CENTER FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

EVALUATION REPORT

STUDY FIELD

TRANSPORT ENGINEERING

at ALYTUS COLLEGE

Expert panel:

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

Evaluation coordinator -

Ms Ona Charževskytė-

Report language – English

Study Field Data*

Title of the study programme	Automobile Transport Engineering
State code	6531EX001
Type of studies	Higher education college studies
Cycle of studies	First
Mode of study and duration (in years)	Full-time, 3 years Part-time, 4 years
Credit volume	180
Qualification degree and (or) professional qualification	Professional Bachelor of Engineering Sciences
Language of instruction	Lithuanian
Minimum education required	Secondary
Registration date of the study programme	2012-01-10

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

CONTENTS

I. INTRODUCTION

1.1. BACKGROUND OF THE EVALUATION PROCESS

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

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

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

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

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

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

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

1.2. THE REVIEW TEAM

The review team was completed according to the Experts Selection Procedure (hereinafter referred to as the Procedure) approved by the Director of Centre for Quality Assessment in Higher Education on 31 December 2019 Order No. V-149. The Review Visit to HEI was conducted by the team on *16/12/2020.*

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

1.3. GENERAL INFORMATION

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

No.	Name of the document
1.	*Descriptions of study subjects Diagnostics of Control Systems for Hybrid Cars and Electric Vehicles, Diagnostics of Car Comfort, Safety and Auxiliary Electrical Systems and Computer Engineering Design*
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):

Alytus College (AC) is a state institution of higher education in the region of South Lithuania. The main goals of Alytus College are to provide higher education and professional qualification corresponding to the needs of the economy of Lithuania. It takes into account the state of the art of science and technology while developing applied research activities necessary mainly for the local and regional economy. It is to provide conditions for continuous education, organise the improvement of professional qualification and lifelong learning.

The study programme of Automobile Transport Engineering (ATE) was launched at Alytus College in 2000. Since then, the content of the study programme changed in various ways, taking into account the labour market conditions, the adopted regulatory acts and documents, the conclusions of experts of international external assessments in 2004, 2010 and 2015.

II. GENERAL ASSESSMENT

The Transport Engineering study field and **first cycle** at Alytus 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	2
3.	Student admission and support	4
4.	Studying, student performance and graduate employment	3
5.	Teaching staff	2
6.	Learning facilities and resources	3
7.	Study quality management and publicity	3
	Total:	**21**

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

III. STUDY FIELD ANALYSIS

3.1. STUDY AIMS, OUTCOMES AND CONTENT

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

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

(1) Factual situation

Information from SER (p. 7):

The aim of the study programme cited in the SER is to enable students for 'professional activities of a future specialist (automotive maintenance, diagnostics and repair) as well as key competencies necessary for formulation and providing reasoned solutions in automobile engineering'.

According to the report, employers were taken into the process and pointed out the following professional skills as very important: 'to perform a car diagnostics and repair processes, to work with technological equipment and be able to make appropriate decisions for the engineering tasks set'. It is very important for employers that 'professionals have organisational skills' and communication skills 'in Lithuanian and a foreign language'.
Taking this opinion into account, the study programme was renewed 'specifying the title of the study programme from Automobile Maintenance to Automobile Transport Engineering'. The aim of the renewal was to achieve coherence between the title of the study programme, the study aim, the intended learning outcomes and the professional bachelor's degree in engineering to be awarded. The graduates of the study programme should be able to solve 'problems of automobile engineering […] in automotive services'.

As a result of monitoring the needs of the labour market, the programme was and is updated. For instance, in order to improve the competencies of car diagnostics and repairs, new alternatives of optional subjects were introduced: Automobile Diagnostics (study subjects of Control Systems and Diagnostics of Hybrid Cars and Electric Vehicles and Control and Diagnostics of Automotive Comfort, Safety and Auxiliary Electrical Systems) and Automobile Repairs (study subjects of Car Body Repairs and Car Defect Detection and Examination). The content of special study subjects was supplemented with the topics of hybrid cars and electric cars.

Information from interviews:

Since there is contradictory information in the self-evaluation report (p. 40) the panel inquired about the role lorry technology plays in the programme. It turns out that it had been an optional subject before recently being integrated into several modules of the programme.

The experts also inquired why the students chose the college. They did so mainly because it was near their homes and because it is small, providing good contacts to teachers; they chose the programme due to their general interest in cars. The specifications of the programme were not mentioned as a reason.

The stakeholders rate the college as innovative, locally focused and cooperative. Particularly the City of Alytus emphasised the valuable cooperation with the college.
They recommend a stronger focus on electric transport and would like to see inter-municipal projects.

As to the technologies to be taught at the college, the opinions among the employers vary between the foundations of mechanics and the understanding of processes as the most important expertise. Single issues such as learning the handling of spare parts are agreed to be of secondary importance. Nonetheless, the thesis papers are deemed too theoretical sometimes.

Computerised teaching designs were introduced, although this was not an explicit wish by employers.

(2) Expert judgement/indicator analysis

The study programme in the study field of Transport Engineering – Automobile Transport Engineering – corresponds to the public and labour market needs. During implementation of the programme, changes in the transport engineering technologies are considered by consulting the social partners; the research findings are also taken into account. The employer survey in the Alytus region can be mentioned, for example: The survey was aimed at identifying the professional competences of an automobile engineering specialist that were the most relevant for the labour market. The programme was thus updated adequately.

When developing studies in the field of Transport Engineering, the focus is on the regional market, including study marketing and program management (survey of car service companies in Alytus region, etc.).

The existing coherence between the programme content and qualification awarded enables the graduates to work in the transport sector. The graduates awarded with the vocational Bachelor of Engineering Sciences degree are employed at vehicle maintenance

or service companies, vehicle technical inspection companies and transport service companies providing services for the logistic companies. Graduates have the possibility to seek higher university education by studying at universities – the teachers provide consultations and support the students in appropriate preparation for the Master degree studies, at the students' request.

Considering the decreasing number of the students applying for the field programme, the decision to abandon the specialisation of Cargo Vehicle Service in the programme and, instead, include individual cargo vehicle topics into the field subjects with the view towards viability of the studies is considered to be timely and reasonable.

In view of the employment rates upon graduation, the need for engineers of automobile transport, and the facilities and human resources available to the HEI, the limitation of offering only one study programme in the study field of Transport Engineering is considered to be reasonable.

The variety of opinions about the priorities in teaching reflect the usual contradictions between emphasis on hands-on education as opposed to a sound theoretical foundation and a process-oriented approach. Given the profile of the college as a regional champion not chosen by students because of specific specialities it is obvious that the college tries to serve all interests in a somehow equal way. It is unrealistic to expect the college to achieve top quality in all fields.

The college has shown flexibility in adapting the programme in a pragmatic way to attenuate weaknesses it has identified. The direction of the changes broadly reflects the changes desired by stakeholders.

