employee's duties are defined in accordance with the Classification of Occupations of the Republic of Latvia and RTU Position Catalog, RTU Remuneration Procedure, RTU Rules of Procedure and the requirements laid down in the job description, which is an integral part of the employment agreement. Job description shall be presented to and signed by the Employee. Job description shall be drawn up in duplicate; one copy shall be issued to the Employee and the other shall be kept according to RTU Case Nomenclature.

Before taking up the employment, the Applicant shall present an identity document – passport or identity card, the Foreigner shall additionally present a visa or residence permit, as well as a work permit if such a permit is required in accordance with regulatory enactments.

Visiting academic staff shall be employed in compliance with:

- Law on Higher Education Institutions (https://likumi.lv/doc.php?id=37967);
- Labor Law (https://likumi.lv/ta/id/26019-darba-likums);
- Immigration Law (https://likumi.lv/ta/id/68522-imigracijas-likums);
- Cabinet Regulation No 568 "Regulations Regarding the Procedure by which a Research Institution Concludes and Terminates Employment Agreements with a Foreign Researcher" as of 21 July 2008 (https://likumi.lv/doc.php?id=178749);
- Cabinet Regulation No 225 "Regulations Regarding the Amount of Financial Means Necessary for a Foreigner and the Determination of the Existence of Financial Means" as of 25 April 2017 (https://likumi.lv/doc.php?id=290808);
- Cabinet Regulation No. 25 "Implementing Regulations for the First, Second and Third Project Applications Selection Round of Specific Objective 8.2.2 "To Strengthen Academic Staff of Higher Education Institutions in the Areas of Strategic Specialization" of the Operational Program "Growth and Employment"" as of 9 January 2018 (https://likumi.lv/doc.php?id=296513);
- RTU internal regulations "Procedure of Involvement and Employment of Visiting Academic Personnel at RTU" as of 26 November 2018 (see the file of Annex 25 of the list of Internal

regulations);
- RTU internal regulations "Unified Work Remuneration Procedure at Riga Technical University" as of 17 December 2019.

According to the results of the applicant selection competition, the employment agreement with the visiting academic staff is signed within a month, specifying an hourly rate. Job description is also provided, which includes specific job responsibilities (delivering lectures, designing study courses, lecture cycles, supervising study papers, etc.). The workload of the visiting academic staff member may include the provision of face-to-face work (delivering lectures, providing tutorials, conducting seminars, supervising graduation papers, etc.) and remote work if it complements the face-to-face work (video lectures, tutorials, supervision of graduation papers). If the work is to be carried out remotely, face-to-face visits (e.g., tutorials) should be provided at the organizational unit.

The visiting academic staff member shall enter into the employment agreement in compliance with the requirements of the Latvian regulatory enactments. During the term of the employment agreement, all assignable copyrights for the work created by the visiting academic staff member, including curricula, materials, and any other teaching aids developed by the visiting academic staff member, shall pass to the Employer. The visiting academic staff member, upon termination of the employment agreement, shall be obliged to transfer the work created within the framework of the employment agreement, including study materials, to RTU. Before terminating the employment agreement, the visiting academic staff member shall submit to the head of a respective organizational unit the reports and other documents stipulated in the employment agreement.

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.

At the end of 2018, the Center for Academic Excellence (teaching and learning center) was established at RTU in order to support RTU academic staff (in the areas of pedagogical, intercultural communication and self-development).

The main tasks of the Center for Academic Excellence are as follows:

- to organize various educational events, such as seminars, thematic series of events, guest lectures, conferences, discussions with the participation of the Latvian and foreign specialists;
- to coordinate experience exchange activities within faculties and other organizational units;
- to inform (including posting to ORTUS) the academic staff about the latest teaching and learning trends that are appropriate for RTU;
- to provide guidance to academic staff on the use of teaching and learning methods, as well as on the assessment of students' knowledge, skills and competence;
- to inform students about learning opportunities, such as platforms, systems, applications, effective methods and forms of learning that can be used both in the study process and individually.

Each semester, a core set of activities is offered taking into account the professional competence and needs of the academic staff. As a basis for the list of professional development activities in the fall semester of 2019, the academic staff survey that was conducted in 2018 was used, in which the academic staff mentioned the topics they would like to acquire. Such surveys are planned to be conducted every two years or as required.

The Center for Academic Excellence organizes two methodological conferences a year. The conference organized in the fall semester is dedicated to the modern content of the study courses, while the conference held in spring focuses on modern teaching and learning methods. Materials of all events are available on ORTUS within the study course “Materials of the Center for Academic Excellence”.

After each professional development event, participants complete assessment questionnaires, which enable organizers to improve the range of offered events. In order to promote the development of competences of the academic staff, the student surveys are analyzed each semester, as well as discussions with the representatives of faculties, student self-governments and the instructors themselves take place.

Educational events are also organized by the Career Support and Services Unit, providing regular seminars to RTU academic and general staff on the following issues:

- cultural diversity;
- work productivity (time planning, conflict resolution, communication culture, etc.);
- critical thinking.

For participation in seminars, employees receive professional development certificates issued by RTU Department of Further Education.

The themes of seminars and classes are offered taking into account the results of RTU staff surveys, as well as current trends at foreign universities. Information on seminars organized over the years is available at http://karjera.rtu.lv/projekti/seminaru-un-vieslekciju-arhivs/.

RTU IT User Support Center regularly organizes training on IT systems and the latest technology tools for RTU academic and general staff. Training is organized on the following topics:

- e-learning environment (Moodle) for beginners;
- e-learning environment (Moodle) for advanced users;
- MS Outlook email and calendar;
- Office365 Teams and OneDrive;
- searching in subscribed databases;
- record-keeping systems;
- basic IT security issues working with RTU information systems.

In January each year, the Student Parliament of RTU organizes the contest “Annual Award of the Student Parliament of Riga Technical University”. During the event, faculty academic staff members chosen by the students are awarded the honorary titles “Most Active Instructor of the Year” and “Instructor of the Year”.

To recognize and appreciate RTU academic staff, since 2018, RTU has been organizing contests “Annual Academic Excellence Awards” and “Young Academic Staff Member of the Year” in cooperation with the foundation “Riga Technical University Development Fund” and Industry Service Partner Ltd. The aim of these events is not only to award the best academic staff members, but also to promote creativity in the academic environment.

Professional advancement activities for academic staff and general staff are also regularly

organized within the framework of the faculty according to a previously designed plan.

For example, in 2018, educational events on the following topics were organized:

- 10.01, 17.01 “Training for Couching”,
- 13.02. “The aims of the study field and their correspondence to the field of activity of the institution of higher education, directions of strategic development, development needs of society and national economy and development tendencies.”,
- 23.02 “Plagiarism, copyright infringement and the preventive measures”,
- 23.04 “Use of computer programs – Word and Excel”,
- 10.04 “Preparation of the self-assessment report”,
- 16.04 “Use of Microsoft Office 365”,
- 27.04 RTU FEEM academic conference “Integration of Methodological and Scientific Work in the Study Process”
- 18.06 “Use of IT classroom management software NetSupport in lectures”,
- 25.09 "The sectoral qualifications structure and professional standards – current issues and solutions”,
- 27.11 “Organization of document management and data preparation for reports”,
- 30.11 “Integration of scientific activity in the study process”.

In 2019, educational events on the following topics were organized:

- 28.01 “Topicalities in document management, circulation of electronic documents in the RTU Document System and preparation of documents for submission to the RTU archive”,
- 29.01 “Formulation of topics for final theses and procedure of their development”,
- 11.02, 7.03, 27.03 “About the structure, navigation and certification capabilities of the Bloomberg database”,
- 15.02 “Didactics, study process improvement and study course audit”,
- 19.02 “Preparation of data for annual reports and reviews”,
- 19.02 “The new practical placement organization at RTU”,
- 01.03 “Corporate culture – how to reduce internal friction and increase external opportunities?”,
- 29.03 “Efficient management of personal income tax”,
- 12.04 RTU FEEM academic conference “Transversal Competence-Based Education in Schools and Its Impact on Higher Education”,
- 23.04 “Use of Library Databases in the Study Process”,
- 21.05 “Renewal of the study course “Practical Placement”,
- 18.10 “About the new RTU academic staff CV (Curriculum Vitae) tool”.

All of the above-mentioned activities have been attended by the academic staff and general staff of the Study Field “Economics”. The average attendance is 80%.

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.

In total, 54 academic staff members are involved in the implementation of the study direction “Economics”, 37 (68.5%) of them have been elected at RTU. Of all the academic staff involved, 72.2% have a Doctoral degree in respective fields of science. Detailed information on the academic staff of the study direction is available in Appendix.

The academic staff involved in the implementation of the study programs in the study field have overlapping duties and all elected academic staff members have both academic and research workload. In some cases, administrative work is also carried out. There is no strict separation between academic and research work at RTU. Its proportion is determined individually for each academic staff member, considering the workload of the staff member at the department, as well as his or her position, involvement in the projects, professional competencies and experience.

To ensure the quality of the study process, it is essential to develop the competences of the academic staff by engaging in mobility programs, as well as to attract foreign academic staff. The mobility of the academic staff in the study direction is quite high and takes several forms. During the reporting period, approximately 100 visits were made with the aim to participate in international conferences and seminars, more than 20 experience exchange visits were undertaken to discuss perspective cooperation, as well as academic staff regularly took part in working groups of international project partners. The Erasmus+ program is of particular importance in the international cooperation of higher education institutions. The academic staff of the study direction went on exchange 23 times under the Erasmus+ program. Table providing the data on participation in the Erasmus+ program is available in Appendix. The analysis of outgoing mobility statistics reveals that there are individuals who are actively involved in mobility, but there are also academic staff members who are passive in this regard. The main factor influencing the mobility of academic staff members is their own motivation, as the opportunities are quite wide. They usually mention family circumstances or insufficient knowledge of foreign languages as obstacles or reasons of not going on exchange. The latter is more of a psychological cause, as practice shows that academic staff have sufficient proficiency in foreign languages to successfully participate in exchange programs.

Foreign academic staff members were involved in the study process of the study direction study programs throughout the reporting period. Academic staff members mainly participated in Erasmus+ mobility program, as well as took advantage of other opportunities related to participation in joint international projects, involvement in scientific research, etc.

Number of incoming foreign academic staff members by academic year:

2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
9	12	3	9	10	10

The statistics on incoming foreign academic staff members, indicating the higher education institutions and countries they represent, are provided in Appendix. The dynamics are quite stable, except for a sharp decline in academic year 2014/2015. In this case, no objective factors can be explicitly stated; possibly it was a coincidence or some subjective factors were involved. The academic staff members were from Germany, Slovenia, Slovakia, Switzerland, Norway, the Czech Republic, Bulgaria, Lithuania, Estonia, Turkey, and Russia.

Students of the study direction “Economics” also greatly benefit from the involvement of local visiting lecturers. Stable cooperation has been established with the Bank of Latvia, the Competition Council of the Republic of Latvia, the Ministry of Environmental Protection and Regional

Development of the Republic of Latvia, the Latvian Green Dot, the Public Services Regulatory Commission of the Republic of Latvia, the Consumer Rights Protection Center, etc. Representatives of these institutions regularly participate in practical classes and share their experiences with students.

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.).

RTU Career Support and Services Unit provides students with a wide range of career and psychological support services.

Career development support involves:

- for prospective students:
  - consultation on study program selection;
  - consultation on study selection and skills profiling;
  - career choice seminars within RTU Open Days and upon request;
- for existing students:
  - regular seminars and individual consultations on the development of career management skills, writing CVs and cover letters, job interview process;
  - seminars on the development of entrepreneurial skills;
  - project "RTU Golden Fund" to honor the best graduates and to promote new opportunities in the labor market;
  - student summer camps for the development of career management and social skills and competences;
  - online resource https://ekarjera.rtu.lv/;
  - an annual career day aimed at informing students majoring in engineering, natural and social sciences about the best and leading companies in the respective fields, and bringing them closer to potential partner companies for undertaking internship and employers.

Psychological support involves:

- individual consultations and support in case of difficulties with studies (time planning, lack of motivation, social anxiety, adaptation difficulties) and individual psychologist consultations on personal issues and difficulties (including crisis intervention);
- seminars and workshops on the following topics:
  - adaptation events for first-year students – informative classes within the study course "Introduction to Study Field", seminars on the development of learning and communication skills;
  - stress management methods;
  - time planning methods;
  - self-motivation;
  - emotion management and development of emotional intelligence;
  - public speaking skills.

Support is differentiated by the target groups (http://karjera.rtu.lv/):

- prospective students (secondary school pupils, vocational school graduates, other prospective students): consultations concerning the studies are available, including skills diagnostics;
- first-year students: informative classes within the framework of the study course "Introduction to Study Field"; seminars on the development of learning skills; information letters on career and psychologist support opportunities; individual career and psychologist consultations; and other activities in cooperation with businesses and non-governmental organizations;
- all RTU students: individual career and psychologist consultations, seminars and classes, guest lectures, RTU Career Day;
- foreign students (Erasmus+ mobility and full-time): individual and career support consultations are available in English; wherever possible, seminars and classes are conducted in English, such as seminars on writing CVs and cover letters, time management;
- students with special needs: psychological and career support consultations are provided upon request; physical access to the room; opportunity to come with one's mentor or interpreter.
- graduates: career support consultations are provided if necessary; consultations on writing CVs and cover letters, job interview process, career opportunities.
- staff: consultations on work and study related issues are provided to RTU academic and general staff members, if necessary.

In 2014, the Student Services Center was opened in Ķīpsala campus. It provides day-to-day support under the supervision of the Career Support and Services Unit:

- provides answers to various questions that students may have;
- provides printing, copying and binding services;
- issues identification cards;
- draws up references, if necessary.

More information is available at: https://www.rtu.lv/lv/studijas/pakalpojumi/studentu-servisa-centrs.

RTU International Cooperation and Foreign Students Department has academic consultants who consult foreign students on studies and practical issues. Academic consultants keep track of the students' academic performance and attendance, as well as meet students on a regular basis to make sure their studies are successful, both in and outside the classroom. Shortly after the arrival of students, academic seminars are held, which are compulsory for all new students. Academic seminars are held approximately twice a week at the beginning of each semester, in line with the student influx. During these seminars, academic consultants introduce students to RTU internal rules, their responsibilities and rights, academic integrity, and various other practical aspects. In the future, it is planned to divide the students into groups according to the study programs and to involve the heads of the study program in the seminars so that the students would get acquainted with the management of the program in due time. If during the semester a student is observed to face difficulties with the study process (attendance, academic arrears), the student is invited to an individual meeting with his/her academic consultant to discuss the best possible solutions to the problem. Each academic consultant has to arrange meetings with 2–5 students per week. After a month, students are invited to the meeting again to discuss their progress and make sure the situation has improved.

At RTU International Cooperation and Foreign Students Department, students have a contact person for facilitating the immigration process. The contact person organizes immigration seminars and document examination at the beginning of the semester. The Department arranges an appointment for students with the Office of Citizenship and Migration Affairs of the Republic of

Latvia.

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).

The main research areas of the study direction “Economics” are “Challenges of Socio-Economic Development of Small Countries” and “Challenges of Sustainable Development of Latvian Regions and Cities”. The chosen research areas correspond to the specifics of the study direction, and the research conducted in these areas can be integrated into the study courses of the study direction.

RTU Strategy defines three goals of the university – high quality study process, excellence in research and sustainable innovation. The goal of the study direction “Economics”, in turn, is to provide students with competitive, research-based, multi-level education in economics that meets the requirements of the Latvian and European labor market. The goal of the study direction essentially results from RTU Strategy and, thus, the research conducted within the study direction is aimed at its implementation. Conducting research, the academic staff members strive for excellence and valorization of the results achieved, and the results are integrated into the study process.

The research area “Challenges of Socio-Economic Development of Small Countries” focuses on current issues as well as the development of economic thought. With regard to this area, scientific monographs have been published: Vitola, A., Šenfelde, M. Institucionālā vide un ekonomiskā attīstība mūsdienu apstākļos [Institutional Environment and Economic Development under Modern Conditions]. Riga: RTU Press, 2019, 132 p. ISBN 978-9934-22-307-5, DOI https://doi.org/10.7250/9789934223082; Krilovs, L. Ekonomiskās domas retrospekcija [Retrospective of Economic Thought]. Riga: RTU Press, 2014, 221 p. ISBN 978-9934-10-529-6.

Several academic staff members involved in the study direction “Economics” have participated in EKOSOC-LV project 5.2.7 “Involvement of the Society in Social Innovation for Providing Sustainable Development of Latvia 2014–2018”, National Research Program EKOSOC-LV (Prof. E.Gaile-Sarkane, Assist. Prof. I.Ozola-Ozoliņa); “Transformation of Economy, Smart Growth, Governance and the Legal Framework for Sustainable Development of the State and Society – A New Approach to Creating a Sustainable Knowledge Society” (2014–2017), project “Challenges for the Latvian State and Society and the Solutions in International Context (INTERFRAME-LV)” within the National Research Program “Latvian Heritage and Future Challenges for the Sustainability of the State” (2018–2021) (Prof. I.Dovladbekova); INTERREG Europe project PGI00304, CLUSTERS3 “Leveraging Cluster Policies for Successful Implementation of RIS3” (2016–2018) (Prof. M. Šenfelde).

Human capital, which is one of the factors of production, plays an important role in the development of national economy. Assistant Professor of the study direction I.Ozola-

Ozoliņa has participated in the EEA and Norwegian grant project “EU Policies Impact on the Transformations of the Higher Education and Research System in Norway and Latvia” (2015–2017) and is currently participating in Erasmus+ project “Improving Management Competences on Excellence Based Stress Avoidance and Working towards Sustainable Organizational Development in Europe (IMPRESS)” (2017–2020).

One of the major problems in the development of the Latvian economy is the promotion of entrepreneurship. Young people, who need support, are particularly important from an economic, social and demographic point of view. Consequently, from 2015 to 2016 the academic staff of the study direction were involved in project No. 2015-1-PL01-KA205-014238 “Shake up Start-ups” within “Strategic Partnerships in the Field of Youth” supported by the European Union Erasmus+ program “Cooperation for Innovation and Exchange of Good Practice” (Assoc. Prof. I.Judrupa, Lecturer A.Mihnenoka).

Another important area of research is “Challenges of Sustainable Development of Latvian Regions and Cities”. Within its framework, a scientific monograph has been published: Judrupa I., Šenfelde M. Latvijas reģionu konkurētspējas novērtēšana. [Evaluation of Competitiveness of Latvian Regions]. Riga: RTU Press, 2018, 152 p. ISBN 978-9934-10-997-3. Academic staff members of the study direction implemented the international INTERREG IVC project “MICROPOL – Smart Work Centers in Non-Metropolitan Areas” (2012–2014). The overall goal of the project was to improve the effectiveness of local and regional development policies and tools in order to stimulate economic growth and employment outside metropolitan areas. It focused on the development and competitiveness of the regions. Researchers attracted several Latvian municipalities and industry experts in the implementation of the project. As a result, scientific articles were published, but the main benefit was the establishment of an industrial center “School6” in Cēsis in April 2016 (http://skola6.lv/). (Project manager Prof. M.Šenfelde, researchers Assoc. Prof. I.Judrupa, Assist. Prof. R.Čaupale, Research Assistant A.Vītola).

In 2014, Assoc. Prof. I.Judrupa, within the EEA and Norwegian Financial Mechanism project “Increasing Territorial Development Planning Capacities of Planning Regions and Local Governments of Latvia and Elaboration of Development Planning Documents” (No. 4.3.-24/NFI/INP-002), participated as an expert in the project “Smart Specialization Opportunities for Vidzeme Planning Region”. Lecturer A. Mihņenoka participated in project No. 2017-1-LV02-KA205-001502 “Creative Start-Ups in Rural Areas (Rural Buzz)” within “Strategic Partnerships in the Field of Youth” supported by the European Union Erasmus+ program “Cooperation for Innovation and Exchange of Good Practice” (2017–2018). All of the above-mentioned projects aimed at promoting the socio-economic development of the regions.

Prof. S.Treija has participated in the National Research Program “Cities & Rail: Increasing Potential for Smart & Just Cities” 4054/2018 (2018–2019); “European Middle Class Mass Housing”, COST action CA18137; “Implementing Nature Based Solutions for Creating a Resourceful Circular City”, COST action CA17133. The research mainly focuses on sustainable urban development, housing issues, quality of life, and urban regeneration. Prof. G. Bažbauers leads the project “Evaluation and Analysis of Energy Efficiency Action Policy” within the National Research Program “Power Engineering” (2018–2021) and the project “Flex4RES – Flexibility for Variable Renewable Energy Integration in the Nordic Energy Systems” funded by the Nordic Energy Research (2016–2019). These projects are directly related to the sustainable development of energy supply in cities and regions, which is an essential component of the sustainability of regional development.

The scientific research of the study direction corresponds to the goals of RTU and the study direction itself. The academic staff members are active enough, but for the further development of the study direction, scientific research should be improved by activating

international cooperation.

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.

Scientific research at the university level is of paramount importance and should also provide the basis for academic work. The study content should be related to the latest scientific trends. This approach is being implemented in the study direction “Economics”. Research components in the work with students include participation in scientific projects and conferences, as well as developing publications. The most important publications of the academic staff of the study direction are summarized in the Appendix "List of academic staff publications, patents, artistic creations for the reporting period". The research conducted and the information collected for publications by the academic staff are incorporated into the study courses and supplement the theoretical material with practical examples and calculations, the latest scientific findings and theories. It promotes students’ understanding of the regularities of economic theory in the national economy, enhances students’ ability to conduct research on economic development issues in Latvia and other European countries, as well as to interpret and analyze the obtained results. The relation of scientific research to the study process can be illustrated with some specific examples.

Participation in the INTERREG IVC project “Micropol – Smart Work Centers in Non-Metropolitan Areas” and information on remote work centers in different European countries obtained during the project complement the study course “Economy of European Countries” delivered by Assoc. Professor I.Judrupa with specific examples and best practices. The acquired knowledge about the topical issues of the EU employment policy in the field of distance work has been incorporated in the study course “Current Trends of the European Union Economic Policy”. Participation in the Norwegian Financial Mechanism project “Smart Specialization Opportunities for Vidzeme Planning Region” has also enabled I.Judrupa to broaden her knowledge of the nature of smart specialization and the principles of developing a smart specialization strategy, as well as the EU position in this field. The knowledge acquired has resulted in the updated study course “Current Trends of the European Union Economic Policy”. The monograph by I.Judrupa and M.Šenfelde “Latvijas reģionu konkurētspējas novērtēšana” (“Evaluation of Competitiveness of Latvian Regions"), published in 2008, is used in study courses, which cover topical issues of regional development and competition.

The involvement of Associate Professor at a professional study program U.Kamola in scientific research is related to the implementation of EU co-financed projects in Latvia and their role in the development of the country, as well as socio-economic development of Latvian cities. The results of the research are used in the study process and students are involved in research by developing study projects. Such an approach allows for a better understanding and acquisition of study courses.

The scientific monograph “Ekonomiskās domas retrospekcija” (“Retrospective of Economic Thought”) by Assoc. Professor L.Krilovs is the basic study aid for the acquisition of the study course “History of Economic Thought”.

Participation of Assist. Professor I.Ozola-Ozoliņa (EKOSOC-LV) in project 5.2.7 “Involvement of the Society in Social Innovation for Providing Sustainable Development of Latvia” and in the IMPRESS

project “Improving Management Competences on Excellence Based Stress Avoidance and Working towards Sustainable Organizational Development in Europe” funded by the Erasmus+ program provides information on relevant and topical research findings and research methodology in the fields of human resource management and economics, which is used in study courses.

The knowledge and competences acquired by professors S.Treija and G. Bažbauers in international scientific projects are used in professional Master level study courses “Sustainable Development of Spatial Environment” and “Sustainable Development of Energy Supply”.

Assist. Professor N.Semjonova, with the support of ERDF postdoctoral research, is implementing the project “The Methodology for the Commercialization of Innovative Biomedical Devices and the Evaluation of the Productions Financing Model” (No.1.1.1.2/VIAA/2/18/348. 2019–2021), which provides for the transfer of good practice, the unity of theory and practice, and the acquisition and exchange of experience on current issues in the sector. Consequently, the study course “Principles of Finances” is updated according to current trends in the field and new developments in foreign study and scientific literature. The theoretical outline of the study course themes is based on practical examples and tasks that ensure the implementation of the study courses in compliance with the developed study program.

In general, evaluating the use of research results in the study process, it should be noted that the findings of scientific research and current information shared at international conferences are constantly reflected in the lectures of the academic staff and discussed with the students in practical classes. It allows developing high quality study courses, establishing better communication with students, enhancing students’ understanding of economic theory and current trends of economic development, stimulating the acquisition of research methods and the skills to apply them in practice.

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.

Academic staff of the study direction are engaged in various forms of international scientific cooperation, such as participation in international projects and publication of results at project websites, participation in international scientific conferences and seminars, publication of articles in scientific journals indexed in databases (Scopus, Web of Science), participation in editorial boards of scientific journals and conference scientific committees, Doctoral boards at foreign universities, etc.

The following projects with the participation of foreign partners have been implemented during the reporting period:

European Territorial Cooperation Program INTERREG IVC project “MICROPOL – Smart Work Centers in Non-Metropolitan Areas” (1 January 2012–31 December 2014). Website: http://micropol-interreg.eu

Project partners: North Denmark Region (Denmark), Province of Drenthe (the Netherlands), Intermunicipality Association from Chiva to Utiel (Spain), West-Transdanubian Regional Development Agency Non-profit Limited Liability (Hungary), BSC, Business

Support Centre Ltd, Kranj (Slovenia), Northumberland County Council (the United Kingdom), Municipality of Teramo (Italy), Public Foundation for the Development of Industry (Hungary), NIVERLAN (France), Estonia Advice Centers (Estonia).

European Economic Area (EEA) and Norway Grants project:

"EU Policies Impact on the Transformations of the Higher Education and Research System in Norway and Latvia" (1 June 2015–28 February 2017). Website: http://transfer.rtu.lv

Project partners: the University of Latvia (Latvia), Nordic Institute for Studies in Innovation Research and Education (Norway), Stockholm School of Economics in Riga (Latvia).

ERASMUS+ Key Action 2 (KA2): Cooperation for Innovation and the Exchange of Good Practices projects:

"Improving Management Competences on Excellence Based Stress Avoidance and Working towards Sustainable Organizational Development in Europe (IMPRESS)". 2017-ES-EPPKA2-KA (1 November 2017–31 October 2020). Website: www.excellence-in-stress-management.eu

Project partners: NGO Euskal Herriko Elektronika Eta Informazio (GAIA) (Leading partner, Spain); University of Barcelona (Spain); Ludwig-Maximilians-Universitet Muenchen (Germany); IBK Management Solutions, Wisbaden (Germany); International Industrial Consult, Frankfurt am Main (Germany); Biedriba Eurofortis (BEFO) (Latvia); Mutualia Mutua Colaboradora con la Seguridad Social Nº 2, Bilbao (Spain); Waterford Chamber of Commerce (Ireland); Riga East University Hospital (Latvia);

"Shake up Start-ups" No. 2015-1-PL01-KA205-014238 (2015–2016)

Project partners: Kielce Municipality/Kielce Technology Park (Poland), Association Education by the Internet (Poland), Local Development Agency (Croatia).

Swedish Institute project "Cities & Rail: Increasing potentials for Smart & Just Cities" 4054/2018 (2018–2019); https://www.rtu.lv/lv/universitate/projekti/atvert?project_number=4054%2F2018

Project partners: KTH Royal Institute of Technology in Stockholm, Tallinn University of Technology.

"European Middle Class Mass Housing", COST action CA18137, *partners* from 30 countries: https://www.cost.eu/actions/CA18137/#tabs|Name:parties.

"Implementing Nature Based Solutions for Creating a Resourceful Circular City", partners from 45 countries: https://www.cost.eu/actions/CA17133#tabs|Name:parties.

Involvement of the academic staff in research and international cooperation positively influences the study process and improves its quality. The results obtained in scientific research are used to improve the content of the study courses and the teaching methodology. The knowledge, competence and experience of academic staff gained within the above-mentioned international projects are also used in specific courses of study programs of the Study Field (see Section 4.2.). All three study programs in the study direction "Economics" benefit from such cooperation. However, it should be noted that the academic staff of the study direction also deliver courses in other study directions of the FEEM, as well as of other RTU faculties. This creates a somewhat multiplier effect, from which the University benefits.

Analyzing the involvement of the academic staff in scientific research, the following activities are identified to enhance research effectiveness:

- to increase the number of scientific publications in scientific journals indexed in Scopus and Web of Science databases;

- to encourage the publication of scientific articles with the participation of foreign co-authors;
- to promote the activity of the academic staff in the implementation of international projects;
- to participate actively in international scientific conferences;
- to diversify forms of cooperation with international partners and in 2020 within European Social Fund project No. 8.2.2.0/18/A/017 “To Strengthen Academic Staff of RTU in the Areas of Strategic Specialization” to attract a foreign visiting professor to the study direction.

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.

It is a requirement of RTU that academic staff are actively involved in research apart from their involvement in the study process. Professors and associate professors are re-evaluated and re-elected every six years. Candidates are obliged to comply with certain criteria in terms of scientific research, i.e., number of publications or patents, supervised Doctoral candidates, etc. (Decision of RTU Senate No. 594 “On RTU Regulation regarding the Approval of the New Edition of Procedure of Electing Professors and Associate Professors” as of 30 November 2015). In order to be allowed to supervise Doctoral students, the academic staff have to be approved experts in their fields, which is possible only if criteria regarding the number of publications/patents are met (decision of RTU Senate No. 602 “On Amendments to RTU Regulation on Doctorate” as of 26 September 2016). Approval process for the experts is organized by the Latvian Council of Science. The database of the experts is published in the National Research Information System (NRIS; http://sciencelatvia.lv).

