CENTER FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

EVALUATION REPORT

STUDY FIELD

TRANSPORT ENGINEERING

at KLAIPĖDA STATE COLLEGE

Expert panel:

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4. **Mr Edmund Lisovski,** *representative of social partners',*
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Evaluation coordinator -

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Report language – English

Study Field Data*

Title of the study programme	Automobile Transport Engineering
State code	6531EX015
Type of studies	College studies
Cycle of studies	First
Mode of study and duration (in years)	Full-time (3)
Credit volume	180
Qualification degree and (or) professional qualification	Professional Bachelor of Engineering Science0073
Language of instruction	Lithuanian
Minimum education required	Education no lower than secondary
Registration date of the study programme	2003-05-29, No. 762

** if there are **joint** / **two-fields** / **interdisciplinary** study programmes in the study field, please designate it in the foot-note*

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

The study field and cycle **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 *17/12/2020.*

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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.	
2.	

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

General information about the significance of the study field:

Automobile Transport Engineering is an important engineering field, 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.

Information about the role of the HEI (reference: SER p. 5):

KVK was established on August 24, 2011, as a public institution. KVK is a state higher education facility that trains qualified specialists in fields of technology, engineering, informatics, social, business, and public management, education and health sciences. KVK studies are focused on practical application of scientific knowledge, and connection with the world of industry and business.

The College consists of three faculties (Faculty of Technology, Faculty of Business and Faculty of Health Sciences) and ten departments that administer the implementation of 25 study programs in 21 fields of study. According to the 1 January 2020 data, 2258 students studied at the College. Of these, 39% of students are studying at the Faculty of Health Sciences, 28% study at the Faculty of Business and 32% of students' study at the Faculty of Technology.

KVK offers first-cycle professional bachelor's studies in higher education.

The Faculty of Technology has four departments (Informatics and Engineering, Environmental and Civil Engineering, Food Technology and Nutrition, Transport Engineering), where ten study programs are implemented. The faculty pays great attention to the practical preparation of students and close cooperation with business enterprises.

Specialists in Automobile transport engineering have been trained at TF since 1970. Since the establishment of the College in 2002, Level VI professional bachelors in the field of Transport Engineering are educated.

II. GENERAL ASSESSMENT

Transport engineering study field and **first cycle** at KLAIPĖDA STATE COLLEGE 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	3
3.	Student admission and support	4
4.	Studying, student performance and graduate employment	3
5.	Teaching staff	3
6.	Learning facilities and resources	3
7.	Study quality management and publicity	4
	Total:	**24**

*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:

With the considerable reduction in the number of applications for admission to the engineering programmes in 2018 and 2019 and failure to reach the minimum number of school graduates meeting the competition conditions for the Transport Logistics programme, the decision was made at the HEI not to admit students for this programme in 2020.

Information from interviews:

Transport Engineering is the nucleus of the college. It is the only study programme in Transport Engineering in the region, referring to cars and lorries.

The Institution executes two study programmes in the Transport Engineering study field: Automobile Transport Engineering and Transport Logistics. The assessment of the field has been performed only on the basis of the data for the Automobile Transport Engineering programme provided in the self-assessment report.

[There was also a logistics programme, now discontinued. Though it may be restarted, it is not part of the evaluation.]

During the last review the main amendments made was the integration of electric cars into the syllabus.

All thesis papers are focused on special parts of the service workshop design, although according to the subjects papers could cover a wider range of topics. That seems to be due to the students picking the topics of their papers themselves, taking into account what business partners offer.

The reasons of the students for choosing the college and the programme are diverse: from leisure value (Baltic Sea), variety and quality of programmes, recommendations from friends & family, the town's small size without traffic jams and the personal atmosphere at the college, compared with larger colleges in Vilnius or Kaunas.

The block courses allow for the combination of studying with work or family and make it easier to avoid an extension of the study time.

(2) Expert judgement/indicator analysis

The study programme Automobile Transport Engineering under the Transport Engineering study field conforms to the needs of the society and labour market. The programme conforms to the implementation of the requirements on assessment of the technical data necessary for the processes of vehicle technical parameter assessment, technical provision, automobile diagnostics, maintenance, and repair processes. Systematic cooperation with employers should be noted – the programme content and learning outcomes are reviewed on a yearly basis as a result of the employers' opinion research and discussions. Inclusion of a study subject related to hybrid automobiles and alternative power sources could be mentioned as an example of this practice.

Broader context of preparation of the thesis is considered as a positive aspect: besides the knowledge and abilities necessary for the speciality in order to be able to manage or apply new technologies, apply the methodologies for diagnostics and design of automobile systems and elements thereof, the graduates also have the possibilities to gain interdisciplinary knowledge, express their creativity, organize service activity, work in a team, think and act pragmatically when making decisions.

The organizers of the study programme model and substantiate the aim, learning outcomes, and purpose of the programme based on the context of the prospects of the Klaipeda region development. The preparation of specialists contributes to greater competitiveness of the city by consistent development of the infrastructure and creating favourable conditions to business; however, it would be relevant to apply a broader context to the issues of the transport system maintenance, sustainable mobility development, accident rate reduction, and accessibility of transport services under the programme.

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 work in the fields of vehicle technical maintenance, repair, vehicle or spare parts trade, insurance companies, traffic maintenance organizations, technical inspection stations and various other companies related to transport and its maintenance, as well as work independently by establishing their own companies and creating jobs.

Graduates of the study programme have the possibility to seek a higher university education degree by studying at universities – the teachers provide consultations and support the students in appropriate preparation for the Master degree studies, at the students' request.

With only one field programme executed following the decision not to admit students for the Transport Logistics programme in 2020, the labour market demands are met only partially, which was confirmed by the arguments expressed by the social partners during the discussions with the experts. The geographical location of Lithuania and Klaipeda determines the attractiveness of Lithuania as a transit country, and the main transport modes developed in

Klaipeda region open wide possibilities for the development of intermodal systems. Klaipeda is an important industrial centre of western Lithuania and large Lithuanian transport hub connecting East and West by marine, land, air and railway.

In this context, the specialists in transport engineering, capable of managing the logistic chains of passenger and cargo flows, transportation processes, and deal with complex engineering issues in multimodal transportation, are important. In view of the above, strategic decisions by the HEI on the number, content, and competence profile of the field study programmes are necessary.

***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. 6):

The central mission of the college is 'to provide quality higher education based on professional practice, applied research and experimental development […]'. To this end, a Centre for Practical Training and Applied Research is provided for Transport Engineering.

(2) Expert judgement/indicator analysis

Generally, the curriculum and the Centre for Practical Training and Applied Research, which the experts inquired about in the interviews, are a strong indicator of the programme fulfilling the practice-oriented mission of the college.

Aims of the Transport Engineering study field and programme (to prepare transport engineering specialists to be able efficiently work in companies of the transport sector, independently organize and perform vehicle technical maintenance, diagnostics and repair processes, applying innovative technological and organizational measures) are in line with the mission, objectives of activities and strategy of the HEI.