***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

<u>Information from SER (p. 7):</u>

According to the SER, the aim of the renewal was to achieve coherence between the title of the study programme, the study aim, the intended learning outcomes and the professional bachelor's degree in engineering. It is stated that 'the outcomes of the ATE study programme at the programme level are coordinated with each other, complement each other, do not duplicate each other, are adapted to college study level, applying practical training and internships in companies and allowing graduates to acquire a set of skills through particular study subjects'.

The AC strategic plan of 2020-2022 aims at carrying out 'high quality studies' based on professional practice and applied research and experimental development, thus providing

a person with 'higher college education, provide conditions for lifelong learning increasing the internationalization of studies and developing applied research'.

Information from interviews:

A significant change in the structure and content of the study programme was made by integrating the unpopular cargo-vehicle module into other modules. This way the college managed to keep the programme in accordance with the desired programme outcomes. The college referred to the introduction of general subjects such as writing skills and business administration when the expert panel inquired about the programme structure, interdisciplinary competences, development of critical thinking and public speaking skills.

(2) Expert judgement/indicator analysis

The aim of the Transport Engineering study programme (training specialists of automobile transport engineering, providing knowledge of engineering science necessary for management of the activities of automobile maintenance, diagnostics and repairs, understanding the importance of reliability and functionality of the impact of engineering solutions, providing conditions for continuous improvement of competencies, teamwork, creative and critical thinking and analysis and generalizing the results of activities) is in line with the mission, objectives of activities and strategy of the HEI: to execute quality studies of higher education based on professional practice and R&D, and create conditions for individuals' life-long learning.

In view of the emerging changes on the labour market and constantly varying business demands, the aim and outcomes of the programme are focused on the perspective of the local industry's needs. The correlation of the aim of the study programme and the aim of the strategic activity plan (to execute quality studies providing an individual with higher college education and provide the conditions for life-long learning) is evidenced by the relevant changes in the content and didactics of the study programmes, ensuring job prospects for the automobile transport engineers.

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

(1) Factual situation

Information from SER (p. 15-16):

The curriculum designs of the study programme in the Transport Engineering field – Automobile Transport Engineering (full-time (3 years) and part-time (4 years) study modes) compares with the General Requirements on Execution of the Studies in the

following way: The total volume of the programmes is 180 credits (minimum 180 required), 147 credits (minimum 120 credits required) have been allocated to achieving the learning outcomes in the study field (including practice placement and final thesis preparation), 30 credits in total (minimum 30 credits required) have been allocated to the practice placements. The study programmes are completed by assessment of the graduates' competencies during the final thesis (project) defence allocated with 12 credits (minimum 9 credits required). The free electives available under the study programmes for the students comprise 6 credits. The volume of the general college study subjects is 15 credits.

The annual volumes of the studies under the full-time and part-time study modes providing the equivalent degree are, respectively, 60 credits (minimum 45 credits required) and 45 credits (in the first year of studies – 48 credits) per year. The learning outcomes, study of volume in credits and contact work volume provided for under the programmes are the same for both study modes.

The volume of students' contact work (including remote work) is 2264 academic hours, i.e. 47 % (at least 20 % required), students' independent work volume – 2536 academic hours, i.e. 53 % (at least 30 % required).

The aims of the study programme and the expected learning outcomes are in line with the mission of AC, as the SER explains, mainly because it focuses on professional practice and derives the other educational objectives from that basis.

(2) Expert judgement/indicator analysis

The share of practice placement and other practical preparation as described in the General Regulations on Execution of the Studies is satisfied in the programmes – 34 %, i.e. more than a third of the programme volume, have been allocated to this.

The number of contact work hours under the full-time and part-time studies differs. In case of part-time studies, part of the lectures and practical / laboratory work are conducted in the form of consultations. In order to ensure the accessibility of learning outcomes, alternatives of the applied studies and relevant assessment methods must be defined in the study module programmes.

The aim and expected learning outcomes under assessment and provided under the study programme in the Transport Engineering field have been formed using five structural elements (knowledge and application thereof, research abilities, special skills, social skills, and personal skills) and are thus in line with the Description of the Group of Engineering Study Fields and requirements applicable to the first-cycle college studies. The level of complexity of the learning outcomes conforms to the Level 6 qualification requirements under the European and Lithuanian Qualifications Framework for higher education.

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.

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. 23):</u>

The self-evaluation report renders some details about teaching and learning methods in its chapter 4.1 on p. 23. According to the explanation there, '40 per cent of the scope of the study subject consists of contact work, the rest is devoted to independent studies'.
The semester is concluded with a 2-3 week examination session, during which 2-6 examinations take place during that session. The students' workload required to achieve the expected learning outcomes of studies is assessed regularly.

The appropriate link between the study programme outcomes and subject learning outcomes has been reflected in Annex 3 of the self-assessment report, while the conformity of the teaching, learning and assessment methods with the learning outcomes was explained in greater detail during the discussions with experts, upon submission of additional materials for assessment, namely the descriptions of study subjects Diagnostics of Control Systems for Hybrid Cars and Electric Vehicles, Diagnostics of Car Comfort, Safety and Auxiliary Electrical Systems and Computer Engineering Design.

The learning outcomes of the study subject are related to the outcomes of the study programme, study methods and methods of assessment of student achievements.

<u>Information from interviews:</u>

In response to the question of whether the students' knowledge and skill assessment was performed on the basis of a pre-established set of criteria familiar to the students asked during the meetings with the experts, the teachers, students, and authors of the self-assessment report named the assessment system and/or study outcome achievement/assessment criteria applied in the models and also provided in the descriptions of the above study subjects.

(2) Expert judgement/indicator analysis

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

development, attestation and updating of the study subjects and programmes. To assure unbiased and fair assessment of the students, it would be reasonable to present the assessment criteria reflecting the evidence used by the teacher in assessment of the knowledge and skills acquired by the student (by identifying their weight, i.e. effect on the assessment mark) in the assessment forms provided for the study modules. For example, where "laboratory work report, defence" is indicated as the assessment form/method under the module, the assessment criteria could be: preparation for implementation of the work, analysis of the results generated and comparison to the theoretical material, validity and presentation of the results, formulation and validity of the conclusions.

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

(1) Factual situation

Information from SER (Annexes):

The subjects and modules are positioned in the programme 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. The logical relations and sequencing of the part-time study subjects are similar to the full-time studies, but spread throughout the four-year period (8 semesters).

(2) Expert judgement/indicator analysis

The coherent and logical structure of the curriculum enables the students to successfully reach the learning outcomes.

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. 9):

Students of the programmes in the Transport Engineering field have the opportunity to personalise the studies by selecting alternative or free elective subjects. The students of programme Automobile Transport Engineering are offered 2 alternative subjects in the field that conform to the personal learning objectives and intended learning outcomes (Automobile Repair or Automobile Diagnostics) (total volume: 9 credits): respectively, Car Body Repair and Car Defect Detection and Examination or Diagnostics of Control Systems for Hybrid Cars and Electric Vehicles and Diagnostics of Car Comfort, Safety and Auxiliary Electrical Systems.

