CENTER FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

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EVALUATION REPORT

STUDY FIELD

TRANSPORT ENGINEERING (E12)

at

VILNIUS COLLEGE OF TECHNOLOGIES AND DESIGN

Expert panel:

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2. **Prof., Dr.Sc.Eng. Irina Jackiva (Yatskiv),** *academic,*
3. **Prof. Dr. Artūras Keršys,** *academic,*
4. **Mr Edmund Lisovski,** *representative of social partners',*
5. **Mr Gytautas Urbonas,** *students' representative.*

Evaluation coordinator -

Ms Ona Charževskytė-

Report language – English

Study Field Data

Title of the study programme	Technical Maintenance of Automobiles	Railway Transport Engineering
State code	6531EX025	6531EX021
Type of studies	Higher education college studies	Higher education college studies
Cycle of studies	First	First
Mode of study and duration (in years)	Full-time 3 years Part-time 4 years	Full-time 3 years from 2012 to 2018 Part-time 4 year from 2012 until now
Credit volume	180	180
Qualification degree and (or) professional qualification	Professional Bachelor of Engineering Sciences	Professional Bachelor of Engineering Sciences
Language of instruction	Lithuanian	Lithuanian
Minimum education required	Secondary education	Secondary education
Registration date of the study programme	30 August 2002	1 February 2012

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I. INTRODUCTION

1.1. BACKGROUND OF THE EVALUATION PROCESS

The evaluation of study fields is based on the Methodology of External Evaluation of Study Fields approved by the Director of Centre for Quality Assessment in Higher Education (hereafter – SKVC) 31 December 2019 Order No. V-149.

The evaluation is intended to help higher education institutions to constantly improve their study process and to inform the public about the quality of studies.

The evaluation process consists of the main following stages: *1) self-evaluation and self-evaluation report prepared by Higher Education Institution (hereafter – HEI); 2) visit of the review team at the higher education institution; 3) production of the evaluation report by the review team and its publication; 4) follow-up activities.*

On the basis of external evaluation report of the study field SKVC takes a decision to accredit study field either for 7 years or for 3 years. If the field evaluation is negative such study field is not accredited.

The study field is **accredited for 7 years** if all evaluation areas are evaluated as "exceptional" (5 points), "very good" (4 points) or "good" (3 points).

The study field is **accredited for 3 years** if one of the evaluation areas was evaluated as "satisfactory" (2 points).

The study field **is not accredited** if at least one of evaluation areas was evaluated as "unsatisfactory" (1 point).

1.2. THE REVIEW TEAM

The review team was completed according to the Experts Selection Procedure (hereinafter referred to as the Procedure) approved by the Director of Centre for Quality Assessment in Higher Education on 31 December 2019 Order No. V-149. The Review Visit to HEI was conducted by the team on *14/12/2020.*

Prof. Dr.-Ing. Haldor E. Jochim, (team leader)
Prof., Dr.Sc.Eng. Irina Jackiva (Yatskiv), *academic,*
Prof. Dr. Artūras Keršys, *academic,*
Mr. Edmund Lisovski, *representative of social partners',*
Mr. Gytautas Urbonas, *students' representative*.

1.3. GENERAL INFORMATION

The documentation submitted by the HEI follows the outline recommended by the SKVC. Along with the self-evaluation report and annexes, the following additional documents have been provided by the HEI before, during and/or after the site-visit:

No.	Name of the document
1.	Individual statistical data of college graduates
2.	Film about the equipment of the laboratories and other teaching resources.

1.4. BACKGROUND OF STUDY FIELD/STUDY FIELD PLACE AND SIGNIFICANCE IN HEI

General information about the significance of the study field:

Transport Engineering is an important engineering field in Lithuania, for various reasons.

1. Motor-cars (automobiles) have been a vital means of individual transport for many decades. Private car ownership is high with a tendency to increase further with rising income. Thus the engineering of motor-cars has become a major branch of mechanical engineering.

2. On a national and regional level, the technical service and repair of motor-cars has been gaining importance due to the rising number of cars. Well-trained specialists in this field are in great demand.

3. Taking into account the challenges by climate change it is obvious that the technology of motor cars must change in due course. Apart from becoming more efficient, the technology will have to move towards alternative means of energy fast. That change requires a huge amount of new thinking, resources and equipment in teaching and research.

4. Lithuania is the main transit country in the Baltics. The share of transport-related business is higher than the international average in this country. That is especially the case in goods traffic, thus leading to special attention to this part of automotive engineering when analysing study programmes and research.

5. If climate change is to be slowed down, the railways must be brought into a position to take a greater share of the traffic. Since Lithuania is an important transit country, that is of particular importance in this country. To this end, railway engineers are going to become a sought-after position and must be trained in sufficient numbers and good quality.

Information about the role of the HEI:

Vilnius College of Technologies and Design (VCTD) is a higher education institution that performs first cycle studies.

Vilnius College of Technologies and Design offers 16 study programmes in 11 study fields and at three faculties (Design, Civil Engineering and Technical Faculty). Studies from the field of

engineering sciences dominate, making the college one of the largest colleges in Lithuania with an engineering focus.

During the assessment period, three study programmes Technical Maintenance of Automobiles, Railway Transport Engineering and Rolling Stock Operation were conducted in the study field of Transport Engineering. Taking into account a decreasing number of applicants and for optimisation of the study programmes, applicants have no longer been admitted to the Rolling Stock Operation programme since 2016, so that this programme was not evaluated. Since 2019, the study programme in Railway Transport Engineering has been running in part-time mode only. This study programme is the only college study programme in Lithuania in which railway transport engineering specialists are trained in management, operation and organisation of railway transport.

II. GENERAL ASSESSMENT

The Transport Engineering study field at VCTD is given **positive** evaluation.

Study field and cycle assessment in points by evaluation areas.

No.	Evaluation Area	Evaluation of an area in points*
1.	Study aims, outcomes and content	4
2.	Links between science (art) and study activities	4
3.	Student admission and support	4
4.	Studying, student performance and graduate employment	4
5.	Teaching staff	4
6.	Learning facilities and resources	5
7.	Study quality management and publicity	4
	Total:	**29**

*1 (unsatisfactory) - there are essential shortcomings that must be eliminated;
2 (satisfactory) - meets the established minimum requirements, needs improvement;
3 (good) - the field develops systematically, has distinctive features;
4 (very good) - the field is evaluated very well in the national and international context, without any deficiencies;
5 (exceptional) - the field is exceptionally good in the national and international context/environment.

III. STUDY FIELD ANALYSIS

3.1. STUDY AIMS, OUTCOMES AND CONTENT

Study aims, outcomes and content shall be assessed in accordance with the following indicators:

3.1.1. *Evaluation of the conformity of the aims and outcomes of the field and cycle study programmes to the needs of the society and/or the labour market (not applicable to HEIs operating in exile conditions);*

(1) Factual situation

Information from SER (p. 6-7):
The automotive industry is of strategic importance to the European economy with about 12 million people working in this sector and generating 4% of the GDP. According to the European Commission, this industry is the largest private investor in research and innovation. About EUR 30 billion are invested in this sector every year, a sector soon to be developed by equipment with new fuel technologies and brought to higher energy efficiency. On the other hand, the existing railway infrastructure is to renewed and improved as well, creating many new jobs in the region.

Specialists of Transport Engineering study field are trained to work in the transport sector. Graduates of Technical Maintenance of Automobiles study programme work in vehicle maintenance or service companies, car technical inspection companies, companies that perform maintenance of vehicles of logistic companies, traffic supervision organisations, insurance companies (such as vehicle damage experts), and vehicle-sale companies. Railway Transport Engineering specialists work in railway companies and traffic management systems, manage the maintenance of traction rolling stock, prepare technological projects and technical documentation for railway infrastructure and facilities. Graduates of both study programmes can pursue higher education at universities.
After cancellation of the study programme Rolling Stock Operation, the number of applicants to the study programmes of the study field did not decrease and was divided between the other two programmes of Transport Engineering study field. In view of the market needs for the demand for specialists of a wider field, narrow specialisations have been abandoned in the study programmes.

Information from interviews:
Since there is a lack of transport engineers in the labour market, the college offers transport engineers in the two fields of automotive engineering and railway engineering. The trend towards sustainable transport supports railway engineering and new subjects, special subjects and topics in final papers in both programmes.

Among the new contents of the Railway Engineering programme are microprocessor systems, traffic management technology and electric rolling stock.

The employers interviewed regard the programme as successful and fulfilling their needs.

(2) Expert judgement/indicator analysis

The study programmes in the study field of Transport Engineering – Technical Maintenance of Automobiles and Railway Transport Engineering – correspond to the public and labour market needs. The programmes are executed and systematically updated following the national and international strategic documents and plans governing the policy and development of transport competition and sustainability. The aims and outcomes of the programmes are based on the objectives set out in the National Programme on the Development of Transport and Communications, namely, related to promotion of the use of vehicles powered by alternative energy resources by developing the necessary infrastructure, conducting the analysis of the existing labour market, and implementing important international transport and communication infrastructure projects (Rail Baltica, etc.) according to the development trends.

As a result of monitoring of the public and labour market needs, the organizers of the study programmes update the programme content and learning outcomes accordingly. Upon introduction of the study subjects Sustainable Development, Sustainable Transport, Sustainable Environment and Human Safety, greater attention has been given to the learning outcomes focused on the assessment of the public and environmental effect of engineering solutions, understanding of the responsibility for the engineering activity results, realization of the ethical, environmental, economic, and commercial circumstances of the engineering activity. The importance and timeliness of the programme update is reflected in the introduction of the study subjects such as Computer Design, Alternative Energy Resources for Automobiles, Project Management, Traffic Engineering, Software Applications.

In the assessment of the uniqueness of the learning outcomes under the field programme, it should be noted that the learning outcomes of the both study programmes in the field under assessment are the same and identical to the learning outcomes of the college studies under the Transport Engineering field listed in the Description of the Group of Engineering Study Fields. This aspect requires correction: the content of the learning outcomes of the programmes can and must reflect the specificity of the study programmes and the knowledge and skills gained within the framework thereof.