The aim and learning outcomes of the study programme correlate to the priorities of the strategic activity plan of the HEI (to prepare highly qualified specialists, develop the applied research activity) by implementing the programmes accordingly: preparation of highly qualified specialists meeting the labour market needs (learning outcome: solve the automobile diagnostic, maintenance, running maintenance, and design and maintenance of repair technologies by assessing the science and technology innovations) and development of the applied research activity (learning outcome: implementation of R&D research by using the laboratory equipment and software and formulate the conclusions).

The aim and learning outcomes of the Automobile Transport Engineering programme also conform to the Sustainable Development Goals identified in the strategic plan, namely, "To

promote sustainable, inclusive economic growth, efficient employment and appropriate job", "To ensure sustainable consumption and production models", and "To take immediate actions in the struggle against climate change and its impact".

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

(1) Factual situation

Information from SER:

The curriculum design of the study programme in the Transport Engineering field – Automobile Transport Engineering (full-time, 3 years) has a total volume of 180 credits. 136 credits have been allocated to achieving the learning outcomes in the study field (including practice placement and final thesis preparation), 38 credits in total 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. The free electives available under the study programmes for the students comprise 6 credits.

(2) Expert judgement/indicator analysis

The curriculum design of the study programme in Automobile Transport Engineering (full-time, 3 years) is in line with the General Requirements on Execution of the Studies: the total volume of the programmes is 180 credits (minimum 180 required), 136 credits (minimum 120 credits required) have been allocated to achieving the learning outcomes in the study field (including practice placement and final thesis preparation), 38 credits in total (minimum 30 credits required) have been allocated to the practice placements. The competencies during the final thesis (project) defence are allocated with 12 credits (minimum 9 credits required). The free electives comprise 6 credits.

The annual volumes of the studies (the full-time mode) providing the equivalent degree is 60 credits (minimum 45 credits required) per year. The volume of students' contact work (including remote work) is 47 % (at least 20 % required), students' independent work volume – 53 % (at least 30 % required). The condition related to practice placement and other practical preparation as described in the General Regulations on Execution of the Studies is satisfied in the programme – the third of the programme volume, have been allocated to this.

The aim and study results of the study program meet the requirements of the description of the study field of Land Transport Engineering (engineering studies) for the first cycle of college studies. The level of complexity of study results is appropriate, taking into account the type of studies (college studies), field (transport engineering), cycle (first) and the qualification requirements of the European Qualifications Framework of the European Higher Education Area

and the national qualifications framework. The study results are focused on B. Bloom's taxonomy levels of competence (knowledge, understanding, application, analysis, synthesis, and evaluation).

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.

The report states that the programme is run only on a full-time basis, but the meetings revealed that some students were studying under a part-time (session) mode. As mentioned at the meeting with the teachers, the students studying under the session mode were receiving individual consultations as needed. In order to ensure the accessibility of learning outcomes, more detailed regulation of independent studies would be relevant. In the study module programmes, it would be reasonable to define alternatives of the applied learning and assessment methods.

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

<u>Information from SER (p. 8):</u>

The links of the learning outcomes of the study programs with the outcomes of the study subjects is presented in the SER on p. 8, but the compatibility of the teaching/learning and assessment methods with them is not discussed in detail.

<u>Information from interviews:</u>
The students confirm that they know the assessment requirements.
Social partners take part in the marking of final papers.

Additional information submitted and discussions with the teachers showed that the systemic approach and process, which provide 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 programme. In response to the question asked during the interviews 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) 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.

(2) Expert judgement/indicator analysis

The appropriate link between the study programme outcomes and subject learning outcomes has been reflected in the self-assessment report (the matrix, Table 2), while the conformity of the teaching, learning and assessment methods with the learning outcomes was described in greater detail during the discussions with experts, upon submission of additional materials for assessment, namely the descriptions of study subjects Cars Flaw Detection and Technical Expertise, Consumables Materials and Solutions, Electrical Installations and Management Systems of Automobile, Internal Combustion Engines, Organization of Maintenance and Current Repair of Automobiles and Technological Equipment.

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 teachers in assessment of the knowledge and skills acquired by the students (by identifying their weight, i.e. effect on the assessment mark) in the assessment forms provided under the study modules. For example, for "verbal illustrated presentation" a 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

<u>Information from SER (p. 10):</u>

The SER argues that consistency is secured by arranging the features of the programme in the following order: 'aim of the program → result of the study program → subject result → assessment of the subject result. The descriptions of study subjects clearly show which result of the study program corresponds to the results of a certain subject.'
'The study subjects are arranged in the study programme in such a way that knowledge, practical skills, and abilities are achieved consistently. All subjects are interconnected by reflection on practice and theory, which helps the student to understand what learning abilities still need to be strengthened in order for learning outcomes to be better.'

The SER also states that 'The ATE program studies active teaching methods are focused on the development of students' creativity and general and special competencies. Auditory work is organized using interactive methods'.

The SER does not specify how students gain interdisciplinary competences, how many credits are dedicated to development of interdisciplinary and how the students develop critical thinking as well as public speaking skills.

Information from interviews:

Asked what actually happens in the classroom when active teaching methods are applied the teaching staff refers to AUDATEX as an example for diagnostic equipment.

Regarding interdisciplinary competences, critical thinking and public speaking skills, the teaching staff explained that their approach relies on the individual development of students, which highly correlates with their enthusiasm.

Weak students are supported by additional counselling hours, especially for the first semester. They are open to anybody, but teachers invite weaker students individually.
The physics exam, which is compulsory, plays a special role in demonstrating the students what level of learning is expected from them.

(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 reach the learning outcomes.

The statements in the SER reflect the methodology of practice-oriented teaching. Thus the experts inquired about the practice of teaching in the interviews.
The explanation of the college staff is down-to-earth and realistic. However, it would be useful to lay down the principles of that approach in documents. Additionally, some general guidelines for enhancing the competences of students would be useful in keeping the process up in a structured way.

***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. 11):

Students of the programme under the Transport Engineering field have the possibility to personalise their studies by choosing a mandatory alternative (3 credits in volume) and two free electives (3 credits each). The alternatives in the area of Social Sciences offered at the fifth semester of the programme: Philosophy, Technical Philosophy, or Psychology. During the fourth semester, the students have the possibility to gain knowledge relevant in the professional activity or the area of interest. One of the most common subjects chosen during the assessment period: Ergonomics in Engineering, Traffic Psychology, Sports Cars, and Automobile Aesthetics.

Apart from a full-time study programme there is a programme conducted in periodic block courses.

Information from interviews:

The students have a positive opinion about this structure; from their point of view, it helps them combine study with work and family obligations.

(2) Expert judgement/indicator analysis

With the elective subject, there is a minimum of personalisation in the study programme. The programme variation organised in block courses is another element of personalisation, regarding the organisation of the course.

Further development of the possibilities for personalisation would be an effective measure for improvement of the attractiveness of the study programme and high employment rates of the graduates, and would allow to expect higher number of applicants and expectations of the social partners-employers. The possibility for a greater volume of the alternative speciality subjects in the programme in the areas such as hybrid vehicles and electric cars, cargo vehicles, etc., should be addressed.