Every year, the Rector and faculty deans sign agreements by which each faculty undertakes to achieve certain key performance indicators, many of which are based on research output, e.g., the number of publications/patents, obtained research project funding, etc. Achievement of these indicators has an impact on financing received by the faculty from the so-called performance-based funds.

RTU Research Support Fund (decision of RTU Senate No. 585 “RTU Regulation of Research Support Fund” as of 15 December 2014) aims at providing financial support for various research related activities, such as support for maintenance of research equipment, protection and licensing of intellectual property, covering of expenses related to the Doctoral study process, publishing of scientific journals, participation and organization of scientific conferences, support to researchers in establishing new laboratories in a prospective research field. The Research Support Fund is an instrument to support research activities, which foster the development of the strategically important research fields.

Six research platforms in the main strategic research areas of RTU were established in 2013 as an instrument for fostering inter-disciplinary and inter-faculty cooperation of researchers in the areas

of importance for industry and society. These platforms are as follows: “Energy and Environment”, “Cities and Development”, “Information and Communication Technologies”, “Transport”, “Materials, Processes and Technologies”, “Security and Defense”. Each platform has a dedicated coordinator and they comprise the Council of Coordinators responsible for implementing the activities within platforms. The Council is supervised by the Office of Vice-Rector for Research (Decision of RTU Senate No. 600 “On Approval of the Regulation of the Council of Coordinators of Research Platforms at Riga Technical University” as of 23 May 2016). Similar to the faculties, the platforms have the Research Program (Decision of RTU Senate No. 590 “On Authorization to Approve RTU Research Program by RTU Scientific Council” as of 27 May 2015; “Research Program of Riga Technical University 2016–2020”), annual action plan and dedicated funding from the Research Support Fund. Internal project calls within the platforms are organized every year, allocating 90–120 thousand EUR in total to six projects selected on a competitive basis. A mandatory requirement for the projects is a minimum 20% industry co-financing and participation of more than one faculty. In the period of 2016–2018, 33 projects were supported and nearly 275 thousand EUR of funding was allocated to the projects. Regular series of seminars and visits to companies are also organized by the research platforms to stimulate networking and cooperation with industry.

Efficiency of these mechanisms can be illustrated by growth of SCOPUS indexed publications in the period of 2013–2018. The total number of the publications increased from approximately 440 publications per year in 2013 to 750 in 2018. Number of SCOPUS publications per researcher (expressed in full-time-equivalent (FTE)) increased from circa 0.9 in 2013 to circa 1.5 publications/FTE per year in 2018 (the data were obtained from Elsevier “SciVal” database on 17 June 2019).

The list of scientific publications related to the study programs by academic staff of the study direction “Economics” is available in Appendix. Evaluating the collected data, it should be noted that during the reporting period the number of scientific publications per year has generally increased compared to the beginning of the period. In addition, the proportion of publications indexed in the Scopus and Web of Science databases has significantly increased from 10–20 % at the beginning of the period to 43–55 %. More detailed individual information on the research achievements of the academic staff of the study direction is available in provided CVs.

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.

In the study direction “Economics”, students’ involvement in research is one of the essential elements of the study process. Academic study programs comprise a special study course “Research Methodology”, which forms the basis for elaborating a high quality graduation paper. However, already in the previous study years, all study programs included study courses that involved the elaboration of study papers or projects aimed at developing students’ research competences. RTU has developed a good historical experience for the promotion of students’ scientific research skills, which continue to improve. The annual Student Scientific and Technical Conference has been organized since 1960. In April 2019, the 60th Student Scientific and Technical Conference was held. Within the conference, sections are organized according to the specifics of the study directions. Students of the study direction “Economics” participate in the

sections “Challenges of National Economy Development” and “Urban Environment and Regional Development”. All Master students attend the conference, publishing their theses and presenting their research conducted during the elaboration of the Master Thesis. Students of the Bachelor study program, on the other hand, conduct compulsory research on a topical issue of modern economics and present their research in the conference. This is one of the ways to ensure the involvement of RTU students in research. Students also have the opportunity to attend conferences organized by other higher education institutions, such as Riga Stradins University (RSU), which have been used by students of the study program. Since 2018, the tradition of holding joint student conferences of RTU and the University of Latvia has been developing and strengthening. They have aroused some student interest and several Bachelor students are currently preparing for the conferences.

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.

New approaches are being developed for the improvement of the study direction “Economics”, its content and the study process. As the transition from “teaching” to “learning” is relevant, it has implications for the methodology of implementing study courses. Interactive study methods are of particular importance here. The business game “Ecosys”, which is a result of cooperation with the Swiss Baltic Net program “Gebert Ruf Foundation”, is used within the academic Bachelor study program. The game encourages students’ involvement in the learning process and promotes their creativity. It helps develop a range of skills (students improve their communication, presentation and analysis skills, as well as respect the opinion of fellow students) and consolidate prior knowledge of economic processes and entrepreneurship to gain a more complete understanding of how the market economy system works and how its subjects interact under information asymmetry conditions. The feedback from the participants on the game is positive. Students also note the value of the method, which in this case helps better understand how the market economy works and how information asymmetry tends to influence participants’ behavior and hinder the achievement of goals.

In order to relate the study process to the real situation in cities, within the professional Master study program “Urban and Regional Engineering Economics” study trips to Riga’s neighborhoods are organized, where students carry out photo surveys and conduct population surveys. As a result, SWOT analysis of the area is performed and suggestions for solving problems are made. Posters of the research results that are of great interest to students are presented at the Faculty.

RTU Design Factory encourages students to generate new ideas, develop product prototypes, and facilitates RTU collaboration with the industry. It provides prototyping of students’ business ideas, facilitates cooperation between the university and entrepreneurs. Along with the DF establishment, the academic staff members of the FEEM have been involved in technology transfer and the commercialization of ideas. In order to encourage involvement in this process, students of the academic Bachelor study program “Economics” have started to acquire a new study course “Technology Transfer and Product Design” since academic year 2019/2020.

In October 2017, RTU FEEM opened a bright, study inspiring Room 119 or study room. The study

room is arranged so that students can work in groups. There is a communal computer, a projector, and some sitting poufs. In order to ensure a more extensive use of the resources provided in the resource room and to introduce students to the methodological materials developed by the faculty academic staff, at the FEEM meeting on 5 May 2018 the decision (No. 22000-1.2/42) was made on transforming the resource room into open learning space.

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.

The goals of the study direction, as well as the set results can be successfully achieved only through the cooperation process involving different institutions. Since its inception, the FEEM has been successful in working with entrepreneurs, organizations and public authorities. Each year, cooperation strengthens and new forms of cooperation emerge, with a growing mutual interest in successful outcome. Cooperation with various professional organizations takes place through the organization of joint conferences and seminars, as well as through scientific cooperation, participation in associations, consultations on the development of the sector and necessary improvements in the content of education.

The selection of cooperation partners is based on the specifics of the study direction, as well as taking into account previous experience gained from activities in joint projects, scientific cooperation, participation in professional organizations, etc.

The main areas of cooperation and topical issues in the study direction are as follows:

- improvement of the study process and quality assurance, including improvement of the content of study programs and forecasts of the need for specialists;
- provision of internships and promotion of students' professional development by offering internships and jobs;
- participation in the composition of the State Examination Commission and the proposal of current themes of graduation papers;
- approbation of scientific research results;
- involvement of professionals as visiting lecturers in the study process;
- provision of extra-curricular activities such as field trips, etc.

The FEEM has established close cooperation with several higher education institutions in Latvia and abroad. Agreements have been concluded between RTU and the University of Latvia, and RSU on mutual cooperation in the implementation of the study process and scientific development issues, which provide for cooperation in all fields, from free mobility of students between the two higher education institutions to the implementation of joint projects in various fields. The FEEM also has

agreements with most Latvian colleges on cooperation and opportunities for further studies.

RTU has established cooperation with more than one hundred foreign higher education institutions (https://www.rtu.lv/en/internationalization/mobility). The FEEM has concluded 115 cooperation agreements with higher education institutions from 22 foreign countries (see Appendix "List of cooperation agreements").

Students and academic staff of the study direction take advantage of study, teaching and experience exchange opportunities at the higher education institutions of the European Union (EU) member states. Currently, the FEEM is cooperating with 95 EU higher education institutions (see the attached figure "FEEM cooperation with higher education institutions of the EU").

Within the framework of cooperation agreements, different types of activities are organized. The most popular are the already mentioned mobility for studies and teaching, and experience exchange, but they also involve organization of joint international conferences (for example, with Vilnius Gediminas Technical University and Kaunas University of Technology in Lithuania, Brno University of Technology in the Czech Republic, the University of Forestry in Bulgaria), participation in Doctorate Boards and the like. Cooperation with many foreign universities has taken place for a very long time and the cooperation agreements are extended. D.A. Tsenov Academy of Economics and the University of Forestry in Bulgaria, where cooperation is very close in the exchange of academic staff, as well as universities in Lithuania can be mentioned as examples. Specific data on mobility of students and academic staff in the Study Field “Economics” is provided in Appendix. Student participation in summer schools is a useful way of promoting cooperation. Since 2011, students of the study direction “Economics” have been attending the International Summer School of Economics in Serbia organized by the University of Niš. Students attend lectures, participate in workshops and present their country and university.

One of the ways in which the administration of the study direction obtains information on the quality of studies and their compliance with the requirements of the labor market is maintaining close cooperation with employers – companies, institutions and organizations, as well as graduates.

In October 2018, the FEEM Advisory Board was established and approved by the FEEM Council. The goal of the Board is to promote the development of RTU and the FEEM in accordance with RTU Strategy and the needs of the national economy. The Chair of the FEEM Advisory Board is the President of the Road Carriers Association “Latvijas Auto” Valdis Trēziņš. The Advisory Board consists of 11 members representing various fields of national economy, and several of them are FEEM graduates, including graduates of the study direction “Economics”. It ensures stable and strong mutual cooperation.

In academic year 2017/2018, every three months (in November, February, June), members of the FEEM Advisory Board met to present the Board’s goals, objectives and responsibilities. The goals of the study direction and their correspondence to the requirements of the labor market and development areas were discussed and specified; as well as internship opportunities for academic staff at enterprises were considered within 8.2.2. SSO project; the development of occupational standards and the delegation of representatives to occupational standard development working groups were also discussed.

Analyzing cooperation with employers, it should be noted that since 2004 RTU has been successfully continuing to hold RTU Career Days, during which entrepreneurs meet students, as well as study trips to companies, discussions and seminars are organized. The goal of the event is to inform students of social and technical sciences about the companies in the field, to bring students and prospective employers closer together. Businesses, on the other hand,

aim at attracting new employees, establishing contacts with students and advertising the company. It is a day for prospective employers to meet prospective employees. At the same time, RTU Career Day reflects the current situation in the labor market. Each year, the number of companies that are interested in participating in the event increases. On 12 April 2018, the FEEM Student Self-government for the first time organized the FEEM Career Day with the participation of 14 Latvian companies. It was a great opportunity for students to get acquainted with possible future jobs and to make useful contacts.

As it has already been mentioned in Section 1.4., the management of the study direction "Economics" is ensured by the Study Direction Committee that includes specialists in the field of economics. It is another effective form of cooperation with employers. The Committee involves Dr. oec., Advisor on Entrepreneurship Issues of the Latvian Association of Local and Regional Governments Andra Feldmane and Head of the Fiscal Analysis and Forecasting Division of the Economic Analysis Department of the Ministry of Finance of the Republic of Latvia Jūlija Burģe. Their point of view is very important in shaping the content of study programs, as it helps maintain close relation with current trends in the national economy and local government processes.

Information on the cooperation agreements concluded is provided in Appendix .

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.

To attract foreign students to RTU, two communication target groups are mainly addressed:

1. the internal: management team; general staff, academic staff; existing students;
2. the external: prospective foreign students (foreign students studying in Latvia, foreign pupils and students, parents of foreign pupils and students); foreign graduates; mass media; opinion leaders; educational institutions; student recruitment education agencies; diplomatic and consular missions of the Republic of Latvia.

The communication strategy uses several types of information channels, choosing the most appropriate for each target audience – paid advertising channels, earned and owned ones. Marketing communication is an essential part of addressing foreign audience using all the traditional marketing tools – advertising in media and other channels, event marketing, direct marketing etc. The main marketing tool used to reach foreign audience is participation in various educational exhibitions and seminars organized by educational agencies in target markets. Continuity in the provision of information and promotion of studies is ensured by the long-term partner universities and educational agencies.

Public relations tools (press releases, media events, face-to-face meetings, interviews, opinion polls, etc.) and RTU social media channels (Facebook, WeChat, WhatsApp, YouTube, etc.) are used in corporate communication. RTU internal channels (ORTUS portal, email, etc.), information seminars and special events are used for internal communication.

RTU foreign student enrollment rates are summarized starting with academic year 2012/2013, indicating whether the student is pursuing undergraduate or graduate studies. The number implies only students enrolled in the first year.

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Bachelor studies	118 (64 %)	164 (66 %)	251 (57 %)	180 (52 %)	225 (51 %)	321 (48 %)	376 (49 %)
Master studies	63 (34 %)	81 (33 %)	179 (41 %)	164 (47 %)	216 (48 %)	338 (51 %)	382 (50 %)
Doctoral studies	4 (2 %)	3 (1 %)	7 (2 %)	5 (1 %)	4 (1 %)	11 (1 %)	3 (1 %)
TOTAL	**185**	**248**	**437**	**349**	**445**	**670**	**761**

The number of applications processed is much higher than the number of students actually enrolled. For example, in academic year 2015/2016, 626 applications were received from prospective students, while 349 students commenced their studies; however, in academic year 2016/2017, 670 applications were received, but 445 students were enrolled.

The mobility of incoming foreign students within the Erasmus+ exchange program is positive during the reporting period. The distribution of incoming students by European country is demonstrated in the attached figure "Breakdown of incoming students by country".

As it can be seen from the figure above, most students come from Germany, France, Italy, Spain, the Czech Republic and the Netherlands. Within the Erasmus+ program, incoming students are not divided at the Faculty by particular programs, as they choose the study courses offered by the FEEM study programs themselves. The Faculty has developed a special Erasmus+ module, which is offered to foreign students. This module includes courses of the study direction “Economics”, such as “International Competition”, “Current Trends of the European Union Economic Policy”. In addition to the study courses offered in the module, incoming students can acquire regular study courses: “Microeconomics”, “Macroeconomics”, “Microanalysis”, “Macroanalysis”, “History of Economic Thought”, “International Economics”. Incoming students acquire study courses together with Latvian students in English. This is a very good practice, from which local students benefit as they get the opportunity to communicate with foreign students and improve their foreign language skills.

Information on the involvement of foreign academic staff is provided in Section 3.6.

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.

Appendix "Description of the organisation of the traineeship of the students" provides the Senate resolution on the Internship management procedure at RTU, which was revised in 2019. It states that the internship coordinator at an organizational unit helps students find the internship place. If additional assistance is required, students can contact the Career Support and Services Unit, where a career consultant and project manager assist students in finding and addressing companies where to undergo internship, as well as promote the development of career management skills through a variety of activities that can ensure the achievement of successful results during the internship. Once a year, the Career Support and Services Unit organizes RTU Career Day, where

students also have the opportunity to meet face-to-face with company representatives and discuss future opportunities. More information about the event and participants of the previous years is available at http://karjera.rtu.lv/projekti/karjeras-dienas-arhivs/ (in Latvian).

An additional resource developed in 2015 is a website that invites companies to post vacancies that are relevant to RTU students (https://ekarjera.rtu.lv/). Students have the opportunity to log in with the University username and keep abreast of current internships and job opportunities in their field.

RTU Development Fund provides additional support for practical skills promotion (https://www.rtu.lv/en/developmentfund). Hundreds of practical skills competitions are offered during the year, which are organized in cooperation with companies.

Each year, the University concludes cooperation agreements with companies and organizations (template in English is in the file of Appendix 37 of the list of Internal regulations), where the parties agree on provision of internship places to students. The list of cooperation partners is available at https://www.rtu.lv/en/valorization/cooperation-partners-1.

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.

The development and implementation of joint study programs are governed by “Procedure for the application, elaboration and amendment of the study programs” (see the file of Appendix 06 of the list of Internal regulations).

The implementation of joint study programs is an effective way of strengthening the capacity and sustainability of the study programs, as well as strengthening the transfer of knowledge and competences. Currently, joint study programs are not implemented in the Study Field “Economics”, but it is planned to implement a joint study program with Klaipeda University in Lithuania. A joint program provides a real opportunity to increase the quality of studies and to mitigate the negative effects of the demographic situation in both countries on the number of students. Discussions have been initiated on the development of a joint academic Master study program “Economics”. Cooperation in this area has been started by involving guest lecturers from Klaipeda University in the study process. It is intended that in accordance with Cabinet Regulation No. 9 of January, 2018. 25 'Operational Programs' Growth and Jobs' 8.2.2. Specific Support Goal "Strengthening Academic Staff of Higher Education Institutions in Strategic Specialization Areas / in the autumn semester of academic year 2020/21, a guest professor from Klaipeda University will start working at RTU.

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 evaluation of the study direction “Economics” took place within the framework of ESF project “Evaluation of Higher Education Study Programs and Proposals for Quality Improvement”; on 11 March 2012, the experts’ report on study direction evaluation was signed, and with Decision No. 36 on 25 May 2013 of the Study Accreditation Committee the study direction “Economics” was accredited.

The experts’ report on the evaluation of the study direction included recommendations that were taken into consideration and implemented. An overview of the implementation of the recommendations is provided in Appendix "Review of implementation of recommendations".

The implementation of academic programs for foreign students in English was launched and the internationalization of studies was promoted, the termination of studies at Daugavpils Affiliation allowed increasing efficiency of resource use, professional Master study program “Urban and Regional Engineering Economics” was established. The implementation of these recommendations had a positive impact on the development of the Study Field and the quality of studies.

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).

During the reporting period, Accreditation Certificate No. 326 was issued for the study direction “Economics” on 13 March 2015 based on Decision No. 36 of the Study Accreditation Committee as of 24 May 2013 and Decision No. 341 as of 23 January 2015 due to the modification of the professional Master study program, but on 21 September 2016 a new Accreditation Certificate No. 23 was issued on the basis of Decision No.36 of the Study Accreditation Committee as of 24 May 2013, Decision No. 341 as of 23 January 2015 and Decision No. 22-A as of 25 August 2016 due to changes in the duration of the implementation of the professional Master program “Urban and Regional Engineering Economics”. There were no recommendations made for the improvement of the study direction.

Annexes

I. Information on the Higher Education Institution/ College		
List of the governing regulatory enactments and regulations of the higher education institution/ college	List of the main internal normative acts and regulations.zip	Saraksts ar galvenajiem iekšējiem normatīvajiem aktiem un regulējumiem.zip
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	RTU_strukturvienibas_okt2019_eng.pdf	RTU_strukturvienibas_okt2019.pdf
II. Description of the Study Direction - 1. Management of the Study Direction		
Plan for the development of the study direction (if applicable)	Development plan of the study direction Economics.docx	Studiju virziena Ekonomika attīstības plāns.docx
Management structure of the study direction	RTU_Study_Direction_Management_Structure.pdf	RTU_studiju_virziena_parvaldibas_struktura.pdf
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	Basic information on the teaching staff of the study direction Economics.xlsx	Pamatinformācija par studiju virzienā Ekonomika iesasitītiem mācībspēkiem.xlsx
Biographies of the teaching staff members (in Europass Curriculum Vitae format)	CV _EN 2019.zip	CV_LV 2019.zip
Summary of the statistical data on the incoming and outgoing mobility of the teaching staff over the reporting period	Statistical data on teaching staff mobility.zip	Statistikas dati par mācībspēku mobilitāti.zip
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	List of the publications of the teaching staff 2013-2019.docx	Mācībspēku publikāciju saraksts 2013-2019.docx
II. Description of the Study Direction - 5. Cooperation and Internationalisation		
List of cooperation agreements	IEVF Sadarbības līgumu saraksts.xlsx	IEVF Sadarbības līgumu saraksts.xlsx
Statistical data on the teaching staff and the students from abroad	Statistical data on the students from abroad.zip	Statistikas dati par ārvalstu studējošiem.zip
Statistical data on the mobility of students (by specifying the study programmes)	Statistical data on the students mobility.zip	Statistikas dati par studentu mobilitāti.zip
Description of the organisation of the traineeship of the students	Internship_Management_Procedure.docx	Prakses_organizesanas_kartiba.docx
Information on the agreements and other documents confirming the traineeship of the students in companies	List of Internship Places for Study Direction Economics Students.xlsx	Prakses vietu saraksts studiju virzienam Ekonomika.xlsx
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	Implementation of of the given recommendations.docx	Pārskats par rekomendāciju izpildi.docx
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.	02000-2.2.1-e_63.edoc	02000-2.2.1-e_63.edoc
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	01000-2.2.1-e_179.edoc	01000-2.2.1-e_179.edoc

Other annexes

Name of document	Document
RTU Stratēģija / Strategy	Strategija_RTU.pdf
RTU_Izcilibas_pieeja	RTU_izcilibas_pieeja.pdf
RTU_Excellence_Approach.pdf	RTU_excellence_approach.pdf
RTU Izcilibas pieeja	RTU_Izcilibas_pieeja.jpg
RTU Izcilības pieejas struktūra	RTU_Izcilibas_pieejas_struktura.jpg
RTU Excellence Approach	RTU_Excellence_approach.jpg
Structure of RTU Excellence Approach	RTU_Excellence_approach_structure.jpg
RTU studējošo priekšlikumu un sūdzību iesniegšanas un izskatīšanas kārtība	RTU_studeoso_priek_un_sudz_iesn_un_izsk_kart.pdf
ESG 1. daļas standartu integrēšanas raksturojums	ESG_standartu_integresanas_raksturojums.pdf
Integration description of the first part of ESG standards	ESG_standards_integration_description.pdf
Studiju virziena “Ekonomika” studiju programmu finanšu resursi	Finansu_resursi_Ekonomika.pdf
Financial resources of study direction "Economics" study programs	Financial_resources_Ekonomics.pdf
Vienotā darba samaksas kārtība RTU	RTU_dsk_speka_no_01012018_izmainiju_09_03_2018_1_.pdf
IEVF sadarbība ar ES dalībvalstu augstskolām / FEEM cooperation with higher education institutions of the EU	FEEM_cooperation_with_HEIs_of_the_EU.jpg
Ienākošo studentu sadalījums pa valstīm / Breakdown of incoming students by country	Breakdown_of_incoming_students_by_country.jpg
Procedure for Submission and Examination of RTU Students' Proposals and Complaints	Procedure_for_Submission_and_Examination_of_RTU Students’_Proposals_and_Complaints.pdf
Par studiju turpināšanas iespējām studiju virzienu "Vadība, administrēšana un nekustamo īpašumu pārvaldība" un "Ekonomika" studiju programmās starp Rīgas Tehnisko universitāti un Latvijas Lauksaimniecības universitāti	01000-4.1-e_2.edoc
Radara_diagramma_akad.bak._Ekonomika.png	Radara_diagramma_akad.bak._Ekonomika.png
Radara_diagramma_akad.mag._Ekonomika.png	Radara_diagramma_akad.mag._Ekonomika.png
RTU IT sistēmu saskarnes / Screenshots of RTU IT systems	RTU_IT_sistemas.zip
Unified Work Remuneration Procedure at Riga Technical University	Unified_Work_Remuneration_Procedure_at_Riga_Technical_University.pdf
Studiju virziena neievēlēto mācībspēku kvalifikācija	Studiju virziena neievēlēto mācībspēku kvalifikācija.docx
Qualification of the study direction “Economics” unelected and guest teaching staff	Qualification of the study direction “Economics” unelected and guest lectureres.docx
Skaidrojums par piešķiramajiem grādiem un kvalifikācijām	137145.pdf

Economics

Title of the higher education institution	*Economics*
ProcedureStudyProgram.Name	*Economics*
Education classification code	*43311*
Type of the study programme	*Academic bachelor study programme*
Name of the study programme director	*Maija*
Surname of the study programme director	*Šenfelde*
E-mail of the study programme director	*maija.senfelde@rtu.lv*
Title of the study programme director	*Dr.oec.*
Phone of the study programme director	*29184578*
Goal of the study programme	*To ensure acquisition of theoretical knowledge in the field of economics in accordance with the national standards of academic education and to train specialists, whose knowledge and skills will allow them to take decisions, plan and coordinate economic processes.*
Tasks of the study programme	*1. to provide students with an opportunity to acquire a degree in the field of economics;* *to foster students' interest in further development and to form a foundation for continuing their studies at Master study programs;* *2. to ensure the development and improvement of the curriculum of the study program, the study process and research work in accordance with the economic changes at the national and international level, as well as in science and didactics;* *3. to organize the study process with an aim to develop students' knowledge, foster their mental development, promote application of their intellectual abilities and competencies in the study process and further practical work;* *4. to develop competencies in accordance with the labour market requirements, to promote interest in further learning and development, enhancing academic knowledge and professional competencies;* *5. to develop skills necessary to ensure students' ability to work successfully and in accordance with the best standards at state institutions and economic enterprises in various industries, including the ability to obtain, compile, analyse and use information, the ability to make decisions and act in a socially responsible environment, etc.;* *6. to foster students' understanding of various economic processes in the national economy and provide them with the required knowledge in the relevant sphere;* *7. to promote students' interest in the social processes, to enable them to develop into positive, modern, responsible and fully capable individuals, who can act independently and make independent decisions;* *8. to foster and develop international exchange of the academic staff and students, as well as their participation in various projects.*

Results of the study programme	*Having completed the study program, graduates are able:* *1. to understand the economic theory, assess the current situation and problems in the national economy;* *2. to define and apply various alternative solutions to the use of financial resources;* *3. to demonstrate their understanding of the structure and main directions of the European Union policy;* *4. to show their understanding of the operating principles and economic performance of enterprises, government or non-governmental institutions;* *5. to collect, process, analyse and apply information;* *6. to use information technologies in the solution of specific economic issues;* *7. to carry out research on economic development issues, interpret and analyse the results;* *8. to properly elaborate and present projects related to economic issues;* *9. to apply the knowledge acquired during the studies in various life and business situations, working in a team or individually thus ensuring their competitiveness in the labour market.*
Final examination upon the completion of the study programme	*Bachelor Thesis*

Study programme forms

Full time studies - 3 years - latvian

Study type and form	*Full time studies*
Duration in full years	*3*
Duration in month	*0*
Language	*latvian*
Amount (CP)	*120*
Admission requirements (in English)	*General secondary Education or 4 –year Vocational Secondary Education*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Bachelor Degree of Social Science in Economics*
Qualification to be obtained (in english)	

Places of implementation

Place name	City	Address
Riga Technical University	RĪGA	KAĻĶU IELA 1, RĪGA, LV-1050

Part time extramural studies - 4 years - latvian

Study type and form	*Part time extramural studies*
Duration in full years	*4*
Duration in month	*0*
Language	*latvian*
Amount (CP)	*120*

Admission requirements (in English)	*General secondary Education or 4 –year Vocational Secondary Education*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Bachelor Degree of Social Science in Economics*
Qualification to be obtained (in english)	

Places of implementation

Place name	City	Address
Riga Technical University	RĪGA	KAĻĶU IELA 1, RĪGA, LV-1050

Full time studies - 3 years - english

Study type and form	*Full time studies*
Duration in full years	*3*
Duration in month	*0*
Language	*english*
Amount (CP)	*120*
Admission requirements (in English)	*General secondary Education or 4 –year Vocational Secondary Education*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Bachelor Degree of Social Science in Economics*
Qualification to be obtained (in english)	

Places of implementation

Place name	City	Address
Riga Technical University	RĪGA	KAĻĶU IELA 1, RĪGA, LV-1050

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

Name of the study program	Ekonomika	
Name of the study program in English	Economics	
Code of the study program in accordance with the Latvian Education Classification	43310	
Type and level of the study program	Academic Bachelor Study Program	
Level of qualification to be acquired (NQF/EQF)	The 6th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF)	
Code of the occupation in the classification of occupations		
Amount of the study program (CP, preferably also ECTS)	120.0 CP, 180.0 ECTS	
Form, type, and duration of the study program (in case the duration cannot be measured in full years, specify the number of months), as well as the language in which the study program is implemented		
Full-time, intramural form	3 years	Latvian, English
Part-time, extramural form	4 years	Latvian
Place of implementation of the study program	Riga	
Director of the study program	Maija Šenfelde, Dr.oec.,Professor	
Admission requirements	General secondary Education or 4–year Vocational Secondary Education	
The degree, professional qualification to be awarded or the degree and professional qualification to be awarded	Bachelor Degree of Social Science in Economics	

Aim of the study program	To ensure acquisition of theoretical knowledge in the field of economics in accordance with the national standards of academic education and to train specialists, whose knowledge and skills will allow them to take decisions, plan and coordinate economic processes.
Objectives of the study program	1. to provide students with an opportunity to acquire a degree in the field of economics; to foster students' interest in further development and to form a foundation for continuing their studies at Master study programs; 2. to ensure the development and improvement of the curriculum of the study program, the study process and research work in accordance with the economic changes at the national and international level, as well as in science and didactics; 3. to organize the study process with an aim to develop students' knowledge, foster their mental development, promote application of their intellectual abilities and competencies in the study process and further practical work; 4. to develop competencies in accordance with the labour market requirements, to promote interest in further learning and development, enhancing academic knowledge and professional competencies; 5. to develop skills necessary to ensure students' ability to work successfully and in accordance with the best standards at state institutions and economic enterprises in various industries, including the ability to obtain, compile, analyse and use information, the ability to make decisions and act in a socially responsible environment, etc.; 6. to foster students' understanding of various economic processes in the national economy and provide them with the required knowledge in the relevant sphere; 7. to promote students' interest in the social processes, to enable them to develop into positive, modern, responsible and fully capable individuals, who can act independently and make independent decisions; 8. to foster and develop international exchange of the academic staff and students, as well as their participation in various projects.