During the study process, the students also have the possibility to choose two free electives, 3 credits each, which provide the conditions for them to gain knowledge in their area of interest or professional activity.

(2) Expert judgement/indicator analysis

Compared with other similar college programmes, the college offers a minimum of electives for specialisation and individualisation.

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

(1) Factual situation

<u>Information from reviews of the final theses and interviews:</u>

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

The experts found that there was an unusually high number of language errors in final thesis papers: The college agrees and complains that writing in the Lithuanian language is a general problem and a consequence of lacking school education. They say they are planning to put a checking system in place for final papers.

As most of the final theses do not have technical drawings, the experts wonder whether and how the college teaches technical drawing. The college agrees that there must be more focus on that topic in future.

(2) Expert judgement/indicator analysis

The topics of the theses are in line with the topics taught and the learning outcomes to be achieved.

The strategy of the organizers of the study programmes to engage social partners in the process of preparation of the final theses is assessed positively. The students of the study programme prepared the final works commissioned by the social partners, where they were addressing the issues of design (creation) and implementation of new or modernisation of the existing processes or activity at automobile service companies. It should be noted that, in the assessment period, the commissioned final theses accounted for 40 % of all the final theses prepared by the programme students. It appears reasonable to continue developing this practice for avoidance of duplication of the topics in the future (which is possible in case of a large number of students).

The expert panel identified two systematic deficiencies in final-thesis papers language errors and lack of technical drawings. It is necessary to act quickly and consequently in these fields.

Recommendations for this evaluation area:

- *To assure unbiased and fair assessment of the students, it would be reasonable to present the assessment criteria reflecting the evidence used by the teacher in assessment of the knowledge and skills acquired by the student (by identifying their weight, i.e. effect on the assessment mark) in the assessment forms provided for the study modules.*
- *In order to ensure the accessibility of learning outcomes, alternatives of the applied studies and relevant assessment methods must be defined in the study module programmes.*
- *More targeted and broader cooperation with social partners is relevant to achieve a greater variety of topics of final projects and thus the realisation of a greater variety of engineering competences by students, such as design, etc.*

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):

The self-evaluation report provides accounts of the activities of lecturers in publications and attending conferences.

Information from interviews:

In transport, there is cooperation with universities in Kaunas and Vilnius, mainly in the form of joint publications. Additionally, there have been some international study programmes in pedagogy (just expired). The college participated in a scientific conference in Latvia with assignment of 3 CP for students participating. A military-vehicle paper appeared in cooperation with a private company. Another paper about market research is in planning.

There is a national contest in which the college participates together with universities; there is collaboration with universities for master theses, since some students go to universities for the 2nd study cycle.
The college is a member of LIMPA and other organisations.

The Plan of Applied Research Activities (annex 5) shows a gap in the 2018-2019 period. The reason is less time for publications in the engineering field due to long-term projects (with organisations in Latvia and Belarus).

(2) Expert judgement/indicator analysis

The experts find that the level of cooperation appears to be of varying intensity. The college might not have decided whether to take a broad, extensive approach on research or an intensive approach focusing on special fields or selected partners. Trying both at the same time does not appear to be a sustainable strategy for achieving consistent results. The cooperation of the HEI with external partners in carrying out scientific (applied science, art) activities in the field of science/art related to the study field is analysed.

There is some cooperation of the HEI with local partners in research, but mainly restricted to joint publications.

***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. 13):

The college points out in the SER that the 'scientific and applied research activities carried out by the lecturers of the Department of Engineering are directly related to the studies in the field of engineering and are integrated into the studies' and gives several examples for this. Lecturers and students also publish scientific articles, prepare reports

for national and international conferences and seminars and participate in scientific discussions with Lithuanian and foreign scientists. Students are also reported to be 'consistently and systematically involved in applied science activities by implementing elements of research and development activities in the study process', by 'preparing independent written works and searching for information in international scientific databases'.

Information from interviews:

During the interviews the college also points out that all teachers prepare their students for research in their modules. They refer to a final paper dealing with research in engine dynamics and cite robot design as an ongoing project.

(2) Expert judgement/indicator analysis

The experts did not find any unambiguous signs of a link between the content of studies and the latest developments in science, art and technology.

***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. 12):

The budget allocations by the state for participation in regional development projects and consulting activities for the previous three years are outlined in the self-evaluation report. Each year, approximately 30% of these funds were allocated for R&D activities, which is a total of around 10,000 EUR.

Information from interviews:

During the interviews, the faculty reported that, since the college as a whole is dedicated to research, it agrees on central funds money being attributed to publications, projects clearly define the division of teachers' workload into scientific work and pedagogical work. And also to develop motivational schemes for creating conditions for more active participation in scientific detail of both teachers and students and expert work, providing the faculty with 8,000 EUR annually. It is not clear whether this total has to be added or is included in the sum referred to in the SER, and it is much less than is needed for realisation of the plans the faculty referred to in the interviews.

The panel inquired details about the journal "The Role of Higher Education Institutions in Society: Challenges, Trends and Perspectives". According to the college, the main focus of the journal is the contact between students and teachers. It is edited once per year and includes the scientific proceedings of in-house conferences.

(2) Expert judgement/indicator analysis

The experts consider the SER statement that 'an average of 42 per cent of students studying in the ATE study programme participated in applied research activities, preparing articles, reports, contract graduation theses ordered by companies, participating in project training courses and creative workshops, competitions, etc.'. They find that the activities mentioned are varied and do not reflect scientific activity as such.

Recommendations for this evaluation area:

- *In SER (annex 5) a PLAN OF APPLIED RESEARCH ACTIVITIES FOR 2017-2019 is included. It seems that this plan has not been fulfilled. So the plan should be prolonged for the next 3 years, set specific indicators and, most importantly, be fulfilled.*
- *It is very important to define clearly the division of teachers' workload between research and pedagogical works. It is also important to develop motivational schemes for creating conditions for more active participation in research activities of both teachers and students.*
- *International collaboration in research should be intensified and enriched. It should be a strong basis for significant improvement in research.*

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

<u>Information from SER (p. 15-16):</u>

Alytus College participates in the general admission process to Lithuanian higher education institutions and follows the general provisions of this admission process.

<u>Information from interviews:</u>

The number of students admitted is constantly decreasing. The Ministry of Education raised admission requirements for intending at Lithuanian higher education institutions. From the point of view of the college the stricter admission requirements have caused the quality of new students to go up. Still, some students are reported not to be able to meet requirements, especially students from remote regions.

The college expects that, due to the additional financial support to students by the Lithuanian government, the student numbers may rise in the future.