***3.1.7.** Evaluation of compliance of final theses with the field and cycle requirements.*

(1) Factual situation

The SER explains the procedure of the final thesis and offers a list of final thesis papers, giving evidence of the subjects of the final theses referring to the learning outcomes of the programme (p. 11). Upon requirement by the panel, the college confirms that there are invitations by the college for stakeholders about collaboration in final theses. The employers present at the interview had not been in that position, though.

(2) Expert judgement/indicator analysis

The topics and content of the final theses of the study programme correspond to the studies of the field; the students demonstrate their acquired competencies with the work they prepare: analyse the interconnection of vehicle technical hubs and their performance characteristics, evaluate the reliability of the part/unit/system; create technological processes of Automobile diagnostics, maintenance, current repair and repair; prepare the technological project of the car technical maintenance company, plan and organize the activities of the company/department.

In preparation of the final theses, the students apply the methodology to design of the technological processes, employ analytical and modelling methods, and conduct applied research.

The initiative by the organizers of the programme and encouragement of the more active students to prepare more complex/original final works that require broader and deeper understanding of the science and technology innovations and holistic engineering thinking is considered to be a positive aspect: Modernization of the fuel supply system of Lada 2101; Speedometer and odometer error study; Modification of a gasoline engine by converting fuel to compressed air; Analysis of the impact of biodiesel on energy and ecological indicators; Increasing the power of the BMW atmospheric engine by installing a turbocharger; Use of car body assemblies for trailer design; Increasing the power of the Peugeot 206 diesel engine; Modification of a truck standard suspension to an air suspension system.

The topics of the final theses of the students are relevant for companies where students perform internships in Practice of Automobiles Service Technologies, therefore a significant part of the final theses are prepared in commission for companies. In them, students solve typical problems of vehicle service centres. Nevertheless, the self-assessment report and information provided in Annex 2 indicate the necessity for considerable further development of the process of involvement of the social partners as to the preparation of final projects. Final project topics should be more diverse than the topics of design and modernization of car service companies, workshops, stations which prevailed in the assessment period. Furthermore, there should be closer contact to the engineering activity and more intensive cooperation with social partners.

Recommendations for this evaluation area:

To ensure 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 under the study modules.

Considering the content / subjects of the programme, the projects should cover a wider range of topics. Closer cooperation with the social partners is needed to assess market demand.

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. 12-13):

According to the SER and the interviews the teachers of the field of study cooperate with the social partners in carrying out applied scientific research activities, participate in research (including students), consult the social partners in solving the technical problems appearing in their companies.

Examples for projects: one project with Klaipeda Municipality (analysis of traffic flow in the city), another one with a public transport company about the rerouting of bus lines. A finished project dealt with an energy-efficiency comparison between road transport and transport on inland waterways between Klaipeda and Vilnius. Together with the Klaipėda State Seaport Authority, an international scientific-practical conference was organised. (More details are referred to in the SER p. 13).

Information from interviews:

Projects with international partners have not been conducted so far. However, projects with Serbia and Silesia are being planned.

(2) Expert judgement/indicator analysis

Management has big plans for research activities, but so far there are no internationally visible results either in the number and quality of articles, or in research projects.

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. 15):

The SER refers to seminars and guest presentations about the latest tools used in car repair shops and the latest car tyre repair technologies. Often teachers go with students to companies for training, thus acquiring knowledge about new technologies, for example about machining of work parts and surface hardening.

Information from interviews:

The college has set up an Applied Research Centre. A students' conference is planned. The experts did not receive examples of (applied) research activities.

(2) Expert judgement/indicator analysis

It seems that the college is still on the way to exploit in the study program the results of research and technology development.

***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. 15):

Research is conducted by students during internships in the laboratories of the Transport Engineering Centre. Students mainly do hands-on work in the laboratories, sometimes followed by the final thesis. Example: Power improvement of Diesel engines.
Students use the research data for the preparation of final theses or present it at an annual student scientific conference.

Information from interviews:

The teachers state that they also explain structures and methodology of research during their regular teaching.
Examples of collaboration in science or technology with business partners are with Latvia, UK, the Lithuanian wheel expert and an AUDATEX software specialist, though the projects were not specified.

(2) Expert judgement/indicator analysis

According to the analysis of the SER and interviews the student engagement in research activities is not sufficient. Only 3% of students hold presentations or publish articles in conference proceedings. Most of students' research (including experiments) is conducted during professional internships only.

Recommendations for this evaluation area:

It is necessary to make the mechanisms for the involvement of the teaching staff in scientific research more visible and transparent.

International collaboration in applied research is to be improved and enhanced.
Special subjects about research and innovation for attracting and preparing students to research should be included 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 interviews:

As the Ministry of Education raised the admission requirements for Lithuanian higher education institutions in 2019. The number of students admitted has been decreasing constantly. As a counter measure the enrolment points for non-state-funded students were lowered; thus the further decline could be attenuated (49 new students 2020). The college stated that a detrimental effect on quality could not be perceived. Additional counselling for weaker students has been introduced.
The improvement in student support by the Lithuanian government has also contributed to the hold-up of the decline.
According to the SER, the admission rules are published on the website of the college and presented at various events, such as open days, exhibitions, meetings with students or other stakeholders.

(2) Expert judgement/indicator analysis

The College uses appropriate means to attract students for appliance to this study programme.

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. 18):

The SER states that, according to the procedure established by the college, a subject is credited if its volume is at least two thirds of the volume of the study subject envisaged in the study programme being studied or intended to be studied, and meets the essential objectives and the main parts of the subject contents. Elective subjects are credited without restriction. Final theses are not credited. A maximum of 75% of the scope of the study programme to be studied can be credited. The SER also provides an overview on the numbers of students who have been accepted and the extents of their accreditations.

(2) Expert judgement/indicator analysis

The evidence about the recognition of foreign qualifications is sufficient.

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

(1) Factual situation

Information from SER (p. 19):

Students are introduced to mobility opportunities and the requirements of exchange programmes. Information is sent to all students by email and is posted on the TF bulletin board; students are also provided with by the head of the department, group tutors and the TF administration, including hands-on information about the necessary paperwork.
There are Erasmus+ partner institutions in 16 countries, with which KVK has signed cooperation agreements; for example, in Belgium, Denmark, France, Poland, Turkey, etc. Students are given advice by the Head of the Department of Engineering and Informatics on the suitability of internship places and the choice of study subjects.

(2) Expert judgement/indicator analysis

The high number of cooperation agreements (58) is evidence that the college tries to ensure the implementation of sufficient internationalisation. The information policy is also adequate, on assessment the students confirmed it. Still, the number of students who go abroad is still small, which is apparently due to their own personal reasons.

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

Information from SER (p. 19-20):

College students are provided with academic, psychological, financial, and social support. Counselling of students on study and study-related issues is provided at the Dean's Office, the Career Centre and the students' representatives' office as well as individually by lecturers according to a consultation schedule.
Academic debts can be settled during an academic support week one week after the exam session. Later, the liquidation of academic arrears (debts) takes place in accordance with the procedure set out in the college regulations. In case of serious causes, such as maternity leave or small children or students with special needs, lectures are allowed to be attended according to an individual schedule. Students experiencing difficulties can seek the help of a psychologist.
Students are eligible for several types of scholarships and other financial support provided by either the College or other organisations or individuals. Depending on the results of studies, applied science and social activities, students can receive incentive payments and one-time

scholarships. Support can also be provided for disabled people studying at the College. Students with financial difficulties may pay the tuition fee in instalments in accordance with a procedure established by the College. Students studying at their own expense and having successfully passed the session may apply for the vacant state-funded place. The best studying students may be reimbursed from the state budget or the part of the tuition fee actually paid.