The existing coherence between the programme content and qualification awarded enables the specialists prepared under the Transport Engineering study field to work in the transport sector. The graduates awarded with the vocational Bachelor of Engineering Sciences degree are employed at the vehicle maintenance or service companies, vehicle technical inspection companies, transport service companies providing services for the logistic companies, traffic handling organisations, as vehicle damage experts at insurance companies, and at vehicle and vehicle component dealer companies. The specialists of Railway Transport Engineering are employed at railway companies, in railway traffic management, supervise the maintenance works on traction units, traffic management systems, develop the process projects on traffic management

systems, rolling stocks, railway stations and the technical documentation. Graduates of both study programmes have the possibility to seek higher university education degrees by studying at universities – the teachers provide consultations and support the students in appropriate preparation for the Master degree studies, at the students' request.

Following the decision to abandon the Rolling Stock Maintenance programme, the number of the study programmes delivered under the Transport Engineering study field is considered to be rational in view of the demand for and profile of the automobile and railway transport specialists and on the facilities and human resources available to the HEI.

3.1.2. *Evaluation of the conformity of the field and cycle study programme aims and outcomes with the mission, objectives of activities and strategy of the HEI.*

(1) Factual situation

Information from SER (p. 7):
The mission of the College is as follows: "Vilnius College of Technologies and Design is your partner in the creation of sustainable society. We train responsible specialists, members of sustainable society in the fields of engineering and design. We make research and technological development results accessible and useful to the general public and business".
The self-evaluation report supplements this general goal with the more specific goal 'to create conditions for a person to acquire high- quality college education that meets the needs of the Lithuanian economy and the society and […] corresponds to the level of science and the latest technologies. The goal of study programmes of Transport Engineering study field is to prepare competitive, highly qualified transport engineering specialists who are able to work independently and apply the latest technological knowledge in the field of Transport Engineering, as well as independently make technical decisions, successfully work in competitive market conditions and improve during professional activities and for the labour market'.
The sub-goal to 'update the content and didactics of the study programmes ensuring career perspectives of graduates' is reported to be implemented through the "Compliance of Learning Outcomes with Strategic Documents of Relevant Sectors and Relevant Goals of United Nations Sustainable Development" document. As an example, the SER mentions that the new generation of European Rail Traffic Management Systems (ERTMS) has been added to the programme in the 'Microprocessor-Based Traffic Control Systems' module of the study programme Railway Transport Engineering. Another example cited is the 'Alternative-Energy Automobiles' module, which provides students with knowledge about electric and hydrogen-powered cars and has been added to the study programme Technical Maintenance of Automobiles.

Information from interviews:
The outcomes are identical for both programmes, according to the SER.

The college asserts that the students' knowledge of English fulfils its expectations.

(2) Expert judgement/indicator analysis

The aims of the Transport Engineering study field and programmes (to prepare the competitive, highly qualified specialists of transport engineering, capable of independent work and application of the most recent technological knowledge in the field of transport engineering, independent technical decision making, successful work under the competitive market conditions, and professional development, for the labour market) are in line with the mission, objectives of activities and strategy of the HEI.

In view of the emerging global changes on the labour market and constantly varying business demands, the aims and outcomes of the field programmes are focused on the perspective of the industry needs and sustainable development goals as well as on the R&D activity contributing to the sustainable development of the society. The correlation of the aim of the study programmes and the aim of the strategic activity plan (providing competitive ability to the HEI in the context of the country's sustainable development) is evidenced by the relevant changes in the content and didactics of the study programmes securing career prospects for the graduates (new topics and modules enabling the students to learn about the railway traffic management systems and electricity- and hydrogen-powered vehicles, master the aspects of traffic safety and efficiency and sustainable development and sustainable environment models).

3.1.3. *Evaluation of the compliance of the field and cycle study programme with legal requirements;*

(1) Factual situation

Information from SER (p. 8-9, Annexes 1, 3 and 9):
The 180-credit programme Technical Maintenance of Automobiles from Transport Engineering study field is conducted in full-time and part-time study modes and the 180-credit study programme Railway Transport Engineering from 2019 is conducted in the part-time study mode only.
The plan of full-time studies is set out over three study years, part-time studies stretches over four study years. Learning outcomes, volume of studies in credits and volume of contact work specified in programmes are the same regardless of the mode of studies. The intensity of full-time studies is 60 credits per year. The intensity of part-time studies is no more than 45 credits per year.
The curriculum designs of the study programmes in the Transport Engineering field – Technical Maintenance of Automobiles (full-time (3 years) and part-time (4 years) study modes) and Railway Transport Engineering (part-time study mode) are in line with the General Requirements on Execution of the Studies: the total volume of the programmes is 180 credits (minimum 180 required), 153 credits (minimum 120 credits required) have been allocated to achieving the learning outcomes in the study field (including practice placement and final thesis preparation), 30 credits in total (minimum 30 credits required) have been allocated to the practice placements. The study programmes are completed by assessment of the graduates' competencies during the final thesis (project) defence allocated with 12 credits (minimum 9 credits required). The free electives available under the study programmes for the students comprise 9 credits. The volume of the general college study subjects is 15 credits.

(2) Expert judgement/indicator analysis

The aims and expected learning outcomes under assessment and provided under the study programmes in the Transport Engineering field have been formed using five structural elements (knowledge and application thereof, research abilities, special skills, social skills, and personal skills), are in line with the Description of the Group of Engineering Study Fields and requirements applicable to the first-cycle college studies. The level of complexity of the learning outcomes conforms to the level 6 qualification requirements under the European and Lithuanian Qualifications Framework for higher education. The studies are focused on preparation for professional occupation in the transport field, enabling acquisition of the R&D-based qualification.

By assuring the close link between the theoretical materials delivered under the subjects and practical classes as well as applying flexible (including remote) teaching and learning methods and techniques, the subjects studied play an important role in achievement of the programme aims and successful implementation of the learning outcomes. The content and description of the study subjects are in line with the requirements applicable to the college and first-cycle studies, and the programme volume is sufficient in view of the expected learning outcomes.

3.1.4. *Evaluation of compatibility of aims, learning outcomes, teaching/learning and assessment methods of the field and cycle study programmes.*

(1) Factual situation

Information from SER (p. 9, Annex 3):
According to the SER, the learning outcomes of each subject take into account the results of the study programme and are mutually coordinated. The learning outcome of a specific subject provides necessary knowledge and skills required to achieve a certain result of the study programme.
The appropriate link between the study programme outcomes and subject learning outcomes has been reflected in the self-assessment report (Annex 3), while the conformity of the teaching, learning and assessment methods with the learning outcomes has been described in greater detail during the discussions with experts, upon submission of additional materials for assessment, namely, the descriptions of study subjects Alternative Energy Automobiles, Automobile Electrical Equipment, Engines, Intelligent Automobile Technologies, Railway Rolling Stock, Railway Track and Station Equipment, Railway Traffic Organization and Technological Practice 2.

Information from interviews:

The additional information submitted and discussions with the teachers have shown that systemic approach and process providing relevant links between the learning outcomes, teaching/learning, and assessment methods (diversity and appropriateness)

prevail in development, attestation and updating of the study subjects and programmes. In response to the question of whether the students' knowledge and skill assessment was performed on the basis of pre-established criteria familiar to the students (i.e. the pre-established set of criteria) asked during the meetings with the experts, the teachers, students, and authors of the self-assessment report named the assessment system and/or study outcome achievement/assessment criteria applied in the models and also provided in the descriptions of the above study subjects.
The assessment criteria are explained to the students at the beginning of each course.

(2) Expert judgement/indicator analysis

To assure unbiased and fair assessment of the students, it would be reasonable to formulate and present the assessment criteria reflecting the evidence used by the teacher in assessment of the knowledge and skills acquired by the student (by identifying their weight, i.e. effect on the assessment mark) in the assessment forms provided for under the study modules. For example, where "laboratory work report, defence" is indicated as the assessment form/method under the module, the assessment criteria could be: preparation for implementation of the work, analysis of the results generated and comparison to the theoretical material, validity and presentation of the results, formulation and validity of the conclusions. In another case, for example, "verbal illustrated presentation", the potential set of assessment criteria would be: presentation structure (logical sequence and compliance with it), introduction (clarity of the presentation aim and objectives), presentation and depth of the content (demonstration of the essence by provision of the appropriate examples, facts, statistics, comparison with other authors' works, following the main topic throughout the presentation, compliance with the presentation duration requirements), conclusions (generalisation of the topic and key points presented or presentation of recommendations), quality of the presentation (volume of the text presented, legibility of the text, clarity of the charts, absence of grammar and style mistakes), language (clear, correct language, professional language used).

3.1.5. *Evaluation of the totality of the field and cycle study programme subjects/modules, which ensures consistent development of competences of students.*

(1) Factual situation

Information from SER (p. 10):
The content of the programmes consists of general study subjects, subjects of study fields and special subjects.
General study subjects are designed to provide 'fundamental knowledge of worldview, philosophical and historical foundations of physical and technological sciences'. 'The aim is for future professionals to have a good understanding of their social responsibility and a better understanding of the factors involved in the decision-making process. Skills of the speciality foreign language are improved'. Sociology, Psychology and Sustainable Development can be chosen as alternatives.

Study field subjects are the 'core and largest part of the programme', covering fundamental knowledge of Mathematics, Physics, General Electrical Engineering and Engineering Mechanics. Students also study subjects of Social Sciences Engineering Economics, Project Management and Law.
Additional subjects in the study programme Technical Maintenance of Automobiles are Automobile Construction Engines, Technical Maintenance of Automobiles, Automobile Diagnostics, Automobile Theory, Automobile Electrical Equipment and Alternative Energy Automobiles. They are 'intended for the acquisition of special knowledge and skills in the field of automobile transport engineering'.
Additional subjects in the study programme Railway Transport Engineering are Railway Rolling Stock, Traction Theory Rolling Stock, Microprocessor-Based Traffic Control Systems, Railways & Station Equipment, Station Technology Design, Railway Traffic Organisation and Communication & Technical Diagnostics Systems. They are intended for the acquisition of special knowledge and skills in the field of railway engineering.
Special study subjects are designed to provide additional knowledge related to the speciality being studied. 'Students can choose and study three optional course units, which are spread across three semesters. The content of many of optional course units offered is related to the study field of Transport Engineering.' Optional course units are a Science Workshop Project and an Interdisciplinary Project, which are to promote a broader engineering approach and combine several disciplines such as physics, mathematics, electrical and automation engineering, mechanical engineering, and other knowledge, skills, and their application.
Practical study work and internships,' the purpose of which is to develop students' practical skills and apply the acquired theoretical knowledge in practical activities as well as improve the organisational skills required for a specialist of Transport Engineering study field' have 30 credits. Practical study work takes place in the college laboratories, while internships take place in industry.
In the last year of studies, there is a 'Final Practice', the purpose of which is to analyse the activities of a transport company and collect data for the preparation of the thesis, and to perform applied research related to the topic of the thesis. It takes place in companies whose activity is similar to the chosen topic of the thesis. 'The thesis is prepared according to the topic chosen by the student, which must correspond to the sought study results.'