(2) Expert judgement/indicator analysis

The college should change its marketing strategy to attract more students not only from its own districts but also from other districts.

***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

<u>Information from SER (p. 17):</u>

Prospective students who acquired secondary education in foreign institutions are exempt from some requirements which applicants with a Lithuanian school exam have to fulfil, mainly the achievement of a minimum entrance competitive score.

Foreign study qualifications are recognised if their volume is at least 75 percent of the volume of the study subject provided for in the study programme intended to be studied and it corresponds to the essential goals and the main parts of the subject content. Optional subjects are recognized without restrictions. The graduation thesis and/or the final examination are not recognised. A maximum of 75 percent of the study programme intended to study may be recognised; the recognised part may contain subjects of another (lower) study cycle or type of study (training) programme but their volume may not exceed 50 per cent of the volume of the programme intended to study.
For people who studied under a study agreement between the college and a foreign higher education institution the study outcomes are recognised without restrictions, subject to the provisions of the contract.
There is also a process for the recognition of non-formal and informal learning. During the last 3 years, though, there have been no students in the study programme wishing to have non-formal and informal learning results recognised.

<u>Information from interviews:</u>

According to the statement of the college students from Belarus have not been allowed to come so far. Polish students do not come because of the tuition fees (there are none in Poland). Students from Nigeria, Azerbaijan and India came and were dealt with successfully.

(2) Expert judgement/indicator analysis

The college has put in place a sufficiently detailed concept for the recognition of external competences.

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

(1) Factual situation

<u>Information from SER (p. 18):</u>

The college reports that Erasmus + student mobility is implemented by enabling college students to study for an integrated period of study and /or to have an internship in a company or organisation for up to 12 months in another country participating in the Lifelong Learning Programme. An Erasmus scholarship is awarded to students during their studies or internships under the Erasmus + program, the payment of national scholarships or loans is not interrupted during the period of these studies, and a lump sum is granted.
Students get acquainted with the Erasmus+ programme during the introductory study week. Information is also published on the AC website, social media, interactive information stands, and e-mails are sent to students as well. The International Relations Department of the college is in charge of the information policy.

<u>Information from interviews:</u>

The students interviewed confirm that there was an introductory week when they started the programme and there are information meetings twice per year, with sufficient information about the Erasmus+ programme.
Despite that, no one from the group interviewed took part in an internship or exchange programme to another country. Asked why not they mentioned family reasons.

(2) Expert judgement/indicator analysis

The College provides sufficient information about Erasmus+ programme and opportunities to study and internships.

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

<u>Information from SER (p. 18-21):</u>

The self-evaluation report is rich in details about support the students are given. The main points are as follows:

1. There is a Career Centre (CC) at AC. The centre organizes, administers and coordinates relations with social stakeholders, organises individual consultations for students on employment opportunities and career planning issues and supports students in writing application papers.
2. The Interactive Career Management Information System (KVIS) provides a great deal of support in the field of student career counselling. In the KVIS, students can create and manage career plans, use self-tests, find internships and job offers, collect and manage career-relevant personal information, establish and maintain contacts with future employers, solve career difficulties independently, connect with career professionals and more.
3. Students who do not have academic debts can receive scholarships of various kinds in two groups: incentive scholarships and social scholarships. Students with disabilities receive targeted benefits to meet special needs.
4. The Career Centre cooperates with specialist psychologists of Kaunas Customer Service Department, who develop and implement psychological training programmes for the development of social and personal competencies, conflict resolution and negotiation, problem analysis and decision-making skills. Lectures and seminars on psychological assistance and career opportunities are organised for students.
5. Beside general psychological assistance there is also individual psychological help in case of students experiencing emotional difficulties of various kinds.
6. Sports events are organised by the college, and in their leisure time students can use the fitness complex, other sports equipment and the gym. The stadium is being reconstructed in accordance with the latest requirements.
7. All AC students who request it are provided with hostel rooms, which have modern equipment. Students have the opportunity to dine in the AC canteen and cafe, which are rated positively.

(2) Expert judgement/indicator analysis

The college provides all the necessary assistance to students: counselling hours, financial support, accommodation and scholarship.

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

(1) Factual situation

<u>Information from SER (p. 21-22):</u>

Following up on the list of section 3.3.4, the following elements of study information and counselling are explained in the self-evaluation report:
8. Introductory week events are organised in the first week of studies.
9. The MOODLE system is used for providing study material of all sorts. The MOODLE environment also supports student discussions, encourages active communication and

student group work. Direct consultations and video meetings can be organised by using the Microsoft Teams programme.
10. Before choosing optional study subjects of the study program, students are provided with detailed information about the significance of mandatory and optional study subjects and the opportunities provided for their further career.
11. Subject to need, AC students have the opportunity to study according to an individual study schedule, combining studies with work and family. During the period under assessment there were no students willing to study according to an individual study schedule.
12. The Study Programme Committee analyses the feedback on the study program, its implementation and organization of the study process twice per year; it organises meetings with students to discuss the survey results and suggests improvements of the study programme.

The elements on individual counselling are mentioned in section 3.3.4.

(2) Expert judgement/indicator analysis

The college provides sufficient information about the study program in their website and Moodle system and from college personnel.

Recommendations for this evaluation area:

– *The college should change its marketing strategy to attract more students not only from its own districts but also from other districts.*

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. 23-25):

This section and the following ones refer to a great extent to the self-evaluation report regarding the explanation of the factual situation.

The study programme is carried out in full-time and part-time modes of studies; the length of the full-time (FT) study mode is three years and the length of the part-time

study mode is four years. The student schedule may not usually exceed 8 academic hours per day.
40 percent of the study consists of contact work (theory, exercises, and consultations), the rest is devoted to independent studies (60 percent), which are combined with the provision of additional counselling. The average number of contact hours per week is 20.
Study lectures are conducted in two different faculties; the schedule of lectures is designed so that students do not have to travel from one faculty to the other.
The semester is concluded with a 2-3 week examination session. On average, 2-6 examinations take place during the examination session.
At least two sessions per academic year are planned for students of the part-time study mode.

Teachers closely link study content with real problems in various fields and their solutions. They apply traditional study methods, complementing them with innovative educational and research development methods adapted to the forms of activities. The main forms of classes are laboratory, practical work, individual or team projects, consultations and seminars. Teachers use teaching methods such as case and situation analysis, project preparation, discussions with professional practitioners and researchers. The teaching process is organised in the form of teamwork, active participation and dialogues. Practical training in companies is also a major part of teaching.

Information from interviews:

Moodle and MS Teams as well as pre-recorded lectures are used for distance teaching (necessary due to the pandemic). Teachers say that students are generally very motivated. However, distance learning is difficult because students' reactions cannot be seen; some teachers presume they may be non-attentive.

Pedagogical training for teachers is in place.