On an external level, social scholarships are awarded to students in accordance with the general rules of the Republic of Lithuania. The Lithuanian State Science and Studies Foundation provides loans to students to pay tuition fees, living expenses and part-time studies in accordance with international treaties and agreements. State financial support for students with disabilities is coordinated by the Council for the Affairs of the Disabled under the Government of the Republic of Lithuania.

(2) Expert judgement/indicator analysis

The college provides sufficient academic, psychological, financial and social support.

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

(1) Factual situation

<u>Information from SER (p. 21):</u>

Following the recommendations of the last accreditation, the college introduced or improved several elements of information and counselling: a survey of first-year students conducted every year, monthly meetings with first-year students, discussion of the results of the student survey with individual groups of students; discussions with social partners, company managers, former students are organized (2-3 times per study year); career information, career counselling and graduate career monitoring.

(2) Expert judgement/indicator analysis

The college provides sufficient information about the study programme for first year students.

Recommendations for this evaluation area:

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. 22):

The main form of study, organized by the ATE study program leading to a professional bachelor's degree, is full-time studies. The regular volume of studies in one full-time form is 60 credits (ECTS). Lectures are organized in the following ways: full-time (academic classes take place during the day on weekdays); session (academic classes take place in periodic sessions, during which work is organized on weekdays and / or weekends).

The assessment of study achievements is a part of the study process. It is performed during the whole semester and the examination session. The college has a cumulative assessment system by which students collect marking points during the semester and at the end of each semester in mid-term examinations and sometimes projects.

Information from interviews:
Dropout figures for the evaluation period are 55% (full-time) and 40% (part-time), respectively.

(2) Expert judgement/indicator analysis

The teaching and learning process takes into account the needs of the students and is appropriate for the achievement of study results.
The ATE study program does not provide extended part-time studies but offers the opportunity to study in a periodic session method. The students who attended the expert panel interviews were mainly working people. Dropout figures for the evaluation period for full-time is high. Expert panel has shown that studying in a periodic session can be stressful for working students.

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. 23):

For students with mobility impairments, there are special entrances to the premises of the Faculty of Technology, an elevator for movement between floors, and a special toilet. The faculty reading room has special work areas adapted for students with hearing and visual impairments.
The SER reports about one student with a deaf-mute disability, who was provided with a sign language interpreter and successfully finished his courses in 2020.

(2) Expert judgement/indicator analysis

The college takes adequate measures to support students with special needs.

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

<u>Information from SER (p. 23-24):</u>

According to the procedures of the college, the individual study results are evaluated by a ten-point criterion evaluation system. In the description of the study subject, each lecturer presents the criteria for the assessment of the study subject results, which reflect the level of achievement of the study subject results.
Various assessment methods are used to assess students' achievements (for example, examinations, presentations and defences).
The first progress monitoring of first-year students is implemented one month after the start of studies. The lecturers provide the head of the department with information about the students' study results. Individual interviews are conducted with students that fail to advance, during which the aim is to find out the reasons and take decisions for further studies. The next stages of monitoring take place at the middle of the semester and at the end of the semester, in the last week before the examination session.

<u>Information from interviews:</u>

For teaching during the pandemic the college introduced a mixed study model in spring: Necessary things were taught in presence, leaving room for digital teaching of other subjects. The college bought software and supported the teachers in using it, with IT counselling hours every Friday. First-year students were introduced into distance-learning platforms (MS Teams and Moodle) and got access to more databases.

Students recommend the study programme to others because of the friendly atmosphere, accessible teachers and good laboratories.

(2) Expert judgement/indicator analysis

The system of the systematic nature of the monitoring of student study progress and feedback is clear, public, and appropriate for students.

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

<u>Information from SER (p. 24):</u>

The accounting of study achievements in the College is explained in the SER: Teachers enter intermediate assessments of study achievements into the college's information system (EDINA). Shortcomings, errors, and remarks on the assessed tasks are announced by the lecturer. Intermediate assessments of study achievements are to be published within three working days before the date of final assessment of study achievements of the subject. The results of the assessment of study achievements are transmitted confidentially.

Information from interviews:

Students recommend the study programme to others because of the friendly atmosphere, accessible teachers and good laboratories.

(2) Expert judgement/indicator analysis

A continuous monitoring of the progress of students in the study field is ensured. Feedback is conducted in a formal and personalized way. During the interviews students appreciate feedback in individual way from direct teaching personnel.

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

(1) Factual situation

Information from SER (p. 24):

The Studies and Career Centre takes a survey of graduates twice per year. Graduates receive a cover letter in their e-mails and a link to the standardised electronic questionnaire.
Objective monitoring of graduates' employment is performed by use of data from departmental and interdepartmental databases and the Government Strategic Analysis Centre, which collects and analyses data from official statistical sources.
The graduates who participated in the survey were satisfied with their studies. However, the questionnaire was filled in by too few graduates for a statistically significant result to be based on it. Following the opinion of graduates expressed in 2017, the college increased the value of the internships in the study programme from 30 ECTS to 38 ECTS.

After conducting a survey of the opinion of social stakeholders on the readiness of the College graduates for the labour market, the college found that the specialists of Transport Engineering are prepared well: the fitness of engineers for work is assessed with 4.5 points (out of 5) and 90 percent of social stakeholders positively assess the compliance of the competencies of the college's graduates with the needs of the labour market.

Information from interviews:

As the SER states among the possible areas for improvement 'employment of graduates by level of qualification categories' on p. 26., the college was queried about the specification of that aim

and pointed out that 80-85% of graduates find employment in the field and 70% of students are employed while still at the university.

Subsequently, the students were asked how useful they think their college training is for later work. They were positive about being 'taught to work properly' and the accessibility of teachers (including even private support). In their focus on practical work, maths and physics are seen as less useful.

With this assessment they are roughly in line with the view of the employers. The employers seek mechanical and communication skills (communication skills mentioned as a prerequisite for customer contact). Most skills are believed to be acquired through job practice, and research and innovation skills as well as 'life values' are seen as individual. They expect graduates to be able to learn 'new things', and are satisfied with the graduates' competences in this respect.

Asked whether the students' knowledge is sufficient for their internships several employers agree:
Employers say that, though some graduates are challenged by new technologies, and there is little competence in heavy-duty vehicles, they are able to learn. The competence in mechanics is regarded as good, electric repair competence as less so. A foreign employer asserts that Lithuanian graduates are generally very good at communication, motivation and technical knowledge, compared with graduates from other countries.
A further example for a company collaborating with the college is a company which collaborates in modern technologies and safe-driving principles, seminars and open doors and internships; two graduates have been employed.

The students confirmed that the college helps to find jobs through contacts to social partners.