Learning outcomes of the study program to be achieved	Having completed the study program, graduates are able: 1. to understand the economic theory, assess the current situation and problems in the national economy; 2. to define and apply various alternative solutions to the use of financial resources; 3. to demonstrate their understanding of the structure and main directions of the European Union policy; 4. to show their understanding of the operating principles and economic performance of enterprises, government or non-governmental institutions; 5. to collect, process, analyse and apply information; 6. to use information technologies in the solution of specific economic issues; 7. to carry out research on economic development issues, interpret and analyse the results; 8. to properly elaborate and present projects related to economic issues; 9. to apply the knowledge acquired during the studies in various life and business situations, working in a team or individually thus ensuring their competitiveness in the labour market.
Final examination upon the completion of the study program	Bachelor Thesis

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.

The statistical data on the students of the study program can be found in Appendix . Having analyzed this data, it can be concluded that the total number of students has not changed significantly in the reporting period: 122 students in academic year 2013/14 and 130 students in academic year 2018/19.

But in this period there have been significant changes in student composition. Until academic year 2016/17, there was a pronounced tendency for decrease of the number of students with Latvian as the language of instruction. This may be attributable to the demographic situation in Latvia, as well as to the reduction in the number of state budget funded study places. It is clearly illustrated by the enrolment data in the first study year in academic year 2014/15 and academic year 2017/18, when

only 9 students were matriculated on state budget funds. At the same time, the reduction in the number of students paying tuition fee for both full-time and part-time studies can be explained by the increase in tuition fees and the demographic situation in the country.

Taking into consideration the above mentioned circumstances, as well as the demand for education in the field of economics abroad, from academic year 2017/18 the program is implemented in English and offered to foreign students. 12 students from 6 countries enrolled in the first year, whereas in academic year 2018/19 there were already 52 students from 13 countries. The majority of students come from Uzbekistan, India and Sri Lanka.

The graduate number dynamics is linked to the number of students and changes therein. The reporting period shows a reduction in the number of graduates from 30 people in academic year 2013/14 to 14 people in academic year 2016/17, coinciding with a sharp reduction in funding for the program in academic year 2014/15 and a relatively large dropout rate just before the development of the Bachelor Thesis. In future, the number of graduates will increase, and this trend should continue taking into account the increase in the total number of students.

Having analyzed student dropout rate, it can be concluded that the main reason for expulsion is poor academic performance results, which is particularly noticeable at the beginning of studies. This points to the fact that students have not had the required level of prior knowledge, or they have not been able to adapt for studies at the university. This refers to both local and foreign students. Much fewer students are expelled at their own will. This usually happens due to health issues, family circumstances and workload (because quite many students join work with studies). In some cases, students do not renew for studies after an academic leave. There are also situations when students are expelled for poor academic results before the development of the Bachelor Thesis, if a student has multiple debts, and the student understands that he or she will not be able to develop the Thesis in time. In this case, unfortunately, there will also be a reduction in the number of graduates, as mentioned above.

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 academic Bachelor study program “Economics” corresponds to the 6th level of the EQF and LQF, thus it is envisioned for school leavers with general secondary education or 4-year vocational secondary education. The name of the study program is related to its ***aim*** of ensuring acquisition of theoretical knowledge in the field of economics in accordance with the national standards of academic education and to train specialists, whose knowledge and skills will allow them to make decisions, plan and coordinate economic processes. In order to achieve the set aim specific tasks have been put forward to reach certain learning outcomes (see Study program parameters in Section 1.1). The aim of the study program is achieved if students in the study process reach the learning outcomes. By its curriculum, the study program is designed in such a way that the aims and learning outcomes of the study courses included therein are subject to and ensure that the overall aim and learning outcomes of the program are achieved.

Bachelor Degree of Social Science in Economics is awarded after the acquisition of theoretical study courses of the study program and the public presentation of the Bachelor Thesis in the State Examination Commission. Having analyzed the interrelation between the name of the study

program, the degree to be obtained, the aims, objectives, learning outcomes, as well as the enrolment requirements, it can be concluded that it is in place.

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.

Having analyzed the compliance with the Cabinet Regulations No 240 "Regulations on the state academic education standard" adopted on May 13, 2014, it can be concluded that the academic Bachelor study program "Economics" meets the requirements of the standard. Appendix provides comparison of the study program with the requirements of the standard.

The content of the study program is constantly updated and improved in line with the latest trends in economics as well as the situation in the labour market and its requirements. In order not to lose its topicality, the study program regularly undergoes bigger or smaller changes, consisting in replacing study courses or supplementing the program with new topical courses. The changes are discussed and approved by the Committee of the Study Field "Economics" and submitted for approval by the Faculty Council. In addition, academic staff take into account the development trends in the Latvian economy and the world economy in the implementation of their study courses and reflect them during the classes. Students also participate in the development of the study curricula by filling out surveys at the end of each semester and evaluating the curricula of the study courses and the quality of their implementation. A meeting with the director of the study program and the leaders of student groups takes place once a semester, where topical issues of the study process are addressed. These meetings are recorded.

The following examples illustrate the development of the program. Taking into consideration expert recommendations made earlier in the assessment process, changes were made to the program in May 2015, excluding study courses "Applied Chemistry" and "Computer Studies (basic course)". Whereas the study course "Taxes and Duties" was replaced by the study course "Public Sector Economics", which gives more added value to the program. The program was supplemented with a modern study course "Technology Transfer and Product Design" and the volume of Internship was increased to 6 credit points. In May 2016, study course "Computer Science for Economists" was replaced by a more modern study course "Business Intelligence Technologies", while the program was supplemented with study courses "Territorial Economic Activity" and "Econometrics". In March 2017, with an aim to develop student research skills and strengthen the research component of the program, it was supplemented with the study course "Topicalities of Nowadays Economy (study work)", but taking into account the current topicality of the environmental aspects, in May 2018,

the program was supplemented with the study course “Eco-economics”.

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 structure and content of the academic Bachelor study program “Economics” is designed to achieve its aim. The aim of the study program is closely related to all 9 defined learning outcomes. These learning outcomes are achieved in the course of acquisition of study courses. Thus the aims set in the descriptions of the study courses are closely related to the learning outcomes of the entire program, but study courses are interrelated and complement each other in order to achieve the expected results upon completion of the program. Interrelation of these study courses to the learning outcomes of the study program is illustrated in the mapping of the study courses (see Appendix).

To ensure successful achievement of study program results, the syllabus for the implementation of study courses follows a specific sequence. The study program plans for full-time and part-time studies are attached in Appendix.

Descriptions of the study courses are included in a unified RTU study course register. Descriptions of the study courses included in the academic Bachelor study program “Economics” are attached in Appendix . In total, there are descriptions of 20 Compulsory Study Courses (A), 29 Compulsory Elective Study Courses (B) and description of Final Examination (E).

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.

The study process is organized in such a way that students acquire both theoretical and practical knowledge. Therefore, a variety of forms of training are used: both traditional, such as lectures for knowledge transfer, seminars, discussions, situation analysis, practical tasks (case studies) for knowledge strengthening and tests for knowledge testing and interaction. For example, when solving tasks, students are offered to join forces and address challenges in small groups, but after the given time period jointly examine the results and discuss typical errors or uncertainties. In line with the level of student preparedness, tasks of increased complexity are also offered. Guest lectures from industry experts and company representatives are organized on a regular basis.

It should be noted that much emphasis is placed on replacing the learning style with “teaching to

learn". Therefore, individual and group research work is widely used. When working in groups and sharing their responsibilities among themselves, students should find, select and process statistical data on economic indicators in order to characterize and compare economic situation of the countries. In this case, based on the acquired theoretical knowledge at the lectures and performed standard tasks at the practical classes, students are able to apply the acquired knowledge and skills in practice. Moreover, when conducting this kind of analysis (usually in Microsoft Word or PowerPoint format), students also learn to design the material according to the requirements. By implementing different types of group work, students are guided towards self-sufficiency, increasing responsibility and promoting mutual respect.

In the study process, an advanced learning method, such as applied games, is also used, which promotes the involvement of students in the learning process and encourages creativity. For example, the study program includes the applied game "Model for the Functioning of the Economic System". The implementation of this study course helps develop different types of skills (students develop their communication, presentation and analytical skills, as well as their skills to respect the views of their peers) and strengthen previously acquired knowledge in the field of economic processes and entrepreneurship, in order to gain a more complete picture of how the economic system of the market as a whole works and how its subjects interact in the circumstances of information asymmetry. Mostly, students' opinion about the course is very positive. Students also note the value of the method, which helps to better understand how market economy works, and how information asymmetry tends to influence participants' actions and hinder the achievement of the objectives pursued.

Interest in research, as well as development of student competencies in this area, is already being promoted from the first year of studies. Following the acquisition of micro and macroeconomic courses, students develop study project within the study course "Topicalities of Modern Economics". Students choose a topical problem and devote their research to it. Students' skills in working with databases, selecting the necessary information and analyzing scientific articles are also developed. Moreover, students' skills to process statistical data are strengthened.

A summative evaluation system is used for the final assessment within the study courses – the final mark is formed of several components, thus during the semester students are already affecting their final grades. The evaluation criteria for the study courses and individual/home tasks are published in advance in ORTUS e-learning environment. The assessment of home tasks, assessment tests, reports, presentations and other tasks performed during the semester is assigned a certain percentage of the final grade. The examination grade must not exceed 50% of the final assessment. Academic staff can also take into account and evaluate the attendance of the classes.

The academic staff determine the assessment structure for their study course, but it must strictly correspond the Resolution of RTU Senate that the examination grade must not exceed 50% of the final assessment. An example of this is an approach where the academic staff, in order to promote the attendance of classes and to ensure continuous knowledge testing, enables students to earn additional points after 2-3 classes by solving small tasks and analyzing case studies on previously discussed topic. From the points earned during the semester, a small percentage (10 to 20) is added to the final grade. Given that students know the deadlines for the submission of individual/group/home tasks, if, for justified reasons, the student is not able to attend the class, he or she has the opportunity to submit the task in ORTUS e-learning environment in a timely manner in order to obtain an assessment.

Another example is an initiative of the academic staff at the end of the semester before the exam tutorials to offer students to write questions that the student wants to be answered or explained in

a shared document (usually using the Google Docs). The answers can be provided not only by the academic staff but also by other students. On the one hand, this helps students to better prepare for the exam, because not all students will dare to ask any questions during the tutorial, whereas when writing anonymously they can find out more. On the other hand, it also enables academic staff to help students prepare for the final examination in a timely and more comprehensive manner, and helps clarify what aspects should be addressed more in the upcoming periods in implementation of these courses.

All academic staff members must dedicate at least 2 academic hours each week for tutorials in which students can communicate with them and receive answers to questions. Moreover, for part-time students, academic staff also provide tutorials on Saturdays or working day evenings, so that all students can be consulted at a convenient time.

The results of the Academic Bachelor Study Program "Economics" student knowledge assessment are discussed twice a year in the meetings of the Department of the Territorial Development Management and Urban Economics, which is responsible for the study program's record keeping. The results are collected and assessed also by the administration of the study program. Together with the results of student surveys, they are used as a basis for further development of the study process.

Having analyzed study implementation and evaluation methods used in the study program, it can be concluded that the student-centred principles have been taken into account:

- student enrolment and the diversity of their needs is taken into account and respected in the development of appropriate learning modes;
- different ways of implementing the program have been used;
- based on students' abilities and needs, academic staff apply diverse pedagogical techniques and promote student's strife for independence, while at the same time ensuring supervision and support from the academic staff;
- implementation of the study process in the program contributes to mutual respect between students and academic staff, as the principle of democracy is applied and the program administration takes into account opinions of students.

The organization and quality of the student evaluation system are essential for the implementation of student-centred education. Having analyzed and assessed this system in the study program, it can be concluded that:

- the evaluation methods and criteria for grading have been published in advance in ORTUS e-learning environment, the academic staff inform students about them at the beginning of the study course, and the conditions referred to the above are well known to students;
- evaluation is consistent, fair, suitable for all students and implemented in accordance with the approved procedures;
- the evaluation reflects the learning outcomes, and students are given the opportunity to receive feedback;
- the academic staff develop their pedagogical skills at academic conferences and seminars to improve the evaluation of teaching methods and learning outcomes.

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.

According to the Cabinet Regulations No 240 “Regulations on the state academic education standard” adopted on May 13, 2014, internship is not a mandatory requirement for academic Bachelor study program. However, in 2014 in the academic Bachelor study program “Economics” an internship in the volume of 6 credit points was included in the compulsory elective study courses of the program. This was done because students expressed willingness to undergo internship in the study process, as well as to improve student skills and competences. Moreover, students are given the ability to integrate in the labour market. As students choose to undergo internship before elaborating the Bachelor Thesis, it provides a good opportunity to link the internship to the Bachelor Thesis and collect data for its development.

Until 1 July 2019, the internship was implemented in accordance with the regulations approved by RTU Senate on 29 March 2010 (Minutes No 539) and in accordance with the regulations of the structural unit implementing the study program.The internship management procedure was revised in accordance with the regulations approved by RTU Senate on January 28,2019 (Minutes No 626).

Description of the internship can be found in RTU study course register. Description provides the internship aim, main tasks, as well as learning outcomes. They are all organically related to the aim of the study program as a whole and the learning outcomes to be achieved in the study process. In addition to the internship description, regulations on internship have been elaborated for students of academic Bachelor study program “Economics”. The internship is coordinated by a member of academic staff appointed by the University, but it is supervised by an employee assigned by the internship company.

Since 2014, 44 full-time students and 10 part-time students have undergone internship. Places of internship are very different. These include municipalities, public authorities, companies, commercial banks, audit firms, insurance companies, etc.

Some places of internship are: Ensat Ltd.; TELETRADE-DJ International Consulting limited representation; Baker Tilly Baltics AS; the State Audit Office of the Republic of Latvia; the Competition Council of the Republic of Latvia; Gulbene Municipality; Delta Green Line EU Ltd.; BTA Insurance Group SE; Ērgļi Divi Ltd.; University of Split; Kurzemes Vārds Ltd.; Veselības centrs 4 Ltd.; Swedbank JSC; PayBis Ltd.; Citadele banka JSC; Balta JSC; Primum Ltd.; LMT Ltd.; Kārsava Municipality; FIDEA Ltd.; KPMG Baltics Ltd.; Arbor Medical Korporācija Ltd.; Luminor Bank JSC; Baltic Distribution Ltd.; Information Technology Centre of Riga City Council; Ernst & Young Baltic Ltd.; Solvay Business Services Latvia Ltd.; Pasažieru vilciens JSC; Discover Car Hire Ltd.; PricewaterhouseCoopers Ltd.; Latvia State Radio and Television Center SJSC; ISC - Paris Business School; Riga Technical University; Ķekava Municipality; AK Transgroup Ltd.; STEM Ltd.; Atea Global Services Ltd.; Samsung Electronics Baltics Ltd.; Metodika Ltd.; Latvijas Finieris JSC; Skandinaviska Enskilda Banken AB Riga Branch; Viseal Ltd.; JP Ltd.; Baltic Hospitality Group Ltd.; Elīze G Ltd. etc.

Despite the diversity of selected places of internship, during the internship students perform tasks related to the specific nature of the study program “Economics” and address economic issues. Generally, students choose places of internship taking into account their own interests and desires, but if necessary, RTU Career Support and Service Centre can assist in finding a place of internship. Many companies and organizations themselves offer places of internship to the University.

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.

At the end of the academic Bachelor study program “Economics”, students develop a Bachelor Thesis. The Bachelor Thesis is publicly presented in the State Examination Commission. The Commission acts in accordance with the resolution approved by RTU Senate and composition of the Commission is approved by the resolution of the Rector.

Description of the Bachelor Thesis can be found in RTU study course register. Description provides the thesis aim, main tasks, as well as learning outcomes. They are all organically related to the aim of the study program as a whole and the learning outcomes to be achieved in the study process. In addition to the description, regulations on Bachelor Thesis have been elaborated for students of academic Bachelor study program “Economics”

The development and public presentation of the Bachelor Thesis allows assessing how the aim and learning outcomes of the study program have been achieved in the study process. At this stage of the education process, the student must use the whole set of knowledge, skills and competences he/she has acquired while studying at the program. Elaborating Bachelor Thesis, students demonstrate the research skills acquired during their studies, as well as the ability to work with international scientific databases available in RTU library with an electronic access through ORTUS e-learning environment. Bachelor Thesis is a serious research developed according to the topic chosen by the student. The topic has to be topical and must correspond to the specifics of the program. The scientific advisor of the Bachelor Thesis is advised by the Director of the Study Program based on the interests and competencies of the academic staff in the relevant field. The topics of the Bachelor Thesis are discussed at the meeting of the Department and a draft of the Dean’s resolution is drawn up. The topics of the Bachelor Theses and their scientific advisors are appointed by the resolution of the Dean.

The developed Bachelor Theses should reflect their relevance to the learning outcomes of the program. Students have to understand regularities of the economic theory, assess the current situation and problems in the national economy, demonstrate their understanding of the main directions of the EU policy. Upon graduation, students should also show their understanding of the operating principles and economic performance of enterprises, government or non-governmental institutions. Moreover, the student should demonstrate the ability to collect, process, analyze and apply information; carry out research on economic development issues, interpret and analyze the results; use information technologies in the solution of specific economic issues; properly elaborate and present the results of the research they conducted.

Having analyzed the topics of publicly presented Bachelor Theses it can be concluded that they can be conditionally divided into several groups:

a large part of the theses is devoted to the current economic challenges of the country, such as – “Impact of Global Economic Crisis on the Labour Market in Latvia”, “Impact of the European Union’s Common Agricultural Policy on the Development of Dairy Industry in Latvia”, “Research of Investment Environment in the Baltic States”, “Youth Employment Problems in the European Union”, “Universal Basic Income and its Impact on the National Economy”, “Impact of Population Ageing on the Latvian Economy”, “The Effect of Investment Multiplier in Latvia’s Economy”, etc.;

the second major group includes the theses dedicated to studying economic problems at company or sectoral level, such as “Possibilities to Increase Business Competitiveness”, “Optimization of

Marketing Activity Costs in Cēsis", "Investment Analysis in the Development of Retail Sector in Latvia", "Commercial Real Estate Valuation", "Assessment of Prospects for Development of Family Business in Latvia" etc.;

rather big number of the theses are devoted to currency and financial issues. This group includes topics such as "Prospects for Mortgage Lending Development in Latvia", "Impact of the Non-Banking Sector on Household Income Level", "Real Convergence of Latvia with the Eurozone", "Development Prospects of the Latvian Banking Sector", "Development of Cryptocurrency Transactions in the World", etc.

Publicly presented Bachelor Theses and their topics demonstrate that the studies carried out are relevant for both the economy as a whole and individual businesses and industries, as well as the labour market.

Having analyzed the assessment of the Bachelor Theses, it can be concluded that the majority of graduates earn grades 8 (very good) and 7 (good). Every year at least one Thesis is evaluated with a grade 10 (outstanding). In this case, the graduate has indeed shown a high level of knowledge and the ability to focus on the subject. Usually those are one or two students, in academic year 2015/2016 there were three outstanding evaluations. There is a strong tendency that full-time students receive higher grades, but outstanding or excellent performance among part-time students can also be sometimes observed. The lowest grade is 4 (almost satisfactory), but during the reporting period such grade has been awarded only 3 times, in 2 cases it was received by part-time students. Consequently, the fact is that part-time students demonstrate a lower level of knowledge than full-time students.

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.

Democracy and dialogue with the students, their active involvement in the development of the study process are among the fundamental principles in the organization and implementation of the study process at RTU Faculty of Engineering Economics and Management. Students may participate in the development of the study process directly – by expressing their wishes to the academic staff of the particular study course, the heads of the departments, the director of the program or with the help of the student self-government, whose representatives are members of FEEM Council, RTU Senate and RTU Senate commissions, and members of RTU Academic Assembly. In general, relations with students at the faculty are characterized by mutual trust and respect.

In order to ensure the principle of democracy and to obtain feedback, the quality control and assurance system established at RTU requires regular electronic surveys of students on the curriculum and performance quality of academic staff, using ORTUS e-learning environment. At the end of semester, students evaluate academic staff by filling out questionnaires about study courses. Questionnaires include questions on the availability of study materials for each particular course, evaluation criteria, culture and quality of work, respect for students' rights during the classes, the time spent on student's individual work and the discipline of teaching. The final part of the questionnaire is intended for student proposals and suggestions on improvement of the quality of study course and performance of the academic staff. The questionnaires are submitted

anonymously so that the responses provided do not affect the attitude of the academic staff towards the student or the group of students and the aim of obtaining an objective appraisal from students is reached. Thus, students can provide feedback on the quality of study courses and the professional performance of the academic staff.

The results of student surveys show that within some study courses there is an overlap of issues/materials to be examined with topics covered by other study courses. In order to prevent this, the descriptions and curriculum of the study courses are regularly reviewed. The overall student survey results were positive, with an average of 4.0 to 5.0 from a maximum of 5.0 points, only few academic staff members in separate questions received an assessment below that rate. Thus, each member of academic staff has the opportunity to assess the results of his or her work and to take measures to improve the quality of studies. Students have positively assessed academic staff who have elaborated their own study materials and/or handouts for the study courses. The main recommendations for improvement of the study courses are related to bringing the content of the classes closer to the current situation and processes. Students positively assess involvement of the guest lecturers – field specialists in the implementation of study courses. The results of student surveys are analyzed by the study program administration and the academic staff, which contributes to the improvement of the quality of studies.

A meeting with the monitors of all groups and the director of the study program is held once a semester, where the problems, if any, are discussed. At the next meeting, information on how the problem has been solved is provided.

FEEM student self-government plays a major role in ensuring communication between the students, academic staff and the program administration; it is active in all these processes and undertakes an annual evaluation of academic staff in identifying the best member of academic staff of the year. Every year in May, student self-government organizes “Pride of the FEEM” – a beautiful event for academic staff, where the best academic staff members are honored.

The opinion of graduates is very important in the development and improvement of the academic Bachelor study program “Economics”. Therefore, every year graduate survey is conducted. The results of the surveys show the positive and negative aspects of the implementation of the program. Respondents express their views on the theoretical knowledge and practical skills acquired, the quality of infrastructure, the work of the administration of the program, etc. Unfortunately, it must be noted that the graduate responsiveness could have been higher:

- in 2014, 80% out of 30 graduates filled out the questionnaires;
- in 2015, 60% out of 22 graduates filled out the questionnaires;
- in 2016, 60% out of 27 graduates filled out the questionnaires;
- in 2017, 45% out of 14 graduates filled out the questionnaires;
- in 2018, 50% out of 17 graduates filled out the questionnaires;
- in 2019, 61% out of 28 graduates filled out the questionnaires.

In general, graduates positively evaluate the curriculum of the program, particularly highlighting the following:

- studies have promoted the interest in learning and acquiring new knowledge;
- knowledge acquired in the course of studies has developed the capacity to independently deal with work and household problems;
- there is a good relationship and cooperation between students and academic staff;
- academic staff are professional and able to explain complex things;
- academic staff are competent and understanding;
- good cooperation between administration, records management office and students;

- administration of the program listens to student opinions;
- easily accessible information for the study process;
- uploading materials in the e-learning environment is welcomed;
- easy access to the required study materials;
- good study infrastructure and equipment in the lecture rooms;
- good opportunity to usefully spend time during studies and to actively participate in the life of student self-government and other public activities.

Graduates made the following suggestions for improvement of the program:

- more attention should be paid to the development of practical skills;
- internship should be introduced in the study program;
- more time should be spent on the practical tasks;
- the expediency of the courses in physics and chemistry within the study program should be considered;
- some study courses require innovative teaching methods;
- the course on foreign languages should be expanded;
- some study courses, for example, Accounting; Taxes and Duties, should be broader;
- more guest lecturers should be invited;
- curriculum of some study courses overlaps.

When analyzing the results of the graduate survey, it should be noted that the answers tend to be very different. Nevertheless, all opinions are analyzed and taken into account. The content of the program is reviewed on a regular basis and changes are made. For example, such study courses as physics and chemistry that were included in the program following earlier RTU internal requirements have been removed.

A key issue was the development of students' practical skills, which was mentioned in the graduate surveys. Since 2014, changes have been made in the program and the list of the compulsory elective study courses has been supplemented with an internship. Taking into account both recommendations from graduates and current events, the program introduced study courses "Public Sector Economics" and "Eco-economics".

Administration of the study field maintains dialogue with employers as it helps to sustain and improve the quality of the offered study programs. Employers' representatives are involved in the Committee of the Study Field "Economics", which makes decisions on the content and changes to the program. Representatives of the State Regional Development Agency of the Republic of Latvia, Ministry of Finance of the Republic of Latvia and the Latvian Association of Local and Regional Governments have been members of the Commission. Recommendations from employers are very important for the improvement of the quality of the study program. Employers' opinions on the level of knowledge and competence of students in the program are regularly received by the program's administration when they write reference on student performance during internship. They have always been positive. 82% of the 2019 graduates were already employed; moreover, jobs of 59% of the graduates were related to the selected study field. Such situation poses problems in the study process because it is difficult for students to combine their studies with work. On the other hand, it proves that the program provides the necessary knowledge to enter the labour market. In recent years, there is a tendency that the internship helps a student find a job, as the management of the place of internship often offers the trainee a permanent job. One of the 2019 graduate questionnaires states, "The knowledge acquired is useful in my current workplace, the employer appreciates that I am competent and I have received a lot of information from teachers".

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.

In the current circumstances, the progress of the study process and its effectiveness are greatly influenced by the opportunity for students to increase their knowledge at the universities abroad. Participation in mobility programs allows students to extend their knowledge and competences, improve their communication skills with foreign students, and increase their foreign language skills. In the framework of the Erasmus program, students of the academic Bachelor study program "Economics" have used this opportunity:

2013/14	1 semester	1 student	Germany	Hochschule Pforzheim
2014/15	1 semester	1 student	Germany	Hochschule Pforzheim
	2 semesters	1 student	France	ISC Paris Business School
	1 semester	1 student	Spain	Universitat de Barcelona
2015/16	2 semesters	1 student	Estonia	Tallinn University of Technology
	1 semester	1 student	Greece	University of Patras
2018/19	1 semester	1 student	Croatia	University of Split
	1 semester	1 student	Croatia	University of Dubrovnik

Having assessed the number of outbound students, it should be noted that it could have been greater. Students are very well informed about this opportunity, but talking to them reveals the main reasons why many do not use it. Usually 2nd and 3rd year students participate in the mobility program. Around this time, many have started to work and they do not want to leave their jobs, others mention family circumstances.

RTU has established a stable and comprehensible system for the recognition of study courses acquired during mobility. Before leaving, the director of the study program individually confirms the list of study courses in a receiving university, which will be recognized as the counterparts of the study courses scheduled for the given semester in the sending university. If any changes occur during the mobility program, they are electronically confirmed. When returning from the mobility program, the study courses acquired in the receiving university are recognized on condition that the student has obtained a positive assessment, as attested by documents issued by the receiving university.

The flow of inbound foreign students at RTU within the framework of mobility program is higher. Students acquire study courses in English together with Latvian students. It is a very good practice that also benefits local students, because they get the opportunity to communicate with foreign

students and improve foreign language skills. Foreign students acquire the following study courses of the academic Bachelor study program “Economics”: Microeconomics, Macroeconomics, International Economics and Current Trends of the European Union Economic Policy. Information on the dynamics of inbound mobility is provided in point 2.5 of the study field self-assessment report.

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.

Study programs of the Faculty of Engineering Economics and Management are implemented in a modern environment that meets the requirements. The study process is organized at RTU buildings in Riga: 6 Kalnciema Street, 1/1 Meža Street and Ķīpsala campus. 90% of the teaching, scientific and administrative work of RTU FEEM is carried out in the FEEM building on 6 Kalnciema Street, which was commissioned on 29 August 2008. All study rooms designated for the study process are equipped with multimedia facilities – computer with Internet access and speakers, OHP, some rooms are also equipped with interactive boards. Since autumns 2019 HP Shareboard system was introduced in many lecture rooms, which allows projecting the notes written on the board to the screen.

Therefore, it is possible to ensure modern and high quality study process.

There are the following premises in the building at 6 Kalnciema Street:

- 4 lecture rooms (120 seats, all equipped with multimedia facilities) which are used to organize lectures;
- 10 lecture rooms (up to 70 seats, equipped with multimedia facilities) are used for lectures and practical classes;
- 6 lecture rooms (from 20 to 40 seats, equipped with multimedia facilities) can be used mainly for practical classes, individual or group work, language studies;
- 3 computer rooms (86 seats, equipped with multimedia facilities).

Each member of academic staff has a personal computer and a well-equipped workplace.

In order to improve the learning environment at RTU, an ambitious project “RTU – City within a City” is currently being carried out, which envisions creation of the most advanced engineering study center in the Baltic region – student campus, which in the future will include RTU faculties, administrative buildings and Scientific Library, thus providing more convenient services.

Students studying at the program and the academic staff will have access to the comprehensive and modern **RTU Scientific Library**. RTU Scientific Library is the oldest university library in Latvia, whose strategy and aims are primarily related to the aims and tasks of RTU. Library provides

subscription to more than 20 databases (see the list of all databases here: http://www.rtu.lv/content/view/388/1337/lang,lv/). A special literature database has been developed for the needs of the study program which has been compiled in accordance with the suggestions and recommendations of the academic staff and the students. This database is available on 5 Paula Valdena Street, as well as using e-resources. The Library provides access to the following databases: LETA, Letonika, EBRARY, EBSCO, Latvian Standards Database, ScienceDirect, SpringerLink, World Scientific WSPC, RUBRICON and other. Students of the study field "Economics" mainly use the following databases: EBSCO, LETA, Science Direct, Scopus, Web of Science. Since 2018, students of the faculty have access to database Bloomberg Terminal. The library has an overnight reading room, which is appropriately equipped, and is accessible to students after registration in ORTUS e-learning environment.