(2) Expert judgement/indicator analysis

The expert panel can confirm that the information provided in the SER is in line with the legal requirements. We have no comments or insights on this issue. No comments or recommendations were made during the last evaluation. During the interviews, the experts made sure that the processes work in practice, as stated in the SER.

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

(1) Factual situation

Information from SER (p. 25, 37):

Since 2012 the college staff have been participating in the project called "Increasing the Accessibility of Studies" co-financed by the European Union Structural Funds and implemented by the State Studies Foundation. The training was attended by 11 AC employees who acquired specific knowledge about the types of disabilities and related special needs, technical assistance tools and environmental adaptation, individualisation of the study process and the curriculum, adaptation of tasks, forms of settlement and achievement assessment (p. 37).
Alytus College has a coordinator for students with special needs, who is an employee of the study centre. Students with special needs have the opportunity to individualise the study process by adapting the sequence of the subjects studied and assessments during the semester to the appropriate intensity (p. 25).

(2) Expert judgement/indicator analysis

The explanation by the college in its report is convincing. The fact that 11 teachers pass the course of specific knowledge related to students with special needs is an indicator of the college working successfully in this respect.

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

(1) Factual situation

<u>Information from SER (p. 24-26):</u>

The assessment system is focused on cumulative assessment, which ensures systematic assessment of students' achievements throughout the semester. The teacher, taking into account the size of the group of students and the learning outcomes of the subject, selects the most appropriate components of the cumulative assessment system. Seminars, workshops, projects, independent work, laboratory work and examinations are assessed. The weight of the components of knowledge, understanding and abilities for the final assessment depends on the subject studied.
At the beginning of the semester, the lecturer of the study subject informs students about the system of assessment, explains the components of cumulative assessment and their relative weight in the general system of assessment of knowledge and skills. The minimum score is indicated.

In accordance with the procedure provided in the quality management system, the study programme coordinator transforms the results of monitoring students' study progress into the study programme performance assessment indicators, analyses them and provides a report to be approved by the faculty board after the end of each session. The

generalised results of students' study progress are given to each lecturer, who uses them to identify useful changes in the content of the study subject and the assessment methods.

Special attention is paid to first-year students: their initial levels of knowledge and skills are determined, information and counselling are provided, as well as specific measures such as additional lectures in particular subjects and the provision of tutoring and mentor services.

Information from interviews:

All interviewed people confirm that the monitoring of students' progress and feedback is personal and comprehensive; they emphasise the personal atmosphere in which this takes place.

(2) Expert judgement/indicator analysis

A continuous monitoring of the progress of students in the study field is ensured. Everyday feedback is conducted in a personalized way. The Expert panel appreciate that during interviews with students they emphasised the personal atmosphere which takes place.

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

(1) Factual situation

Information from SER (p. 24-25):

The student's independent work includes learning according to the tasks given by the lecturers and the reference literature without the direct supervision of the lecturers, who offer consultation hours instead. Students' independent work also includes preparation for seminars, laboratory work, tests and examinations, individual and group tasks, preparation of independent research papers, reports, professional bachelor's theses and projects. The college has developed formal requirements and procedures for the organisation and assessment of independent work.

Information from interviews:

Most students interviewed by the panel prefer practical training to study experience abroad or a 2nd cycle of studies. They expect to be employed after graduation but are not very specific about what exactly they are planning to do during their professional careers.

(2) Expert judgement/indicator analysis

The perspectives the students convey are in line with what one can expect. According to their own statements they have a local background and attend a local college with the perspective of being hired by a local employer after the completion of their programme. The panel wonders whether that either reflects an established strategy of the college or the college might have ambitions to present a wider perspective to them. If the latter is the case, further measures are obviously needed.

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

(1) Factual situation

<u>Information from SER (p. 25-27):</u>

Alytus College monitors the employment of graduates by conducting direct surveys of graduates and analysing the data collected in the Career Management Information System (CMIS). Indicators of how graduates of the study programme manage to establish themselves in the labour market are reviewed and analysed after 6 months, 12 months and 3 years after graduation. CMIS monitoring of graduates' careers is carried out on the basis of data provided by SODRA on graduates working in Lithuania. According to these data, the share of graduates of 2019 who work in jobs according to the acquired qualification level is 27 percent. Unfortunately, since the SODRA data are not updated when the graduates' careers change, the information provided by it does not exactly reflect the real employment and career situation of graduates (p. 26).

The college collects its own data on the monitoring of graduates' careers, which allows assessing the changes in the position of graduates in the labour market and their career changes. This so-called 'subjective' monitoring of graduates' careers is carried out by contacting graduates individually one and three years after graduation. According to the subjective monitoring of the careers of graduates it can be seen that more than half of graduates moved from a lower professional category to higher category positions within one year after graduation (p. 27).

After graduating from college, graduates can also choose studies at university in the same or a different field. Graduates of additional studies are provided with the opportunity to participate in admission to the second cycle (master's) study programmes of that university. Such studies in the field of transport engineering are offered by several universities in Vilnius and Kaunas. The most favourable and attractive conditions for compensatory studies in the field of transport engineering are offered by Vilnius Gediminas Technical University, which lasts for 2 years and after which a bachelor's diploma is awarded (p. 25).

In September 2020, four universities of the country started to implement bachelor's and master's degree programs in Alytus, thus bringing closer and increasing the possibilities

for graduates of the ATE study programme to obtain a master's qualification degree.(p. 25).

Information from interviews:

In the interviews the experts find that the majority of stakeholders who employ graduates from the programme are service garages for garages. Automotive manufacturing enterprises are not among the stakeholders. Further study at universities appears to play a negligible role in the prospective graduates' plans.

In interviews with the SER staff and the mayor of Alytus city the experts find that the idea with the 4 universities in Alytus region was from the municipality of Alytus. So far it is still just an idea for the faculty.

(2) Expert judgement/indicator analysis

The expert panel appreciates that the faculty collects its own data on the monitoring of graduates' careers, a so-called 'subjective' monitoring, which allows assessing fully the changes in the position of graduates in the labour market and their career changes.
Expert recommendations provided during the last external evaluation related to developing a clear strategy to support the easier transfer of students from this programme to future studies in local universities, but it is still an idea only. The expert panel recommends revising the strategy in order to make it more specific as to time and actions.

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

(1) Factual situation

Information from SER (p. 27):

The Code of Academic Ethics of the college provides for academic integrity, tolerance and non-discrimination. Alytus college has implemented Procedures of Submission and Examination of Appeals last amended by the college academic board in 2016. During the period under review, there were no cases of appeals or complaints on violations of the principles of academic integrity, tolerance and non-discrimination.

(2) Expert judgement/indicator analysis

The effectiveness of Code of Academic Ethics in the study field is difficult to evaluate for an expert panel because no events are mentioned during the evaluation period.