(2) Expert judgement/indicator analysis

The opinions of the college and the stakeholders show their focus on practical training issues. The college, though, tries to keep up the theoretical teaching even if that is not always appreciated by the students nor valued very highly by some employers.

The expert panel appreciates that the faculty performs subjective and objective monitoring of graduates' employment and career, which allows full-scale assessment of the changes in the position of graduates in the labour market and their career changes.
As the faculty mentioned in SER (p .24), there was a very low response of graduates to the questionnaire of opinion of graduates and employers about the studies at KVK, employment opportunities and competencies required by the market. The difficulty to collect generalized data is mentioned as areas of improvement and the faculty is working on this.

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

(1) Factual situation

<u>Information from SER (p. 25):</u>

The academic integrity of ATE students during their studies is ensured by the KVK Academic Community Code of Ethics, where it is clearly defined that academic integrity prohibits plagiarism, copying, purchase, sale, falsification and forgery of study papers. Each student who enrols in the College signs a Student Declaration of Academic Integrity, which is valid for the entire term of the study contract. Students may be subject to disciplinary action or expulsion from the College for copying, plagiarism, other dishonesty, and fraud.
A test of independence is conducted with the eLABAa system, and when level of similarity with other works exceeds 30%, the work is not approved for public defence.

The annual survey of students' satisfaction with the quality of studies also contains several questions where students can express their opinion about the practice of academic integrity. During the period analysed no cases of violation of the principles of academic integrity, tolerance and non-discrimination were recorded.

During the interviews the experts heard that women students, being a small minority in the business, are strongly supported by teachers.

(2) Expert judgement/indicator analysis

The experts find that, apart from the existing formal Academic Community Code of Ethics teachers support students in individual ways. During the interviews with students and graduates the experts understood that this point is very important for students. It creates a good atmosphere of confidence at the college.

Regarding intellectual property the expert panel appreciates that the faculty uses plagiarism detection software programs for bachelor's 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

<u>Information from SER (p. 25-26):</u>

According to the Regulations on the Submission and Examination of Appeals of the college, students have the right to submit appeals to the dean after publication of the examination assessment, regarding the assessment of the study results of the subject semester or violations of the assessment procedure. An appeal may also be lodged regarding satisfactory and unsatisfactory final assessments of the study results of the studied subject (module). Appeals regarding the evaluation of the final thesis or qualification exam shall be submitted after the day

of the defence of the final thesis or the exam. An appeal may be lodged against breaches of the final thesis or qualifying examination assessment procedures that may have affected the final assessment. Upon receipt of an appeal regarding the assessment of the study achievements of the subject semester, an Appeal Commission with three lecturers from the area of the programme is to be set up. Upon receipt of an appeal regarding the evaluation of the final thesis or examination, the chairman of the qualification commission, the dean of the faculty and the vice-dean must be invited to the commission. No appeals were lodged during the period under review.

(2) Expert judgement/indicator analysis

A methodology of submitting appeals and complaints regarding the study is difficult to evaluate for the expert panel because no events are mentioned during the evaluation period.

Apart from this methodology, students have the chance to submit their thoughts on the study content, including their opinion on the teaching methods, wishes and suggestions by filling in a questionnaire.

Recommendations for this evaluation area:

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. 26-27):

The ATE study programme has 7.52 full-time positions, of which 0.83 are associate professors, 6.2 are lecturers and 0.49 are assistants. Three more teachers are due to come next year, after they have finished their PhD. They will teach at Klaipeda University in parallel. Visiting lecturers are also going to be involved in the realisation of the programme. Within a three-year plan, specific partnerships with external partners are planned.

The pedagogical staff of the study programme is selected according to the Labour Code of the Republic of Lithuania, the Statute of the College, and the description of qualification requirements for teaching positions at Klaipeda State University of Applied Sciences. Teachers

working in the study programme meet the pedagogical and qualification requirements set out in the Law on Science and Studies of the Republic of Lithuania.

91 percent of the teachers of the subjects of the study field have more than 3 years of practical work experience in the field of the taught subject during the last 7 years and 86 percent of teachers have at least 3 years of pedagogical work experience.

In order to optimise the study organisation process, part of the theoretical lectures is given at the College by creating academic groups, for example: Mathematics, Philosophy, Fundamentals of Management, Applied Research Methodology. For practical and laboratory work and teaching internships, the group is divided into two subgroups if there are more than 20 students in the group. One lecturer supervises the final theses of a maximum of eight students.

As to the fluctuation of teachers, during 2017-2020 nine lecturers left due to retirement, the change of residence or the change of place of the (second) job.

(2) Expert judgement/indicator analysis

Measured by the requirements approved by the order of the Minister of Education the concentration of teachers/researchers in the study field is low.

According to the data provided in Annex 3 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 applied research in the field of Engineering Sciences, publishing the results thereof in the scientific journals/proceedings, and participating at the scientific and practical events are adequate for achievement of the learning outcomes.

An important aspect of improvement of the studies is more intensive applied research activity in the transport engineering field and, respectively, larger number of publications in the field journals, based on the data provided in the self-assessment report, the Annex, and the list of scientific works published by the teachers for the recent period.

The composition of the teaching staff employed for the 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), satisfying the minimal requirements considerably. 5 teachers holding the Doctor's degree deliver 16.9 % of the volume of the subjects under the field programme (minimum 10% required). 65.2 % of the teachers delivering the study field programme (of which 4 – associate professors and 19 – lecturers) are employed at the HEI on a permanent basis (at least half of the FTE and at least for 3 years), 90.9 % of the teachers 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 who hold at least a Master's degree or an equivalent qualification of higher education and have at least a 3-year experience of teaching in the field subject or of practical experience.

The existing field teacher to student ratio 15.2 corresponds to the HEI-approved requirements on Compliance of Actual Facilities with the Organization/Quality of the Studies, is rational, and enables assurance of the quality study process.

With the number of students studying under the study field shrinking, the total number of teachers has been reduced accordingly; however, the number of the teachers of the study field subjects employed at least half by the FTE and for at least 3 years at the HEI has remained stable. The organizers of the field programme declare that the turnover of teachers in the period of assessment was minor; however, the change of almost the third of the teaching staff composition in the relatively short period 2017–2020 (6 new teachers had to start the employment) indicates the need for a sustainable human resource planning and management strategy and solutions. With the teachers retiring and/or leaving to work at another institution or work abroad, it is important to ensure continuity of the R&D activities and appropriate research, didactic, and professional competences in the area of research activities.

The participation of teachers-practitioners in the programmes by delivering field subjects is considered to be a positive aspect. In the period of assessment, 9 employees at companies providing automobile servicing and maintenance delivered lectures and practical classes to the students.

The substitutability of the teachers approaching their retirement is ensured by integration of new teachers into the studies. Young teachers assure the appropriate level of the quality of studies and application of the new achievements in science and technologies to the study process by participating systematically in the professional development courses/seminars in Lithuania and abroad (Use of Mobile Applications to the Study Process, A/C System Maintenance and Diagnosis, Use of Service Liquids in Vehicles, Automobile Tyres and their Repair Technologies, etc.).