RTU Scientific Library was one of the first in Latvia to introduce RFID technologies, thus becoming a modern and contemporary university library. One of the most significant innovations that made the library more convenient for students is the self-service machine to take out and return books. This means that students no longer have to stand in line, and they can receive and return books without the librarian. In the library, students have access to the newest periodical publications, statistical materials, books, conference materials on economics and business. Every year, the library's funds are supplemented by both teaching and scientific literature and periodical publications used in the study process. For the needs of the study program, each year funds are allocated for the purchase of literature, and academic staff order the necessary publications.

Other elements of RTU infrastructure, such as canteens and cafeterias, copying facilities, student hostels, RTU sports and leisure centers, the swimming pool, and other facilities are available for the needs of the students and the academic staff. Vending machines selling snacks and drinks are installed in RTU premises.

The technological infrastructure of the premises is continuously updated, new resource rooms and study laboratory rooms are equipped, new office equipment, study literature and computers for the needs of the study process are purchased, and other activities are performed.

Currently, there are three computer rooms at the disposal of the Faculty with 86 equipped seats. Students of the study program "Economics" are provided with Microsoft Office, EViews and other software programs required for acquisition of the study program. All students and academic staff have the opportunity to use free WiFi network in all premises of RTU FEEM.

In academic year 2015/2016, six portable computers were purchased for the academic staff in order to provide a more convenient and modern working environment and to improve work quality. In academic year 2017/2018, two new monitors and two laser printers were purchased for the academic staff. New dimming blinds were installed on the windows of academic staff rooms.

State budget subsidies and student tuition fees are used to finance the implementation of the study program. The information on the financial resources of the Bachelor study program "Economics" is shown below:

Academic year	State budget subsidies, EUR	Tuition fees, EUR		Total funds, EUR	Costs per 1 student, EUR
		Tuition fees for local students, EUR	Tuition fees for foreign students, EUR		

2013/2014	44 633	70 252	-	114 885	1 866
2014/2015	36 181	55 235	-	91 416	1 866
2015/2016	41 995.89	46 039.75	-	88 035.64	2 279.62
2016/2017	43 354.31	45 857.93	-	89 212.24	2 279.62
2017/2018	44 861.79	36 518.69	37 302.89	118 683.37	2 382.59
2018/2019	46 741.76	50 258.25	75 922.92	172 922.93	2 494.05

Having analyzed the information it can be concluded that the state budget subsidies have been relatively stable, with the exception of the sharp fall in academic year 2014/2015, when the number of budget seats was reduced by 10 places. Fees for the local students tended to decline during the reporting period, although their amount increased in academic year 2018/2019. The financial resources of the study program were significantly increased due to enrolment of foreign students starting from academic year 2017/2018. Costs per 1 student over the reporting period have increased due to the improvement of infrastructure, as well as the overall increase in RTU costs, taking into account objective reasons (public utilities payments, building maintenance, etc.).

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).

Not applicable.

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.

30 academic staff members are involved in the academic Bachelor study program “Economics”. The complete list of academic staff in the study field “Economics” with specified study program where they are involved is provided in Appendix in Chapter II. In the implementation of the study program both RTU elected academic staff and guest lecturers and guest professors as well as researchers are involved. Compared to the beginning of the reporting period in academic year 2013/14, the number of academic staff has not changed significantly. There are 2 Professors, 7 Associate Professors, 9 Assistant Professors, 6 Assistant Professors at Professional Programs, 5 Lecturers and 1 Researcher. There are minor changes in the age structure. The changes are

provided in table below. Currently, 65.2% of elected academic staff have a Doctoral Degree. Doctoral students are involved in the study process, which promotes the introduction of new teaching methods, as well as the linkage of the study process with their scientific research. This is a positive trend, as it shows generational renewal of academic staff.

Changes in Academic Staff in Study Program

2013/2014			**2018/2019**		
	Number	Average age		Number	Average age
Professors	4	58.5	Professors	2	54
Associate Professors	**5**	59.4	Associate Professors	7	56.1
Assistant Professors	9	47.2	Assistant Professors	9	48.2
Assistant Professors at Professional Programs	6	44.8	Assistant Professors at Professional Programs	6	49.2
Lecturers	4	52.2	Lecturers	5	46.6
Researchers	1	37	Researchers	1	39
Assistants	2	41			
	31			**30**	

Since 2019, with a focus on professional advancement, academic staff of the study program have the opportunity to participate at traineeship program within the European Social Fund Project No 8.2.2.0/18/A/017 “Development of the Academic Personnel of Riga Technical University”. Academic staff members can undergo a 200-hour long traineeship at different Latvian companies. This opportunity was used by 8 academic staff members involved in the implementation of the study program.

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.

Highly qualified academic staff from several faculties of the university are involved in the implementation of academic Bachelor study program “Economics”. To improve the quality of studies, guest lecturers and field specialists are invited, thus providing students with in-depth knowledge. The aim of administration of the program, by selecting and recruiting academic staff, is to maximize the effectiveness of the study program and to enable students to achieve the envisaged learning outcome.

The following elected academic staff are involved in the implementation of the study program:

Auziņa-Emsiņa Astra, Dr.oec., RTU FEEM Assistant Professor. Professional experience: 15 years of academic work experience at higher education institution. Scientific activities and research are also carried out for more than 15 years, specializing in economic and sectoral analysis, modelling of external trade, competitiveness and productivity, assessment of interindustry ties, development of macroeconomic, macroeconometric and multisectoral models, as evidenced by participation in scientific projects and research programs, participation in international scientific conferences and publications. Expert of Latvia Council of Science. Membership in industry associations – Board member of the Latvian Association of Econometrists, member of the International Input-Output Association, member of INFORUM modeling group, founder and member of the Association of Latvian Young Scientists, etc. Students master methods and solutions for economic and sectoral analysis and modelling, carry out practical modeling of macroeconomic processes, scenario development and forecasting. The latest and most up-to-date scientific studies and their results, topicalities in other countries are integrated in the study process.

Andersone Ieva, Dr.oec., Assistant Professor. Professional experience: more than 15 years of academic work experience as scientific assistant, lecturer, assistant professor and researcher. Research component in work with students is ensured by participation in scientific conferences, as well as by developing publications. RTU teacher qualification courses and FEEM academic conference on the integration of teaching methods and scientific work into the study process have been attended. In addition, participation in the various workshops ensures knowledge about the latest trends in the sector, encourages the acquisition of new methods that enable students to learn the topicalities of the sector.

Balabka Normunds, Mg.oec., Mg.paed.,, **Mg.jur., Assistant Professor at Professional Programs.** The work at the higher education institution is closely related to the organizational and management work at Ulbroka Secondary School, Stopiņi Municipality, as well as fulfilment of the duties of the member of municipal council. The professional activities in Stopiņi municipality are thematically closely linked to the program of the study course “Territorial Economic Activity” and its curricula, which generally help ensure high-quality implementation of the study course.

Bartušauskis Jānis, Mg. in Occupational Safety, qualification of senior labor protection specialist, obtained at Riga Technical University. In addition, attended various local and international courses (Nord +, Sweden), seminars, professional and scientific conferences, during these actions enhanced knowledge of the latest industry and scientific trends. Professional experience: A teaching staff member with more than 12 years of experience at university has participated in research projects (Ventspils Grain Terminals Impact on environment assessment project, etc.). The development of research skills is ensured by writing scientific articles. During the study process, students develop and improve their skills in research and analysis of results, which ensure achievement of study goals in various group works, research projects and case studies. During these years, several awards were received from the Faculty and the Student Parliament for

my professional work in the study process.

Budņiks Leonards, Mg.oec., FEEM Lecturer. ICF certified professional couch, Microsoft certified Excel Expert. He implements study courses that are related to management of information technologies and information systems, develops data processing tools in Ms Excel and Power Bi environment. The lecturer constantly participates in local IT conferences and forums, online courses and seminars. He is interested in the impact of information technologies on the society and the economy. The research interest concerns the management of information technologies and systems in small and medium-sized enterprises, the concept of open data and the research on the social consequences of IT development.

Eriņa Jana, Dr.oec., assoc.prof. Professional experience: 9 years of academic work experience in a higher education institution. Scientific activity and research has been conducted for more than 9 years specializing in the field of financial services and calculations of costs of vocational and higher education certified by participation in scientific projects and research programs, participation in international scientific conferences and publications. Expert of the Latvian Scientific Council, Acting Head of the Department of Innovation and Business Management

Gaile-Sarkane Elīna, Dr.oec., Bc.sc.ing., FEEM Professor. Professional experience: more than 20 years of academic and research work experience at higher education institution. The additionally acquired Bachelor degree in chemical industry provides an excellent basis for academic and research work in the fields of innovation, management and business. The scientific research focuses on interdisciplinary areas, covering management science, innovation management, technology transfer and different aspects of business. She has developed more than 150 scientific publications in management, economics and related fields. More than 35 of them have been published in internationally recognized publications or conferences with an indexation in international databases (e.g., Thomson and Reuter, Scopus, EBSCO, etc.). She is the author and/or co-author of 4 textbooks, 3 monographs, 1 patent. Elīna Gaile-Sarkana is an expert of Latvia Council of Science. She is an expert, researcher or project manager in more than 20 projects, promoting interdisciplinary, international cooperation with a significant contribution to the development of the Latvian education system.

Greitāne Rita Dr.oec., FEEM Assistant Professor. Doctor degree provides an opportunity to conduct lectures and practical classes at academic study programs. Every year, professional advancement activities in the field of project management are undertaken, for example, on 31 October and 7 November 2018, a workshop “Project Management Workshops” organized by the KIC was attended and a certificate was obtained. In academic year 2018/19, a project “Survey on the Satisfaction of Railway Passengers with the Quality of Railway Services in Latvia in 2018” initiated by the State Railway Administration (contract No. 03000-3.1.2.-e/54.) was carried out with students, 50 students and 1134 respondents participated in the project, thus developing project management skills. By participating in scientific and academic conferences, the latest developments in the field of project management are effectively integrated by Rita Greitāne into the study process.

Gorbunova Kristīne, Mg.oec., FEEM Assistant Professor at Professional Programs. Extensive academic work experience at university, as well as professional work experience at a municipal public transport company. Participation in scientific conferences ensure research competence in work with students. She is a co-author of a scientific monograph on municipal development issues. RTU teacher qualification courses and FEEM academic conference on the integration of teaching methods and scientific work into the study process have been attended. In addition, participation in various workshops ensures knowledge about the latest trends in the sector, encourages the acquisition of new methods that enable students to learn the topicalities of the sector.

Judrupa Ilze, Dr.oec., Associate Professor. She is the author of a number of scientific publications on regional competitiveness, assessment of quality of life, smart specialization at the national and regional level, remote work. She is a co-author of the scientific monograph “Evaluation of Regions’ Competitiveness in Latvia” (2018). She has published a textbook “Economics of European States”, which is used in the study process. The conducted research and information collected are incorporated into lectures and complement theoretical material with practical examples and methods for evaluating regional development and competitiveness. This contributes to the ability of students to understand factors of economic development, both internationally and regionally, as well as to the ability to carry out economic calculations related to sustainable regional development and competitiveness assessment. She has participated in a number of international projects.

Jurgelāne-Kaldava Ingūna, Dr.oec., Associate Professor. Head of the Department of International Business, Transport Economics and Logistics. Professional experience: researcher and head of several international projects. Research component in work with students is ensured by participation in scientific conferences and development of publications in internationally recognized collections of scientific articles and journals, etc. For publications, different research methods are used, including statistical, which allow presenting the results of research to students. She is a co-author of the textbook “Economic Statistics”. In the implementation of the study course, a variety of teaching methods are used that allow students to learn the acquisition, compilation and analysis of statistical information in the field of a particular study program, using the latest information and data.

Jurušs Māris, Dr.oec. associate professor. Academic and scientific work experience at RTU more than 7 years. Experience in the public sector, in business and in the academic area for many years. Worked at the Ministry of Finance relating to tax matters for several years. Has developed policy planning documents, laws and regulations of the Cabinet of Ministers, national positions and points of view, participated in committees of the European Commission, different work groups and resolution of practical administration matters. Worked in an international auditing company by leading different projects on tax matters and business development matters.

Kamola Līga, Mg.oec., Mg.sc.educ. She has completed Doctoral studies as a candidate for a scientific degree at FEEM academic program “Management Science and Economics” and continues writing her Doctoral Thesis. In addition, knowledge of the latest industry and scientific trends is gained at various local and international courses, seminars, professional and scientific conferences. Professional experience: academic staff member for more than 10 year at university, participant of research projects. By developing the Doctoral Thesis and writing scientific articles, her research skills are developed. In the study process, her students develop and improve their skills in research and analysis of results to ensure that the learning outcomes are achieved.

Kamols Uldis, Mg.oec., Dipl.oec., FEEM Assistant Professor at Professional Programs. Professional experience: internal auditor at the state administrative institution for 3 years, project manager in supervision of implementation of projects co-financed by the European Union for 3 years, senior manager at the Development Instruments Department of the Ministry of Regional Development and Local Government for more than 2 years. Previous professional experience and qualification help achieve learning outcomes, as well as supplement the theory with practical examples of projects co-financed by the EU and the socio-economic development of cities. The complete achievement of learning outcomes is supported by both acquired expertise in project management, project development and practical experience in evaluating and monitoring projects co-financed by the EU and identifying urban socio-economic challenges. The involvement in scientific research is related to the implementation of EU co-financed projects in Latvia and their role in the development of the country, as well as the socio-economic development of cities in

Latvia. The results of the conducted research are used in the study process, as well as students are involved in research to better understand study courses.

Kauškale Linda, Dr.oec., Assistant Professor, an expert of social sciences at the Latvian Council of Science in such fields as Economy and Entrepreneurship; Social and Economic Geography and other social sciences, including generic ones. In 2016, L. Kauškale became beneficiary of a scholarship Deutsche Bundesstiftung Umwelt, she works at the German Sustainable Building Council. Linda Kauškale is the author of numerous scientific publications, she has participated in international scientific projects, conferences and workshops in Latvia and abroad, etc. Her main areas of research include sustainable development of real estate market, sustainable building construction, environment-friendly buildings, certification of green building construction, macroeconomic analysis, decision making, environment protection and others. Qualification of Assistant Professor Kauškale meets the requirements of the study program and regulatory enactments, it also provides for achievement of the aims and learning outcomes of the study program and study courses “Real Estate Economics”, “Real Estate Market in National Economy” and “Civil Construction and Real Estate International Market”.

Kuškins Jānis, Mg.oec., Assistant Professor at Professional Programs. He has 28 years of experience in the organization and management of transport activities, 12 years of experience in the development of regulatory enactments at the state administration. He has more than 20 years of academic work experience at university. He participates in conferences and seminars in the field of transport, urban planning, business management, and other fields of interest. The complete achievement of learning outcomes is supported by both the knowledge acquired and the great practical experience in dealing with urban infrastructure, particularly transport.

Lāce Nataļja Dr.oec. professor. Long-lasting experience of academic and administrative work at the university. Scientific interests of prof. Lāce are related to the critical factors of performance of small and medium-sized enterprises and innovation, as well as different financial aspects of business. N. Lāce is an LSC expert in Entrepreneurship and Business, as well as political science, she has extensive interdisciplinary professional interests and research experience obtained when leading scientific projects: “Development of innovation and business in Latvia in accordance with the Smart Specialisation Strategy” (NRP EKOSOC-LV), “Strengthening securitability of the Latvian population by increasing the level of financial literacy (394/2012)” (LSC), “Conducting interdisciplinary research in cross-cultural environment” (ERASMUS), “Development of a training methodology for the implementation of sustainable development in small and medium-sized companies based on the life cycle of a company” (RTU, MoES), etc. 2 scientific monographs, 60 scientific articles in international editions

Liokumoviča Irina, Dr. philol., Assistant Professor. Philologist, instructor of the English Language in the context of economics. Participation in international scientific conferences with reports (e.g., international scientific conference “Linguistic, Didactic and Sociocultural Aspects of Language Functioning”, Vilnius, Lithuania (2018), international scientific conference “XXVIII Scientific Readings” Daugavpils University, Faculty of Humanities (2018) etc.) allows gaining and sharing knowledge. Participation in the academic project “Partnership for Education and Research about Responsible Living (PERL)” provides the acquaintance with the latest tendencies in industry and, thus, promotes acquisition and use of modern methods.

Malahova Jeļena, Dr.oec., Institute of Occupational Safety and Civil Defense Associate Professor. Professional experience: since 2011 Assistant Director of Studies at RTU FEEM IOSCD, as well as since 2014 RTU FEEM IOSCD Associate Professor. Research component in work with students is ensured by active participation in professional advancement seminars, scientific conferences and elaboration of publications. Active participation in different projects and scientific

contract work. Within the study process, students gain topical information in accordance with Cabinet of Minister Regulation No 716 “Minimum Requirements for the Content of the Mandatory Civil Protection Course and the Content of Civil Protection Training for Employees”.

Mihņenoka Aleksandra, Mg.oec. FEEM Lecturer. The competences of Aleksandra Mihņenoka to conduct lectures and practical classes are regularly improved. As a result, within the teaching activities, the lecturer implements the principles of student-centred education, which is based on different teaching methods, both traditional and interactive. She is an active member of Association “Creative Ideas”. She has participated in multiple international projects to promote entrepreneurship. She has industry-relevant scientific publications, also included in Scopus and ISI Web of Science databases. She has participated in scientific conferences. Research experience allows promoting students to get involved in research within the acquisition of the study course and elaboration of final project, by collecting and analyzing scientific articles on relevant topics and using different research methods. In May – July 2019, within the European Social Fund Project No 8.2.2.0/18/A/017 “Development of the Academic Personnel of Riga Technical University” lecturer underwent a traineeship at companies Jekabpils pakalpojumi Ltd. and Evatek Ltd. (total of 200 hours), which allowed gaining new experience, improving communication skills. Providing opportunity to give real examples to students ensures a more complete understanding of theoretical material by linking the theory to the actual practical examples, the real situation in the company and industry.

Ozoliņa Velga, Dr.oec., Associate professor. Since 2004 RTU has been engaged in research and lectures on quantitative methods in economics, as well as supervises bachelor and master theses and performs other duties to ensure quality studies for students of the Department of International Business, Transport Economics and Logistics.

Ozoliņa-Ozola Iveta, Dr.oec. FEEM Assistant Professor. Professional experience: academic staff member with more than 20 years of experience at higher education institution. She conducts study courses related to human resource management and economics. Iveta Ozoliņa-Ozola is an expert and researcher in the field of human resource management and economics at Safege Baltija Ltd. Her responsibilities include conducting assessment, research, program and other projects commissioned by public authorities. She is also an expert at the National Centre for Education, project “Implementation of National and International Activities for the Development of Student Talent”. Regular professional advancement at professional and academic study courses, seminars and conferences, elaboration of scientific publications. Starting from this year, she has participated in the traineeship program within the European Social Fund Project No 8.2.2.0/18/A/017 “Development of the Academic Personnel of Riga Technical University”. She has been a member of the Latvian Evaluation Society (LATES) for more than three years. The gained experience, knowledge, skills and competence are used in teaching activities, developing the curricula of study courses, selecting appropriate teaching and evaluation methods, and establishing cooperation with the students.

Ozolzīle Gunārs, Dr.sc.soc., Associate Professor. Professional experience: since 1989 teaching social sciences at RTU (Sociology, Politology and Political System of Latvia) and other higher education institutions in Latvia (University of Latvia, Latvian Academy of Sport Education, Police Academy of Latvia, College of Business Administration and Institute of Social Technologies); since 2005 Chairman of the State Examination Commission at Bachelor and Master study program “Sociology of Organizations and Public Administration” at the Faculty of Economics and Social Development of University of Life Sciences and Technologies. From 1991 till 2018, he was a Researcher at market and public opinion research company Baltic Studies Centre Ltd. Research link with students is also ensured by scientific research work in projects funded by the Latvian Council of Science, the Ministry of Defence and the EU, participation in conferences and development of

scientific publications. Research activities have mainly been linked to research into the stability and efficiency of the Latvian political system, as well as the possibilities for reforming individual political institutes. Such research contributes to increasing the quality of the implemented study courses and to ensuring links with national political processes. Regular methodological work – development of teaching tools and other methodological materials – to increase efficiency of study work.

Plotka Kaspars, **Mg.oec., FEEM Researcher, PhD student.** Professional experience in the public and private sector, as well as teaching experience at higher education institution. Participation in scientific conferences, development of scientific publications. The experience gained makes it possible to successfully implement study courses related to the public sector economics, public sector investment and the circular economy. Active doctoral studies, participation in scientific conferences and the development of publications, as well as participation in the work of the state administration as a consultant, provide scientific research and practical components in the work with students.

Pola Aija, Mg.math., Lecturer. Professional experience: academic work for more than 20 years. Participation in scientific and methodological conferences and seminars, as well as elaboration of publications ensure constant professional advancement. Knowledge of mathematics, probability theory and other fields of mathematics is taught to students with an aim to apply the acquired knowledge in the field of economics, which later is used as the necessary applicable mathematical methods in the development of the Bachelor Thesis.

Roskoša Antra, Mg.phil., Dr.sc.admin., Associate Professor. Professional experience: instructor of the English language at different RTU faculties, including Faculty of Engineering Economics and Management, for almost 15 years; researcher, actively participates in scientific conferences and develops publications. Participant of Erasmus+ program, Staff Training week at Sapienza University of Rome, Rome, Italy (April 2018) and University of Porto, Porto, Portugal (November 2018). The main aim of staff training is to share experience and gain new information about work with foreign students, promote integration of foreign students at RTU community, as well as promote communication and cooperation with foreign colleagues at partner universities.

Semjonova Nadežda Dr.oec., Assistant Professor. Research work, elaboration of scientific articles, participation in international conferences and various seminars ensure the conformity of the qualification in accordance with the requirements for the implementation of the study program and regulatory enactments. Involved in the Post-doctoral research support project, which enables co-operation with other European universities and the Association of the Latvian Manufacturers of Medicines. Expert on state and local government finances, author of the scientific monograph “Government Debt: Evaluation of Financial Security and Optimal Policy Selection” (2017).

Survilo Tatjana, Dr.oec., FEEM Associate Professor. Professional experience: research work at the Institute of Economics, Latvian Academy of Sciences and other research institutions for more than 20 years; Head of the Department of National Economy (4 years) at Riga City Latgale suburb municipality, as well as at RTU for nearly 25 years. Participation in scientific conferences and elaboration of publications ensure research component in work with students. Co-author of a scientific monograph on municipal development issues.

Šenfelde Maija Dr.oec., RTU Professor. Long-lasting experience of academic and administrative work at the university. Expert of Latvia Council of Science. Author of four issues of the textbook “Macroeconomics” and author of a number of scientific monographs in the field of economics. Active participation in scientific conferences for improvement of competences, professional advancement in different courses and seminars. Participation in the annual economic conferences organized by the Bank of Latvia, as well as in the “Expert Talks”. The experience and continued professional advancement ensure the ability to provide students with the necessary theoretical

knowledge, as well as to inform students about the most topical challenges in macroeconomics, national economy, international economy and their potential solutions, which in turn develop students' ability to assess economic, social and political processes in the world and their impact on the Latvian economy. Maija Šenfelde has participated in international projects.

Šteinberga Airisa, Mg.paed., Dr.psych., Institute of Humanities, Associate Professor. Education: Master Degree in Pedagogy, Doctoral Degree in Psychology, qualification of a teacher and psychodrama specialist. Professional experience: more than 25 years of teaching experience at RTU, conducting different study courses related to the field psychology (Psychology, Cognitive and Social Psychology, Educational Psychology, etc.), elaborating study programs, development and management of teacher training programs and courses for more than 10 years. Regular professional advancement as a psychologist and a psychologist consultant, as well as extensive academic experience, allows not only enriching the content of study courses but also diversifying lectures, practical classes and independent tasks. Research experience in joint projects with researchers from engineering institutes allows understanding and using examples and terminology understandable to engineering students.

Tambovceva Tatjana, Dr.oec, Dipl.ing., RTU Professor, an expert of social sciences in the field of Economics and Entrepreneurship at the Latvian Council of Science. Her research and academic interests lie in green management, management of building construction projects, sustainable development. Professor Tamboceva regularly advances her professional qualifications by taking part in ERASMUS mobility program. Professor Tambovceva is the author of numerous scientific publications, co-author of books and monographs. Qualification of Professor Tambovceva meets the requirements of the study program and regulatory enactments, it also provides for achievement of the aims and learning outcomes of the study program and study course "Construction Project Planning and Controlling", "Construction Project risk and Quality Management", "Management of Building Construction Projects".

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).

Not 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).

Not 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.

Academic staff of the study program are also actively involved in scientific research, which allows improving the quality of studies. The experience and knowledge gained allows improving the competences of academic staff, as well as enriching the discussions organized in the audience and providing students with knowledge of current industry challenges in the world.

For example, ***Professor M.Šenfelde*** has led INTERREG IVC project No 1097R4 "MICROPOL – Smart Work Centres in Non-metropolitan Areas" (2012-2014), as well as FLLP-2011 / 26 project "Optimization of National Development Planning Process", and has participated in the work group of INTERREG Europe project PGI00304, CLUSTERS3 - "Leveraging Cluster Policies for Successful Implementation of RIS3"; ***Professor E.Gaile-Sarkane and Assistant Professor I.Ozola-Ozoliņa*** have participated in the State Research Program EKOSOC–LV project 5.2.7. "Involvement of the Society in Social Innovation for Providing Sustainable Development of Latvia" 2014-2018; since 2018 ***Assistant Professor I.Ozoliņa-Ozola*** has participated in EU Erasmus+ program funded project IMPRESS "Improving Management Competences on Excellence Based Stress Avoidance and Working Towards Sustainable Organisational Development in Europe", in 2016 and 2017 was a researcher in project "EU Policies Impact to the Transformations of the Higher Education and Research System in Norway and Latvia" funded by Norway Grants; ***Associate Professor Ilze Judrupa*** has participated in INTERREG IVC project No 1097R4 "MICROPOL – Smart Work Centres in Non-metropolitan Areas" (2012-2014), project "Smart Specialisation Opportunities for Vidzeme Planning Region" funded by Norwegian Financial Instrument, as well as Erasmus+ project "Shake up Start ups"; ***Associate Professor J.Malahova*** has participated in scientific contracts "Development of a Single Environmental Risk Plan for Jelgava and Siauliai" contract No JPD2018/85/MI, "Assessment of the Technological Process of Granules Manufacturing Plants in Inčukalns, 34 Plānupes Street" contract No 1-3.31/016/2015; ***Assistant Professor at Professional Programs N.Balabka*** has led a project "Stopiņi Region Education Development Strategy 2018-2022" and participated in Ulbroka Secondary School and Daugavpils University project "Clicking with Voters" funded by EU program "Europe for Citizens"; ***Assistant Professor N.Semjonova*** with ERAF support implements project "Innovative Medical Devices Commercialisation Methodology and Evaluation of Manufacturing Financing Model"; ***Lecturer A.Mihņenoka*** in 2017 and 2018 participated in Erasmus+ project " Creative Start-Ups in Rural Areas (Rural Buzz)" 2017-1-LV02-KA205-001502.

Participation in the INTERREG IVC project "Micropol – Smart Work Centers in Non-Metropolitan Areas" and information on remote work centers in different European countries obtained during the project complement the study course "Economy of European Countries" delivered by Assoc. Professor I.Judrupa with specific examples and best practices. The acquired knowledge about the topical issues of the EU employment policy in the field of distance work has been incorporated in the study course "Current Trends of the European Union Economic Policy". Participation in the Norwegian Financial Mechanism project "Smart Specialization Opportunities for Vidzeme Planning Region" has also enabled I.Judrupa to broaden her knowledge of the nature of smart specialization and the principles of developing a smart specialization strategy, as well as the EU position in this

field. The knowledge acquired has resulted in the updated study course “Current Trends of the European Union Economic Policy”. The monograph by I.Judrupa and M.Šenfelde “Latvijas reģionu konkurētspējas novērtēšana” (“Evaluation of Competitiveness of Latvian Regions"), published in 2008, is used in study courses, which cover topical issues of regional development and competition.

The involvement of Associate Professor at a professional study program U.Kamols in scientific research is related to the implementation of EU co-financed projects in Latvia and their role in the development of the country, as well as socio-economic development of Latvian cities. The results of the research are used in the study process and students are involved in research by developing study projects. Such an approach allows for a better understanding and acquisition of study courses.

The scientific monograph “Ekonomiskās domas retrospekcija” (“Retrospective of Economic Thought”) by Assoc. Professor L.Krilovs is the basic study aid for the acquisition of the study course “History of Economic Thought”.

Participation of Assist. Professor I.Ozola-Ozoliņa (EKOSOC-LV) in project 5.2.7 “Involvement of the Society in Social Innovation for Providing Sustainable Development of Latvia” and in the IMPRESS project “Improving Management Competences on Excellence Based Stress Avoidance and Working towards Sustainable Organizational Development in Europe” funded by the Erasmus+ program provides information on relevant and topical research findings and research methodology in the fields of human resource management and economics, which is used in study courses.

Assist. Professor N.Semjonova, with the support of ERDF postdoctoral research, is implementing the project “The Methodology for the Commercialization of Innovative Biomedical Devices and the Evaluation of the Productions Financing Model” (No.1.1.1.2/VIAA/2/18/348. 2019–2021), which provides for the transfer of good practice, the unity of theory and practice, and the acquisition and exchange of experience on current issues in the sector. Consequently, the study course “Principles of Finances” is updated according to current trends in the field and new developments in foreign study and scientific literature. The theoretical outline of the study course themes is based on practical examples and tasks that ensure the implementation of the study courses in compliance with the developed study program.