Regarding intellectual property and citing the expert panel recommends the implementation of plagiarism detection software for 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

Information from SER (p. 28):

Study Regulations define the students' right to an appeal. They provide procedures for lodging an appeal, forming an appeal commission and examining the appeal.
Study Regulations also define the possibility for students to lodge individual complaints on violation of their rights. During the period under review, there were no cases of appeals or complaints on violations of the principles of academic integrity, tolerance and non-discrimination.

The regulations were last amended by the college director in 2018. During the period under review, there were no cases of appeals or complaints.

(2) Expert judgement/indicator analysis

The effectiveness of the methodology of submitting appeals and complaints regarding the study field is difficult to evaluate because no events are mentioned during the evaluation period.
Apart from the methodology, the experts appreciate that students have the chance to submit their thoughts on the study content, including their opinion on the teaching methods at the end of each semester, by filling in a questionnaire for each course.

Recommendations for this evaluation area:

– *The expert panel recommends the implementation of plagiarism detection software for bachelor's theses.*

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. 29 and Annex 6)

The composition of the teaching staff corresponds to the requirements of the related regulations (General Requirements on Execution of the Studies, Description of the Group of Engineering Study Fields), exceeding the minimal requirements. 4 teachers holding the Doctor's degree deliver 30 % of the volume of the subjects under the field programme (minimum 10% required). 55 % of the teachers delivering the study field programme (of which 3 – associate professors, 3 – lecturers) are employed at the HEI on a permanent basis (at least half of the FTE and at least for 3 years) and hold at least 3-year practical experience in the field of the subject delivered (minimum half of the teachers required). The practice placement supervisors are the teachers holding at least the Master's qualification degree or an equivalent qualification of higher education and at least 3-year experience of teaching of the field subject or of practical experience.

Teachers in the transport-engineering study programme who deliver study field courses and work not less than half of full-time workload and have been employed for at least three years make up about 55 % of all study field teachers.
During the period under consideration one Master and two Doctors of Science were employed for teaching in the study programme. Teachers are hired for the position by public tender for 5-year terms.
External teachers are also invited to work in the study programme with the aim of ensuring students' practical development. Their number is not specified in the SER, nor was it during the interviews.

Currently 4 Doctors of Science and 7 Masters work in the study programme. 64 % of the teachers of the programme have at least 3 years of practical work experience in the relevant course subject. Doctors of Science teach 30 %t of the course volume of the study programme.

Information from interviews

As revealed by the discussion during the meeting with the experts, the academic staff formed for implementation of the study programme is stable, motivated, and oriented towards the fields and objectives of the study programme, enabling the students to pursue quality studies. One teacher holding the Master's degree and two teachers holding the Doctor of Science degrees were employed during the assessment period. The Department practice whereby a new teacher discusses the content, practical assignments, teaching and assessment methods with the teachers intending to retire, the transfer of the teaching and learning aids prepared is performed and, finally, the new teacher becomes integrated into the teaching and learning process has been assessed positively. Education

of new, young teachers is assured by the relevant training/courses arranged by the Department for Development of the Teaching Staff.

The expert panel inquired how the college workload is allocated for pedagogical and methodological work, and to scientific work according to the college, 30% of the teaching load shall be assigned to research in the future. The number of teachers must be raised accordingly to achieve that goal.
At present, all teachers decide individually how much time they allocate for both parts of their work. Some of them pay more attention to teaching young students competently rather than engage in research. There is, however, a remuneration component related to published articles.

(2) Expert judgement/indicator analysis

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

The experts find that special subjects are taught by three lecturers (the total number of full-time workload is 0.89). This is a large workload of teaching work (coordinating and teaching several subjects), limiting the possibilities for systematic implementation of applied research in the science field of Transport Engineering, publication of their results in scientific journals, participate in national and international scientific and practical events. Low intensity of publication of research results in scientific journals in the field of Transport Engineering should be noted.

With the reduction in the number of full-time and part-time students of the Transport Engineering field programme, the ratio of the field subject teachers to students 4.0 is not considered to be rational in terms of viability of the studies. On the other hand, the increased frequency of individual consultations and greater possibilities for direct contact with the teacher help ensure the quality of the study process.

With the number of students decreasing, the pedagogical work load of a share of the teachers of speciality subjects under the programme in the study field of Transport Engineering is not high – it is lower than 0.5 FTE. Although the share of at least half-FTE teachers delivering the subjects of the study field subject to the formal assessment for at least three years in the total number of teachers of the field subjects under the study field programmes (55 %) meets the General Requirements on Execution of the Studies, it is important to implement sustainable personnel policy solutions assuring continuity/further development of the R&D activities in the field, which may lead to increase in the number of students entering this programme.

Participation of the teachers-practitioners in the programme is considered a positive aspect. To ensure students' preparedness for practice, company employees are invited to

supervise the professional practice placements, research final theses and to teach the subjects intended for acquisition of the competences of the special (professional) part.

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

(1) Factual situation

<u>Information from SER (p. 30)</u>

The college has 50 inter-institutional agreements with partner institutions, 11 of which refer to the transport engineering field. The teachers receive full information about partner institutions and cooperation possibilities, invitations to international events, conferences, invitations for cooperation in preparing and implementing projects, etc. After every mobility visit teachers share their experience with colleagues in meetings and discussions where the impact of their mobility on studies in the field is assessed. The results of teachers' participation in academic mobility are analysed and recognised during the assessment of annual teachers' activities reports and teachers' certification. The selection for Erasmus+ staff teaching and training visits is carried out with reference to a catalogue of criteria. The catalogue contains the contents of the work programme, the importance for the teachers' qualification and professional activities, foreign language skills, relevance of the teaching for the activities of the division or institution, and participation in projects strategically important for the college. Priority for mobility activities is also given if it is the first participation in a mobility project, new teaching material has been prepared, cooperation relations of the departments and faculties have been strengthened or expanded, or projects for future cooperation have been prepared.

(2) Expert judgement/indicator analysis

Considerable attention is given at the HEI to improvement of international scope of activities. The selection for teaching and training under Erasmus+ staff mobility is conducted in view of the content and importance of the work programme for the teacher's qualification and professional activity, foreign language skills, relevance of the training for the activity of the department or institution, participation in the projects that are strategically important for HEI. Priority is given to the mobility activity, if the teacher participates in the mobility for the first time. Nonetheless, the number of teachers (9) 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 used to the fullest is supported by the number of visiting teachers: in the assessment period, nine visiting teachers delivered lectures to the students (language competences, business planning basics, IT, etc.). It should be noted that there were no visiting teachers of the field subject 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. 32)

Every year the college plans teachers' trainings according to the teachers' preferences for participation in various seminars, courses, conferences and other events.
Some teachers study for a doctorate, others improve their qualifications in short term and long term courses, carry out research and applied research activities, participate in local projects, international mobility programmes, seminars and conferences. Some intensively learn foreign languages.
The main productivity indicators of teacher activity in science are as follows: articles in reviewed publications, presentations on conferences, participation in projects, publication of course books and other teaching books (especially in electronic media), preparation of standards, participation in expert and consultation activities in the institutions and companies of Lithuania, reviewing of course books and other teaching material.
The college reports that during the period under consideration all the teachers of the study programme have improved their qualification in different ways: carried out various applied research works, participated in project and research activities, delivered courses and seminars, participated in conferences, seminars, training sessions, study visits and exchange programmes.
The college also attaches importance on informal collaboration and the sharing of experiences of its teachers and their activities in science councils and committees.