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

(1) Factual situation

<u>Information from SER (p. 28-29):</u>

The College is a member of the Erasmus+ Charter for Higher Education (ECHE). The HEI has concluded more than 50 cooperation agreements with foreign schools of higher education, of which 12 are related to the field of Transport Engineering. The teachers and students have the opportunity to visit schools of higher education in Germany, Finland, Poland, Latvia, Romania, and Slovenia. The teachers cooperate closely with the Silesian University of Technology (Poland), Warsaw University of Technology (Poland). Mobility participants are paid a grant to cover travel and subsistence expenses, and employees are paid an average salary during the mission. The College has an Internationality strategy, which sets out an action plan to promote

internationalisation. The organisation of mobility is defined in coordination arrangements. An invitation to participate in the Erasmus+ programme is sent at least twice a year, and there is a selection of applicants.

The college has signed 12 cooperation agreements with foreign higher education institutions in the field of Transport Engineering. During the accreditation period, 16 lecturers of the study programme participated in exchange programs, gave lectures or did internships in foreign higher education institutions. Recently, one teacher held lectures in Silesia, and one went to Latvia for a maths congress.

There are courses for more teachers to achieve B2, so far used by two teachers.

Information from interviews:

There were two visiting teachers in three years (one through the Erasmus programme, one outside of that programme from Riga).

(2) Expert judgement/indicator analysis

Considerable attention is given at the HEI to improvement of international scope of activities. The College has an International Strategy aimed at the promotion of the international character of activities. The invitation to participate in the Erasmus+ programme selection processes are arranged twice a year. International events are held at the HEI and attract representatives of foreign schools with whom the teachers and students of Institution have the opportunity to communicate, discuss potential exchange, and coordinate their mobility.

Though the HEI has concluded a large number of cooperation agreements with foreign schools of higher education and the teachers and students have the opportunity to visit schools of higher education in several countries, the number of teachers (15) who participated in the exchange programmes (including lectures or internship at foreign schools of higher education) during the assessment period was not high.

The fact that the cooperation possibilities and modes are not fully used is evidenced by the extremely low number of visiting teachers – only two visiting teachers delivered lectures to the students of the field programme during the assessment period. In this context, it should be noted that it is important for the teachers to participate not only in the Erasmus+ programme, but also to cooperate with foreign schools of higher education, organizations, and companies for development of applied research and project activities in the field of transport engineering.

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

(1) Factual situation

Information from SER (p. 29-30):

The College Statute supports lifelong learning. The Quality Manual pays attention to the competence of employees, notes the importance of learning, planned training, and estimated training costs. There is also a Procedure for Improving the Qualification of Teachers and Other College Employees, according to which the training plan is prepared every academic year. Training is funded by the College, the EU Structural Funds or the staff members' own finances.

All lecturers are provided with equal conditions to improve their qualifications by preparing and defending qualification research papers, internships in Lithuanian and foreign research and training institutions, attending various courses and trainings, and participating in project activities.

The main areas of teacher training programmes relate to the study programme (e.g. car construction, car management systems, car maintenance and diagnostics, modern technologies in car repair, ecology, traffic safety, modern study methods in engineering studies, entrepreneurship education, foreign language development).
The SER provides the numbers of teacher qualification courses during the analysed period in Table 13; they lay at around 40 in the study year 2019-2020.

<u>Information from interviews:</u>

Inquired about the strategy of its human-resources development, the college explains its HR development programme: more external teachers, more teachers with PhD qualification, invitation of more guest lecturers and plans for knowledge improvement have been worked out.

There is a salary supplement for teachers for scientific research.

(2) Expert judgement/indicator analysis

It is necessary to strengthen the participation of lecturers in all activities with industry, support them with the due importance of integration of the latest technologies, knowledge and practical experience in the studies.

The HEI gives appropriate attention to teachers' development in the scientific research, didactic, and professional activity – the State University of Applied Sciences has approved the Procedure for Professional Development of Teachers and Other Staff, and the teachers pursue professional development under its framework. The Professional Development Plan is developed on a yearly basis. Professional development is funded by the HEI funds, EU structural funds or employees' own funds.

The conditions for didactic and professional development of the teaching staff of the programme are good, and the process is considered to be systematic; however, given the importance of project activities specifically for the transport engineering field in order to successfully develop the field studies, it is also important to consistently address development of the staff in the applied research activities.

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.

Recommendations for this evaluation area:

The experts recommend the launch of a special programme for inviting guest specialists from business and leading professors, also from abroad, to fill part time consulting positions and enhance the competencies of KVK staff and research.

The involvement of a larger number of teachers of the Transport Engineering study field in the academic exchange programme is recommended, in parallel with the development of English language skills.

The number of foreign teachers should be increased.

More intensive teacher involvement in applied research in the field of transport engineering (commissioned by industry) is recommended, correspondingly leading to more active publication of research results in scientific journals.

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. 30-33):

The SER gives a comprehensive and detailed record of its teaching resources, including room space, laboratory places, hardware and software.

Information from interviews:

A speciality is the laboratory for load securing, which was used for the logistics programme and is also used by police force for training.

The library opening hours were 8-19h, but the hours have turned flexible according to lecture times. The digital library is open round the clock.

(2) Expert judgement/indicator analysis

The SER (p. 30) mentions that the faculty has an average of 12.01 m² of total premises per student (the normative limit (minimum) value of the indicator is 12 m²). The faculty should regard this in their future faculty strategy.

Despite the claim that laboratories are equipped with the latest equipment and tools for laboratory and practical work as well as for the implementation of applied research there are some lacks with equipment for new implemented study subjects (Hybrid Automobiles and Energy Sources of Alternative Power). This was mentioned as an area of improvement. During the meeting the experts were assured that the laboratory equipment due to be commissioned will be purchased and installed in 2021.
Second, the experts identify a lack of heavy-vehicle laboratory equipment. During the meetings heavy-vehicle companies confirm their commitment to investment into spare parts and their commitment to compensate resource gaps by field trips and short internships.

To ensure the quality of the implementation of the new study programmes the Faculty should develop a strategy of implementing new study programmes together with needed laboratory equipment.

The cooperation with Social partners appears to be very good and the active involvement in the allocation of final internship placements is successful and useful to the students.
At the library there are sufficient methodological resources for studies in the study field; 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

<u>Information from SER (p. 33-34):</u>

There is some information in the SER about investment into resources in the past, but little about future investment budgets, so the experts inquired about that in detail.

<u>Information from interviews:</u>

The faculty explained that there is a basis of funding for resources provided by the college management, which the faculty is free to spend. It can be topped up by request for specific projects. The faculty can also top up its funds with project income.

E-car equipment is being introduced together with a German partner. Recently, there were problems, so more funds are needed. Part of the planned equipment will be bought and installed in 2021.

Since the experts identify a lack of heavy-vehicle laboratory equipment, they inquire about support by social partners.
Heavy-vehicle companies confirm their investment into spare parts and their commitment to compensate resource gaps by field trips and short internships.