Information from interviews:
The experts inquire about study trips as an element of teaching, since they are not mentioned in the self-evaluation report. The teachers emphasise that study trips are conducted frequently.

(2) Expert judgement/indicator analysis

The subjects and modules are positioned in the programmes consistently, the subjects and content/topics thereof do not overlap. The analysis of the logical relations and sequencing of the study subjects has shown coherent positioning of the study subjects by semesters. The subjects which provide fundamental knowledge, understanding and abilities forming the foundation for further studies and research are delivered in the first semesters. The modules delivered during subsequent semesters build on the knowledge and abilities gained during the previous modules. This enables the students

to successfully achieve the learning outcomes. The logical relations and sequencing of the part-time study subjects are similar to the full-time studies, but spread throughout the four-year period (8 semesters).

3.1.6. *Evaluation of opportunities for students to personalise the structure of field study programmes according to their personal learning objectives and intended learning outcomes.*

(1) Factual situation

Information from SER (p. 10):
The study programmes are designed in such a way that during the study period students can choose optional course units from various alternatives. According to the SER, the first year includes alternative optional course units such as Sociology, Psychology and Sustainable Development. In the second and third year, students can choose optional course units from several subjects. A total of nine optional course units are offered. If there is a need to acquire additional knowledge, students can study additional subjects from other study programmes. Students of Transport Engineering can also individualise their studies by utilising the Moodle remote studying environment or the Microsoft Teams software.

(2) Expert judgement/indicator analysis

Students of the programmes in the Transport Engineering field have the opportunity to personalise the studies by selecting alternative or free elective subjects. In the first year, the students of the study programmes Technical Maintenance of Automobiles and Railway Transport Engineering are offered 3-credit alternatives in the field of Social Sciences (Sociology, Psychology, and Sustainable Development). In the second and third years, three 3-credit special study subjects are elected freely in line with the personal learning objectives and intended learning outcomes from the list of 9 free elective subjects offered. Free electives Scientific Workshop Project and Interdisciplinary Project create conditions to gain knowledge and abilities relevant in the interdisciplinary engineering and research activity.

The responsible and non-formal approach towards the students' needs to personalise their studies upon their self-assessment of their own abilities to pursue the studies in the Engineering Sciences and the intentions to continue into the Master degree studies should also be noted. The existing practice of independent studies using the distance learning environment Moodle and/or Microsoft Teams was evidenced by the cases mentioned during the meetings with the expert group, namely, the cases where the students seeking additional knowledge chose additional subjects and consulted with the teachers on individual/engineering projects and implementation of the assignments.

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knowledge chose additional subjects and consulted with the teachers on individual/engineering projects and implementation of the assignments.

3.1.7. *Evaluation of compliance of final theses with the field and cycle requirements.*
(1) Factual situation

Information from SER (p. 10):
Theses are prepared in accordance with internal papers of the college. Students are acquainted with the procedure for the preparation of theses and methodological recommendations approved by the Study Programme Committees.
Theses are evaluated by the Qualification Commission, which is made up of at least five members, including representatives of social partners. The commission may also include lecturers from other higher education institutions. Reviewers with pedagogical and/or production experience are appointed by Order of the Director of the College.
The defence of theses is evaluated by each member of the Qualification Commission separately. The final grade of the thesis is determined in a closed meeting of the Qualification Commission, after evaluating the grade of each member of the commission, the supervisor of the thesis and the reviewer.
Each lecturer supervises a maximum of eight students simultaneously.
Students of the study field of Transport Engineering may prepare theses commissioned by companies. Companies may provide a list of topics, offer students to analyse specific problems at the company during the internship, provide financial support for the implementation of an ongoing project, or commission technical calculations or research required by the company. The SER provides a list of theses commissioned by external partners.
Students who have chosen the thesis topic themselves coordinate its topic and objectives with the supervisor. The content of the thesis topic must correspond to the studies of Transport Engineering. During the thesis work, students select design methods and apply them in technological processes, apply analytical and modelling methods, solve qualitative and quantitative engineering tasks in the field of transport engineering, perform applied research, process the results and devise conclusions.
The college is planning to intensify joint activities of the College and social partners in the future to increase the number of commissioned theses.

Finally, the SER states that surveys of social partners have revealed that graduates who have completed the study programmes meet the requirements required for a specialist of technical maintenance of automobiles and railway transport engineering.

Information from interviews:
As the SER states that 'students of the study field of Transport Engineering prepare theses according to the company's orders...', the panel wonder how students are prepared for conducting studies that come directly from companies.
The college points out that all theses are conducted in cooperation with industry in some way and 30% are directly commissioned by industry. Students are prepared individually irrespective of the nature of the thesis.
For training in scientific writing, there is an Applied Research module with an academic-paper assignment.

(2) Expert judgement/indicator analysis

The topics and content of the final theses in the Transport Engineering field are associated with the design and modernisation of the automobile service companies, automobile repair, maintenance technologies, equipment design, modification of the internal combustion engines for operation using alternative fuels, organisation of the traffic of railway stations and lines, access roads and goods yards/stations, process design, design/process implementation of the railway traffic management systems, etc. In preparation of the final theses, the students select the design methodologies and apply them to design of the technological processes, employ analytical and modelling methods, solve the qualitative and quantitative engineering tasks in the field of Transport Engineering, and conduct applied research.

The strategy of the organizers of the study programmes to engage social partners in the process of preparation of the final theses is assessed positively. The companies commission works on the relevant topics in various forms: provide the list of the final theses topics, offer the students to analyse specific issues encountered at the company during the final practice placement, provide financial support for implementation of the ongoing project, commission technical calculations or research necessary for the company.

Students' final projects commissioned by the social partners and put to practice are the successful examples to be followed: "Vaidotai Railway Station Throughput Improvement Project", "ES-1 Railway Traffic Organisation Project" and "Project on Improvement of Throughput of the Palemonas Reception-Departure Track Yard" (commissioned by public company Lithuanian Railways); "Electric Kart Frame Structure Project", "Electric Kart Body Elements and Wings Project", "Electric Kart Engine Power System Project", "Project on the Use of Electric Motor PMACG4845 in a Kart" (Experimental development project "Elektrinis kartas" conducted in cooperating with the Lithuanian Karting Federation, company Energus Power Solutions, UAB, and Audatex Baltics, UAB); "Investigation of the Dynamic Characteristics of the Three-Wheeler Prototype with Two Seats" (company Rimti ratai, MB), and others.

Nevertheless, it would be reasonable to continue developing this practice for avoidance of duplication of the topics in the future (which is possible in case of a large number of students).

Recommendations for this evaluation area:

– The learning outcomes of both programmes, Technical Maintenance of Automobiles and Railway Transport Engineering, are the same and identical to those named in the Description of the Group of Engineering Study Fields. However, the content of the learning outcomes can and must reflect the specificity of the curriculum, acquired knowledge and skills.
– To assure unbiased and fair assessment of the students, it would be reasonable to formulate and present the assessment criteria reflecting the evidence used by the teacher in assessment of the knowledge and skills acquired by the student (by

identifying their weight, i.e. effect on the assessment mark) in the assessment forms provided for under the study modules.

– For the purpose of diversity of the final project topics and their closer relation to the engineering activity, it is important to seek more intensive cooperation with the social partners, namely with the latter proposing ideas with the latter for the projects or commissioning the topics relevant for company operations.

3.2. LINKS BETWEEN SCIENCE (ART) AND STUDY ACTIVITIES

Links between science (art) and study activities shall be assessed in accordance with the following indicators:

3.2.1. *Evaluation of the sufficiency of the science (applied science, art) activities implemented by the HEI for the field of research (art) related to the field of study.*

(1) Factual situation

Information from SER (p. 14-15):

The self-evaluation report quantifies the value of the work conducted by the college from externally commissioned activities at around 14,000 EUR in the field of Transport Engineering. The college also receives funding for research, experimental development and the development of artistic activities, the sources of which are not clearly stated in the report. The share allocated to Transport Engineering is also not given. These funds were used for sophisticated experimental student projects of various kinds.

The college has established a Science Foundation, intended for the support of scientific activities and experimental development at the college. Its funds support lecturers and students in carrying out scientific work and disseminating scientific knowledge in international databases and conferences. During the evaluation period, EUR 30,000 were allocated to Transport Engineering.

The self-evaluation report explains a number of projects the college has undertaken in research activities on p. 15. The college cooperates with external partners, various Lithuanian and foreign companies and research institutions (shown in Table 2 on p. 16-17).

According to the SER, the number of researches conducted and published in the study field of Transport Engineering increased significantly during the assessment period. Some of the research results have been published in publications with an impact factor citation index belonging to Q1, Q2 and Q3 quartiles. For example, thirteen articles were published in Clarivate Analytics Web of Science International database, seven of which have a citation index impact factor, and twenty articles were published in other peer-reviewed periodicals and one-time scientific publications, as well as in conference materials. Other work was presented on scientific conferences.

The College plans more applied scientific and experimental activities, which are reflected in the College's integrated development strategy and the College's strategic action plan. This plan envisages the Study and Research Development Programme. The SER mentions the funds of this programme but does not give information about the funds allocated specifically for Transport Engineering.

Information from interviews:

External teachers are either from universities or experienced practitioners from companies.
Some foreign universities (Žilina, Tallinn) are foreign partners. There is good cooperation with VGTU and KTU local universities, too.

(2) Expert judgement/indicator analysis

There is a good collaboration network with research entities and businesses, constituting the base for the future development of study directions. Research topics devoted to Road Safety, Railway design, track performance etc. are mentioned by both staff and students.
The college shows a clear and transparent motivation system for staff involvement in scientific research including financial support and special awards to staff and students. First results of the application of this system appeared in the evaluation period; the strategy includes visible measures for research monitoring as well as plans for financial support in future.