Participation of Associate Professor J.Malahova in the contracted work allows using the gained experience in the implementation of the study course “Civil Defence”, but the competencies acquired by Assistant Professor at Professional Programs N.Balabka in contract work and projects related to regional development are invaluable in implementing the study course “Territorial Economic Activity”.

These examples demonstrate the scientific research potential of the academic staff and their professional qualification, which make a real contribution to the study process.

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 interrelation between the study courses and their logical, sequential acquisition are essential

for achieving the results of the study program. A system has been established to promote cooperation between academic staff and university in general, which provides regular academic conferences and professional advancement seminars for the development of teaching methodology competences. For example, academic conference “Integration of Teaching Methodological and Scientific Work into the Study Process” organized on April 27, 2018. Such events promote professional advancement of academic staff and provide opportunity to cooperate more efficiently in reaching learning outcomes and improving study courses. The department responsible for the implementation of the study program reviews the study process and achieved results at the end of each semester. Student surveys on the quality of study courses play an important role in this process. Based on current situation analysis, solutions have been mutually found. For example, adjustments have been made to the structure of individual study courses to avoid partial overlapping and to improve the interrelation between study courses, or to include changes in the curricula of the study program have been proposed. In this case, the proposed changes are discussed and approved by the Committee of the Study Field “Economics” and directed for consideration by the Faculty Council.

The student-academic staff ratio within the academic Bachelor study program “Economics” on November 30, 2019 is 5:1. Such proportion promotes good individual contact between students and academic staff, thus enabling them to perform their studies effectively. However, in fact, this ratio is higher because several study courses are implemented in flows with students from other programs, and academic staff do not work with only one specific study program.

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	Statistical data on the students RIBEO.xlsx	Studējošo statistika RIBEO.xlsx
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 with the State Education Standard.docx	Atbilstība valsts izglītības standartam RIBEO.docx
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	Mapping of the Study Courses RIBEO.xlsx	Studiju kursu kartējums RIBEO.xlsx
Curriculum of the study programme (for each type and form of the implementation of the study programme)	Curriculum RIBE0.zip	Studiju plāni RIBE0.zip
Descriptions of the study courses/ modules	Description of the Study Courses.zip	Studiju kursu apraksti.zip
Description of the Study Direction - Other mandatory attachments		
Sample of the diploma to be issued for the acquisition of the study programme.	Sample of the Diploma.zip	Diploma paraugs RIBEO.zip
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	RTU vienošanās ar LU un BA.zip	RTU vienošanās ar LU un BA.zip
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	01000-2.2.1-e_178.edoc	01000-2.2.1-e_178.edoc
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.	02000-2.2.1-e_62.edoc	02000-2.2.1-e_62.edoc
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	02000-2.2.1-e_61.edoc	02000-2.2.1-e_61.edoc
Sample (or samples) of the study agreement	Study agreements.zip	studiju līgumi.zip
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.	02000-2.1.1_19 AIP atzinums.pdf	02000-2.1.1_19 AIP atzinums.pdf

Urban and Regional Engineering Economics

Title of the higher education institution	*Economics*
ProcedureStudyProgram.Name	*Urban and Regional Engineering Economics*
Education classification code	*47311*
Type of the study programme	*Professional master study programme*
Name of the study programme director	*Maija*
Surname of the study programme director	*Šenfelde*
E-mail of the study programme director	*maija.senfelde@rtu.lv*
Title of the study programme director	*Dr.oec.*
Phone of the study programme director	*29184578*
Goal of the study programme	*To provide students with the Master's level knowledge in the field of regional and urban development; to train socially responsible and highly qualified specialists, whose knowledge in economic and engineering, skills and competences will allow them to make engineering and technical well-founded economic decisions, to plan and coordinate the processes of territorial economic development and governance, as well as conduct scientific research.*
Tasks of the study programme	*1. to enable students to obtain the professional Master's degree in economics;* *2. to organize the study process with the aim to develop students' knowledge and skills, to promote their use in the study process and in further practical work;* *3. to foster students' analytical skills, to promote acquisition and development of scientific research skills;* *4. to create the necessary preconditions for training competitive specialists for the Latvian and international labour market;* *5. to develop students' abilities in the systematic application of knowledge and skills necessary to address complex economic problems about micro- and macroeconomics, regional and urban economics;* *6. to develop students' skills to formulate aims and objectives, to take socially and ethically responsible decisions related to the ongoing economic processes in the world;* *7. to provide students with an opportunity to continue their education at the Doctoral programs after receiving the Master's degree.*

Results of the study programme	*1. ability to demonstrate an understanding of the organizational principles of urban development planning and regional development assessment criteria and methods;* *2. ability to demonstrate an understanding of the issues of economic development and national economic policy;* *3. ability to carry out economic calculations/feasibility studies related to sustainable development of towns and regions;* *4. ability to demonstrate an understanding of the factors of economic development regionally, as well as to identify and eliminate potential risks;* *5. ability to demonstrate an understanding of the planning and maintenance of engineering infrastructure in urban and rural areas, as well as traffic flow planning principles;* *6. ability to assess the impact of social and political processes on urban and regional development;* *7. ability to plan, implement and evaluate the budgetary process at a local and regional level;* *8. ability to implement "green economy" policies for sustainable development of regions and towns;* *9. ability to carry out scientific research in the field of territorial development and to justify the advantages or disadvantages of particular decisions;* *10. ability to formulate aims and tasks and to take socially and ethically responsible decisions related to the territorial development;* *11. ability to work out and implement national and international projects;* *12. ability to creatively interact with clients, merchants, professionals and other parties and to work in interdisciplinary teams.*
Final examination upon the completion of the study programme	*Master Thesis*

Study programme forms

Full time studies - 1 years, 6 months - latvian

Study type and form	*Full time studies*
Duration in full years	*1*
Duration in month	*6*
Language	*latvian*
Amount (CP)	*60*
Admission requirements (in English)	*Professional Bachelor Degree and/or Qualification in Economics, Management and Administration, Accounting and Taxation, Financial Engineering sectors, or other recognizable education.*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Master Degree in Economics*
Qualification to be obtained (in english)	*Economist (except when the qualification of an economist has been obtained at the previous level of study)*

Places of implementation

Place name	City	Address
Riga Technical University	RĪGA	KAĻĶU IELA 1, RĪGA, LV-1050

Part time extramural studies - 2 years - latvian

Study type and form	*Part time extramural studies*
Duration in full years	*2*
Duration in month	*0*
Language	*latvian*
Amount (CP)	*60*
Admission requirements (in English)	*Professional Bachelor Degree and/or Qualification in Economics, Management and Administration, Accounting and Taxation, Financial Engineering sectors, or other recognizable education.*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Master Degree in Economics*
Qualification to be obtained (in english)	*Economist (except when the qualification of an economist has been obtained at the previous level of study)*

Places of implementation

Place name	City	Address
Riga Technical University	RĪGA	KAĻĶU IELA 1, RĪGA, LV-1050

Full time studies - 2 years - latvian

Study type and form	*Full time studies*
Duration in full years	*2*
Duration in month	*0*
Language	*latvian*
Amount (CP)	*80*
Admission requirements (in English)	*Bachelor Degree in Economics, Management Science, Natural Sciences or Civil Engineering sectors*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Master Degree in Economics*
Qualification to be obtained (in english)	*Economist*

Places of implementation

Place name	City	Address
Riga Technical University	RĪGA	KAĻĶU IELA 1, RĪGA, LV-1050

Part time extramural studies - 2 years, 6 months - latvian

Study type and form	*Part time extramural studies*
Duration in full years	*2*
Duration in month	*6*
Language	*latvian*
Amount (CP)	*80*

Admission requirements (in English)	*Bachelor Degree in Economics, Management Science, Natural Sciences or Civil Engineering sectors*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Master Degree in Economics*
Qualification to be obtained (in english)	*Economist*

Places of implementation

Place name	City	Address
Riga Technical University	RĪGA	KAĻĶU IELA 1, RĪGA, LV-1050

Full time studies - 1 years, 6 months - latvian

Study type and form	*Full time studies*
Duration in full years	*1*
Duration in month	*6*
Language	*latvian*
Amount (CP)	*60*
Admission requirements (in English)	*Professional Bachelor Degree and/or Qualification in Architecture and Urban Planning, Civil Engineering sectors, or other recognizable education*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Master Degree in Economics*
Qualification to be obtained (in english)	*Economist*

Places of implementation

Place name	City	Address
Riga Technical University	RĪGA	KAĻĶU IELA 1, RĪGA, LV-1050

Part time extramural studies - 2 years - latvian

Study type and form	*Part time extramural studies*
Duration in full years	*2*
Duration in month	*0*
Language	*latvian*
Amount (CP)	*60*
Admission requirements (in English)	*Professional Bachelor Degree and/or Qualification in Architecture and Urban Planning, Civil Engineering sectors, or other recognizable education*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Professional Master Degree in Economics*
Qualification to be obtained (in english)	*Economist*

Places of implementation

Place name	City	Address
Riga Technical University	RĪGA	KAĻĶU IELA 1, RĪGA, LV-1050

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

Name of the study program	Pilsētu un reģionu inženierekonomika	
Name of the study program in English	Urban and Regional Engineering Economics	
Code of the study program in accordance with the Latvian Education Classification	473410	
Type and level of the study program	Professional Master Study Program	
Level of qualification to be acquired (NQF/EQF)	The 7th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF); or the 7th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF); the 5th level of Latvian Professional Qualification	
Code of the occupation in the classification of occupations	2631 02 Economist	
Amount of the study program (CP, preferably also ECTS)	60 CP / 90 ECTS 60 CP/ 90 ECTS 80 CP/ 120 ECTS	
Form, type, and duration of the study program (in case the duration cannot be measured in full years, specify the number of months), as well as the language in which the study program is implemented		
Full-time, intramural form	1.5 years	Latvian
Part-time, extramural form	2 years	Latvian
Full-time, intramural form	2 years	Latvian
Part-time, extramural form	2.5 years	Latvian
Place of implementation of the study program	Riga	
Director of the study program	Maija Šenfelde – Dr.oec., Professor	

Admission requirements	- Professional Bachelor Degree and/or Qualification in Economics, Management and Administration, Accounting and Taxation, Financial Engineering sectors, or other recognizable education, - Professional Bachelor Degree and/or Qualification in Architecture and Urban Planning, Civil Engineering sectors, or other recognizable education, - Bachelor Degree in Economics, Management Science, Natural Sciences or Civil Engineering sectors
The degree, professional qualification to be awarded or the degree and professional qualification to be awarded	Professional Master Degree in Economics, Professional Master Degree in Economics, Qualification of Economist and Professional Master Degree in Economics
Aim of the study program	To provide students with the Master's level knowledge in the field of regional and urban development; to train socially responsible and highly qualified specialists, whose knowledge in economic and engineering, skills and competences will allow them to make engineering and technical well-founded economic decisions, to plan and coordinate the processes of territorial economic development and governance, as well as conduct scientific research.
Objectives of the study program	1. to enable students to obtain the professional Master's degree in economics; 2. to organize the study process with the aim to develop students' knowledge and skills, to promote their use in the study process and in further practical work; 3. to foster students' analytical skills, to promote acquisition and development of scientific research skills; 4. to create the necessary preconditions for training competitive specialists for the Latvian and international labour market; 5. to develop students' abilities in the systematic application of knowledge and skills necessary to address complex economic problems about micro- and macroeconomics, regional and urban economics; 6. to develop students' skills to formulate aims and objectives, to take socially and ethically responsible decisions related to the ongoing economic processes in the world; 7. to provide students with an opportunity to continue their education at the Doctoral programs after receiving the Master's degree.

Learning outcomes of the study program to be achieved	1. ability to demonstrate an understanding of the organizational principles of urban development planning and regional development assessment criteria and methods; 2. ability to demonstrate an understanding of the issues of economic development and national economic policy; 3. ability to carry out economic calculations/feasibility studies related to sustainable development of towns and regions; 4. ability to demonstrate an understanding of the factors of economic development regionally, as well as to identify and eliminate potential risks; 5. ability to demonstrate an understanding of the planning and maintenance of engineering infrastructure in urban and rural areas, as well as traffic flow planning principles; 6. ability to assess the impact of social and political processes on urban and regional development; 7. ability to plan, implement and evaluate the budgetary process at a local and regional level; 8. ability to implement “green economy” policies for sustainable development of regions and towns; 9. ability to carry out scientific research in the field of territorial development and to justify the advantages or disadvantages of particular decisions; 10. ability to formulate aims and tasks and to take socially and ethically responsible decisions related to the territorial development; 11. ability to work out and implement national and international projects; 12. ability to creatively interact with clients, merchants, professionals and other parties and to work in interdisciplinary teams.
Final examination upon the completion of the study program	Master Thesis

Variant 1		
Amount of the study program (CP, preferably also ECTS)	60 CP / 90 ECTS	
Form, type, and duration of the study program (in case the duration cannot be measured in full years, specify the number of months), as well as the language in which the study program is implemented		
Full-time, intramural form	1.5 years	Latvian
Part-time, extramural form	2 years	Latvian
Admission requirements	Professional Bachelor Degree and/or Qualification in Economics, Management and Administration, Accounting and Taxation, Financial Engineering sectors, or other recognizable education	

The degree, professional qualification to be awarded or the degree and professional qualification to be awarded	Professional Master Degree in Economics	
Variant 2		
Amount of the study program (CP, preferably also ECTS)	60 CP / 90 ECTS	
Form, type, and duration of the study program (in case the duration cannot be measured in full years, specify the number of months), as well as the language in which the study program is implemented		
Full-time, intramural form	1.5 years	Latvian
Part-time, extramural form	2 years	Latvian
Admission requirements	Professional Bachelor Degree and/or Qualification in Architecture and Urban Planning, Civil Engineering sectors, or other recognizable education	
The degree, professional qualification to be awarded or the degree and professional qualification to be awarded	Professional Master Degree in Economics	
Variant 3		
Amount of the study program (CP, preferably also ECTS)	80 CP / 120 ECTS	
Form, type, and duration of the study program (in case the duration cannot be measured in full years, specify the number of months), as well as the language in which the study program is implemented		
Full-time, intramural form	2 years	Latvian
Part-time, extramural form	2.5 years	Latvian
Admission requirements	Bachelor Degree in Economics, Management Science, Natural Sciences or Civil Engineering sectors	

The degree, professional qualification to be awarded or the degree and professional qualification to be awarded	Professional Master Degree in Economics and Qualification of Economist

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.

The statistical data on the students of the study program can be found in Appendix. Having analyzed these data, it can be concluded that the total number of both full-time and part-time students had a tendency to slightly decrease in the reporting period. This is due to the demographic situation in Latvia, increase of the tuition fees and partly due to a reduction in the number of budget seats. It is clearly illustrated by the enrolment data in the first study year of academic year 2017/18, when only 14 students were matriculated on state budget funds.

The graduate number dynamics is linked to the number of students and changes therein. The reporting period shows that the number of graduates fluctuated between 20 and 30 people every year. An exception is academic year 2018/19, when the number of graduates was only 13, but this coincided with a reduction in funding for the program in academic year 2017/18. In future, the number of graduates will rise as the number of students in the program has become stable.

Having analyzed student dropout rate, it can be concluded that the main reason for expulsion is poor academic performance results, which is particularly noticeable at the beginning of studies. This points to the fact that students have not had the required level of prior knowledge, or they cannot combine their studies with work, as a majority of master students work. Much fewer students are expelled at their own will. This usually happens due to health issues, family circumstances and workload. In some cases, students do not renew for studies after an academic leave, as well as students are expelled before the development of the Master Thesis, if a student has multiple debts, and the student understands that he or she will not be able to develop the Thesis in time.

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 professional Master study program “Urban and Regional Engineering Economics” corresponds to the 7th level of the EQF and LQF, thus it is envisioned for school leavers with Professional Bachelor Degree and/or Qualification in Economics, Management and Administration, Accounting and Taxation, Financial Engineering, Architecture and Urban Planning, Civil Engineering sectors, or comparable education. Such extensive base of previous education is envisaged due to the specifics

of the program, which is related to urban and regional development. The program is also envisioned for school leavers with an Academic Bachelor Degree in Economics, Management Science, Natural Sciences or Civil Engineering sectors, who should study an additional semester and can therefore obtain both a Master Degree and a professional qualification.

The name of the study program is related to its ***aim*** of ensuring professional Master education in economics, educating and training socially responsible and highly qualified specialists, whose interdisciplinary knowledge, analytical capacity, skills, and competences would allow solving problems of regional development in the context of current urbanization processes. In order to achieve the set aim specific ***tasks*** have been put forward to reach certain ***learning outcomes*** (see Study program parameters in Section 1.1). The aim of the study program is achieved if students in the study process reach the learning outcomes. By its curriculum, the study program is designed in such a way that the aims and learning outcomes of the study courses included therein are subject to and ensure that the overall aim and learning outcomes of the program are achieved.

Professional Master Degree in Economics or *Professional Master Degree in Economics and Economist Qualification* is awarded after the acquisition of theoretical study courses of the study program and the public presentation of the Master Thesis in the State Examination Commission. Depending on previous education, there are differences in the content of the studies. Professional qualification for students with previously acquired academic degree is granted after completing additional internship tasks and the necessary requirements for obtaining qualification. In addition, they must acquire study course "Basics of Occupational Safety" and develop a study project within the study course "Elaboration of the Regional Socio-economic Development Program".

Having analyzed the interrelation between the name of the study program, the degree or degree and qualification to be obtained, the aims, objectives, learning outcomes, as well as the enrolment requirements, it can be concluded that it is in place.

The professional Master study program "Urban and Regional Engineering Economics" has also received a high international assessment. In *Eduniversal Best Masters Ranking 2017,* among the best university and business school programs in the Eastern European region, it ranked 7th among the best in the field of economics https://www.best-masters.com/ranking-master-economics-in-eastern-europe.html; in *Eduniversal Best Masters Ranking 2018*, among the 100 best university and business school programs in the Eastern European region, it ranked 29th among the best in the field of sustainable development and environmental management, while in *Eduniversal Best Masters Ranking 2019* among the 100 best university and business school programs, it ranked 23rd among the best in the field of sustainable development and environmental management http://www.best-masters.com/ranking-master-sustainable-development-and-environmental-management/urban-and-regional-engineering-economics-riga-technical-university-faculty-of-engineering-economics-and-management-feem.html. *Eduniversal* is ranking created by French ranking agency and consulting company SMBG. The ranking results demonstrate the high quality and international competitiveness of the Master 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.

Having analyzed the compliance with the Cabinet Regulations No 512 "Regulations on State Standard of Second Level Professional Higher Education" adopted on August 26, 2014, it can be concluded that the professional Master study program "Urban and Regional Engineering Economics" meets the requirements of the standard. Appendix provides comparison of the study program with the requirements of the standard.

The content of the study program is constantly updated and improved in line with the latest trends in economics, urban economics and regional development, as well as the situation in the labour market and its requirements. In order not to lose its topicality, the study program regularly undergoes bigger or smaller changes, consisting in replacing study courses or supplementing the program with new topical courses. The changes are discussed and approved by the Committee of the Study Field "Economics" and submitted for approval by the Faculty Council. In addition, academic staff take into account the development trends in urban and regional development, particularly concentrating on problems in Latvia in the implementation of their study courses and reflect them during the classes.

For example, the academic staff of the study course "Urban Economics and Social Environment" discuss topical challenges of urban and regional development with students and organize debates, propose report topics on topical problems such as sorting of waste, negative impacts of traffic and pollution, smart cities and the like. As the issue of refugees in the European Union is getting more and more urgent, the impact of refugees on urban and regional development was analyzed. Field studies are regularly carried out in various areas of Riga – Torņakalns, Āgenskalns, Bolderāja, etc. The surveys include topical urban development issues on availability of services, waste-sorting facilities, availability of public transport, the current statistics are collected. The study course "Regional Management" focuses on the issues of ongoing administrative territorial reform, while the study course "Regional Infrastructure" addresses the relevant challenges in this area. Influenced by this study course several students have chosen to study the impact of the Rail Baltica project on the development of territories in their Master Thesis. The issue of the use of renewable energy resources is raised by the study course "Sustainable Development of Energy Supply". In addition, within the study courses Kaspars Zakulis, the director of JSC Latvijas Zaļais punkts discussed the developments in waste management and Juris Pūce, Minister of Environmental Protection and Regional Development discussed administrative territorial reform and its role in urban and regional development.

Students also participate in the development of the study curricula by filling out surveys at the end of each semester and evaluating the curricula of the study courses and the quality of their implementation. The opinion of graduates and employers is very important in the development of the content of the program. Particularly close cooperation has been established with representatives of the Regional Policy Department of the Ministry of Environmental Protection and Regional Development of the Republic of Latvia and the Latvian Association of Local and Regional Governments.

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 structure and content of the professional Master study program “Urban and Regional Engineering Economics” is designed to achieve its aim. The aim of the study program is closely related to all 12 defined learning outcomes. These learning outcomes are achieved in the course of acquisition of study courses. Thus the aims set in the descriptions of the study courses are closely related to the learning outcomes of the entire program, but study courses are interrelated and complement each other in order to achieve the expected results upon completion of the program. Interrelation of these study courses to the learning outcomes of the study program is illustrated in the mapping of the study courses (see Appendix).

To ensure successful achievement of study program results, the syllabus for the implementation of study courses follows a specific sequence. The study program plans are attached in Appendix .

Descriptions of the study courses are included in a unified RTU study course register. Descriptions of the study courses included in the professional Master study program “Urban and Regional Engineering Economics” are attached in Appendix. In total, there are descriptions of 5 Compulsory Study Courses (A), 17 Compulsory Elective Study Courses (B), 2 Internship (D) and description of Final Examination (E).

Clause No 27 of Cabinet Regulations No 512 “Regulations on State Standard of Second Level Professional Higher Education” adopted on August 26, 2014 states that students with previously acquired academic degree receive a 5th level professional qualification after successful completion of the Master program.

The map of professions in the fields of entrepreneurship, finances, accounting and administration https://visc.gov.lv/profizglitiba/dokumenti/nozkval/NKSK_uznemejdarbiba.pdf includes the profession of economist, which corresponds to 5 PQL and the standard of which may be attributed to the given professional Master degree program. The standard of the profession is available here: https://visc.gov.lv/profizglitiba/dokumenti/standarti/2017/PS-113.pdf

Appendix provides comparison of the study program with the requirements of the standard. It can be concluded that the study program meets the requirements of the standard.

The study program has specific characteristics, as it is, to some extent, interdisciplinary. It is the strength of this program, because interdisciplinarity is very topical today and it is also demanded by the labor market. Admission requirements provide students with different previous education and qualifications with the opportunity to enroll. Nevertheless, the aim of the study program must be achieved. As a result, study curriculum will be different for students. The differences mainly affect the duration of the Internship and the list of compulsory and field-specific study courses. Students with a previous academic degree are required to undertake the study course “Basics of Occupational Safety”, develop a study project, and spend an additional semester in the place of Internship. Consequently, they obtain both a Master degree and a professional qualification.

Students with previous education in economics and management, as well as construction,

architecture, urban planning and other recognizable education are enrolled in the study program. In this case, in order to achieve the aim of the program, there are differences in the list of field-specific study courses. They are provided in the appendix to the study program plans. These students are offered study courses on economics and financial matters. In addition, academic staff, being informed about the previous education of the students, try to consider this in their study courses and pay increased attention to the ability of students to successfully acquire their study course. The enrolment of students with different previous education gives good results, as they develop very interesting Master Theses after successful acquisition of the study program. They are fully in line with the study program, but have certain specifics. Graduates of the program have deepened their previously acquired knowledge as well as gained new competences.

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.

At the level of professional Master studies, the development of professional competences is of particular importance so that they can be applied in practice, thus making the graduate competitive on the labor market. However, good vocational education must be based on a sound basis of theoretical knowledge; thus, the study process is organized in such a way that students acquire both theoretical and practical knowledge. Therefore, a variety of forms of training are used: lectures for knowledge transfer, discussions, situation analysis, practical tasks (case studies) for knowledge strengthening, research of particular problems for development of scientific research skills. Students' skills to work with databases and selecting the necessary information are also developed. Moreover, students' skills to process statistical data are strengthened.

It should be noted that much emphasis is placed on replacing the learning style with "teaching to learn", which is particularly important at the level of Master studies. When conducting research, students also develop creativity, as they must be able to find the right approach when dealing with different problems. On the basis of the acquired theoretical knowledge, students must conduct research on a particular problem. When working in groups, students must be able to share their tasks among themselves, which strengthens their skills to work with colleagues, develops self-independence and a sense of responsibility, as well as promotes mutual respect. The practice of presenting to the audience research conducted by students is widely applied, which then is followed by discussion. This helps develop different skills (students improve their communication, presentation and analytical skills, as well as the skill of respecting opinion of other students) and strengthen the previously acquired theoretical knowledge.

Students of the professional Master study program "Urban and Regional Engineering Economics" conduct research on particular urban territories by recording the facts and interviewing residents. As a result, an interesting visual material with a collection of data is elaborated and after that are available at the Faculty. It is also binding for other students, but the main aim of such research is to show the ability to assess the strengths and weaknesses of certain neighborhoods, as well as to identify the main problems and find possible solutions. Such study trips unite students and develop their creativity.

A summative evaluation system is used for the final assessment within the study courses – the final mark is formed of several components, thus during the semester students are already affecting their final grades. The evaluation criteria for the study courses and individual/home tasks are published in advance in ORTUS e-learning environment. The assessment of home tasks, assessment tests, reports, presentations and other tasks performed during the semester is assigned a certain percentage of the final grade. The examination grade must not exceed 50% of the final assessment. Academic staff can also take into account and evaluate the attendance of the classes. The academic staff determine the assessment structure for their study course, but it must strictly correspond the Resolution of RTU Senate that the examination grade must not exceed 50% of the final assessment.

All academic staff members must dedicate at least 2 academic hours each week for tutorials in which students can communicate with them and receive answers to questions. For part-time students, academic staff also provide tutorials on Saturdays or working day evenings, so that all students can be consulted at a convenient time. Moreover, academic staff are open and obliging; thus, if necessary electronic communication with students is practiced.

The results of the professional Master study program "Urban and Regional Engineering Economics" student knowledge assessment are discussed twice a year in the meetings of the Department of the Territorial Development Management and Urban Economics, which is responsible for the study program's record keeping. The results are collected and assessed also by the administration of the study program. Together with the results of student surveys, they are used as a basis for further development of the study process.

Having analyzed study implementation and evaluation methods used in the study program, it can be concluded that the student-centered principles have been taken into account:

- student enrolment and the diversity of their needs are taken into account and respected in the development of appropriate learning modes;
- different ways of implementing the program have been used;
- based on students' abilities and needs, academic staff apply diverse pedagogical techniques and promote student's strife for independence, while at the same time ensuring supervision and support from the academic staff;
- implementation of the study process in the program contributes to mutual respect between students and academic staff, as the principle of democracy is applied and the program administration takes into account opinions of students.

The organization and quality of the student evaluation system are essential for the implementation of student-centered education. Having analyzed and assessed this system in the study program, it can be concluded that:

- the evaluation methods and criteria for grading have been published in advance in ORTUS e-learning environment, the academic staff inform students about them at the beginning of the study course, and the conditions referred to the above are well known to students;
- evaluation is consistent, fair, suitable for all students and implemented in accordance with the approved procedures;
- the evaluation reflects the learning outcomes, and students are given the opportunity to receive feedback;
- the academic staff develop their pedagogical skills at academic conferences and seminars to improve the evaluation of teaching methods and learning outcomes.

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.

According to Cabinet Regulations No 512 “Regulations on State Standard of Second Level Professional Higher Education” adopted on August 26, 2014, internship is a mandatory requirement for the professional Master study program: students with previously acquired academic Bachelor degree undergo an internship in the volume of 26 credit points, but students with previously acquired professional Bachelor degree undergo an internship in the volume of 6 credit points.

Until July 1, 2019, the internship was implemented in accordance with the regulations approved by RTU Senate on March 29, 2010 (Minutes No 539) and in accordance with the regulations of the structural unit implementing the study program. The internship management procedure was revised in accordance with the regulations approved by RTU Senate on January 28,2019 (Minutes No 626).

The aim of the internship is to enable students to use theoretical knowledge acquired during their studies in practical work at a specific company/organization and to promote university cooperation with companies and organizations by finding out their needs in a specific field of study. As a result, students develop their skills and competences as well as they are given the ability to integrate in the labor market. As students undergo internship before elaborating the Master Thesis, it provides a good opportunity to link the internship to the Master Thesis and collect data for its development.

Description of the internship can be found in RTU study course register. Description provides the internship aim, main tasks, as well as learning outcomes. They are all organically related to the aim of the study program as a whole and the learning outcomes to be achieved in the study process. In addition to the internship description, regulations on internship have been elaborated for students of the professional Master study program “Urban and Regional Engineering Economics”. The internship is coordinated by a member of academic staff appointed by the University, but it is supervised by an employee assigned by the internship company. During the internship, students elaborate an internship report, which contains the summary and analysis of the research results, and at the end of the internship, these results are publicly presented. The administration of the study program regularly improves the program and tasks of the internship in close cooperation with employers and internship supervisors, as well as following the trends in development of economics and regional development.

Feedback and assessment from employers and internship supervisors at companies/organizations show that the knowledge, practical capacity and skills acquired by students meet the requirements of the State Standard of Second Level Professional Higher Education and the occupational standard. In general, assessments of internship are positive – from 7 (good) till 10 (outstanding). The main conclusions of internship supervisors and employers on student knowledge and work are as follows: students are determined, dutifully perform internship tasks, individual students stand out with the ability to introduce innovative solutions for identification and prevention of company problems, students are able to quickly fit into the work of company’s team and work groups, perform assigned duties with a high sense of responsibility, demonstrate the skill of using theoretical knowledge in a real work environment, perform the assigned tasks within the set deadlines, are not afraid of new challenges, students have very good skills in working with computer and the commonly used software. The knowledge of some students has been assessed satisfactorily but their attitude to

assigned responsibilities and their desire to develop in the chosen profession have been assessed positively.