Information from interviews

On inquiry by the panel, the college announces that planning competitions, internships and grants for improving the research competencies of teachers will continue in 2021.

(2) Expert judgement/indicator analysis

Favourable conditions have been provided for professional development of the teaching staff. During the assessment period, all teachers working under the study programme improved their qualifications in various ways: by conducting various applied research works, participating in project and research activities related to the study programme,

conducting training, seminars, participating in conferences, seminars,training, internship, and exchange programmes. The teachers working in the study programme conducted applied research and/or improved their competences in the projects conducted by HEI.

A system for development of technical competences of non-teaching staff that would be equivalent to the professional development procedure for the teaching staff should be introduced too.

Recommendations for this evaluation area:

- *With the relatively low share of regular teachers delivering the subjects in the field of Transport Engineering of the total number of all programme teachers, it is important to implement sustainable personnel policy solutions assuring continuity/further development of the R&D activities in the field of Transport Engineering.*
- *The increasing number of guest teachers is relevant for teaching the subjects of the Transport Engineering field. Involvement of a larger number of teachers of the Transport Engineering study field in the academic exchange programmes is recommended, in parallel with the development of English language skills.*
- *More intensive teacher involvement in applied research in the field of transport engineering (e.g. commissioned by industry) is relevant, 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. 34-36, 39)

The area of the premises designed for the study programme is given in detail in the self-evaluation report. The equipment is listed in Table 14.
Details about the library and its equipment are also given in ample detail (p. 39).

Information from interviews

The MathLab software is used in maths teaching. The AUTODATA and AUDATEX database software can also be used by students.

There is diagnostic equipment and a cooperation with a large lorry dealer covering the laboratory requirements for lorry technology.

Among innovative technologies there are diagnostic stands for motor cars and high-voltage equipment. There is also a Technological Centre used by other colleges too.
Social partners support the college with their equipment. The Alytus Vocational Training Centre is also used, for instance for welding training.

There is information and communication equipment for Green City research and a petrol emission stand.

Overall, according to the college the equipment is not suitable for research because it has only medium precision.

The opening times of the library will not be extended because there is no demand. But there are electronic textbooks, to an ever greater extent. Literature in the English language currently makes up 30% (more in databases).

(2) Expert judgement/indicator analysis

Despite the claim that the laboratory equipment is fully functional and suitable for organizing an efficient and high-quality teaching process and achieving study results
there are some lacks with the equipment at the automobile structure; engine testing and mechatronics laboratories with equipment for automatic and hybrid transmission, engine control and training stands, as well as stands with hydraulic components are not sufficient. These lacks are stated in the SER table 14 (laboratory equipment).
During the meeting with the administration the experts were assured that listed laboratory equipment will be updated in the nearest future.

It is appreciated that the faculty takes into account expert recommendations from the previous external evaluation and updated instructions on personal health and safety in training laboratories and supplemented them with personal protective equipment. Laboratories have been equipped with safety information signs.

The cooperation with social partners appears very good and the active involvement in the allocation of final practice placements is successful and useful to the students.

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

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

(1) Factual situation

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

In the course of a project called "Creation of a Regional Technology Centre", with a total budget of 1.2m EUR, 0.31m EUR were allocated to the reconstruction of buildings and 0.89m EUR were spent on three new laboratories and renovating and modernising the existing 7 laboratories, including the purchase of advanced equipment. Due to the implementation of these measures, students of the ATE study programme will have access to the SolidWorks programme of three-dimensional design for computer modelling and computer engineering from 2020/21.

Information from interviews

The funds for resources vary because funds are distributed according to need university-wide, with the priority lying on expendable items in subjects such as chemistry.

As the SER states that about 40 percent of final thesis have come from stakeholders (p. 10), the panel discuss whether that advantage might be used for acquiring additional funds, but the college explains that stakeholders are used to receiving the services by the college for free and expect no change in this respect.

The content of special study subjects has been supplemented with hybrid and electric vehicles topics.

The plan for the improvement of the material facilities of the study programme in 2020–2022 (annex 7) is contradicted by the management asserting that there will be extra funds of 600,000 EUR envisaged for new equipment and teacher training.
The college is planning to purchase special software to set up a 'Virtual Automotive Laboratory'. A hybrid car stand is also planned.
The college confirms that SolidWorks 3D equipment is planned and there will be additional teacher training for setting it up in 2021. That is in slight contrast to the assertion in the SER (p. 35) that it will be available in 2020/21.

The college is planning to spend 50,000 EUR for strategic development, mainly on car cameras and radar, in perspective for research activities. This is not mentioned in the SER.

(2) Expert judgement/indicator analysis

Given the fact that the college is a small organisation one cannot expect high-quality laboratory equipment. That is why the panel come to the conclusion that the resources in place are just sufficient for adequate teaching, though not for research. Stakeholders must play a major role for the college keeping capable of fulfilling its educational and training duties. For assessment of the numerous improvements planned it is necessary to wait for the implementation, since a coherent strategy does not seem to exist, as is revealed by the contradictions between the conservative statements in the SER and the optimistic information given orally.

Recommendations for this evaluation area:

– *It is recommended that the faculty develop a coherent strategy as to the improvement of resources for teaching and research.*

3.7. STUDY QUALITY MANAGEMENT AND PUBLICITY

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

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

(1) Factual situation

Information from SER (p. 41-42):

The Study Quality Management system of Alytus College meets the requirements of ESG and ISO 9001: 2015 standards. The main documents regulating the study quality management system are the Quality Manual, Quality Policy and Procedures. The quality processes are divided into three groups: management processes, core processes and subsidiary processes.

The quality management consists of several more elements:

1. An employee training plan is prepared and approved every year.
2. A teacher workload plan (contact and non-contact academic hours) is drawn up every year.
3. Assessments of plans take place twice a year at the end of the spring semester and at the end of the year.
4. Teacher accreditation takes place every 5 years.
5. There is an abundance of regulations and procedures for the execution of the study programme and the assurance of study quality listed on p. 41-42 of the SER. The decision-making sequence is also provided in these documents. The process of considering and approving the quality assurance of the programme is constantly improved, taking into account new legal acts, new challenges and requirements for higher education, AC activity trends, AC internal study quality assurance procedures and the development of the concept of quality in higher education.
6. A Study Programme Committee supervises each study programme. The Committee consists of at least 6 people recruited from the various groups of the college. The Committee collects and analyses information about the study programme, its implementation and organization of the study process, submits proposals on the improvement and renewal of the study programme to the Faculty Council at least twice

per year. The Committee analyses the information on the weaknesses of the study programme and its implementation, revealed during the external assessment of the studies; it examines the data received from social stakeholders to the end of improving the study programme. The Coordinator is responsible for the coordination of the study programme, its content, updating and improvement. He or she analyses similar study programmes of Lithuanian and foreign higher education institutions, organises continuous study programme improvement, disseminates information about the study programme, cooperates with relevant employers and stakeholders. Every year, the Coordinator provides information about the supervised study programme at the meeting of the Faculty Council. All proposals are submitted to the Faculty Council.