3.2.2. *Evaluation of the link between the content of studies and the latest developments in science, art and technology.*

(1) Factual situation

Information from SER (p. 18):
The self-evaluation report refers to the latest research as well as technological achievements in the field of Transport Engineering being integrated into the study subjects. Lecturers learn about the latest technologies used in car production by participating in the training of the latest models and technologies used by the strategic partner Toyota Baltic AS and when innovative railway network technologies are implemented in the Lithuanian Railways).
Taking into account the application of new technologies in the transport sector, rapid growth of vehicles using renewable energy sources and the implementation of innovative systems, the following new subjects are included in the study process: Alternative Energy Automobiles, Intelligent Automotive Technologies, Electric Traction Rolling Stock, etc.

Information from interviews:
As the last evaluation recommended that 'the college should develop strategies for the case that EU regulations change the market of railways in a way that the Lithuanian Railways may cease to exist in its current form' (SER p. 13), the panel inquire about the current state of affairs in this respect. The college points out that there is collaboration with private companies; the number of students affected is still small but growing. Rail Baltica will bring new companies to Lithuania, so that the number of private companies is set to rise.

(2) Expert judgement/indicator analysis

The directions of scientific research are relevant to the study direction; the mechanisms for updating the content of the programme are based on staff research; new technologies development exist and are mentioned in staff interviews.

***3.2.3**. Evaluation of conditions for students to get involved in scientific (applied science, art) activities consistent with their study cycle.*

(1) Factual situation

Information from SER (p. 18-19):
Students of the study field of Transport Engineering conducted various studies of the study field of Transport Engineering and presented their results in 36 presentations at various student scientific-practical conferences. Together with the lecturers, students published six scientific articles in international database publications and peer-reviewed scientific periodicals. Two students of Transport Engineering study field won and implemented projects from the European Union Funds Investment Operational Programmes of 2014–2015. Based on the results of these researches, students prepared scientific publications and theses. The SER refers to several examples of these activities.
Every year, the Technical Faculty organises student scientific practical conferences, where students present their research and discuss a variety of research-related issues.
Additionally, experimental development projects are carried out in the study field of Transport Engineering. They are conducted by students and lecturers of different fields of study. The SER refers to 15 projects and specifies a couple of them, such as the Student Formula competition and an Electric Go-Kart project.
In 2019, 30% of students of the programmes participated in research/applied scientific activities (Table 3).

Information from interviews:
Students are prepared for applied research through dedicated courses and supervision, and some scholarships. Research is presented in conferences, research in the college's own laboratories, but also in VGTU laboratories.

(2) Expert judgement/indicator analysis

Conditions for the involvement of the students in scientific research exist and consist of different mechanisms incl. annual research conferences. The students mentioned their involvement in different research projects and especially stressed the annual research conference.

Recommendations for this evaluation area:

- The possibilities of cooperation that may attract more opportunities for the students for applied research projects and for expanding opportunities for final diplomas should be explored more.
- The role of research methods should be emphasized more in the programme.

3.3. STUDENT ADMISSION AND SUPPORT

Student admission and support shall be evaluated according to the following indicators:

3.3.1. *Evaluation of the suitability and publicity of student selection and admission criteria and process.*

(1) Factual situation

Information from SER (p. 20-22):
Admission for state-funded college places has been organised and implemented according to Lithuanian government rules. Applicants may also enter the College directly to study in a non-funded study place if they meet the minimum requirements laid down in the Law on Science and Studies.
The most important admission criterion is the competitive score. The main criteria for calculating the competitive score are the results of the completion of the secondary education programme and maturity examinations.
During the assessment period, the requirements for the competitive score for those applying into the study programmes in the study field of Transport Engineering were raised year by year. For non-funded places, the minimum requirement in 2018 and 2019 was a degree in secondary education and passing at least one state maturity examination.
Sports achievements, professional experience and military training are also taken into account in the estimation of the scores. The competitive scores of students enrolled in full-time and part-time study modes do not vary to a large extent.

In 2018–2019, the number of applicants decreased due to the deteriorating demographic situation in the country and increasing requirements for applicants. However, the field of study of Transport Engineering remains one of the most popular fields of study in the College among the applicants. Those who enrolled in the study programmes of Transport Engineering in 2019, accounted for 17.5% of all applicants, of which 83% of students were admitted to the study programme Technical Maintenance of Automobiles, and 17% of students to the study programme of Railway Transport Engineering. Due to the decreasing number of applicants into the Railway Transport Engineering study programme, only the part-time study mode of this study programme has been carried out since 2019.

<u>Information from interviews:</u>
The decline of student numbers reflects the decreasing number of science students in general in Lithuania and the stricter admission criteria applied by the government. The college works against this trend with measures such as special promotion events and general information & marketing policy.

The panel argue that especially the railway programme needs a higher number of students. The college agrees but points out that it is the only Railway Engineering Programme at a college in Lithuania and therefore some optimism about its long-term future is justified. A special effect in recent years was the comprehensive modernisation

of railway technology in Lithuania, which led to a reduction of the need of workshop staff. In the long term more engineers are needed again.
In the automotive field there are more competitors, such as Kaunas Technical College and Klaipeda College, which have to be observed carefully.

(2) Expert judgement/indicator analysis

The panel believe that the position of the college in the market is still very good despite the difficulties. The consolidation of the rolling stock programme into the railway engineering programme has supported the relatively good standing of the programme in terms of student numbers. For the future of railway engineering in Lithuania it is important that the college upholds that programme and perseveres in trying to find a sufficient number of students for it. As the public perception of trends usually lags behind the perception by the professional world, that strategy may bring positive results over time.

3.3.2. *Evaluation of the procedure of recognition of foreign qualifications, partial studies and prior non-formal and informal learning and its application.*

(1) Factual situation

Information from SER (p. 22-23):
Recognition of qualifications acquired abroad, of part-time studies and of previous non-formal and informal learning is carried out in accordance with two internal college procedures. In 2017–2019, seven students of the study field Transport Engineering, who studied in study institutions in other countries according to the part-time study agreement and the agreed study content, 120 credits were credited and 54 credits were credited to six students who carried out their internships in transport companies of other countries. During the assessment period, there were no applications for recognition of competencies acquired non-formally in the study field of Transport Engineering.

Information from interviews:
Lectures with Erasmus students are held in English in some subjects.

(2) Expert judgement/indicator analysis

As the internal college procedures are not available to the international experts in the English language, they cannot check it for conformance with European guidelines. The number of credits transferred, though, is some evidence that the rules are not too restrictive.

3.3.3. *Evaluation of conditions for ensuring academic mobility of students.*

(1) Factual situation

Information from SER (p. 23):
Students in the study field of Transport Engineering participate in the mobility programme Erasmus+. Information on the mobility programme is available on the College's website and is published in several ways, such as information meetings with students, individual counselling and e-mails. The procedure is organised by the International Relations Department of the college.
Meetings with students who have participated in the exchange programme are organised at least twice a year, where they share their experience with other students and lecturers. Articles of students who participated in Erasmus+ Studies are published on the College website.
The SER reports about the numbers of students going abroad and coming from abroad.
13 students had gone abroad on part-time studies or internships, while three students (from Slovenia and Hungary) came to study for one semester.

(2) Expert judgement/indicator analysis

The experts find that the college tries to foster the mobility of students to a reasonable extent.

3.3.4. *Assessment of the suitability, adequacy and effectiveness of the academic, financial, social, psychological and personal support provided to the students of the field.*

(1) Factual situation

According to the self-evaluation report, the lecturers of the study programme and the supervisors of the theses continuously communicate with students and provide them with study-related assistance. Students are counselled according to a schedule approved by the dean and published on the College website and electronically. Additional counselling in mathematics and physics is available during the first year. Students who face academic difficulties are given the opportunity to retake the examination of the subjects specified in the study programme at the end of the examination session. If academic debts are liquidated during the scheduled debt liquidation periods, the student's studies are not interrupted.
The college has a student social support mechanism. Students of the study field of Transport Engineering have the opportunity to use state-supported loans and receive financial support: to pay the tuition fee and pay for living expenses. In accordance with Government resolutions and regulations, students who meet the selection criteria can receive social scholarships. During the analysed period, social scholarships were received by all students in the study field, according to the SER. The best students who study in state-funded places receive incentive study scholarships for their learning outcomes. In the period 2017-2019, 149 full-time students in the study field of Transport Engineering were given incentive study scholarships, the amount of which during the assessment period was EUR 118 877. Prizes of 3,938 EUR were awarded to 49 students of the study field for active social, scientific and sports activities or participation in project during the evaluation period.

Students are also financially supported by social partners. Each year, social partner Toyota Baltic AS awarded personal scholarships of EUR 60 each month (7,680 EUR in total) to the four best students of the Automotive study programme. In 2018, JSC ALTAS komercinis transportas granted support of 2,602 EUR to eight students of the study programme Technical Maintenance of Automobiles who had completed professional practice at the company and in 2019, EUR 400 support was granted to two students.
State support and study scholarships are awarded to students with the highest scores, who were admitted into non-funded study places. In 2017, seven students of the study programme Railway Transport Engineering studied with a study scholarship.
Regarding personal support, students who are unable to attend lectures due to work commitments are granted the right to study according to an individual schedule. Such an opportunity was taken by 17 full-time students. Students may take a study break due to health problems or for personal reasons for a period of up to one study year. Students with material difficulties are allowed to pay for their studies in instalments.
The College has a Career Centre for advice on job search issues, organisation of trainings and meetings with graduates and social partners. The Career Days event is organised for students of the study field every year. For example, 21 companies participated in the event in 2019. The representatives of companies counsel students on the aspects of a successful careers and offer internships as well as jobs.
The College provides gyms and weight-lifting halls for students to physically train and improve their health. Students have also an opportunity to participate in cultural activities. All students in the study field are given the opportunity to live in modernised college dormitories.

(2) Expert judgement/indicator analysis

According to the experts, the academic, financial, social, psychological and personal support provided to the students offered by the college is suitable and adequate.

***3.3.5** Evaluation of the sufficiency of study information and student counselling.*

(1) Factual situation

Information from SER (p. 25):
All information about the study programmes in the study field of Transport Engineering is published on the College's website. Relevant information is sent to students via group e-mails and information is passed on during continual meetings with faculty administration staff. Introductions to Studies are organised for first-year students. Meetings are organised with social partners who present the opportunities in their professions.
The official documents on the study programmes and the organisation of studying are presented on the website of the college and students of all study years are informed about changes. The SER also states that the library and teachers convey information to the students, but is not specific in what way this is organised.
The adequacy of the information and counselling provided is checked through student surveys.