In the period from academic year 2013/14 to academic year 2018/19, within the professional Master study program “Urban and Regional Engineering Economics” 54 students underwent internship at: the Ministry of Finance of the Republic of Latvia, the Ministry of Economics of the Republic of Latvia, the Ministry of Agriculture of the Republic of Latvia, the State Revenue Service, Investment and Development Agency of Latvia, Central Statistical Bureau of Latvia, the State Employment Agency of Latvia, the Central Finance and Contracting Agency, State Real Estate SJSC, the Municipal Revenue Office of Riga City Council, Latvian Rural Advisory and Training Centre, the Rural Support Service of the Republic of Latvia, Alūksne Municipality, Ventspils Municipality, Insurance joint stock company BALTA, ADB Gjensidige Baltic Latvia Branch, Swedbank JSC, SEB bank JSC, Nordea Bank Finland Plc. Latvia Branch, Life insurance company SEB Dzīvības apdrošināšana, Danske Bank JSC Latvia Branch, Rietumu Banka JSC, Latio Namsaimnieks Ltd., Rīgas Audits Ltd., Compensa T. U. S.A. Vienna Insurance Group Latvia Branch, Skandinavska Enskilda Banken AB Riga Branch, Insurance joint stock company BTA Baltic Insurance Company, etc. Many students underwent internship at insurance companies and banks. This is due to the fact that until 2016, before the changes in the structure and title of the program, the program included specialization “Financial Analysis”.

During the internship, students conduct research related to the specific nature of the study program “Urban and Regional Engineering Economics”. The research focuses on issues related to infrastructure of cities and regions, budget, territorial development, impact of specific businesses on aspects of territorial development. They identify problems, conduct research and offer solutions to the problems. Generally, students choose places of internship taking into account their own interests and desires, but if necessary, RTU Career Support and Service Centre can assist in finding a place of internship. Many companies and organizations themselves offer places of internship to the University.

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.

At the end of the professional Master study program “Urban and Regional Engineering Economics”, students develop a Master Thesis devoted to research of a topical economic problem in development of a particular region. The Master Thesis is publicly presented in the State Examination Commission. The Commission acts in accordance with the resolution approved by RTU Senate and composition of the Commission is approved by the resolution of the Rector. According to the requirements regarding the State Examination Commission in professional study programs, labor market representatives participate in the work of the Commission. Currently representatives of the Latvian Association of Local and Regional Governments, Jēkabpils Municipality, the Competition Council of the Republic of Latvia, Rural Support Service and the Ministry of Education and Science of the Republic of Latvia are members of the Commission.

Description of the internship can be found in RTU study course register. Description provides the thesis aim, main tasks, as well as learning outcomes. They are all organically related to the aim of the study program as a whole and the learning outcomes to be achieved in the study process. In addition to the description, regulations on Master Thesis have been elaborated for students of the

professional Master study program “Urban and Regional Engineering Economics”.

The development and public presentation of the Master Thesis allows assessing how the aim and learning outcomes of the study program have been achieved in the study process. At this stage of the education process, the student must use the whole set of knowledge, skills and competences he/she has acquired while studying at the program. Elaborating Master Thesis, students demonstrate the research skills acquired during their studies, as well as the ability to work with international scientific databases available in RTU library with an electronic access through ORTUS e-learning environment. Master Thesis is a serious research developed according to the topic chosen by the student. The topic has to be topical and must correspond to the specifics of the program. The scientific advisor of the Master Thesis is advised by the Director of the Study Program based on the interests and competencies of the academic staff in the relevant field. The topics of the Master Thesis are discussed at the meeting of the Department and a draft of the Dean’s resolution is drawn up. The topics of the Master Theses and their scientific advisors are appointed by the resolution of the Dean.

The developed Master Theses should reflect their relevance to the learning outcomes of the program. Student must understand the organizational principles of urban development planning and regional development assessment criteria and methods; the issues of economic development and national economic policy; the factors of economic development regionally, as well as identify and eliminate potential risks; the planning and maintenance of engineering infrastructure in urban and rural areas, as well as traffic flow planning principles; carry out economic calculations/feasibility studies related to sustainable development of towns and regions; assess the impact of social and political processes on urban and regional development; plan, implement and evaluate the budgetary process at a local and regional level; as well as implement “green economy” policies for sustainable development of regions and towns.

Every year in April *RTU Student Scientific and Technical Conference* is organized. Students who have to publicly present their Master Thesis in summer participate in this conference. They present their research and the results achieved. It strengthens their scientific research skills, develops the ability to speak in front of the audience, engage in discussions and answer questions. These skills are developed during the studies, because students have to elaborate study projects “Urban Socio-economic Development Planning” or “Elaboration of the Regional Socio-economic Development Program”. In 2015, 9 students participated in the 56th RTU SSTC; in 2016, 3 students participated in the 57th RTU SSTC; in 2017, 6 students participated in the 58th RTU SSTC; in 2018, 11 students participated in the 59th RTU SSTC, while in 2019, 6 students participated in the 60th RTU SSTC. To participate in the conference, students must submit abstract of their research, which is published in the e-environment. The best conference participants in each section are awarded.

Such involvement in research activities has a good long-term result, as, for example, young academic staff member of the Department Kaspars Plotka is a former graduate of this study program. Currently he is the 3rd year student at RTU Doctoral study program.

Having analyzed the topics of publicly presented Master Theses, it can be concluded that they mainly focus on problems of regional and urban development in Latvia in close context with aspects of national economy and development of its sectors, which corresponds to the aims and tasks of the study program. For example, “Business promotion opportunities in Bauska municipality”, “Teleworking opportunities in Viļaka municipality“, “Improvement of Culture Sphere Financing System in Ventspils Region”, “The Role of Income Tax in the Socio-Economic Development of Municipality”, “Assessment of Strategic Planning of Jūrmala City Development”, “Lifelong Learning Possibilities in the Regions of Latvia”, “Possibility of Human Resource Attraction in the Regions of Latvia ”, “Evaluation of Socio-Economic Efficiency of Utilities Planning”, “Development Perspectives

of Lūznava Manor Territory", "Efficiency and Usefulness of Social Care Services System Transformation in Municipalities", "Development Opportunities of Brownfields in Salacgrīva Region", "Trends in Revitalization of Public Outdoor Space in the Historic Environment of Budapest", "Implementation of the Principles of Industrial Ecology in the Green Urban Environment", "Development of a New Approach to Municipal Housing Policy", etc.

Publicly presented Master Theses and their topics demonstrate that the studies carried out are relevant for both development of specific municipalities and territories, and the country in general. Graduates of the study program are competitive on the labor market. With few exceptions, everyone works according to the specific nature of the acquired education, while some even hold leading positions at public administration and municipal institutions.

Having analyzed the assessment of the Master Theses, it can be concluded that a majority of graduates earn grades 9 (excellent) – 29% and 8 (very good) – 34.5%. 16.6% of Master Theses have earned grade 7 (good). In the reporting period, 7 students have earned grade 10 (outstanding). In this case, the graduate has indeed shown a high level of knowledge and the ability to focus on the subject, as well as demonstrated a deep understanding of economic processes. 6.2% of graduates have earned grade 6 (almost good), and only 3.4% have earned grade 5 (satisfactory). None of the graduates have earned the lowest positive grade. It should be noted that the overall level of publicly presented Master Theses is rather high and this trend remains stable. Moreover, there is no difference in grades of full-time and part-time students, which indicates that the level of graduates is the same.

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.

Democracy and dialogue with the students, their active involvement in the development of the study process are among the fundamental principles in the organization and implementation of the study process at RTU Faculty of Engineering Economics and Management. Students may participate in the development of the study process directly – by expressing their wishes to the academic staff of the particular study course, the heads of the departments, the director of the program or with the help of the student self-government, whose representatives are members of FEEM Council, RTU Senate and RTU Senate commissions, and members of RTU Academic Assembly. In general, relations with students at the faculty are characterized by mutual trust and respect.

In order to ensure the principle of democracy and to obtain feedback, the quality control and assurance system established at RTU requires regular electronic surveys of students on the curriculum and performance quality of academic staff, using ORTUS e-learning environment. At the end of semester, students evaluate academic staff by filling out questionnaires about study courses. Questionnaires include questions on the availability of study materials for each particular course, evaluation criteria, culture and quality of work, respect for students' rights during the classes, the time spent on student's individual work and the discipline of teaching. The final part of the questionnaire is intended for student proposals and suggestions on improvement of the quality of study course and performance of the academic staff. The questionnaires are submitted anonymously so that the responses provided do not affect the attitude of the academic staff towards the student or the group of students and the aim of obtaining an objective appraisal from

students is reached. Thus, students can provide feedback on the quality of study courses and the professional performance of the academic staff.

As a drawback that should be addressed, students mention the overlap of some topics in different courses. This issue has been discussed with students and there is no unambiguous evaluation. Sometimes students simply do not see that different courses complement each other, and that a particular problem is viewed from different aspects. Students welcome interactive study methods, but are negative if the academic staff members do not involve the audience in activities. Students appreciate the activities carried outside the classroom. As mentioned above, students of the program go to explore the neighborhood of Riga. As a result, significant research works are conducted. The overall student survey results were positive, with an average of 4.0 to 5.0 from a maximum of 5.0 points, only few academic staff members in separate questions received an assessment below that rate. Thus, each member of academic staff has the opportunity to assess the results of his or her work and to take measures to improve the quality of studies. Students have positively evaluated academic staff who actively engage students in discussions, using real examples in the classes, because only then students can really understand the meaning of theoretical regularity. The main recommendations for improvement of the study courses are related to bringing the content of the classes closer to the current situation and processes. Students positively assess involvement of the guest lecturers – field specialists in the implementation of study courses. The results of student surveys are analyzed; the expressed opinions are evaluated and taken into account in the improvement of the quality of studies.

FEEM student self-government plays a major role in ensuring communication between the students, academic staff and the program administration; it is active in all these processes and undertakes an annual evaluation of academic staff in identifying the best member of academic staff of the year. Every year in May, student self-government organizes “Pride of the FEEM” – a beautiful event for academic staff, where the best academic staff members are honored.

The opinion of graduates is very important in the development and improvement of the professional Master study program “Urban and Regional Engineering Economics”. Therefore, every year graduate survey is conducted. The results of the surveys show the positive and negative aspects of the implementation of the program. Respondents express their views on the theoretical knowledge and practical skills acquired, the quality of infrastructure, the work of the administration of the program, etc. Unfortunately, it must be noted that the graduate responsiveness could have been higher:

- in 2014, 57% of graduates filled out the questionnaires;
- in 2015, 56% of graduates filled out the questionnaires;
- in 2016, 52% of graduates filled out the questionnaires;
- in 2017, 46.4% of graduates filled out the questionnaires;
- in 2018, 78.8% of graduates filled out the questionnaires;
- in 2019, 55.1% of graduates filled out the questionnaires.

In general, the theoretical and practical skills acquired during studies, as well as the time spent during studies, are viewed positively by graduates and they are satisfied with their choice to study at RTU. 77% of the 2019 graduates would recommend this study program to others. Graduates particularly highlight the following positive aspects:

- attitude of administration and records management office towards students is welcoming and positive;
- information is always provided on time. If there are uncertainties or questions, it is always possible to clarify everything with the records management office;
- good relationship with the academic staff and administration;

- studies are of high quality and promote analytical thinking;
- good mutual relationship between students and administration;
- competent academic staff, who can provide learning of new and topical issues;
- very active time, active studies, a feeling that there is not enough time for everything;
- the curriculum of the study program was versatile, but the planning could have been better;
- well-equipped and modern facilities at the Faculty;
- information on the study process and study materials are easily accessible;
- the time spent during studies was very useful; nowadays education is very important to raise student potential in the labor market;
- the schedule was well organized, it was particularly good that the group was rather small;
- the study process was intensive, but at the same time the academic staff took into account that students had to work. The schedule was organized in such a way that students could combine studies and work.

Graduates made the following suggestions for improvement of the program:

- curriculum of some study courses overlapped;
- more practical tasks should be performed during classes;
- more young academic staff should be involved, because they use modern teaching methods;
- the lectures should be scheduled 4 days a week;
- it is complicated for working people to concentrate five days during evening lectures.

When analyzing the results of the graduate survey, it should be noted that the answers tend to be very different; thus, it is difficult to find a particular solution that would suit everyone. For example, some students consider evening lessons to be exhausting. At the same time, a majority of students are very positive about being able to undertake full-time studies and combine them with work. For this reason, classes start on working days at 18:15. Some students mentioned that topics overlapped in some study courses. However, sometimes it is necessary, as the context in which these issues are examined can be different. It can even create a positive effect of synergy. For the improvement of quality of the program, the opinion of graduates is always respected, analyzed and only then decisions about certain improvements are made.

Administration of the study field maintains dialogue with employers as it helps to sustain and improve the quality of the offered study programs. Employers' representatives are involved in the Committee of the Study Field "Economics", which makes decisions on the content and changes to the program. Representatives of the State Regional Development Agency of the Republic of Latvia, Ministry of Finance of the Republic of Latvia and the Latvian Association of Local and Regional Governments have been members of the Commission. There are situations where the employer representatives in the Commission are graduates of the academic Master program "Economics". It gives a particularly important contribution, as in this case there is particularly high added value to the expressed opinion and proposals.

It should be mentioned that a very valuable benefit of the study program is the involvement of employers as members of the State Examination Commission. Thus, they can evaluate the learning outcomes of the study program. After each meeting of the Commission, there is always a discussion among the administration and members of the Commission. The administration takes into account their views and recommendations for further improvements in the implementation of the program.

Employers' opinions on the level of knowledge and competence of students in the program are regularly received by the program's administration when they write reference on student performance during internship. They have always been positive. Employers point out that Master students have good theoretical knowledge and sufficient practical skills, although sometimes difficulties may arise in dealing with particular issues. However, student desire and willingness to

develop professionally are evaluated positively.

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.

In the current circumstances, the progress of the study process and its effectiveness are greatly influenced by the opportunity for students to increase their knowledge at the universities abroad. Participation in mobility programs allows students to extend their knowledge and competences, improve their communication skills with foreign students, and increase their foreign language skills. Unfortunately, students of the professional Master study program “Urban and Regional Engineering Economics” rarely use the opportunity provided by Erasmus mobility program, because a majority of students work and they are afraid of falling out of the labor market for half a year. This is the main reason students mention when they are offered to participate in this program.

The Erasmus mobility program also offers students to undergo internship abroad. In the fall and spring semester of academic year 2018/19, this opportunity was used by the 2nd year student, who underwent internship at urban planning company “Mindspace Nonprofit Ltd” in Budapest, Hungary. As a result of the internship, the Master Thesis “Trends in Revitalization of Public Outdoor Space in the Historic Environment of Budapest” was elaborated.

The example shows how useful and successful this experience can be. Unfortunately, students’ employment has a negative impact on their mobility opportunities, and, in this case, the program administration cannot interfere in order to change the situation.

RTU has established a stable and comprehensible system for the recognition of study courses acquired during mobility. Before leaving, the director of the study program individually confirms the list of study courses in a receiving university, which will be recognized as the counterparts of the study courses scheduled for the given semester in the sending university. If any changes occur during the mobility program, they are electronically confirmed. When returning from the mobility program, the study courses acquired in the receiving university are recognized on condition that the student has obtained a positive assessment, as attested by documents issued by the receiving university.

The flow of inbound foreign students at RTU within the framework of mobility program is higher. Students acquire study courses in English together with Latvian students. It is a very good practice that also benefits local students, because they get the opportunity to communicate with foreign students and improve foreign language skills. Foreign students acquire the following study course of the professional Master study program “Urban and Regional Engineering Economics”: “Current Trends of the European Union Economic Policy”. Information on the dynamics of inbound mobility is provided in point 2.5 of the study field self-assessment report.

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.

Study programs of the Faculty of Engineering Economics and Management are implemented in a modern environment that meets the requirements. The study process is organized at RTU buildings in Riga: 6 Kalnciema Street, 1/1 Meža Street and Ķīpsala campus. 90% of the teaching, scientific and administrative work of RTU FEEM is carried out in the FEEM building on 6 Kalnciema Street, which was commissioned on 29 August 2008. All study rooms designated for the study process are equipped with multimedia facilities – computer with Internet access and speakers, OHP, some rooms are also equipped with interactive boards. Since autumns 2019 HP Shareboard system was introduced in many lecture rooms, which allows projecting the notes written on the board to the screen. Therefore, it is possible to ensure modern and high quality study process.

There are the following premises in the building at 6 Kalnciema Street:

- 4 lecture rooms (120 seats, all equipped with multimedia facilities) which are used to organize lectures;
- 10 lecture rooms (up to 70 seats, equipped with multimedia facilities) are used for lectures and practical classes;
- 6 lecture rooms (from 20 to 40 seats, equipped with multimedia facilities) can be used mainly for practical classes, individual or group work, language studies;
- 3 computer rooms (86 seats, equipped with multimedia facilities).

Each member of academic staff has a personal computer and a well-equipped workplace.

In order to improve the learning environment at RTU, an ambitious project “RTU – City within a City” is currently being carried out, which envisions creation of the most advanced engineering study center in the Baltic region – student campus, which in the future will include RTU faculties, administrative buildings and Scientific Library, thus providing more convenient services.

Students studying at the program and the academic staff will have access to the comprehensive and modern RTU Scientific Library. RTU Scientific Library is the oldest university library in Latvia, whose strategy and aims are primarily related to the aims and tasks of RTU. Library provides subscription to more than 20 databases (see the list of all databases here: http://www.rtu.lv/content/view/388/1337/lang,lv/).

RTU Scientific Library was one of the first in Latvia to introduce RFID technologies, thus becoming a modern and contemporary university library. One of the most significant innovations that made the library more convenient for students is the self-service machine to take out and return books. This means that students no longer have to stand in line, and they can receive and return books without the librarian. In the library, students have access to the newest periodical publications, statistical materials, books, conference materials on economics and business. Every year, the library’s funds are supplemented by both teaching and scientific literature and periodical publications used in the study process. For the needs of the study program, each year funds are allocated for the purchase of literature, and academic staff order the necessary publications.

Other elements of RTU infrastructure, such as canteens and cafeterias, copying facilities, student hostels, RTU sports and leisure centers, the swimming pool, and other facilities are available for the needs of the students and the academic staff. Vending machines selling snacks and drinks are installed in RTU premises.

The technological infrastructure of the premises is continuously updated, new resource rooms and study laboratory rooms are equipped, new office equipment, study literature and computers for the needs of the study process are purchased, and other activities are performed.

Currently, there are three computer rooms at the disposal of the Faculty with 86 equipped seats. Students of the study program "Urban and Regional Engineering Economics" are provided with Microsoft Office, EViews and other software programs required for acquisition of the study program. All students and academic staff have the opportunity to use free WiFi network in all premises of RTU FEEM.

In academic year 2015/2016, six portable computers were purchased for the academic staff in order to provide a more convenient and modern working environment and to improve work quality. In academic year 2017/2018, two new monitors and two laser printers were purchased for the academic staff. New dimming blinds were installed on the windows of academic staff rooms.

Students of the study field "Economics" mainly use the following databases: EBSCO, LETA, Science Direct, Scopus, Web of Science. Since 2018, students of the faculty have access to database Bloomberg Terminal. A special literature database has been developed for the needs of the study program which has been compiled in accordance with the suggestions and recommendations of the academic staff and the students. This database is available on 5 Paula Valdena Street, as well as using e-resources. The library has an overnight reading room, which is appropriately equipped, and is accessible to students after registration in ORTUS e-learning environment.

State budget subsidies and student tuition fees are used to finance the implementation of the study program. The information on the financial resources of the study program is shown below:

Academic year	State budget subsidies, EUR	Tuition fees, EUR	Total funds, EUR	Costs per student, EUR
2013/2014	47 609	36 504	84 112	2 800
2014/2015	54 271.19	27 604.63	81 875.82	2 799.53
2015/2016	78 316.65	22 527.18	100 843.83	3 419.43
2016/2017	85 567.73	16 294.18	101 861.91	3 419.43
2017/2018	67 292.69	16 168.50	83 461.19	3 573.89
2018/2019	70 112.64	10 070.50	80 183.14	3 741.08

Having analyzed the information, it can be concluded that the state budget subsidies have been

increasing in the reporting period till academic year 2017/2018, when the number of budget seats and, consequently, also funding were reduced. In academic year 2017/2018, only 14 state budget students were enrolled, and there was no further reduction. In the reporting period, the amount of tuition fees for local students has been very unstable with a tendency to fall. It can be explained by the economic and demographic situation in the country. Costs per student over the reporting period have increased due to the improvement of infrastructure, as well as the overall increase in RTU costs, taking into account objective reasons (public utilities payments, building maintenance, etc.).

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).

Not applicable.

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.

17 academic staff members are involved in the professional Master study program “Urban and Regional Engineering Economics”. The complete list of academic staff in the study field “Economics” with specified study program where they are involved is provided in Appendix of section II. In the implementation of the study program both RTU elected academic staff and guest lecturers and guest professors, as well as researchers are involved. Compared to the beginning of the reporting period in academic year 2013/14, the number of academic staff has not changed significantly. As this is an inter-disciplinary study program, academic staff from other RTU faculties are also involved in the implementation of this program. There are 5 Professors, 3 Associate Professors, 4 Assistant Professors, 3 Assistant Professors at Professional Programs, 2 Lecturers involved in the implementation of the study program. Currently, 72.7 % of elected academic staff have a Doctoral Degree, but in the beginning of the reporting period in academic year 2013/14 54.1% of academic staff had a Doctoral Degree.

Unfortunately, there are undesirable changes in the staff age structure – in almost all academic staff groups the average age has increased, except for Associate Professors and Assistant Professors at Professional Programs where the average age has decreased. The changes in average age are presented in the Table below. In order to deal with this issue Doctoral students are involved in the study process as Professor Assistants, thus promoting the introduction of new teaching methods, as well as linking the study process with their scientific research. In such a way, the administration of the study program takes care of the renewal of the contingent academic staff with a Doctoral Degree. In pursuing this aim, the study field “Economics” has been involved in the European Social Fund Project No 8.2.2.0/18/A/017 “Development of the Academic Personnel of Riga Technical University”.

Changes in Academic Staff in Study Program

2013/2014			2018/2019		
	Number	Average age		Number	Average age
Professors	9	56	Professors	5	59.6
Associate Professors	3	61	Associate Professors	3	52.6
Assistant Professors	4	41.5	Assistant Professors	4	55
Assistant Professors at Professional Programs	1	55	Assistant Professors at Professional Programs	3	54
Lecturers	3	35.6	Lecturers	2	47
	20			**17**	

Since 2019, with a focus on professional advancement, academic staff of the study program have the opportunity to participate at traineeship program within the European Social Fund Project No 8.2.2.0/18/A/017 “Development of the Academic Personnel of Riga Technical University”. Academic staff members can undergo a 200-hour long traineeship at different Latvian companies. This opportunity was used by 3 academic staff members involved in the implementation of the study program.

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.

Highly qualified academic staff are involved in the implementation of professional Master study program “Urban and Regional Engineering Economics”. Despite the fact that this is a professional program, 66.7% of the elected academic staff have a Doctoral degree. Academic staff from RTU Faculty of Architecture and Faculty of Power and Electrical Engineering also participate in the implementation of the program. Such an approach ensures the inter-disciplinarity of the program. The aim of administration of the program, by selecting and recruiting academic staff, is to maximize the effectiveness of the study program and to enable students to achieve the envisaged learning

outcome.

The following elected academic staff are involved in the implementation of the study program:

Bažbauers Gatis Dr.sc.ing. , FPEE Professor. Professional experience: 6 years of experience at energy company Vattenfall Latvija Ltd. in the position of Board Member, 6 years of experience at the same company in the position of Project Manager and one year of experience at energy consulting company EEE Ltd. in the position of Project Manager. Teaching experience: 22 years of experience at RTU Faculty of Power and Electrical Engineering in different academic positions from Assistant till Professor (the last 10 years). Gatis Bažbauers has elaborated and conducted 12 study courses in the field of energy and environment for students of various specialties. Member of international organization "System Dynamics Society" and professional association "Latvian Association of Heating Companies". In the study courses, professional and academic experience allows linking theoretical and practical issues, and including information on the current tendencies in the industry. 37 publications have been indexed in Scopus database and the author's Hirsch index is 8 (excluding self-citation). Research fields are mainly related to the analysis and modeling of sustainable energy systems. Scientific activities allow involving students in the research process and using findings in elaboration of study courses and practical classes.

Ieviņš Jānis, Dr.oec., Professor. He has long-lasting experience of academic, scientific and administrative work at the university. He has been involved in a number of international scientific projects both as the project leader and/or researcher. He takes active participation in contract work. Furthermore, knowledge of the latest industry and scientific trends is gained in various local and international courses (e.g. Nordplus, Sweden), seminars, industry and scientific conferences. In the study process, students involved in different work groups, research projects and case studies develop and improve their skills in research and results analysis that ensure achievement of learning outcomes.

Judrupa Ilze, Dr.oec., Associate Professor. She is the author of a number of scientific publications on regional competitiveness, assessment of quality of life, smart specialization at the national and regional level, remote work. She is a co-author of the scientific monograph "Evaluation of Regions' Competitiveness in Latvia" (2018). She has published a textbook "Economics of European States", which is used in the study process. The conducted research and information collected are incorporated into lectures and complement theoretical material with practical examples and methods for evaluating regional development and competitiveness. This contributes to the ability of students to understand factors of economic development, both internationally and regionally, as well as to the ability to carry out economic calculations related to sustainable regional development and competitiveness assessment. She has participated in a number of international projects.

Kamols Uldis, Mg.oec., Dipl.oec., FEEM Assistant Professor at Professional Programs. Professional experience: internal auditor at the state administrative institution for 3 years, project manager in supervision of implementation of projects co-financed by the European Union for 3 years, senior manager at the Development Instruments Department of the Ministry of Regional Development and Local Government for more than 2 years. Previous professional experience and qualification help achieve learning outcomes, as well as supplement the theory with practical examples of projects co-financed by the EU and the socio-economic development of cities. The complete achievement of learning outcomes is supported by both acquired expertise in project management, project development and practical experience in evaluating and monitoring projects co-financed by the EU and identifying urban socio-economic challenges. The involvement in scientific research is related to the implementation of EU co-financed projects in Latvia and their role in the development of the country, as well as the socio-economic development of cities in

Latvia. The results of the conducted research are used in the study process, as well as students are involved in research to better understand study courses.

Kuškins Jānis, Mg.oec., Assistant Professor at Professional Programs. He has 28 years of experience in the organization and management of transport activities, 12 years of experience in the development of regulatory enactments at the state administration. He has more than 20 years of academic work experience at university. He participates in conferences and seminars in the field of transport, urban planning, business management, and other fields of interest. The complete achievement of learning outcomes is supported by both the knowledge acquired and the great practical experience in dealing with urban infrastructure, particularly transport.

Malahova Jeļena, Dr.oec., Institute of Occupational Safety and Civil Defence Associate Professor. Professional experience: since 2011 Assistant Director of Studies at RTU FEEM IOSCD, as well as since 2014 RTU FEEM IOSCD Associate Professor. Research component in work with students is ensured by active participation in professional advancement seminars, scientific conferences and elaboration of publications. Active participation in different projects and scientific contract work. Within the study process, students gain topical information in accordance with Cabinet of Minister Regulation No 716 "Minimum Requirements for the Content of the Mandatory Civil Protection Course and the Content of Civil Protection Training for Employees".

Mihņenoka Aleksandra, Mg.oec. FEEM Lecturer. The competences of Aleksandra Mihņenoka to conduct lectures and practical classes are regularly improved. As a result, within the teaching activities, the lecturer implements the principles of student-centred education, which is based on different teaching methods, both traditional and interactive. She is an active member of Association "Creative Ideas". She has participated in multiple international projects to promote entrepreneurship. She has industry-relevant scientific publications, also included in Scopus and ISI Web of Science databases. She has participated in scientific conferences. Research experience allows promoting students to get involved in research within the acquisition of the study course and elaboration of final project, by collecting and analyzing scientific articles on relevant topics and using different research methods. In May – July 2019, within the European Social Fund Project No 8.2.2.0/18/A/017 "Development of the Academic Personnel of Riga Technical University" lecturer underwent a traineeship at companies Jekabpils pakalpojumi Ltd. and Evatek Ltd. (total of 200 hours), which allowed gaining new experience, improving communication skills. Providing opportunity to give real examples to students ensures a more complete understanding of theoretical material by linking the theory to the actual practical examples, the real situation in the company and industry.

Semjonova Nadežda Dr.oec., Assistant Professor. Research work, elaboration of scientific articles, participation in international conferences and various seminars ensure the conformity of the qualification in accordance with the requirements for the implementation of the study program and regulatory enactments. Involved in the Post-doctoral research support project, which enables co-operation with other European universities and the Association of the Latvian Manufacturers of Medicines. Expert on state and local government finances, author of the scientific monograph "Government Debt: Evaluation of Financial Security and Optimal Policy Selection" (2017).

Survilo Tatjana, Dr.oec., FEEM Associate Professor. Professional experience: research work at the Institute of Economics, Latvian Academy of Sciences and other research institutions for more than 20 years; Head of the Department of National Economy (4 years) at Riga City Latgale suburb municipality, as well as at RTU for nearly 25 years. Participation in scientific conferences and elaboration of publications ensure research component in work with students. Co-author of a scientific monograph on municipal development issues.