(2) Expert judgement/indicator analysis

The expert panel missed precise information in the SER about future investments into upgrading resources, dedicated budget and concrete plan of actions.
During the meeting the experts were assured that the implementation of processes at the college created a real possibility to get needed assignments for upgrading resources, but the whole picture of future particular investments did not become clear.

In the SER (p.34.) it is stated that, by taking into account the sustainable development of the energy, transport sector and the development trends of electric car production, it is planned to prepare a financial plan and to supplement laboratories with training equipment for the construction and repair of electric vehicles in 2021.
The expert panel expects to see a summary of plans to be presented in the SER in the section explaining the evaluation of the planning and upgrading of resources needed to carry out the field studies.

Recommendations for this evaluation area:

– *To ensure the quality of the implementation of the new study programmes the Faculty should develop a strategy of implementing new study programmes together with needed laboratory equipment.*
– *The expert panel recommends to prepare a summary of plans to be presented in the next SER in the section explaining the evaluation of the planning and upgrading of resources needed to carry out the field studies.*

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

<u>Information from SER (p. 34-36):</u>

The college has implemented a Quality Management System that meets the requirements of the EN ISO 9001. Procedures for continuous quality improvement have been established. The SER cites among their achievements that processes of preparation and improvement of study programmes as well as organisation of studies have been documented and are monitored; a procedure for assessing student achievements has been established; the qualification and competence of lecturers is regulated, as well as resources required for studies and support for

students. The college collects analyses information required for study management, takes decisions on it and assures their observance. Information on the programmes and qualifications awarded is made public. The criteria of the quality assurance system set by KVK are in line with the mission of the institution, are oriented towards meeting the needs and expectations of stakeholders and are harmonised with the criteria of external evaluation.

(The functions of the College Quality Centre were explained at the respective sections.)

The responsibility for the quality of studies is distributed to all members and departments of the College's academic community according to their duties, powers, and competence.

Information from interviews:

The experts inquired who ultimately decides about the improvement and the resources.
The college replied that analysis is executed by all management levels, student representatives, discussion rounds, employers, employees and graduates.

Asked to explain the updating process of lectures they replied that teachers are responsible for evolutional updating, while a regular renewal inquiry is done annually by the Student Programme Committee and in case of bigger changes, the Academic Council discusses and approves changes.

(2) Expert judgement/indicator analysis

The committee finds that the explanations in the report are reflected by the oral statements of management.

***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. 36):

The SER explains the evaluation process and cites examples: surveys of social stakeholders (students, lecturers, graduates and employers) are conducted annually, problems and ways to solve them are identified. Graduates are invited for debates, discussions, seminars and conferences, and faculty members travel to partner companies several times per year. Internships and final theses are discussed and evaluated with employers, and employers' opinions on the subject and abilities of trainees and graduates are asked. Stakeholders receive feedback after surveys.
Social partners are directly involved in the development process of the study programme by submitting proposals on the competencies that an ATE student should acquire. For example, after discussions with major service representatives and according to their wishes, the

programme was improved to include the subject of hybrid cars and alternative energy sources in 2017.

As the SER states that 'in all cases, stakeholders receive feedback after surveys and after the measures have been applied, the progress of students' satisfaction with the quality of studies and the effectiveness of the measures applied are monitored annually' (SER p. 36), the experts inquired about that subject during the interview with stakeholders.

Information from interviews:

The employers present during the interview could not assert that they have been contacted to that end yet. However, they confirmed that, through their contacts to students, they are indirectly involved in the quality process.

(2) Expert judgement/indicator analysis

In general, the processes as to the involvement of stakeholders appear to be adequate.

The experts find that regular contact between the college and stakeholders should also cover quality issues about resources.

***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. 37-38):

The SER provides comprehensive detail about the information management of the college. The Open Information, Counselling and Guidance System (AIKOS) is mentioned, and websites are presented as its main information channel.
Schools in Western Lithuania are visited every year for presentations of the study programmes of the College. The study programme is presented in an annual publication and several events throughout the year.

The Department, faculty office and other centralised departments of the College collect and analyse data on the study process, student admission, teacher certification, applied, experimental and consultation activities of teachers and students, changes in the number of students and reasons for dropping out. The collected data are analysed in order to improve the program implementation and quality assurance process. For example, in 2018, the study programme's results, contents and staff qualifications were updated, whereas in 2019 more attention is brought to the strategic partnership and cooperation.
Surveys of the employers' opinions were conducted in 2017 and 2018, after which problematic issues arising during the implementation and updating of the programme were discussed with them in meetings, seminars, trainings, field trips and other discussions.

The Study and Career Centre carries out the monitoring of graduates' employment annually, based on graduates' surveys. Dissemination of the results of the improvement of the study field is carried out for lecturers and administration first, subsequently it is discussed at the meetings of the Studies Programme Committee, the Department, the Faculty community, and the meetings of the Academic Council.
Surveys of satisfaction of students and graduates with the quality of studies and employers' opinions on the competencies of graduates are carried out by the Quality Centre.

Information on the quality of the study programme is systematically collected by the Study and Career Centre and its data is used to improve the programme.
Taking into account the students' remarks and suggestions after the survey of their satisfaction with the subject module, the lecturers plan measures for the improvement of the subject individually, before them being reviewed by the SPC. The Dean eventually takes the decisions on measures. The latest improvement of the results and structure of the study programme was carried out in 2017 after execution of all steps.

The SER also reports about a specific round table discussions with social and academic partners (employers) held on 15 November 2019 (p. 38), where problems and issues related to the training of transport engineers were discussed. The discussion resulted in a decision to collaborate in popularising and raising the prestige of engineering professions, share innovations and support laboratory teaching equipment, among other things.

<u>Information from interviews:</u>

The students confirm that they actively take part in the surveys and the results are sent to students' e-mail addresses. Feedback is also provided by presentation and round-table discussions are organised. As to the difference between formal surveys and informal channels, they explain that formal surveys lead to improvements of the programme, whereas non-formal dialogue has more depth.

(2) Expert judgement/indicator analysis

The evaluation process fulfils the requirements for the quality loop to be in place and work as required, thus securing quality standards.

***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

<u>Information from SER (p. 38-39):</u>

Students' satisfaction with the quality of studies is researched and evaluated in two aspects and measures: at the study subject level and the programme level.

Surveys of students' opinions about the study of the subject started to use a mobile app, implemented in the year 2018. The results showed that overall student satisfaction has had a clear trend of improvement. Some areas need to be improved, such as the wider use of innovative and active teaching methods, discussions during lectures, the needs of students when creating lecture schedules and the faster update of computers.

Information from interviews:

The students are active in surveys about the quality of study. The participation varies according to the subject of the survey; usually it lies around 70%.
Sometimes surveys get into the spam folders of students, the college says, leading to the questionnaire being filled in by few graduates. The college reacts by conducting informal discussions.

(2) Expert judgement/indicator analysis

In general, the evaluation process is organised in a sufficient way. There should, however, be a way to prevent surveys from disappearing in students' spam folders.

Recommendations for this evaluation area:

IV. RECOMMENDATIONS

1. To ensure unbiased and fair assessment of the students, 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/effect on the assessment mark) in the assessment forms should be provided as part of the study modules.

2. Projects should cover a wider range of topics, and closer cooperation with the social partners is needed to assess market demand.