Information from interviews:
The students say that information about the Erasmus+ programme is clear and understandable and all information is provided. If a student wants to go abroad that is not an obstacle.

(2) Expert judgement/indicator analysis

The experts conclude from the information they received that study information and study counselling are adequate.

Recommendations for this evaluation area: *no specific recommendations.*

3.4. STUDYING, STUDENT PERFORMANCE AND GRADUATE EMPLOYMENT

Studying, student performance and graduate employment shall be evaluated according to the following indicators:

3.4.1. *Evaluation of the teaching and learning process that enables to take into account the needs of the students and enable them to achieve the intended learning outcomes.*

(1) Factual situation

Information from SER (p. 26-28):
The SER stated that 'the reliability of the assessment of study achievements is ensured by the involvement of students and lecturers in the assessment process.'

Several teaching and study methods are used by lecturers, taking into account the required results of the subject of the study programme. The self-evaluation report lists lectures, exercises, seminars, simulations, demonstration, discussions, case studies, lectures in a real business environment, lectures by business representatives, distance learning and project methods. Assessment methods mentioned are: examination, project, test, report and presentation of individual work.
The evaluation of learning outcomes of the subject is planned by the subject lecturer, providing information about the subject's learning outcome evaluation system in the subject description. During the first lecture, the subject lecturer is supposed to acquaint students with the syllabus of the subject, examinations, the final procedure and the form of evaluation of the student's knowledge and abilities, and evaluation criteria.

Intermediate examinations are carried out during the semester.
The criteria for evaluating the achievements of students in the study field of Transport Engineering are linked to the learning outcomes of the programme and are indicated in the description of each subject. The results of interim examinations are discussed with the students individually.

The final evaluation of the semester consists of the sum of interim evaluations and evaluations of the student's independent work multiplied by the weighted coefficients assigned to them.
The results of examinations and students' independent work, approved credits and evaluations of interim examinations are recorded in the Study Administration System (KIS).
Examination results are published no later than within three working days after the examination.
According to the SER, 'at the end of the teaching and its evaluation, the subject lecturer and the administration provide an opportunity for students to express their opinion on the methods, form and procedure of teaching and evaluation of the subject,' though it does not specify the form in which this is organised.

Students are given independent work tasks that develop learning, information processing and analysis skills. They use the Moodle remote learning virtual environment for their individual studying. The independent work is evaluated before the beginning of the examination session. Students' knowledge, understanding and abilities demonstrated in the independent work are evaluated in the same way as the achieved learning outcomes.

Information from interviews:
Asked to explain the organisation and assessment of the study programme the teachers refer to the Study Programme Committee (SPC), which discusses and suggests the study programme. One measure it introduced was supplementary teaching for weaker students in foundation courses.

(2) Expert judgement/indicator analysis

The expert panel can confirm the impression that faculty is on the right way. Remarks from last evaluation were implemented. During the interviews the experts made sure that the processes work in practice as presented in the SER.

3.4.2. *Evaluation of conditions ensuring access to study for socially vulnerable groups and students with special needs.*

(1) Factual situation

Information from SER (p. 28):
The College provides opportunities for these students to study at an individual pace, according to capabilities, needs and interests. The College uses the virtual learning environment Moodle, creates a schedule of individual consultations for lecturers, and, if necessary, students are consulted both in the virtual environment and individually.
During the evaluation of the studying achievements of students with special needs (visual and hearing impairments, movement or other disabilities), flexible forms of achievement evaluation are employed, and processes are adapted to the capabilities of these persons. For example, the font of the task text is enlarged, the time for the

examination of study achievements is extended, or the physical environment is adapted, ensuring the accessibility of the place and lighting.
Prior to the first auditorium lecture, the faculty administration informs the subject lecturers about students with special needs, provides necessary tools for the evaluation of learning outcomes, ensures adaptation of the place of final evaluation of learning outcomes.
The physical environment in the College is well adapted and the community creates a study and work environment that ensures equal opportunities and non-discrimination. The facilities have been renovated, applying universal design principles, equipped with auxiliary equipment (lifts, sloping corridors, wide doors, reserved places in the car park). The College regulates financial support for the disabled. Seven students with special needs studied in the study field of Transport Engineering during the assessment period.

(2) Expert judgement/indicator analysis

The explanation by the college in its report is convincing. The fact that seven students with special needs attended the study programme in the assessment period is an indicator of the college working successfully in this respect.

3.4.3. *Evaluation of the systematic nature of the monitoring of student study progress and feedback to students to promote self-assessment and subsequent planning of study progress.*

(1) Factual situation

Information from SER (p. 26, 28):
Students' progress in the study field of Transport Engineering is planned and systematically and consistently monitored. Intermediate examinations are carried out during the semester.
Students receive the final grade of the subject only after having the grades of all interim evaluations.
'In accordance with the provisions of the Description of Learning Outcome Evaluation Procedure, progress summaries for each group of students are prepared after each session, the achieved learning outcomes are analysed, discussed at the department and Study Programme Committee meetings, and publicised at faculty community meetings.'
At the end of the study year, the final summary of the progress of the group of students of the study year is prepared, and the level of the achieved learning outcomes is analysed. Based on the results of the monitoring of study progress, the necessary measures are envisaged to help solve the problematic aspects, for example the provision of additional counselling by lecturers. Students attending the counselling are monitored about their progress.

College graduates have the opportunity to gain a higher education at a university. The SER reports about two examples:
1. Graduates of the study field of Transport Engineering who have obtained a professional bachelor's degree can continue their studies at Kaunas University of

Technology (KTU) in the additional studies of the study programme Vehicle Engineering and prepare for the master's studies of Vehicle Engineering study programme. These studies are attractive to part-time students with practical experience, as the volume of studies is reduced from 60 to 30 credits.
2. Vilnius Gediminas Technical University (VGTU) offers two-year 120-credit balancing studies in the study programme Transport Engineering to the College graduates of Transport Engineering study field. Graduates who have completed balancing studies may participate in the competition in accordance with the general procedure in order to enrol into the master's study programme Transport Engineering. Also, graduates of Transport Engineering who wish to enrol into the master's cycle of Transport Engineering can choose one-year additional studies at VGTU for obtaining 30–120 credits.

(2) Expert judgement/indicator analysis

A continuous monitoring of the progress of students in the study field of Transport Engineering is ensured. Everyday feedback is conducted in a personalized way.

3.4.4. *Evaluation of the feedback provided to students in the course of the studies to promote self-assessment and subsequent planning of study progress.*

(1) Factual situation

Information from SER (p. 29):
Feedback on learning outcomes is provided to students after the publication of evaluation results. By discussing the completed student works in the group, the lecturer summarises the mistakes and areas where more efforts from the student is required.
The summarised results of the surveys shall be provided to the students participating in the survey no later than two months after their collection, ensuring confidentiality of personal data of the survey participants. The results of the survey of the subject are presented to the lecturer who taught the subject during an individual interview with the dean of the faculty. The summarised results of the surveys are publicly presented in the student and lecturer meetings.
The results of interim examinations are discussed with the students individually (p. 26).

(2) Expert judgement/indicator analysis

The variety of feedback (official - using created processes and tools and personal communication) is a good method for reaching all students, taking into account the variety of tasks they are given and the variety of their personalities.

3.4.5*. Evaluation of employability of graduates and graduate career tracking in the study field.*

(1) Factual situation

Information from SER (p. 30)

The monitoring of college graduates is carried out in two ways. The first basis is the data of the Employment service under the Ministry of Social Security and Labour. Secondly, surveys are conducted by the Study Programme Committee.
In the SER the data on employment of graduates are based on the data of the Centre for Strategic Analysis of the Government (STRATA). Individual statistic data of college graduates were provided for the expert panel after the meeting.

According to the SER, employers participating in meetings and survey results confirm that students are provided with necessary knowledge and practical skills. 93 percent of employers assess the preparation of graduates for professional activities and the acquired theoretical and practical knowledge as excellent and very good. The survey data was provided for the expert panel right after the meeting.
Similarly, 80% of graduates confirmed that the College's lecturers team provides comprehensive, up-to-date professional knowledge.

Information from interviews:
As a main point of career tracking the college mentions the Career Centre, which was set up to help students plan career paths and discover professional career opportunities.
In practice, since the students tend to find jobs easily, the Career Centre is made use of mostly for long-term career planning. Internships are also offered by companies though some students prefer to look for them themselves. Even in this semester, during the Corona pandemic, they take place, some in college laboratories.

The employers generally appreciate the good quality of the graduates. The best graduates are even called 'outstanding'. The majority have particularly good basic skills and receive additional training on the job when new technologies are introduced.

The graduates confirmed that they had various job-seeking opportunities, for instance during the internship, after the internship, immediately after the thesis or after an Erasmus semester. Some graduates start on a low job level but tend to get promoted quickly.
Even graduates who are currently working in a different professional area are convinced that the learning outcomes of the study programme have been useful for them and will continue to be.

(2) Expert judgement/indicator analysis

The government-created database (STRATA) shows the employment of graduates as highly qualified and non-qualified specialists of the study field of Transport Engineering overall, but not for college graduates. Because of this deficiency the college collects precise data from surveys of graduate employment itself. The problem with this is that the number of respondents is very small.

The large number of stakeholders that participate in surveys show close cooperation. Extensive questionnaires cover all relevant areas. Survey conclusions provide a clear picture of stakeholders' needs related to the college study field.
A large number of graduates of the field of study confirmed that the College has a professional team of lecturers and good teaching quality, though the small number of graduates participating in the surveys reduces their accuracy.
The expert panel recommends to proactively educate future students and graduates about the importance of surveys, which in the future should increase the number of survey participants.

3.4.6. *Evaluation of the implementation of policies to ensure academic integrity, tolerance and non-discrimination.*

(1) Factual situation

Information from SER (p. 30-31):
The implementation of the policy of academic integrity, tolerance and non-discrimination in the study field of Transport Engineering is ensured in accordance with a system of targeted documents and proceedings.
To ensure academic integrity, students in the study field sign a declaration of integrity at the beginning of their studies, thus declaring honest performance of academic work.
The principle of confidentiality is important for the creation of atmosphere of trust and non-discrimination, when information about a student and his/her knowledge evaluation is published individually. Lecturers of the study field prepare individual practical, control and independent work and examination tasks.
The academic community (students, lecturers and administrative staff) is reminded of the principles of ethical behaviour in training sessions and meetings.
The set of preventive measures applied to ensure academic integrity, tolerance and non-discrimination resulted in no violations of the Code of Academic Ethics in the study field of Transport Engineering.