Šenfelde Maija Dr.oec., RTU Professor. Long-lasting experience of academic and administrative

work at the university. Expert of Latvia Council of Science. Author of four issues of the textbook “Macroeconomics” and author of a number of scientific monographs in the field of economics. Active participation in scientific conferences for improvement of competences, professional advancement in different courses and seminars. Participation in the annual economic conferences organized by the Bank of Latvia, as well as in the “Expert Talks”. The experience and continued professional advancement ensure the ability to provide students with the necessary theoretical knowledge, as well as to inform students about the most topical challenges in macroeconomics, national economy, international economy and their potential solutions, which in turn develop students’ ability to assess economic, social and political processes in the world and their impact on the Latvian economy. Maija Šenfelde has participated in international projects.

Treija Sandra, Dr.arch., FA Professor. Professional experience: 4 years of experience at the Board of Urban Development at Riga City Council’s City Development Department. Teaching experience: 20 years of experience at RTU Faculty of Architecture in different academic positions, member of the Latvian Union of Architects and member of its Council. Expert of Latvia Council of Science: scope of research – architecture, urban planning, sustainable development, urban ecology, urban landscape residential environment. National group coordinator at international organization Docomomo. Research is mainly related to sustainable urban development, housing issues, quality of life in terms of environment, urban regeneration issues. Professional, academic and research activities provide a complex view on topical urban planning problems, which gives advantage in the study process to focus on both theoretical and practical tendencies in industry.

A substantial contribution to the efficient achievement of learning outcomes of the program is made by the involvement of guest lecturers from abroad, as well as field specialists from Latvian Public administration institutions and municipal institutions. Information on inbound academic staff mobility is provided in section 3.6 of the attached Description of the Study Field.

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).

Not 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).

Not 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.

Academic staff of the study program are also actively involved in scientific research, which allows improving the quality of studies. The experience and knowledge gained allows improving the competences of academic staff, as well as enriching the discussions organized in the audience and providing students with knowledge of current industry challenges in the world.

For example, ***Professor G.Bažbauers*** has participated in implementation of several research projects, including State Research Program "Power Engineering" (manages one of the projects – "Assessment and Analysis of Energy Efficiency Policy") and project "Flex4RES- Flexibility for Variable Renewable Energy Integration in the Nordic Energy Systems" funded by Nordic Energy Research. He has also participated in research projects commissioned by Latvenergo JSC and State JSC Latvijas Valsts meži. Within the Horizon 2020 project, he collaborates with the Society "Zemgale Regional Energy Agency" as a consultant in renovation of heating systems; ***Professor S.Treija*** has participated in international and local research projects, including - "Technological Solutions for Energy Efficiency of Buildings", State Research Program; "Cities & Rail: Increasing potentials for Smart & Just Cities", the Swedish Institute; "BuildDigiCraft", Erasmus+; "European Middle Class Mass Housing", COST action CA18137; "Implementing Nature Based Solutions for Creating a Resourceful Circular City", COST action CA17133; ***Professor M.Šenfelde*** has led INTERREG IVC project No 1097R4 "MICROPOL – Smart Work Centres in Non-metropolitan Areas" (2012-2014), as well as FLLP-2011 / 26 project "Optimization of National Development Planning Process", and has participated in the work group of INTERREG Europe project PGI00304, CLUSTERS3 - "Leveraging Cluster Policies for Successful Implementation of RIS3"; ***asoc. Associate Professor Ilze Judrupa*** has participated in INTERREG IVC project No 1097R4 "MICROPOL – Smart Work Centres in Non-metropolitan Areas" (2012-2014), project "Smart Specialisation Opportunities for Vidzeme Planning Region" funded by Norwegian Financial Instrument, as well as Erasmus+ project "Shake up Start ups"; ***Associate Professor J.Malahova*** has participated in scientific contracts "Development of a Single Environmental Risk Plan for Jelgava and Siauliai" contract No JPD2018/85/MI, "Assessment of the Technological Process of Granules Manufacturing Plants in Inčukalns, 34 Plānupes Street" contract No 1-3.31/016/2015; ***Assistant Professor I.Skribāne*** has participated in Latvian and international projects as a researcher and project leader, as well as in the development and monitoring of strategic documents for economic policy (Smart Specialization Strategy, Industrial Policy Guidelines, etc.) and in drawing the informative reports on Latvia's economic development; ***Assistant Professor N.Semjonova*** with ERAF support implements project "Innovative Medical Devices Commercialisation Methodology and Evaluation of Manufacturing Financing Model".

Participation in the INTERREG IVC project "Micropol – Smart Work Centers in Non-Metropolitan Areas" and acquired knowledge about the topical issues of the EU employment policy in the field of distance work has been incorporated in the study course "Current Trends of the European Union Economic Policy" delivered by Assoc.Professor I.Judrupa. Participation in the Norwegian Financial Mechanism project "Smart Specialization Opportunities for Vidzeme Planning Region" has also enabled I.Judrupa to broaden her knowledge of the nature of smart specialization and the principles of developing a smart specialization strategy, as well as the EU position in this field. The knowledge acquired has resulted in the updated study course "Current Trends of the European Union Economic Policy". The monograph by I.Judrupa and M.Šenfelde "Latvijas reģionu konkurētspējas novērtēšana" ("Evaluatio

n of Competitiveness of Latvian Regions"), published in 2008, is used in study courses, which cover topical issues of regional development and competition.

The involvement of Associate Professor at a professional study program U.Kamols in scientific research is related to the implementation of EU co-financed projects in Latvia and their role in the development of the country, as well as socio-economic development of Latvian cities. The results of the research are used in the study process and students are involved in research by developing study projects. Such an approach allows for a better understanding and acquisition of study courses.

The knowledge and competences acquired by professors S.Treija and G. Bažbauers in international scientific projects are used in professional Master level study courses “Sustainable Development of Spatial Environment” and “Sustainable Development of Energy Supply”.

Assistant Professor I.Skribāne’s experience gained in elaboration of the strategy of Latvia’s economic policy allows supplementing the study course “Theory of Economic Analysis”, because the strategy can be developed only on the basis of analysis of the existing situation.

These examples demonstrate the scientific research potential of the academic staff and their professional qualification, which make a real contribution to the study process.

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 interrelation between the study courses and their logical, sequential acquisition are essential for achieving the results of the study program. A system has been established to promote cooperation between academic staff and university in general, which provides regular academic conferences and professional advancement seminars for the development of teaching methodology competences. For example, academic conference “Integration of Teaching Methodological and Scientific Work into the Study Process” organized on April 27, 2018. Such events promote professional advancement of academic staff and provide opportunity to cooperate more efficiently in reaching learning outcomes and improving study courses. The department responsible for the implementation of the study program reviews the study process and achieved results at the end of each semester. Student surveys on the quality of study courses play an important role in this process. Based on current situation analysis, solutions have been mutually found. For example, adjustments have been made to the structure of individual study courses to avoid partial overlapping and to improve the interrelation between study courses, or to include changes in the curricula of the study program have been proposed. In this case, the proposed changes are discussed and approved by the Committee of the Study Field “Economics” and directed for consideration by the Faculty Council.

The student-academic staff ratio within the professional master study program “Urban and Regional Engineering Economics” on November 30, 2019 is 3:1. Such proportion allows to maintain good individual contact between students and the members of the academic staff, thus enabling them to perform their studies effectively. However, in fact, this ratio is higher because several study courses are implemented in flows with students from other programs, and academic staff do not work with

only one specific study program.

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	Students statistical data RIGY0.xlsx	Studējošo statistika RIGYO.xlsx
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 with the State Standard for Education.docx	Atbilstība izglītības valsts standartam RIGYO.docx
Compliance of the qualification to be acquired upon completion of the study programme with the professional standard (if applicable)	Compliance of the Qualification with the Professional Standard.xlsx	Kvalifikācijas atbilstība profesijas standartam.xlsx
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	Mapping of the study courses RIGYO.xlsx	Studiju kursu kartējums RIGYO.xlsx
Curriculum of the study programme (for each type and form of the implementation of the study programme)	Curriculum.zip	Studiju plāni.zip
Descriptions of the study courses/ modules	Descriptions of study courses.zip	Studiju kursu apraksti.zip
Description of the Study Direction - Other mandatory attachments		
Sample of the diploma to be issued for the acquisition of the study programme.	Sample of the diploma.zip	Diploma paraugs.zip
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	01000-4.1-e_53 Līgums RTU ar LU.pdf	01000-4.1-e_53 Līgums RTU ar LU.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	01000-2.2.1-e_178.edoc	01000-2.2.1-e_178.edoc
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	Study agreements.zip	Studiju līgumi.zip
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.		

Economics

Title of the higher education institution	*Economics*
ProcedureStudyProgram.Name	*Economics*
Education classification code	*45311*
Type of the study programme	*Academic master study programme*
Name of the study programme director	*Maija*
Surname of the study programme director	*Šenfelde*
E-mail of the study programme director	*maija.senfelde@rtu.lv*
Title of the study programme director	*Dr.oec.*
Phone of the study programme director	*29184578*
Goal of the study programme	*To provide students with an in-depth theoretical knowledge in compliance with the Master's level education and national standards for academic education, as well as to develop research skills necessary for analysts of economic processes and industry specialists to resolve economic issues and take decisions in today's changing economy.*
Tasks of the study programme	*1. to develop skills necessary for conducting scientific research in the field of economics and to enable students to obtain academic Master's degree in economics;* *2. to organize the study process with the aim to develop students' knowledge and competences, to promote their use in the study process and in further practical work;* *3. to organize the studies so that the program graduates will have sufficient academic research skills necessary to evaluate the sectors of national economy;* *4. to foster students' analytical skills, to promote acquisition and development of scientific research skills;* *5. to create the necessary preconditions for educating and training competitive economic analysts for the Latvian and international labor market;* *6. to develop students' ability to apply knowledge and skills in practice in order to address complex economic problems related to micro- and macroeconomics, econometrics, environmental economics and marketing;* *7. to develop students' ability to formulate aims and tasks, to take socially and ethically responsible decisions in relation to the ongoing economic processes in the world;* *8. to promote students' interest in the processes of society, to enable students to become positive, modern, responsible and capable individuals, who can act independently and make autonomous decisions;* *9. to provide students with an opportunity to continue their education at the Doctoral study programs after receiving the Master's degree;* *10. to promote students' interest in pedagogical work.*

Results of the study programme	*1. ability to demonstrate an understanding of the economic and business concepts, functioning regularities and scientific theories of economics;* *2. ability to analyze economic and political processes and their impact on the sustainable development of the country;* *3. ability to formulate aims and tasks, to take socially and ethically responsible decisions in relation to the ongoing economic processes in the world;* *4. ability to carry out scientific research on economic development issues, to interpret and analyze the results;* *5. ability to demonstrate knowledge and competences of using modern information technologies for the economic analysis of the sectors of national economy and enterprises;* *6. graduates are positive, modern, responsible and capable individuals, who can act independently and make autonomous decisions and are interested in the ongoing processes in society;* *7. ability to apply their knowledge to a variety of life situations, working in a team or individually;* *8. ability to engage in pedagogical work and continue their education at the Doctoral study programs.*
Final examination upon the completion of the study programme	*Master Thesis*

Study programme forms

Full time studies - 2 years - latvian

Study type and form	*Full time studies*
Duration in full years	*2*
Duration in month	*0*
Language	*latvian*
Amount (CP)	*80*
Admission requirements (in English)	*Bachelor Degree of Social Science in Economics or in Management Science, or comparable education*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Master Degree of Social Science in Economics*
Qualification to be obtained (in english)	—

Places of implementation

Place name	City	Address
Riga Technical University	RĪGA	KAĻĶU IELA 1, RĪGA, LV-1050

Full time studies - 2 years - english

Study type and form	*Full time studies*
Duration in full years	*2*
Duration in month	*0*
Language	*english*

Amount (CP)	*80*
Admission requirements (in English)	*Bachelor Degree of Social Science in Economics or in Management Science, or comparable education*
Degree to be acquired or professional qualification, or degree to be acquired and professional qualification (in english)	*Master Degree of Social Science in Economics*
Qualification to be obtained (in english)	—

Places of implementation

Place name	City	Address
Riga Technical University	RĪGA	KAĻĶU IELA 1, RĪGA, LV-1050

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

Name of the study program	Ekonomika	
Name of the study program in English	Economics	
Code of the study program in accordance with the Latvian Education Classification	45310	
Type and level of the study program	Academic Master Study Program	
Level of qualification to be acquired (NQF/EQF)	The 7th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF)	
Code of the occupation in the classification of occupations		
Amount of the study program (CP, preferably also ECTS)	80.0 CP, 120.0 ECTS	
Form, type, and duration of the study program (in case the duration cannot be measured in full years, specify the number of months), as well as the language in which the study program is implemented		
Full- time studies	2 years	Latvian, English
Place of implementation of the study program	Riga	
Director of the study program	Maija Šenfelde – Dr.oec., Professor	
Admission requirements	Bachelor Degree of Social Science in Economics or in Management Science, or comparable education	
The degree, professional qualification to be awarded or the degree and professional qualification to be awarded	Master Degree of Social Science in Economics	

Aim of the study program	To provide students with an in-depth theoretical knowledge in compliance with the Master's level education and national standards for academic education, as well as to develop research skills necessary for analysts of economic processes and industry specialists to resolve economic issues and take decisions in today's changing economy.
Objectives of the study program	1. to develop skills necessary for conducting scientific research in the field of economics and to enable students to obtain academic Master's degree in economics; 2. to organize the study process with the aim to develop students' knowledge and competences, to promote their use in the study process and in further practical work; 3. to organize the studies so that the program graduates will have sufficient academic research skills necessary to evaluate the sectors of national economy; 4. to foster students' analytical skills, to promote acquisition and development of scientific research skills; 5. to create the necessary preconditions for educating and training competitive economic analysts for the Latvian and international labor market; 6. to develop students' ability to apply knowledge and skills in practice in order to address complex economic problems related to micro- and macroeconomics, econometrics, environmental economics and marketing; 7. to develop students' ability to formulate aims and tasks, to take socially and ethically responsible decisions in relation to the ongoing economic processes in the world; 8. to promote students' interest in the processes of society, to enable students to become positive, modern, responsible and capable individuals, who can act independently and make autonomous decisions; 9. to provide students with an opportunity to continue their education at the Doctoral study programs after receiving the Master's degree; 10. to promote students' interest in pedagogical work.

Learning outcomes of the study program to be achieved	1. ability to demonstrate an understanding of the economic and business concepts, functioning regularities and scientific theories of economics; 2. ability to analyze economic and political processes and their impact on the sustainable development of the country; 3. ability to formulate aims and tasks, to take socially and ethically responsible decisions in relation to the ongoing economic processes in the world; 4. ability to carry out scientific research on economic development issues, to interpret and analyze the results; 5. ability to demonstrate knowledge and competences of using modern information technologies for the economic analysis of the sectors of national economy and enterprises; 6. graduates are positive, modern, responsible and capable individuals, who can act independently and make autonomous decisions and are interested in the ongoing processes in society; 7. ability to apply their knowledge to a variety of life situations, working in a team or individually; 8. ability to engage in pedagogical work and continue their education at the Doctoral study programs.
Final examination upon the completion of the study program	Master Thesis

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.

The statistical data on the students of the study program can be found in Appendix. Having analyzed this data, it can be concluded that the total number of students has not changed significantly in the reporting period, although a sharp reduction in the number of students enrolled is seen in academic year 2014/15 and academic year 2016/17 due to a reduction in the number of budget seats. As this reduction was very significant (10 and 5 seats), starting from this year it could be seen that every 2 years fewer students were enrolled.

The demographic situation in the country is not favorable, but there is demand for education in the field of economics from foreign students. This has been taken into consideration and since academic year 2017/18 the program has being implemented in English and offered to foreign students. If in the first year only 1 student from Uzbekistan was enrolled, then in the next academic

year (2018/19) 5 students were enrolled from 3 countries: 3 from Uzbekistan, 1 from Turkey and 1 from China.

The graduate number dynamics is linked to the number of students and changes therein. The reporting period shows fluctuations in the number of graduates. There were only 5 graduates in academic year 2015/16 and 8 graduates – in academic year 2017/18, coinciding with a sharp reduction in funding for the program in academic year 2014/15 and 2016/17. In academic year 2018/19, the first foreign student graduated. The student successfully continues her education at RTU Doctoral study program.

Having analyzed student dropout rate, it can be concluded that the main reason for expulsion is poor academic performance results, which is particularly noticeable at the beginning of studies. This points to the fact that students have not had the required level of prior knowledge, or they cannot combine their studies with work, as a majority of master students work. Much fewer students are expelled at their own will. This usually happens due to health issues, family circumstances and workload. In some cases, students do not renew for studies after an academic leave.

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 academic Master study program “Economics” corresponds to the 7th level of the EQF and LQF, thus it is envisioned for school leavers with Bachelor Degree of Social Science in Economics or in Management, or comparable education. The name of the study program is related to its ***aim*** of ensuring acquisition of in-depth theoretical knowledge in the field of economics in accordance with the national standards of academic education, as well as developing research skills necessary for analysts of economic processes and industry specialists to resolve economic issues and take decisions in today’s changing economy. In order to achieve the set aim specific ***tasks*** have been put forward to reach certain ***learning outcomes*** (see Study program parameters in Section 1.1). The aim of the study program is achieved if students in the study process reach the learning outcomes. By its curriculum, the study program is designed in such a way that the aims and learning outcomes of the study courses included therein are subject to and ensure that the overall aim and learning outcomes of the program are achieved.

Master Degree of Social Science in Economics is awarded after the acquisition of theoretical study courses of the study program and the public presentation of the Master Thesis in the State Examination Commission. Having analyzed the interrelation between the name of the study program, the degree to be obtained, the aims, objectives, learning outcomes, as well as the enrolment requirements, it can be concluded that it is in place.

The academic Master study program “Economics” has also received a high international assessment in *Eduniversal Best Masters Ranking 2018* among the 200 best university and business school programs in the Eastern European region, ranking 7th among the 10 best in the field of economics, while in *Eduniversal Best Masters Ranking 2019* it was ranked 6th among the 10 best in the Eastern European region (https://www.best-masters.com/ranking-master-economics-in-eastern-europe.html). *Eduniversal* is ranking created by French ranking agency and consulting company SMBG. The ranking results

demonstrate the high quality and international competitiveness of the Master 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.

Having analyzed the compliance with the Cabinet Regulations No 240 "Regulations on the state academic education standard" adopted on May 13, 2014, it can be concluded that the academic Master study program "Economics" meets the requirements of the standard. Appendix provides comparison of the study program with the requirements of the standard.

The content of the study program is constantly updated and improved in line with the latest trends in economics as well as the situation in the labour market and its requirements. In order not to lose its topicality, the study program regularly undergoes bigger or smaller changes, consisting in replacing study courses or supplementing the program with new topical courses. The changes are discussed and approved by the Committee of the Study Field "Economics" and submitted for approval by the Faculty Council. In addition, academic staff take into account the development trends in the field of economic sciences, the Latvian economy and the world economy in the implementation of their study courses and reflect them during the classes. Students also participate in the development of the study curricula by filling out surveys at the end of each semester and evaluating the curricula of the study courses and the quality of their implementation. The opinion of graduates and employers is very important in the development of the content of the program.

The structure of the academic Master study program "Economics" provides for the inclusion of study courses containing research of theoretical knowledge and its approbation within the aspect of the current economic challenges. Scientific seminars are organized to discuss the current scientific knowledge and its manifestation. Master Thesis, by its nature, is a scientific research containing a compulsory theoretical part. It includes a critical analysis and evaluation of the body of scientific knowledge in the relevant field. Within the Master Thesis, it is obligatory to develop an innovation based on the existing scientific knowledge and current trends in the national economy. Thus, it can be concluded that the award of an academic Master degree is based on the achievements and knowledge of the economic science.

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 structure and content of the academic Master study program “Economics” is designed to achieve its aim. The aim of the study program is closely related to all 8 defined learning outcomes. These learning outcomes are achieved in the course of acquisition of study courses. Thus the aims set in the descriptions of the study courses are closely related to the learning outcomes of the entire program, but study courses are interrelated and complement each other in order to achieve the expected results upon completion of the program. Interrelation of these study courses to the learning outcomes of the study program is illustrated in the mapping of the study courses (see Appendix).

To ensure successful achievement of study program results, the syllabus for the implementation of study courses follows a specific sequence. The study program plans are attached in Appendix.

Descriptions of the study courses are included in a unified RTU study course register. Descriptions of the study courses included in the academic Master study program “Economics” are attached in Appendix. In total, there are descriptions of 10 Compulsory Study Courses (A), 15 Compulsory Elective Study Courses (B) and description of Final Examination (E).

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.

At the level of academic Master studies, an aspect of scientific research is particularly important, which makes them different from professional programs. The study process is organized in such a way that students acquire both theoretical and practical knowledge. Therefore, a variety of forms of training are used: lectures for knowledge transfer, discussions, situation analysis, practical tasks (case studies) for knowledge strengthening, research of particular problems for development of scientific research skills. Students’ skills to work with databases, selecting the necessary information and analyzing scientific articles are also developed. Moreover, students’ skills to process statistical data are strengthened. Individual and group research work is widely used. When working in groups, students must be able to share their tasks among themselves, which strengthens their skills to work with colleagues, develops self-independence and a sense of responsibility, as well as promotes mutual respect.

It should be noted that much emphasis is placed on replacing the learning style with “teaching to learn”, which is particularly important at the level of Master studies. When conducting research, students also develop creativity, as they must be able to find the right approach when dealing with different problems. On the basis of the acquired theoretical knowledge, students must conduct research on a particular problem.

The practice of presenting to the audience research conducted by students is widely applied, which

then is followed by discussion. This helps develop different skills (students improve their communication, presentation and analytical skills, as well as the skill of respecting opinion of other students) and strengthen the previously acquired theoretical knowledge.

A summative evaluation system is used for the final assessment within the study courses – the final mark is formed of several components, thus during the semester students are already affecting their final grades. The evaluation criteria for the study courses and individual/home tasks are published in advance in ORTUS e-learning environment. The assessment of home tasks, assessment tests, reports, presentations and other tasks performed during the semester is assigned a certain percentage of the final grade. The examination grade must not exceed 50% of the final assessment. Academic staff can also take into account and evaluate the attendance of the classes. The academic staff determine the assessment structure for their study course, but it must strictly correspond the Resolution of RTU Senate that the examination grade must not exceed 50% of the final assessment.

All academic staff members must dedicate at least 2 academic hours each week for tutorials in which students can communicate with them and receive answers to questions. Moreover, academic staff are open and obliging; thus, if necessary electronic communication with students is practiced.

The results of the academic Master study program “Economics” student knowledge assessment are discussed twice a year in the meetings of the Department of the Territorial Development Management and Urban Economics, which is responsible for the study program’s record keeping. The results are collected and assessed also by the administration of the study program. Together with the results of student surveys, they are used as a basis for further development of the study process.

Having analyzed study implementation and evaluation methods used in the study program, it can be concluded that the student-centered principles have been taken into account:

- student enrolment and the diversity of their needs are taken into account and respected in the development of appropriate learning modes;
- based on students’ abilities and needs, academic staff apply diverse pedagogical techniques and promote student’s strife for independence, while at the same time ensuring supervision and support from the academic staff;
- implementation of the study process in the program contributes to mutual respect between students and academic staff, as the principle of democracy is applied and the program administration takes into account opinions of students.

The organization and quality of the student evaluation system are essential for the implementation of student-centered education. Having analyzed and assessed this system in the study program, it can be concluded that:

- the evaluation methods and criteria for grading have been published in advance in ORTUS e-learning environment, the academic staff inform students about them at the beginning of the study course, and the conditions referred to the above are well known to students;
- evaluation is consistent, fair, suitable for all students and implemented in accordance with the approved procedures;
- the evaluation reflects the learning outcomes, and students are given the opportunity to receive feedback;
- the academic staff develop their pedagogical skills at academic conferences and seminars to improve the evaluation of teaching methods and learning outcomes.

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.

According to the Cabinet Regulations No 240 “Regulations on the state academic education standard” adopted on May 13, 2014, internship is not a mandatory requirement for academic Master study program. However, in 2015 in the academic Master study program “Economics” an internship in the volume of 4 credit points was included in the compulsory elective study courses of the program. This was done because students expressed willingness to undergo internship in the study process, as well as to improve student skills and competences. Moreover, students are given the ability to integrate in the labour market. As students undergo internship before elaborating the Master Thesis, it provides a good opportunity to link the internship to the Master Thesis and collect data for its development.

Until July 1, 2019, the internship was implemented in accordance with the regulations approved by RTU Senate on March 29, 2010 (Minutes No 539) and in accordance with the regulations of the structural unit implementing the study program. The internship management procedure was revised in accordance with the regulations approved by RTU Senate on January 28,2019 (Minutes No 626).

Description of the internship can be found in RTU study course register. Description provides the internship aim, main tasks, as well as learning outcomes. They are all organically related to the aim of the study program as a whole and the learning outcomes to be achieved in the study process. In addition to the internship description, regulations on internship have been elaborated for students of academic Master study program “Economics”. The internship is coordinated by a member of academic staff appointed by the University, but it is supervised by an employee assigned by the internship company.

According to the aims and tasks of the internship, during the internship the focus is placed on the possibility of using theoretical knowledge acquired during studies, developing and improving research skills in the field of economics. During the internship, students elaborate an internship report, which contains the summary and analysis of the research results, and at the end of the internship, these results are publicly presented. The administration of the study program regularly improves the program and tasks of the internship in close cooperation with employers and internship supervisors, as well as following the trends in development of economics and national economy.

In general, assessments of internship are positive – from 7 (good) till 10 (outstanding). The main conclusions of internship supervisors and employers on student knowledge and work are as follows: students are determined, dutifully perform internship tasks, individual students stand out with the ability to introduce innovative solutions for identification and prevention of company problems, students are able to quickly fit into the work of company’s team and work groups, perform assigned duties with a high sense of responsibility, demonstrate the skill of using theoretical knowledge in a real work environment, perform the assigned tasks within the set deadlines, are not afraid of new challenges, students have very good skills in working with computer and the commonly used software. The knowledge of some students has been assessed satisfactorily but their attitude to assigned responsibilities and their desire to develop in the chosen profession have been assessed

positively.

In the period from academic year 2015/16, when internship was included in the program, to academic year 2018/19, within the academic Master study program “Economics” 40 students have undergone internship at *state administration and municipal institutions*:

Saeima of the Republic of Latvia, the Ministry of Finance of the Republic of Latvia, the Ministry of Welfare of the Republic of Latvia, the State Revenue Service, the State Audit Office, the State Employment Agency of Latvia, the Central Finance and Contracting Agency, State Real Estate SJSC, the Municipal Revenue Office of Riga City Council;

at insurance and financial companies: Insurance stock company BALTA, ABD Gjensidige Latvia Branch, Swedbank JSC, Nordea Bank AB Latvia Branch, EURORISK Latvia Ltd., Nordea Finance Latvia Ltd., Revidentes Sanitas Paideres birojs Ltd., Citadele banka JSC, Skandinaviska Enskilda Banken AB Riga Branch;

at companies: Prodimpekss Loģistikas Grupa Ltd., Veselības centrs 4 Ltd., Dinair Filton Ltd., Decta Ltd., Elko Grupa JSC, Augstsprieguma tīkls JSC, EUROAPTIEKA Ltd., Jēkabpils Optika Ltd., Kantar TNS, Rīgas piena kombināts JSC, Pav Haulage Ltd., Tele2 Shared Service Center Ltd., Ramata Plus Ltd., Tekshop, Sabre Invest Ltd., Bite Latvia Ltd.

Despite the diversity of selected places of internship, during the internship students perform tasks related to the specific nature of the study program “Economics”. They identify problems, conduct research and offer solutions to the problems. Generally, students choose places of internship taking into account their own interests and desires, but if necessary, RTU Career Support and Service Centre can assist in finding a place of internship. Many companies and organizations themselves offer places of internship to the University.

As the internship is one of the Compulsory Elective Study Courses, instead of internship students have the possibility of acquiring a study course, which has equivalent volume in credit points. Several students have chosen this option.

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.

At the end of the academic Master study program “Economics”, students develop a Master Thesis devoted to research of a topical problem in economics. The Master Thesis is publicly presented in the State Examination Commission. The Commission acts in accordance with the resolution approved by RTU Senate and composition of the Commission is approved by the resolution of the Rector.

Description of the Master Thesis can be found in RTU study course register. Description provides the thesis aim, main tasks, as well as learning outcomes. They are all organically related to the aim of the study program as a whole and the learning outcomes to be achieved in the study process. In addition to the description, regulations on Master Thesis have been elaborated for students of academic Master study program “Economics”

The development and public presentation of the Master Thesis allows assessing how the aim and

learning outcomes of the study program have been achieved in the study process. At this stage of the education process, the student must use the whole set of knowledge, skills and competences he/she has acquired while studying at the program. Elaborating Master Thesis, students demonstrate the research skills acquired during their studies, as well as the ability to work with international scientific databases available in RTU library with an electronic access through ORTUS e-learning environment. Master Thesis is a serious research developed according to the topic chosen by the student. The topic has to be topical and must correspond to the specifics of the program. The scientific advisor of the Master Thesis is advised by the Director of the Study Program based on the interests and competencies of the academic staff in the relevant field. The topics of the Master Thesis are discussed at the meeting of the Department and a draft of the Dean's resolution is drawn up. The topics of the Master Theses and their scientific advisors are appointed by the resolution of the Dean.

The developed Master Theses should reflect their relevance to the learning outcomes of the program. Student must understand the economic and business concepts, functioning regularities and scientific theories of economics; must be able to analyze economic and political processes and their impact on the sustainable development of the country; must be able to carry out scientific research on economic development issues, to interpret and analyze the results; to demonstrate the knowledge and competences of using modern information technologies for the economic analysis of the sectors of national economy and enterprises.