3. It is necessary to make the mechanisms for the involvement of the teaching staff in scientific research more visible and transparent.

4. Special subjects about research and innovation for attracting and preparing students to research should be included in the programme.

5. It is recommended that the college launch a special programme for inviting guest specialists from business and leading professors, also from abroad, to fill part time consulting positions and enhance the competencies of KVK staff and research.

6. The involvement of a larger number of teachers of the Transport Engineering study field in the academic exchange programme is recommended, in parallel with the development of English language skills.

7. The number of foreign teachers should be increased.

8. More intensive teacher involvement in applied research in the field of transport engineering (commissioned by industry) is recommended, correspondingly leading to more active publication of research results in scientific journals. International collaboration in applied research is also recommended to be improved to that end.

9. To ensure the quality of the implementation of the new study programmes the Faculty should develop a strategy of implementing new study programmes together with needed laboratory equipment.

10. The expert panel recommends to prepare a summary of plans to be presented in the next SER in the section explaining the evaluation of the planning and upgrading of resources needed to carry out the field studies.

V. SUMMARY

The study programme Automobile Transport Engineering conforms to the needs of the society and labour market. The existing coherence between the programme content and qualification awarded enables the graduates to work in the transport sector. The aim, learning outcomes, and purpose of the programme are based on the context of the Klaipeda region development. However, it would be relevant to apply a broader context to more issues of the transport system, such as sustainable mobility development, accident rate reduction, and accessibility of transport services under the programme.

With only one transport-engineering programme executed following the decision not to admit students for the Transport Logistics programme in 2020, the labour market demands are met only partially. The geographical location of Lithuania and Klaipeda and their role as a transport hub should open wider possibilities for the development of a programme dealing with intermodal systems.

The aim and learning outcomes of the study programme correlate to the priorities of the strategic activity plan of the HEI. The aim and learning outcomes of the Automobile Transport Engineering programme also conform to the Sustainable Development Goals identified in the strategic plan. The curriculum design of the study programme in Automobile Transport Engineering is in line with the General Requirements on Execution of the Studies.

The aim and study results of the study programme meet the requirements of the description of the study field of Land Transport Engineering for the first cycle of college studies. 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. This enables the students to successfully reach the learning outcomes. With the elective subject, there is a minimum of personalisation in the study programme. The programme variation organised in block courses is another element of personalisation, regarding the organisation of the course.

The topics and content of the final theses of the study programme correspond to the studies of the field; in preparation of the final theses, the students apply the methodology to the design of technological processes, employ analytical and modelling methods, and conduct applied research. Final project topics should, however, be more diverse than the topics which prevailed in the assessment period. Furthermore, there should be closer contact to the engineering activity and more intensive cooperation with social partners.

Generally, the curriculum and the Centre for Practical Training and Applied Research, which the experts inquired about in the interviews, are a strong indicator of the programme fulfilling the practice-oriented mission of the college.

It seems that the college is still on the way to exploit in the study programme the results of research and technology development. That does not seem to be due to a lack of plans set up by the management of the faculty, but rather to a lack of internationally visible results as to the number and quality of articles and research projects.

The student engagement in research activities is not sufficient yet. Only 3% of students hold presentations or publish articles in conference proceedings. Most of students' research (including experiments) is conducted during professional internships.

The College uses appropriate means to attract students for appliance to the study programme and the evidence of the recognition of foreign qualifications is sufficient.

The high number of cooperation agreements (58) is evidence that the college tries to ensure the implementation of sufficient internationalisation. The information policy is also adequate. Still, the number of students who go abroad is small.

The college provides sufficient academic, psychological, financial and social support for all students, including those with special needs, and sufficient information about the study programme for first year students.

The system of the monitoring of student study progress and feedback is clear, public, and appropriate for students. A continuous monitoring of the progress of students in the study field is ensured. Experts find that, apart from the existing formal Academic Community Code of Ethics teachers support students individually. During the interviews with students and graduates the experts understood that this point is very important for students. It creates a good atmosphere of confidence at the college.

The opinions of the college and the stakeholders show their focus on practical training issues. The college, though, tries to keep up the theoretical teaching even if that is not always appreciated by the students nor valued very highly by some employers.

The expert panel appreciates that the faculty performs subjective and objective monitoring of graduates' employment and career, which allows full-scale assessment of the changes in the position of graduates in the labour market and their career changes.

As there was a low response of graduates to the questionnaire about the studies at KVK, employment opportunities and market competencies the faculty has mentioned this problem as an area of improvement and is working on this.

Regarding intellectual property the expert panel appreciates that the faculty uses plagiarism detection software programs for bachelor's theses.

The qualification and scientific, didactic and professional competences of the teaching staff conducting are adequate for achievement of the learning outcomes and the composition of the teaching staff even exceeds the requirements of the regulations.

With the number of students studying under the study field shrinking, the total number of teachers has been reduced accordingly; however, the number of the teachers of the study field

subjects employed at least half by the FTE and for at least 3 years at the HEI has remained stable. With the teachers retiring and/or leaving to work at another institution or work abroad, it is important to ensure continuity of the R&D activities and appropriate research, didactic, and professional competences in the area of research activities.

The participation of teachers-practitioners in the programmes by delivering field subjects is considered to be a positive aspect. Young teachers assure the appropriate level of the quality of studies and application of the new achievements in science and technologies to the study process by participating systematically in professional development courses and seminars in Lithuania and abroad.

The premises of the faculty meet the stipulated minimum value only narrowly. There are also some lacks of equipment for newly implemented study subjects. During the meeting the experts were assured that the laboratory equipment due to be commissioned will be purchased and installed in 2021.

The cooperation with Social partners appears to be very good and the active involvement in the allocation of final internship placements is successful and useful to the students. For instance, during the meetings heavy-vehicle companies confirmed their commitment to invest into spare parts and to compensate resource gaps by field trips and short internships to make up for the lack of heavy-vehicle laboratory equipment the experts identified.
The experts would welcome a strategy of synchronising the implementation of study programmes with needed laboratory equipment to put the quality of the implementation of the new study programmes on a sound footing.

At the library there are sufficient methodological resources for studies in the study field, resources are available for students physically and remotely.

The responsibility for the quality of studies is distributed to all members and departments of the College's academic community according to their duties, powers, and competence.
In general, the processes as to the involvement of stakeholders appear to be adequate. However, the experts find that regular contact between the college and stakeholders should also cover quality issues about resources.
The evaluation process fulfils the requirements for the quality loop to be in place and to work as required, thus securing quality standards.

The Department, faculty office and other centralised departments of the College collect and analyse data on the study process, student admission, teacher certification, activities of teachers and students, changes in the number of students and reasons for dropping out. Information on the quality of the study programme is systematically collected by the Study and Career Centre and its data is used to improve the programme.
Overall student satisfaction has had a trend of improvement. Some areas need to be improved, such as the wider use of innovative and active teaching methods, discussions during lectures, the needs of students when creating lecture schedules and the faster update of computers.

Expert panel signatures:

Prof. Dr.-Ing. Haldor E. Jochim, (panel chairperson), academic,
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.