Information from interviews:
During the evaluation period disturbances of the Code of Academic Ethics did not occur in the study field of Transport Engineering.
The expert panel inquired about a plagiarism checking system. According to the SER committee, there is little room for plagiarism due to the nature of the science, but introduction of a plagiarism software is planned.

(2) Expert judgement/indicator analysis

The effectiveness of the Code of Academic Ethics in the study field of Transport Engineering system is difficult to evaluate for an expert panel because no events are mentioned during the evaluation period.
Regarding intellectual property and citing, the expert panel recommends the implementation of plagiarism detection software for bachelors' theses.

3.4.7. *Evaluation of the effectiveness of the application of procedures for the submission and examination of appeals and complaints regarding the study process within the field studies.*

(1) Factual situation

Information from SER (p. 31):

A methodology of submitting appeals and complaints regarding the study process is presented in the Self Evaluation Report. Students have the right to file appeals against violations of their evaluation grades and/or evaluation procedures. The appeal against evaluation of the thesis may be filed only for procedural violations that occurred during the defence of the thesis. During the analysed period, there were no appeals regarding evaluation of students 'knowledge and procedural violations in the study field.

(2) Expert judgement/indicator analysis

The effectiveness of the methodology of submitting appeals and complaints regarding the study field is difficult to evaluate because no events are mentioned during the evaluation period.
Apart from the methodology, the experts appreciate that students have the chance to submit their thoughts on the study content, including their opinion on the teaching methods at the end of each semester, by filling in a questionnaire for each course. The high completion rate is ensured by the rule that without having the questionnaire completed, students cannot instantly access the learning resources for the following semester.

Recommendations for this evaluation area:

See. 3.4.5; 3.4.6 and 3.4.7.

3.5. TEACHING STAFF

Study field teaching shall be evaluated in accordance with the following indicators:

3.5.1. *Evaluation of the adequacy of the number, qualification and competence (scientific, didactic, professional) of teaching staff within a field study programme(s) at the HEI in order to achieve the learning outcomes. Entrance requirements are well-founded, consistent and transparent.*

(1) Factual situation

Information from SER (p. 32-34 and Tables 7-10):

The self-evaluation report provides comprehensive information about the teaching staff, including their qualification and their development.
The required educational requirement is at least a master's degree or equivalent higher education qualification. Lecturers' positions are advertised publicly and the recruitment follows the rules of a public contest. The commission in charge of the contest includes employees of the College, students' representatives of social partners.
During the analysed period the number of lecturers decreased due to a declining number of students, keeping the ratio between the number of lecturers and students studying constant.

The college tries to manage smooth transitions of retiring lecturers to new ones replacing them by providing a transition phases with the outgoing and the incoming lecturer teaching in parallel.

Information from interviews:
All teachers have at least a Master's degree, and there are five with a PhD.

The college has recently acquired a large number of new teachers (twelve). Usually the college manages to provide a time overlap, so that retiring or outgoing teachers can introduce incoming ones. Since the new teachers also get regular didactic training, the college believes that their integration into the teaching body is running smoothly and successfully.
…

(2) Expert judgement/indicator analysis

According to the data provided in Annex 4 to the Self-Assessment Report and to the additional information provided at the meetings with the experts, the number and composition of the teaching staff within the field study programmes at the HEI could be claimed to enable successful implementation of the study programmes under the Transport Engineering field at the HEI. The qualification and scientific, didactic and professional competences of the teaching staff conducting systematic applied research in the field of Engineering Sciences, publishing the results thereof in the scientific journals, and participating at the national and international scientific and practical events are adequate for achievement of the learning outcomes.

Teaching staff (its composition) employed for execution of the study field programmes corresponds to the requirements of the related regulations (General Requirements on Execution of the Studies, Description of the Group of Engineering Study Fields), exceeding the minimal requirements considerably. 12 teachers holding the Doctor's degree deliver 26.6% of the volume of the subjects under the field programme (minimum 10% required). 71% of the teachers delivering the study field programme (45, of which 6 – associate professors, 39 – lecturers) are employed at the HEI on a permanent basis (at least half of the FTE and at least for 3 years) and hold at least 3-year practical experience in the field of the subject delivered (minimum half of the teachers required). The practice placement supervisors are the teachers holding at least the Master's qualification degree or an equivalent qualification of higher education and at least 3-year experience of teaching of the field subject or of practical experience.

The number of the teachers employed in the study field during the assessment period was reduced along with the reduction of the prospective and admitted students; however, as a result of the turnover of students and teachers, the teacher to student ratio which reduced by one fifth may be considered to be rational and enabling quality process of teaching and learning.

With the number of students studying under the study field reducing and the total number of teachers reducing accordingly, the number of the teachers of study field subjects employed at least half of the FTE and for at least 3 years at the HEI has remained stable, suggesting successful application of the human resource planning and management strategy.

Participation of the teachers-practitioners (3–6 teachers-practitioners in the assessment period) in the programmes by delivering the study field subjects, in particular, in case of the Railway Transport Engineering programme, has received positive assessment. Nevertheless, in view of the essentially prevailing position of the HEI in Lithuania in terms of preparation of the railway transport specialists for professional activity, and considering the context of the European-level infrastructure projects implemented in the sector, sustainable personnel policy decisions need to be made, assuring continuity of the R&D activities in the study field, which might determine increase in the number of students entering the programme.

The substitutability of the teachers approaching their retirement is assured appropriately: the turnover of the teachers taking place for various reasons does not have negative impact on execution of the programmes or quality thereof, as new and young teachers are educated systematically. The Department practice whereby a new teacher discusses the content, practical assignments, teaching and assessment methods with the teachers intending to retire, the transfer of the teaching and learning aids prepared is performed and, finally, the new teacher becomes integrated into the teaching and learning process has been assessed positively. The mentor assigned by the head of division provides consultations to the new teacher on the relevant issues, gives advice on professional development, engagement in the R&D activity, participation in Erasmus+ programme and other exchange programmes. This mechanism and measures assure smooth substitution of a teacher with competent teachers already occupied in the study field, holding teaching and professional experience.

3.5.2. Evaluation of conditions for ensuring teaching staffs' academic mobility (not applicable to studies carried out by HEIs operating under the conditions of exile).

(1) Factual situation

Information from SER (p. 34-36 and Table 11):
According to the self-evaluation report, lecturers are given the opportunity for internships, share professional experience, to improve competencies and practical teaching skills in other academic environments.
Lecturers intending to participate in conferences or internships discuss their intentions with the head of the department regarding the definition of participation goals and content definition. Subsequently, lecturers have to submit a request to the dean. In order

to ensure a continuous study process for long-term internships, business trips are only offered when students go on internships. If this is not possible, a substitute lecturer is appointed, according to the SER. During business trips or other trips, lecturers are paid a salary, conference and seminar participants are paid a fee and other expenses are covered. A respective procedure is followed in case of an Erasmus+ project. According to the College documents, priority is given to mobility activities during which new teaching materials are developed, relations between study programme committees and faculty are strengthened and expanded during mobility and future cooperation projects are prepared.
During the assessment period, 35 lecturers from the study field of Transport Engineering went to educational institutions in 14 countries according to the exchange programme and seven lecturers arrived at the College.
The self-evaluation report cites several individual examples of lecturers going abroad and coming in and provides an overview of the numbers in Table 11. Whereas the mobility of outgoing lecturers has increased, the number of incoming lecturers did not change significantly.

Information from interviews:
There is a small salary surplus for teachers who wish to go abroad for a while. Spells in Latvia and Estonia are planned.

(2) Expert judgement/indicator analysis

Considerable attention is given at the HEI to improvement of the international scope of activities. Following the last assessment, the measures for promotion of academic mobility have been undertaken, namely, administrators have been assigned at the Faculties to coordinate and develop international relations, international weeks have been organised, and an international conference, during which cooperation relations with foreign university teachers are established, has been held, joint research work has been conducted, meetings between the teachers and their colleagues who participated in a mobility programme have been arranged, English language courses for various levels have been organised. The teachers have been provided with appropriate conditions ensuring academic mobility, i.e. the teachers are provided with the opportunity to undergo internship, exchange professional experience, improve their competences and practical skills of teaching in a different academic setting. Teachers' academic mobility takes place in different forms, such as delivery of lectures, participation at conferences, internships, seminars.

The increased academic mobility of the teachers has been assessed positively: in the assessment period, 35 teachers in the Transport Engineering study field visited educational institutions in the total of 14 countries under the exchange programme. The teachers participated not only in the Erasmus+ programme, but also cooperated with other institutions of higher education, organisations and companies in relation to development of R&D, project activity, and underwent internship at companies abroad.

The number of visiting teachers at the HEI is not high (7); hence, development of international cooperation by promoting incoming visits by teachers representing foreign

institutions remains the issue to be dealt with. This may also influence initiation and implementation of joint research and projects.

3.5.3. *Evaluation of the conditions to improve the competences of the teaching staff.*

(1) Factual situation

Information from SER (p. 37):
Qualification improvement is paid for from the state budget funds for qualification improvement, college funds and other sources. Lecturers improve their qualifications by participating in courses, seminars, conferences, internships, the Erasmus+ and other international programmes or by studying for a master's or doctoral degree. The faculty defines priority areas of professional development for the upcoming year. The departments draw up plans for the qualification improvement of lecturers for the upcoming year. On this basis, the lecturers and the head of the department discuss and coordinate the individual volumes of qualification improvement for the subsequent year. The volume of lecturer qualification improvement is envisaged. The SER reports about an example, where lecturers took a 40-hour course on active teaching methods, reflection, assessment methods and performed practical tasks. This training was attended by twelve lecturers of field subjects. The training for the lecturers was conducted by KTU Educational Competence Centre.

Information from interviews:

There is financial support, bonuses, material support, covering of expenses for training and travel, and sport & health activities.

(2) Expert judgement/indicator analysis

Appropriate attention has been given at the HEI to teachers' improvement in the R&D; didactic, and professional activities – the systematic character of the process (formal procedure, planning, organisation, funding, improvement areas, methods) could be emphasised. The arguments expressed by the teachers and representatives of the administration at the meetings with the experts provide positive support of the professional development cases/forms referred to in the Self-Assessment Report: by using the state budget, own or project funds of the HEI and third parties, funding for participation in the courses, seminars, conferences, internships, Erasmus+, and other international programmes.