Before writing a Master Thesis, the student must present the aim, tasks, hypothesis of his/her research in scientific seminars, as well as substantiate the research object and subject. Before the public presentation of Master Thesis, all Master students participate in the *annual RTU Student Scientific and Technical Conference (SSTC)*, where they present their research and the results achieved. It strengthens their scientific research skills, develops the ability to speak in front of the audience, engage in discussions and answer questions. In 2014, 13 students participated in the 55th RTU SSTC; in 2015, 13 students participated in the 56th RTU SSTC; in 2016, 6 students participated in the 57th RTU SSTC; in 2017, 16 students participated in the 58th RTU SSTC; in 2018, 9 students participated in the 59th RTU SSTC, while in 2019, 13 students participated in the 60th RTU SSTC. To participate in the conference, students must submit abstract of their research, which is published in the e-environment. The best conference participants in each section are awarded. Such involvement in research activities has a good long-term result, as, for example, young academic staff members of the Department Aleksandra Mihņenoka and Kristaps Freimanis, who pursue their Doctoral studies, are former graduates of the academic Master study program "Economics". In total, there are five graduates of this program working at the Department as academic staff.

Having analyzed the topics of publicly presented Master Theses, it can be concluded that they mainly focus on the problems of national economy and the development of its sectors, which corresponds to the aims and tasks of the study program.

A majority of research are topical at the *level of country's economic development*. For example, "Assessment of Impact of Tax Policy on Latvian Economy", "Development of Sustainable Pension System Model in Latvia ", "Labour market problems and development prospects in Latvia", "Assessment of Impact of Foreign Direct Investment on Latvia's Economic Growth ", "Impact of Fiscal Policy on the Income Level of Residents of Latvia", "Assessment of Employment Policy in Terms of Economic Development"," Factoring Market Development Prospects in the Baltic States ", "Scenarios for Tackling Social Inequalities in Latvia" etc.

Often topics that address the *challenges of the development of economic sectors* are selected, such as "Milk Production and Processing Development Prospects in Latvia", "Improvement of Latvian

Health Care Funding Model", "Competitiveness of Latvian Medical Services in the Baltic Region", "Development and Growth Opportunities of Information Technology Industry in Latvia", "Competitiveness of Pharmacy Networks in the Latvian Market", "Development Prospects of Latvian Meat Processing Industry" "Assessment of Factors Affecting Foreign Trade Balance of Latvia" etc.

Publicly presented Master Theses and their topics demonstrate that the studies carried out are relevant for both the economy as a whole and individual businesses and industries, as well as the labour market.

Having analyzed the assessment of the Master Theses, it can be concluded that a majority of graduates earn grades 9 (excellent) – 25% and 8 (very good) – 36%. 14% of Master Theses have earned grade 7 (good). In the reporting period, 2 students have earned grade 10 (outstanding). In this case, the graduate has indeed shown a high level of knowledge and the ability to focus on the subject, as well as demonstrated a deep understanding of economic processes. Unfortunately, as an exception in academic year 2018/19, the performance of one Master student was assessed with the lowest positive grade 4 (almost satisfactory). It should be noted that the overall level of publicly presented Master Theses is rather high and this trend remains stable.

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.

Democracy and dialogue with the students, their active involvement in the development of the study process are among the fundamental principles in the organization and implementation of the study process at RTU Faculty of Engineering Economics and Management. Students may participate in the development of the study process directly – by expressing their wishes to the academic staff of the particular study course, the heads of the departments, the director of the program or with the help of the student self-government, whose representatives are members of FEEM Council, RTU Senate and RTU Senate commissions, and members of RTU Academic Assembly. In general, relations with students at the faculty are characterized by mutual trust and respect.

In order to ensure the principle of democracy and to obtain feedback, the quality control and assurance system established at RTU requires regular electronic surveys of students on the curriculum and performance quality of academic staff, using ORTUS e-learning environment. At the end of semester, students evaluate academic staff by filling out questionnaires about study courses. Questionnaires include questions on the availability of study materials for each particular course, evaluation criteria, culture and quality of work, respect for students' rights during the classes, the time spent on student's individual work and the discipline of teaching. The final part of the questionnaire is intended for student proposals and suggestions on improvement of the quality of study course and performance of the academic staff. The questionnaires are submitted anonymously so that the responses provided do not affect the attitude of the academic staff towards the student or the group of students and the aim of obtaining an objective appraisal from students is reached. Thus, students can provide feedback on the quality of study courses and the professional performance of the academic staff.

As a drawback that should be addressed, students mention the overlap of some topics in different courses. This issue has been discussed with students and there is no unambiguous evaluation.

Sometimes students simply do not see that different courses complement each other, and that a particular problem is viewed from different aspects. Students welcome interactive study methods, but are negative if the academic staff members do not involve the audience in activities. The overall student survey results were positive, with an average of 4.0 to 5.0 from a maximum of 5.0 points, only few academic staff members in separate questions received an assessment below that rate. Thus, each member of academic staff has the opportunity to assess the results of his or her work and to take measures to improve the quality of studies. Students have positively evaluated academic staff who actively engage students in discussions, using real examples in the classes, because only then students can really understand the meaning of theoretical regularity. The main recommendations for improvement of the study courses are related to bringing the content of the classes closer to the current situation and processes. Students positively assess involvement of the guest lecturers – field specialists in the implementation of study courses. The results of student surveys are analyzed; the expressed opinions are evaluated and taken into account in the improvement of the quality of studies.

FEEM student self-government plays a major role in ensuring communication between the students, academic staff and the program administration; it is active in all these processes and undertakes an annual evaluation of academic staff in identifying the best member of academic staff of the year. Every year in May, student self-government organizes “Pride of the FEEM” – a beautiful event for academic staff, where the best academic staff members are honored.

The opinion of graduates is very important in the development and improvement of the academic Master study program “Economics”. Therefore, every year graduate survey is conducted. The results of the surveys show the positive and negative aspects of the implementation of the program. Respondents express their views on the theoretical knowledge and practical skills acquired, the quality of infrastructure, the work of the administration of the program, etc. Unfortunately, it must be noted that the graduate responsiveness could have been higher:

- in 2014, 60% of graduates filled out the questionnaires;
- in 2015, 65% of graduates filled out the questionnaires;
- in 2016, 20% of graduates filled out the questionnaires;
- in 2017, 83% of graduates filled out the questionnaires;
- in 2018, 62% of graduates filled out the questionnaires;
- in 2019, 64% of graduates filled out the questionnaires.

In general, the theoretical and practical skills acquired during studies, as well as the time spent during studies, are viewed positively by graduates and they are satisfied with their choice to study at RTU. 77% of the 2019 graduates would recommend this study program to others. Graduates particularly highlight the following positive aspects:

- attitude of administration and records management office towards students is welcoming and positive;
- administration of the program listens to student opinions;
- the acquired theoretical knowledge and skills are useful for future activities;
- there is a good relationship among students and with the administration;
- academic staff are able to inspire in difficult times;
- academic staff are professional and able to give in-depth answers to student questions;
- good quality lecture rooms and equipment;
- information on the study process and study materials are easily accessible;
- schedule allows combining studies with work.

Graduates have made the following suggestions for improvement of the program:

- more attention should be paid to the development of practical skills;
- more group work should be used and more time should be spent on practical tasks;
- more real-life examples should be used;
- more guest lecturers should be invited.

When analyzing the results of the graduate survey, it should be noted that the answers tend to be very different; thus, it is difficult to find a particular solution that would suit everyone. For example, some students consider evening lessons to be exhausting. At the same time, a majority of students are very positive about being able to undertake full-time studies and combine them with work. For this reason, classes start on working days at 18:15. To improve the quality of the program, the views of graduates are taken into account. In the particular program, this is done by paying more attention to the improvement of teaching methods.

In 2019, the first foreign student completed the program. She highly appreciated the work of the administration and cooperation with it, as well as studies at RTU in general. To improve the curricula of the program, she suggested introducing more study courses related to economics and mathematics.

Administration of the study field maintains dialogue with employers as it helps to sustain and improve the quality of the offered study programs. Employers' representatives are involved in the Committee of the Study Field "Economics", which makes decisions on the content and changes to the program. Representatives of the State Regional Development Agency of the Republic of Latvia, Ministry of Finance of the Republic of Latvia and the Latvian Association of Local and Regional Governments have been members of the Commission. There are situations where the employer representatives in the Commission are graduates of the academic Master program "Economics". It gives a particularly important contribution, as in this case there is particularly high added value to the expressed opinion and proposals.

Recommendations from employers are very important for the improvement of the quality of the study program. Employers' opinions on the level of knowledge and competence of students in the program are regularly received by the program's administration when they write reference on student performance during internship. They have always been positive. Employers point out that Master students have good theoretical knowledge and sufficient practical skills, although sometimes difficulties may arise in dealing with particular issues. However, student desire and willingness to develop professionally are evaluated positively.

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.

In the current circumstances, the progress of the study process and its effectiveness are greatly influenced by the opportunity for students to increase their knowledge at the universities abroad. Participation in mobility programs allows students to extend their knowledge and competences, improve their communication skills with foreign students, and increase their foreign language skills. Unfortunately, students of the academic Master study program "Economics" rarely use the opportunity provided by Erasmus mobility program, because a majority of students work and they are afraid of falling out of the labor market for half a year. This is the main reason students mention when they are offered to participate in this program.

In the framework of the Erasmus program, students of the academic Master study program “Economics” have used this opportunity:

2013/14	1 semester	1 student	Spain	Universidad de Huelva
	1 semester	4 students	Portugal	Polytechnic Institute of Santarem
2018/19	1 semester	1 student	Germany	Friedrich-Alexandr Universitaet Erlagen - Nuernberg
	1 semester	1 student	Cyprus	Frederick University of Cyprus

RTU has established a stable and comprehensible system for the recognition of study courses acquired during mobility. Before leaving, the director of the study program individually confirms the list of study courses in a receiving university, which will be recognized as the counterparts of the study courses scheduled for the given semester in the sending university. If any changes occur during the mobility program, they are electronically confirmed. When returning from the mobility program, the study courses acquired in the receiving university are recognized on condition that the student has obtained a positive assessment, as attested by documents issued by the receiving university.

The flow of inbound foreign students at RTU within the framework of mobility program is higher. Students acquire study courses in English together with Latvian students. It is a very good practice that also benefits local students, because they get the opportunity to communicate with foreign students and improve foreign language skills. Foreign students acquire the following study courses of the academic Master study program “Economics”: Microeconomic Analysis, Macroeconomic Analysis and International Competition. Information on the dynamics of inbound mobility is provided in point 2.5 of the study field self-assessment report.

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.

Study programs of the Faculty of Engineering Economics and Management are implemented in a modern environment that meets the requirements. The study process is organized at RTU buildings in Riga: 6 Kalnciema Street, 1/1 Meža Street and Ķīpsala campus. 90% of the teaching, scientific and administrative work of RTU FEEM is carried out in the FEEM building on 6 Kalnciema Street, which was commissioned on 29 August 2008. All study rooms designated for the study process are

equipped with multimedia facilities – computer with Internet access and speakers, OHP, some rooms are also equipped with interactive boards. Since autumns 2019 HP Shareboard system was introduced in many lecture rooms, which allows projecting the notes written on the board to the screen. Therefore, it is possible to ensure modern and high quality study process.

There are the following premises in the building at 6 Kalnciema Street:

- 4 lecture rooms (120 seats, all equipped with multimedia facilities) which are used to organize lectures;
- 10 lecture rooms (up to 70 seats, equipped with multimedia facilities) are used for lectures and practical classes;
- 6 lecture rooms (from 20 to 40 seats, equipped with multimedia facilities) can be used mainly for practical classes, individual or group work, language studies;
- 3 computer rooms (86 seats, equipped with multimedia facilities).

Each member of academic staff has a personal computer and a well-equipped workplace.

In order to improve the learning environment at RTU, an ambitious project "RTU – City within a City" is currently being carried out, which envisions creation of the most advanced engineering study center in the Baltic region – student campus, which in the future will include RTU faculties, administrative buildings and Scientific Library, thus providing more convenient services.

Students studying at the program and the academic staff will have access to the comprehensive and modern RTU Scientific Library. RTU Scientific Library is the oldest university library in Latvia, whose strategy and aims are primarily related to the aims and tasks of RTU. Library provides subscription to more than 20 databases (see the list of all databases here: http://www.rtu.lv/content/view/388/1337/lang,lv/).

RTU Scientific Library was one of the first in Latvia to introduce RFID technologies, thus becoming a modern and contemporary university library. One of the most significant innovations that made the library more convenient for students is the self-service machine to take out and return books. This means that students no longer have to stand in line, and they can receive and return books without the librarian. In the library, students have access to the newest periodical publications, statistical materials, books, conference materials on economics and business. Every year, the library's funds are supplemented by both teaching and scientific literature and periodical publications used in the study process. For the needs of the study program, each year funds are allocated for the purchase of literature, and academic staff order the necessary publications.

Other elements of RTU infrastructure, such as canteens and cafeterias, copying facilities, student hostels, RTU sports and leisure centers, the swimming pool, and other facilities are available for the needs of the students and the academic staff. Vending machines selling snacks and drinks are installed in RTU premises.

The technological infrastructure of the premises is continuously updated, new resource rooms and study laboratory rooms are equipped, new office equipment, study literature and computers for the needs of the study process are purchased, and other activities are performed.

Currently, there are three computer rooms at the disposal of the Faculty with 86 equipped seats. Students of the study program "Economics" are provided with Microsoft Office, EViews and other software programs required for acquisition of the study program. All students and academic staff have the opportunity to use free WiFi network in all premises of RTU FEEM.

In academic year 2015/2016, six portable computers were purchased for the academic staff in order to provide a more convenient and modern working environment and to improve work quality. In academic year 2017/2018, two new monitors and two laser printers were purchased for the

academic staff. New dimming blinds were installed on the windows of academic staff rooms.

Students of the study field “Economics” mainly use the following databases: EBSCO, LETA, Science Direct, Scopus, Web of Science. Since 2018, students of the faculty have access to database Bloomberg Terminal. A special literature database has been developed for the needs of the study program which has been compiled in accordance with the suggestions and recommendations of the academic staff and the students. This database is available on 5 Paula Valdena Street, as well as using e-resources. The library has an overnight reading room, which is appropriately equipped, and is accessible to students after registration in ORTUS e-learning environment.

State budget subsidies and student tuition fees are used to finance the implementation of the study program. The information on the financial resources of the Master study program “Economics” is shown below:

Academic year	State budget subsidies, EUR	Tuition fees, EUR		Total funds, EUR	Costs per 1 student, EUR
		Tuition fees for local students, EUR	Tuition fees for foreign students, EUR		
2013/2014	56 535	996.00	-	57 531	2 800
2014/2015	38 765	-	-	38 765	2 800
2015/2016	40 860.86	7 045.20	-	47 906.06	3 419.43
2016/2017	47 917.93	7 780.80	-	55 698.73	3 419.43
2017/2018	47 104.88	4 449.08	5 537.53	57 091.49	3 573.89
2018/2019	49 078.85	150.00	10 782.07	60 010.92	3 741.08

Having analyzed the information it can be concluded that the state budget subsidies have been relatively stable, with the exception of the sharp fall in academic year 2014/2015, when the number of budget seats was reduced by 10 places. The volume of tuition fees for local students has been very unstable and inconsistent in the reporting period. The financial situation of the study program has improved due to enrolment of foreign students since academic year 2017/2018. Costs per 1 student over the reporting period have increased due to the improvement of infrastructure, as well as the overall increase in RTU costs, taking into account objective reasons (public utilities payments, building maintenance, etc.).

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).

Not applicable.

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.

14 academic staff members are involved in the academic Master study program “Economics”. The complete list of academic staff in the study field “Economics” with specified study program where they are involved is provided in Appendix of section II. In the implementation of the study program both RTU elected academic staff and guest lecturers and guest professors are involved. Compared to the beginning of the reporting period in academic year 2013/14, the number of academic staff has decreased. This is due to the changes in the list of Compulsory Elective study courses, which resulted in a reduction in the number of study courses and thus also in the number of academic staff. All members of the academic staff involved in the implementation of the study programs have a Doctoral Degree, including 6 Professors, 3 Associate Professors, 4 Assistant Professors. In addition there is 1 Assistant Professor at Professional Programs without a Doctoral Degree. Owing to her high level of competence and experience of analytical work at the Ministry of Economics, I. Skribāne has been invited by the responsible Professor to conduct study course “Theory of Economic Analysis”. Unfortunately, there are undesirable changes in the staff age structure – in almost all academic staff groups the average age has increased, except for Associate Professors where the average age has decreased. The changes in average age are presented in the Table below. In order to deal with this issue Doctoral students are involved in the study process as Professor Assistants, thus promoting the introduction of new teaching methods, as well as linking the study process with their scientific research. In such a way, the administration of the study program takes care of the renewal of the contingent academic staff with a Doctoral Degree. In pursuing this aim, the study field “Economics” has been involved in the European Social Fund Project No 8.2.2.0/18/A/017 “Development of the Academic Personnel of Riga Technical University”.

Changes in Academic Staff in Study Program

2013/2014			**2018/2019**		
	Number	Average age		Number	Average age
Professors	7	60.9	Professors	6	66.5
Associate Professors	4	65.2	Associate Professors	3	58
Assistant Professors	7	38.8	Assistant Professors	4	51

Assistant Professors at Professional Programs	1	33	Assistant Professors at Professional Programs	1	60
Total:		**19**		**14**	

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.

Highly qualified academic staff are involved in the implementation of academic Master study program “Economics”. All academic staff members involved in the implementation of the program have a Doctoral Degree, except for the Assistant Professor at Professional Programs who is a high class specialist in her field and works as analyst at the Ministry of Economics; the Assistant Professor at Professional Programs who works as Professor’s assistant; and the lecturer who conducts study course “Basics of Occupational Safety” that is not one of the fundamental courses of the given study program. The aim of administration of the program, by selecting and recruiting academic staff, is to maximize the effectiveness of the study program and to enable students to achieve the envisaged learning outcome.

The following elected academic staff are involved in the implementation of the study program:

Auziņa-Emsiņa Astra, Dr.oec., RTU FEEM Assistant Professor. Professional experience: 15 years of academic work experience at higher education institution. Scientific activities and research are also carried out for more than 15 years, specializing in economic and sectoral analysis, modelling of external trade, competitiveness and productivity, assessment of interindustry ties, development of macroeconomic, macroeconometric and multisectoral models, as evidenced by participation in scientific projects and research programs, participation in international scientific conferences and publications. Expert of Latvia Council of Science. Membership in industry associations – Board member of the Latvian Association of Econometrists, member of the International Input-Output Association, member of INFORUM modeling group, founder and member of the Association of Latvian Young Scientists, etc. Students master methods and solutions for economic and sectoral analysis and modelling, carry out practical modeling of macroeconomic processes, scenario development and forecasting. The latest and most up-to-date scientific studies and their results, topicalities in other countries are integrated in the study process.

Eriņa Jana, Dr.oec., assoc.prof. Professional experience: 9 years of academic work experience in a higher education institution. Scientific activity and research has been conducted for more than 9 years specialising in the field of financial services and calculations of costs of vocational and higher education certified by participation in scientific projects and research programmes, participation in international scientific conferences and publications. Expert of the Latvian Scientific Council, Acting Head of the Department of Innovation and Business Management

Ieviņš Jānis, Dr.oec., Professor. He has long-lasting experience of academic, scientific and administrative work at the university. He has been involved in a number of international scientific projects both as the project leader and/or researcher. He takes active participation in contract work. Furthermore, knowledge of the latest industry and scientific trends is gained in various local and international courses (e.g. Nordplus, Sweden), seminars, industry and scientific conferences. In the study process, students involved in different work groups, research projects and case studies develop and improve their skills in research and results analysis that ensure achievement of learning outcomes.

Oganisjana, Karine, Dr.paed. assoc. prof. Higher education in physics, English, secondary school and higher pedagogy. Therefore, assoc. professor has extensive interdisciplinary professional interests and research experience, which was obtained when implementing ESF and NRP research projects as a leading researcher or project manager in Latvia, as well as participating in international research projects as a member of ASEM (Asia Europe Lifelong Learning Research HUB) since 2011, as a member of the Management Committee of COST (European Cooperation in Science and Technology) since 2019, as an invited researcher in a project of the Malaysian Ministry of Education (2012-2014), etc. Karine Oganisjana is an LSC expert in economics and business, as well as in education sciences. Over 60 scientific publications in management, economics, education, research and related areas

Ozolzīle Gunārs, Dr.sc.soc., Associate Professor. Professional experience: since 1989 teaching social sciences at RTU (Sociology, Politology and Political System of Latvia) and other higher education institutions in Latvia (University of Latvia, Latvian Academy of Sport Education, Police Academy of Latvia, College of Business Administration and Institute of Social Technologies); since 2005 Chairman of the State Examination Commission at Bachelor and Master study program “Sociology of Organizations and Public Administration” at the Faculty of Economics and Social Development of University of Life Sciences and Technologies. From 1991 till 2018, he was a Researcher at market and public opinion research company Baltic Studies Centre Ltd. Research link with students is also ensured by scientific research work in projects funded by the Latvian Council of Science, the Ministry of Defence and the EU, participation in conferences and development of scientific publications. Research activities have mainly been linked to research into the stability and efficiency of the Latvian political system, as well as the possibilities for reforming individual political institutes. Such research contributes to increasing the quality of the implemented study courses and to ensuring links with national political processes. Regular methodological work – development of teaching tools and other methodological materials – to increase efficiency of study work.

Survilo Tatjana, Dr.oec., FEEM Associate Professor. Professional experience: research work at the Institute of Economics, Latvian Academy of Sciences and other research institutions for more than 20 years; Head of the Department of National Economy (4 years) at Riga City Latgale suburb municipality, as well as at RTU for nearly 25 years. Participation in scientific conferences and elaboration of publications ensure research component in work with students. Co-author of a scientific monograph on municipal development issues.

Šenfelde Maija Dr.oec., RTU Professor. Long-lasting experience of academic and administrative work at the university. Expert of Latvia Council of Science. Author of four issues of the textbook “Macroeconomics” and author of a number of scientific monographs in the field of economics. Active participation in scientific conferences for improvement of competences, professional advancement in different courses and seminars. Participation in the annual economic conferences organized by the Bank of Latvia, as well as in the “Expert Talks”. The experience and continued professional advancement ensure the ability to provide students with the necessary theoretical knowledge, as well as to inform students about the most topical challenges in macroeconomics, national economy, international economy and their potential solutions, which in turn develop

students' ability to assess economic, social and political processes in the world and their impact on the Latvian economy. Maija Šenfelde has participated in international projects.

Šteinberga Airisa, Mg.paed., Dr.psych., Institute of Humanities, Associate Professor. Education: Master Degree in Pedagogy, Doctoral Degree in Psychology, qualification of a teacher and psychodrama specialist. Professional experience: more than 25 years of teaching experience at RTU, conducting different study courses related to the field psychology (Psychology, Cognitive and Social Psychology, Educational Psychology, etc.), elaborating study programs, development and management of teacher training programs and courses for more than 10 years. Regular professional advancement as a psychologist and a psychologist consultant, as well as extensive academic experience, allows not only enriching the content of study courses but also diversifying lectures, practical classes and independent tasks. Research experience in joint projects with researchers from engineering institutes allows understanding and using examples and terminology understandable to engineering students.

Tatjana Tambovceva, Dr.oec, Dipl.ing., professor, expert in social sciences of the Latvian Scientific Council in the field of economics and business. Her research and academic interests are related to ecologically oriented management, project management in construction, sustainable development. Professor T.Tamboceva improves her professional qualification by participation in the ERASMUS mobility programme on a regular basis. Professor T.Tamboceva is the author of several scientific publications, co-author of books and monographs. The qualification of Prof. T.Tambovceva corresponds to the conditions of implementation of the study programme and the requirements of regulatory enactments, as well as ensures the achievement of aims and learning outcomes of the study programme and study course "Project Management in Construction Business and Real Estate Administration and Management".

Zigmunde Alīda, Dr.paed., Professor. She undertakes continuous professional advancement activities attending different courses and follows the latest studies and findings in pedagogy, by reading the latest publications, participating in conferences and training programs for promoting teachers' professional qualification. A good cooperation has been established with Kuldīga Technology and Tourism Technical School, where annual professional advancement seminars are organized. To gain theoretical knowledge and practical skills, in February 2019, a program for the development of professional competence of teachers "Transferable Skills for the Implementation of Competency-based Approach" implemented by Rolands Ozols from the Adult Non-Formal Education Centre of the Institute for Lifelong Learning and Culture "Vitae" was mastered. She is the author of several scientific monographs on the history of Riga Technical University.

A substantial contribution to the efficient achievement of learning outcomes of the program is made by the involvement of guest lecturers from abroad, as well as from Latvian Public administration institutions, banking and financial sector, etc. Information on inbound academic staff mobility is provided in section 3.6 of the attached Description of the Study Field.

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).

Not 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).

Not 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.

Academic staff of the study program are also actively involved in scientific research, which allows improving the quality of studies. The experience and knowledge gained allows improving the competences of academic staff, as well as enriching the discussions organized in the audience and providing students with knowledge of current industry challenges in the world.

For example, ***Professor I. Dovladbekova*** has participated in the State Research Program "Economic Transformation, Smart Growth, Governance and Legal Framework for the State and Society for Sustainable Development – a New Approach to the Creation of a Sustainable Learning Community" (2014 – 2017) and in the project "Latvian Heritage and Future Challenges for the Country's and Society's Sustainability and Solutions in International Context" (INTERFRAME-LV) (2018 – 2021), ***Professor M.Šenfelde*** has led INTERREG IVC project No 1097R4 "MICROPOL – Smart Work Centres in Non-metropolitan Areas" (2012-2014), as well as FLLP-2011 / 26 project "Optimization of National Development Planning Process", and has participated in the work group of INTERREG Europe project PGI00304, CLUSTERS3 - "Leveraging Cluster Policies for Successful Implementation of RIS3"; ***Assistant Professor I.Skribāne*** has participated in Latvian and international projects as a researcher and project leader, as well as in the development and monitoring of strategic documents for economic policy (Smart Specialization Strategy, Industrial Policy Guidelines, etc.) and in drawing the informative reports on Latvia's economic development, ***Associate Professor K.Kozlovskis*** has participated in eight international projects of various levels; ***Associate Professor G.Ozolzīle*** has worked as a researcher at market and public opinion research company Baltic Studies Centre Ltd. (1991 – 2018), and has conducted scientific research work in projects funded by the Latvian Council of Science, the Ministry of Defense and the EU.

Participation in the State Research Programs and international projects allows Professor M.Šenfelde and Professor I.Dovladbekova to successfully use the gained experience and competences in the implementation of study courses "Macroeconomic Analysis" and "Economic Policy". The study process is significantly improved if theoretical knowledge is supplemented with its manifestations in the real life. Assistant Professor I.Skribāne's experience gained in elaboration of the strategy of Latvia's economic policy allows supplementing the study course "Theory of Economic Analysis", because the strategy can be developed only on the basis of analysis of the existing situation.

Similar situation is observed within the study courses implemented by Associate Professor K.Kozlovskis, which are related to forecasting of economic processes and information systems. Graduates of an academic Master study program must also master study courses in humanities to expand their views. In this case, a great contribution is given by experience Associate Professor G. Ozolzīle gained in market and public opinion research, as well as participation in projects.

These examples demonstrate the scientific research potential of the academic staff and their professional qualification.

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 interrelation between the study courses and their logical, sequential acquisition are essential for achieving the results of the study program. A system has been established to promote cooperation between academic staff and university in general, which provides regular academic conferences and professional advancement seminars for the development of teaching methodology competences. For example, academic conference “Integration of Teaching Methodological and Scientific Work into the Study Process” organized on April 27, 2018. Such events promote professional advancement of academic staff and provide opportunity to cooperate more efficiently in reaching learning outcomes and improving study courses. The department responsible for the implementation of the study program reviews the study process and achieved results at the end of each semester. Student surveys on the quality of study courses play an important role in this process. Based on current situation analysis, solutions have been mutually found. For example, adjustments have been made to the structure of individual study courses to avoid partial overlapping and to improve the interrelation between study courses, or to include changes in the curricula of the study program have been proposed. In this case, the proposed changes are discussed and approved by the Committee of the Study Field “Economics” and directed for consideration by the Faculty Council.

The student-academic staff ratio within the academic master study program “Economics” on November 30, 2019 is 2:1. Such proportion allows to maintain good individual contact between students and the members of the academic staff, which is particularly important in the implementation of the academic master study program, where the focus is put on scientific research component. However, in fact, this ratio is higher because several study courses are implemented in flows with students from other programs, and academic staff do not work with only one specific study program.

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	Students statistical data RIME0.xlsx	Studējošo statistika RIME0.xlsx
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 with the state education standard RIMEO.docx	Atbilstība valsts izglītības standartam RIMEO.docx
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	Mapping of the study courses RIMEO.xlsx	Studiju kursu kartējums RIME0.xlsx
Curriculum of the study programme (for each type and form of the implementation of the study programme)	Curriculum RIMEO.docx	Studiju programmas plāns RIMEO.docx
Descriptions of the study courses/ modules	Description of study courses.zip	Studiju kursu apraksti.zip
Description of the Study Direction - Other mandatory attachments		
Sample of the diploma to be issued for the acquisition of the study programme.	Sample of the diploma.zip	Diploma paraugs.zip
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	RTU vienošanās ar LU un BA.zip	RTU vienošanās ar LU un BA.zip
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	01000-2.2.1-e_178.edoc	01000-2.2.1-e_178.edoc
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.	02000-2.2.1-e_62.edoc	02000-2.2.1-e_62.edoc
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	02000-2.2.1-e_61.edoc	02000-2.2.1-e_61.edoc
Sample (or samples) of the study agreement	Study agreements.zip	Studiju līgumi.zip
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.	02000-2.1.1_19 AIP atzinums.pdf	02000-2.1.1_19 AIP atzinums.pdf