The systematic approach towards the content and volumes of professional improvement has been assessed positively: one internship is provided for during the teacher's term of office, 16 academic hours are allocated annually to improvement of didactic competences, 4 academic hours are allocated annually to enhancement of subject-related competences. Teachers' knowledge in modern didactics has a positive effect on the teaching and learning process. In the assessment period, teacher training in various aspects of didactics were organised by the HEI: 12 teachers of the field subjects

completed a 40-hour training course on the active teaching methods, reflection, assessment methods, performed practical assignments.

With the facilities allocated to the field studies being upgraded systematically, a system for development of technical competences of non-teaching staff that would be equivalent to the professional development procedure for the teaching staff needs to be dealt with.

There is thus evidence that the college makes plans for the professional improvement of its lecturers according to the requirements defined by the faculty and department management. On the other hand, the SER asserts that "every lecturer has the right to improve his/her qualification by freely choosing the methods, forms and topics of professional development" (p. 37 SER). That is an obvious contradiction.

Recommendations for this evaluation area:

– Development of international cooperation is relevant, ensuring systematic participation of foreign teachers in the studies and creating preconditions for initiation and implementation of joint projects.

3.6. LEARNING FACILITIES AND RESOURCES

Study field learning facilities and resources should be evaluated according to the following criteria:

3.6.1. *Evaluation of the suitability and adequacy of the physical, informational and financial resources of the field studies to ensure an effective learning process.*

(1) Factual situation

Information from SER (p. 38-40):
The list of lecture rooms and laboratories used for the programmes of Transport Engineering is presented in Annex 5 of the self-evaluation report and a film provided for the experts separately.
The SER gives a comprehensive account of the VCTD library: its titles, electronic resources, and training opportunities for staff.
Lecturers upload their teaching material to the Moodle electronic studying environment, where students can access the material remotely.

Information from interviews:

Industrial internships and final practices take place at the enterprises of major car and railway companies operating in Lithuania, which apply the latest technological process management methods, use modern technologies and the most advanced equipment in the transport sector.

As the TOYOTA Technical Training Laboratory appears to be a vital part in the automotive study programme the SER authors are explicitly asked to explain the collaboration with TOYOTA in detail. The staff emphasise that students get first-hand information and technological access through this cooperation.

The Formula student project, however, is conducted with the support by other departments and universities abroad.

The online resources, such as Moodle and MS Teams, have been supporting the college to conduct distance learning since spring. Thanks to the experience from spring, there are no major problems now, according to the teaching staff.

(2) Expert judgement/indicator analysis

The panel can confirm the impression that the long-term cooperation with stakeholders and social partners in the transport engineering field is very active, especially with companies related to railways and Toyota Baltic A/S.
An example of such a cooperation are the Toyota Technical Training Centre and Special laboratories of railway traffic control systems. These laboratories are reported to be equipped taking into account the latest technological trends in the transport engineering field, allowing not only to carry out teaching processes but suitable to carry student projects and research activities.
During the meeting the expert panel was interested that so many students take training practices in the laboratories of the Technical Faculty. Given the excellent relationships with the social partners, it may be possible to encourage more students to focus on internships in companies during technological practices.
The cooperation with Social partners appears very good and the active involvement in the allocation of final practice placements is successful and useful to the students.
At the library there are sufficient methodological resources for studies in the study field of Transport Engineering and resources are available for students physically and remotely.

3.6.2. *Evaluation of the planning and upgrading of resources needed to carry out the field studies.*

(1) Factual situation

Information from SER (p. 41):
Resources required for the study field programmes conducted at the College are planned for in the strategic action plan of the College for 2019–2021. Each calendar year, a plan for the acquisition or renewal of laboratory equipment required for the conduction of studies is drawn up. The plan provides for specific measures and funds for their acquisition. During the study year, the necessary equipment is acquired and put to use.
The SER report lists all purchased equipment including the prices and purchased materials for experimental and development projects for 2017; 2018 and 2019, some of them with assistance by industrial partners. Examples are Toyota Baltic AS donating the simulator Toyota RAV4 Hybrid and lecturers with the opportunity to connect to online virtual learning material, which is constantly updated with the introduction of advanced

technologies at Toyota Baltic AS, and JSC Voestalpine VAE Legatecha giving the students the opportunity to perform practical research work by handing over to the College the Ecostar transfer system with an external lock (Spherolok) installed in a steel sleeper.

The college joined a project implemented by Kaunas Technical College about communication technology. In the project 140,000 EUR will be allocated for the programmes of Transport Engineering. The project is planned to be implemented by the end of July 2021.

In order to renew the study and applied research infrastructure for the acquisition of laboratory equipment, the College joined the laboratories upgrading project with Kaunas Technical College. Project budget for the Transport engineering field is 140 000 Eur. The project is planned to be implemented by the end of July 2021.

(2) Expert judgement/indicator analysis

Infrastructure and laboratories required for Transport Engineering studies are constantly supplemented and renewed. Social partners such as Toyota Baltic AS and Voestalpine VAE Legatecha, JSC help to ensure a continuous process of equipment renewal and support the implementation of innovative student projects, especially Student Formula.
The list of purchased laboratory testing equipment for 2017, 2018 and 2019 plus information collected during the meeting with SER staff and teachers prove that the faculty has sufficient financial background and is thus able to continue with infrastructure upgrading projects.
Social partners in Transport Engineering very actively support the upgrading process materially and financially. Furthermore,, new investment projects are planned to upgrade laboratory research equipment for joint research with KTK College.

Recommendations for this evaluation area:

- See 3.6.1.

3.7. STUDY QUALITY MANAGEMENT AND PUBLICITY

Study quality management and publicity shall be evaluated according to the following indicators:

3.7.1*. Evaluation of the effectiveness of the internal quality assurance system of the studies.*

(1) Factual situation

Information from SER (p. 42-43):
The quality assurance in the study field of Transport Engineering is based on the Provisions and Guidelines for Quality Assurance of Studies in the European Higher Education Area. There is also an Internal Study Quality Management System taking into

account the recommendations of external study programme evaluation experts. The College has prepared an approved quality assurance policy and procedures and implements an internal study quality management system.

The self-evaluation report explains the procedures of decision-taking. Management decisions of the study field are made in the study programme committee, department, and the Academic Council. The Study Programme Committee ensures compliance of the study programme content with the legislation and market needs. If changes to the study programme are planned, they are first discussed in the Study Programme Committee, subsequently discussed in the department, and the study programme updates are approved by the Academic Council.
The following tools are used for the analysis of study quality indicators of the study field: study quality surveys, lecturer certification, graduate employment statistics, student evaluations and analyses of study intensity. Round table discussions with employers are organised, employers evaluate students' production internships, provide feedback on the content of internships, students' preparation for internships. Representatives of employers are members of the qualification commission, reviewers of theses, and members of Study Programme Committees.

There are Study Programme Committees of Technical Maintenance of Automobiles and of Railway Transport Engineering. Each one consists of five members representing the head of the study programme, students, lecturers and representatives of employers and graduates. At the end of each study year, meetings of the Study Programme Committees are held, where the management of the programmes of the study field of Transport Engineering during the study year is assessed, including the quality of theses, evaluation results, relevance of theses topics and results of surveys conducted during the study year and the quality of the lecturers' work during the study year.
The Study Programme Committees and the heads of departments submit proposals to the dean of the faculty on the improvement of study programme subjects, and the suitability of thesis topics.
As an example, in 2019 the hours for student counselling were raised from 10% to 20%. Other examples the SER refers to is the cancellation of specialisations in the study programmes and the introduction of new topics covering innovative technologies in the transport sector in 2019.

Students express their opinion about the study programmes of the study field, their implementation and updating through their representatives in the Study Programme Committees, the Faculty Council and the Academic Council.

The dean of the faculty is in charge of the quality of the field of studies, applied research carried out at the faculty, the level of the education provided and the need for necessary material resources.

Information from interviews:
Internal and external discussions and round-table discussions took place during the evaluation period and came to the decision to avoid narrow-specialisation courses but keep the programmes broad and even more holistic, including ideas about sustainable development.

They see that internationalisation is a challenge and aim at a systemic change with invitation of more foreign professors and teachers from foreign industry

(2) Expert judgement/indicator analysis

The SER and the complementary interviews provide evidence that the college is effective in the process of adapting its programme and making plans for further improvements.

3.7.2. *Evaluation of the effectiveness of the involvement of stakeholders (students and other stakeholders) in internal quality assurance. Evaluation of the planning and upgrading of resources needed to carry out the field studies.*

(1) Factual situation

Information from SER (p. 43-44):
Stakeholders are invited as members into committees of the college, as explained in section 3.7.1.

Additionally information from social stakeholders is gathered through surveys and other means of gathering information such as interviews and roundtable discussions.
According to the self-evaluation report, student surveys are conducted at the end of each semester; the study internship quality survey is conducted at the end of the internship. A survey of graduates on studies, theses and readiness for the labour market is conducted at the end of studies. A survey of graduates about their establishment in the labour market and their career is conducted 12 months after graduation. Surveys of employers are also conducted, but the SER does not specify their rhythm.

The contribution of stakeholders to the improvement of studies can be seen in further aspects: lecturers are hired from companies; educational trips to companies are organised; representatives of companies read lectures to students and supervise internships. They hold presentations at scientific conferences organised by the faculty and discuss new technological solutions and technologies with lecturers. Employers are invited to participate in the defence of theses.

The self-evaluation report mentions feedback from the college to the stakeholders, but is not entirely clear about how this feedback loop is organised.

Information from interviews:
The Career of College graduates is carried out using governmental data (KVIS) and surveys conducted by the Study Programme Committees. Annual career days and round-table discussions are organised.

(2) Expert judgement/indicator analysis

The graduates and other stakeholders interviewed agree that they are regularly consulted by the college and are well-informed about its plans.

From the interviews the experts get the impression that the large employers are particularly well incorporated into the developments of the college. Currently that is an advantage, but it might pose some danger, albeit possibly small, of neglecting the whole variety of employers in not-so-prominent companies.

3.7.3. *Evaluation of the collection, use and publication of information on studies, their evaluation and improvement processes and outcomes.*

(1) Factual situation

Information from SER (p. 44):
According to the self-evaluation report, the faculty constantly collects data and performs data analysis on the implementation and evaluation of studies. The collected information is used by the faculty administration, lecturers and study programme committees to improve the studies of the field.
For example, the dean's office of the faculty responded quickly to proposals for improving the information of students about changes in the study process by introducing a centralised message information system. The information system also allows students to find information on interim and final evaluations of subjects in a timely and fast manner.

According to the SER, information on the management of the study field of Transport Engineering, the progress of improvement and the results of evaluation is made public and known to all social stakeholders: students, lecturers and social partners. It is announced at the Faculty Council, discussed at the meetings of the Study Programme Committees and the department, and at the meetings of the faculty community and the dean's office. Study programmes are publicised at higher education fairs, in an annual exhibition, during Career Days organised by the faculty and during open door days. Every year, the faculty organises Technical Days, and student national conferences, during which joint projects of students and lecturers are presented. The representatives of other higher education institutions, schools and businesses take part in these events.

Every year, the College prepares a report which presents data on student admission, the number of graduates, the average grade for theses and employment results. The report announces the most significant student achievements and completed significant projects.

Lecturers use information from several sources to improve the content of the subjects they teach individually. Social partners assess students' fitness for practical activity and make suggestions for improving their practical skills, thus supporting lecturers in improving hands-on teaching. A new subject, Electrical Engineering and Electronics, was introduced in the syllabus, which improves students' knowledge in the field of electronics. Industrial Practice was transferred to the end of the study year, creating conditions for students to continue working in the company.

Information from interviews:
The lecturers discuss the survey results with each other and with students.

(2) Expert judgement/indicator analysis

The college provides a mixture of centralised information management with formal procedures and informal processes in the improvement of their study programmes. From the interviews the experts get the impression that both ways are used to a considerable extent and will thus bear useful results. From the self-evaluation report it has not become entirely clear, though, if and how both methods are coordinated and whether they work in parallel or with an overlap.

3.7.4. *Evaluation of the opinion of the field students (collected in the ways and by the means chosen by the Centre or the HEI) about the quality of the studies at the HEI.*

(1) Factual situation

Information from SER (p. 45):
Student surveys are organised twice a year, during which the aim is to find out the factors determining the quality of studies, such as the quality of teaching and professionalism of lecturers, the quality of services provided, the opportunities for personal development and the assessment of students' achievements. Students of all years and modes of studying are supposed to participate in the surveys. The results of the surveys are analysed in the meetings of the faculty administration, discussed in the Study Programme Committees and measures are adopted to improve the quality of study programmes of the field.
The Study Programme Committees, in order to take a deeper look at the individual study programme evaluation criteria, organise additional surveys and round table discussions with students.
Students are reported to positively assess the achievement system, which is clear and understandable to them.

Information from interviews:
The students confirm that they regularly get invited to meetings of the Faculty Council and the Student Programme Committee. They are full members with voting rights in both groups.

The students interviewed made the impression of being attentive, well aware about what is expected of them and what they can expect from the college, including their voicing opinions about deficiencies.

The expert panel find that the participation of students in surveys is rather low, especially in the first semesters. In contrast to some other colleges and universities the student surveys are not compulsory, and feedback comes from the teachers individually. The programme is also discussed with individual students; the students' union does not play a specific role in those discussions.

(2) Expert judgement/indicator analysis

The regular participation of students including the feedback in case of problems appears to work and bear the necessary fruit. The participation in the surveys should, however, be improved. Short of making them compulsory, the college might consider introducing a formal approach to the feedback, so that the students get a definite idea about the use of the questionnaires for the improvement of their programme.

Recommendations for this evaluation area:

- Apart from large employers, which are already well incorporated into the developments of the college, the contact to smaller companies might be useful in the long term.
- The participation in the surveys should be improved. Short of making them compulsory, the college might consider introducing a formal approach to the feedback.

IV. RECOMMENDATIONS

- The content of the learning outcomes can and must reflect the specificity of the curriculum of each programme.
- To assure unbiased and fair assessment of the students, it is recommended to define the assessment criteria (by identifying their weight, i.e. effect on the assessment mark) in the assessment forms provided.
- For more diversity of the final project topics, it is important to intensify cooperation with the social partners in the form that they propose ideas for projects or commission relevant topics. In the same way, cooperation in applied research projects and for expanding opportunities for final diplomas should be explored more.
- The role of research methods should be emphasized more in the programme.
- Development of international cooperation is relevant, ensuring systematic participation of foreign teachers in the studies and creating preconditions for initiation and implementation of joint projects.
- Apart from large employers, which are already well incorporated into the developments of the college, the contact to smaller companies might be useful in the long term.

- The participation in the surveys should be improved. Short of making them compulsory, the college might consider introducing a formal approach to the feedback.

V. SUMMARY

The study programmes in the study field of Transport Engineering correspond to the public and labour market needs and are in line with the mission, objectives of activities and strategy of the HEI. The programmes are executed and systematically updated following the national and international strategic documents and plans governing the policy and development of transport competition and sustainability. The aims and outcomes of the programmes are based on the objectives set out in the National Programme on the Development of Transport and Communications.

As a result of monitoring the public and labour market needs, the organisers of the study programmes have updated the programme content and learning outcomes accordingly, though the learning outcomes of both study programmes in the field under assessment are identical to one another and to the learning outcomes of the college studies under the Transport Engineering field. This aspect requires correction.

The coherence between the programme content and qualification awarded enables the specialists prepared under the Transport Engineering study field to work in the transport sector. Graduates of both study programmes have the possibility to seek higher university education degrees by studying at universities.

Following the decision to abandon the Rolling Stock Maintenance programme, the number of the study programmes delivered under the Transport Engineering study field is considered to be rational in view of the demand for and profile of the automobile and railway transport specialists and on the facilities and human resources available to the HEI.

The aims and expected learning outcomes under assessment are in line with the Description of the Group of Engineering Study Fields and requirements applicable to the first-cycle college studies. The level of complexity of the learning outcomes conforms to the Level 6 qualification requirements under the European and Lithuanian Qualifications Framework for higher education. The content and description of the study subjects are in line with the requirements applicable to the college and first-cycle studies, and the programme volume is sufficient in view of the expected learning outcomes. The subjects and modules are positioned in the programmes consistently. Students of the programmes in the Transport Engineering field also have the opportunity to personalise the studies by selecting alternative or free elective subjects.

In preparation of the final theses, the students select the design methodologies and apply them to design of the technological processes, employ analytical and modelling methods, solve the qualitative and quantitative engineering tasks in the field of Transport Engineering, and conduct applied research.

The college has a transparent motivation system for staff involvement in scientific research including financial support and special awards to staff and students. Conditions for the involvement of the students in scientific research exist and consist of different mechanisms incl. annual research conferences.

The panel believe that the position of the college in the market is still very good despite the difficulties. The consolidation of the rolling stock programme into the railway engineering programme has supported the relatively good standing of the programme in terms of student numbers. For the future of railway engineering in Lithuania it is important that the college upholds that programme and perseveres in trying to find a sufficient number of students for it. As the public perception of trends usually lags behind the perception by the professional world, that strategy may bring positive results over time.

The experts find that the college tries to foster the mobility of students to a reasonable extent and the academic, financial, social, psychological and personal support provided to the students and study information and study counselling offered by the college are suitable and adequate. The variety of feedback is a good method for reaching all students, taking into account the variety of tasks they are given and the variety of their personalities. The experts appreciate that students have the chance to submit their thoughts on the study content, including their opinion on the teaching methods at the end of each semester.

With the number of students studying under the study field decreasing and the total number of teachers reducing accordingly, the number of the teachers of study field subjects employed at the HEI has remained stable, suggesting successful application of the human resource planning and management strategy. However, more policy decisions need to be made, assuring continuity of the R&D activities in the study field, which might determine increase in the number of students entering the programme.

Considerable attention is given at the HEI to improvement of the international scope of activities. Following the last assessment, the measures for promotion of academic mobility have been undertaken. Teachers have been provided with appropriate conditions ensuring academic mobility, i.e. the teachers are provided with the opportunity to undergo internship, exchange professional experience, improve their competences and practical skills of teaching in a different academic setting. The teachers also cooperated with other institutions of higher education, organisations and companies in relation to development of R&D, project activity, and underwent internship at companies abroad.

The number of visiting teachers at the HEI is not high; hence, development of international cooperation by promoting incoming visits by teachers representing foreign institutions remains the issue to be dealt with. This may also influence initiation and implementation of joint research and projects.

Appropriate attention has been given at the HEI to teachers' improvement in the R&D; didactic, and professional activities, though the systematic character of the process could be developed more.

With the facilities allocated to the field studies being upgraded systematically, a system for development of technical competences of non-teaching staff that would be equivalent to the professional development procedure for the teaching staff needs to be dealt with.

The strategy of the organisers of the study programmes to engage social partners in the process of preparation of the final theses is assessed positively. Students' final projects commissioned by the social partners and put to practice are successful examples to be followed. Nevertheless, it would be reasonable to continue developing this practice for avoidance of duplication of the topics in the future. Given the excellent relationships with the social partners, it may additionally be possible to encourage more students to focus on internships in companies during technological practices.

From the interviews the experts get the impression that the large employers are particularly well incorporated into the developments of the college. Currently that is an advantage, but it might pose some danger, albeit possibly small, of neglecting the whole variety of employers in not-so-prominent companies.

The list of purchased laboratory testing equipment plus information collected during the meeting with SER staff and teachers prove that the faculty has sufficient financial background and is thus able to continue with infrastructure upgrading projects.

The college provides a mixture of centralised information management with formal procedures and informal processes in the improvement of their study programmes. It has not become entirely clear, though, if and how both methods are coordinated and whether they work in parallel or with an overlap.

The regular participation of students including the feedback in case of problems appears to work and bear the necessary fruit. The participation in the surveys should, however, be improved. Short of making them compulsory, the college might consider introducing a formal approach to the feedback, so that the students get a definite idea about the use of the questionnaires for the improvement of their programme

.Expert panel signatures:

1. **Prof. Dr.-Ing. Haldor E. Jochim, (panel chairperson), academic,**
2. **Prof., Dr.Sc.Eng. Irina Jackiva (Yatskiv), academic,**
3. **Prof. Dr. Artūras Keršys, academic,**
4. **Mr Edmund Lisovski, representative of social partners',**
5. **Mr Gytautas Urbonas, students' representative.**