Information from interviews:

Another example about the quality process derived from an interview is a change in the curriculum: The teaching of lorry technology was reorganised because students did not choose it as an optional subject.

(2) Expert judgement/indicator analysis

In the light of the organisation being fairly small, the sophistication of the quality process and its regulation is high. Though the seemingly high degree of formality stands in some contrast to the familiar atmosphere, the experts do not find that this compromises the decision-taking process. The college appears to succeed in taking ad-hoc decisions successfully.

***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. 42-43):

All social stakeholders are involved in the processes of assessment, improvement and quality assurance of the study programme: they actively participate in the activities of all bodies. Stakeholders are also involved in various working groups and commissions. Stakeholders create preconditions for the preparation and implementation of high-quality study programmes, influence the topics of study subjects and outcomes of studies. Cooperation with employers, professional associations and science institutions helped to form and improve the study programme, to coordinate it with the ongoing changes taking place in the working environment. The feedback from stakeholders is collected by surveys, but the most effective feedback is obtained while conducting interviews and

round-table discussions. All internal stakeholders in the AC have the possibility to register the improvement.
Information on the implementation of the ATE study programme is available for social stakeholders on the AC website. All information related to the study programme is published on the College website.
Information about the results of the study programme quality assessment and programme improvement is provided on the website and is presented to various bodies of the college and social partners. Detailed results are presented to the College Council.

As a result of the feedback from social stakeholders, the college reports that most of the practical training periods in the study plan have been transferred to the last year of studies in order to provide conditions for students to establish themselves in the labour market. Alternatives of optional subjects of Automobile Diagnostics and Automobile Repairs have also been introduced in the study plan.

<u>Information from interviews:</u>

Open doors are organised regularly and there are meetings with prospective employers. At both occasions, the college regularly presents its equipment.

The local Employment Service, an important stakeholder, tries to find graduates for placement, but there are more open positions than graduates.

The local employers employ the college's graduates in a fairly high number.

The employers praise the continuity with which the graduates transfer from college into internships and subsequently into jobs, thanks to the qualification of teachers and the equipment of the college.

Sometimes graduates leave after some time for better-paid positions outside the region.
The municipality aspires to bring the city forward and keep young people there. That refers to the engineering programmes but also to other programmes such as general management and medical management (the latter in cooperation with Kaunas).

(2) Expert judgement/indicator analysis

The strong focus on local relationships is obvious in this area too. The local stakeholders are essential for the programme to be run successfully. That might pose problems if the local economy runs into a crisis somehow. It is therefore recommended that the college sets clear priorities of what it wants to achieve in a worst-case scenario.

***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. 43):

Information collected and analysed every year includes data of entrants, number of students, employability of graduates, distribution of enrolled students by place of residence, dropout statistics, contracts with companies for internships, students employed in internship partners, evaluation of students' final theses, final assessment of study outcomes. Each year, a summary of the role of social partners in the development of the existing study programmes and the new ones is prepared. All information related to the study programme is published on the College website

Information from interviews:

Surveys are organised and discussed by the Student Programme Committee, subjects and course descriptions are adapted accordingly.
(Example: Lorry technology teaching was reorganised because students did not choose it as an optional subject.)

(2) Expert judgement/indicator analysis

The scope and frequency of information-gathering and the publication of the information gathered is adequate.

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

Information from SER (p. 41):

The college identifies the feedback from students as a very important factor in ensuring the quality of studies, several student surveys are taken regularly. Table 15 on p. 41 lists the periodicity of student surveys. In the spring semester of 2020, Alytus College organised an additional survey on the satisfaction with and challenges in the organisation of distance learning.

Information from interviews:

The students are aware that there is a Faculty Board and a Coordinator of study programme, in which students are involved. The surveys are seen as useful, and since there is free space for individual comments it is also possible to voice individual assessments.
The students take part in surveys after each semester. If there are changes in the programme they are informed by the head of the department. Students actively take part in the SPC.

(2) Expert judgement/indicator analysis

The requirements of the quality process in this area are fully met.

Recommendations for this evaluation area:

– *It is recommended that the college sets clear priorities of what it wants to achieve in a worst-case scenario because it is very much dependent on the local economy, which may be volatile.*

IV. RECOMMENDATIONS

1. *To assure unbiased and fair assessment of the students, it would be reasonable to present the assessment criteria reflecting the evidence used by the teacher in assessment of the knowledge and skills acquired by the student (by identifying their weight, i.e. effect on the assessment mark) in the assessment forms provided for the study modules.*

2. In order to ensure the accessibility of learning outcomes, alternatives of the applied studies and relevant assessment methods must be defined in the study module programmes.

3. More targeted and broader cooperation with social partners is relevant to achieve a greater variety of topics of final projects and thus the realisation of a greater variety of engineering competences by students, such as design, etc.

4. The existing plan of applied research activities should be prolonged for the next 3 years, set specific indicators and be fulfilled.

5. It is recommended to define clearly the division of teachers' workload between research and pedagogical works. It is also recommended to develop motivational schemes for creating conditions for more active participation in research activities of both teachers and students.

6. International collaboration in research should be intensified and enriched. It should be a strong basis for significant improvement in research.

7. The college should change its marketing strategy to attract more students not only from its own catchment area but also from other areas.

8. The expert panel recommends the implementation of plagiarism detection software for bachelor's theses.

9. *With the relatively low share of regular teachers delivering the subjects in the field of Transport Engineering of the total number of all programme teachers, it is important to implement sustainable personnel policy solutions assuring continuity/further development of the R&D activities in the field of Transport Engineering.*

10. The increasing number of guest teachers is relevant for teaching the subjects of the Transport Engineering field. Involvement of a larger number of teachers of the Transport Engineering study field in the academic exchange programmes is recommended, in parallel with the development of English language skills.

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

12. It is recommended that the faculty develop a coherent strategy as to the improvement of resources for teaching and research.

13. It is recommended that the college sets clear priorities of what it wants to achieve in a worst-case scenario because it is very much dependent on the local economy, which may be volatile.

V. SUMMARY

The study programme corresponds to the public and labour market needs. Changes in the transport engineering technologies were considered by consulting the social partners in the Alytus region. When developing studies in the field of Transport Engineering, the focus is on the regional market, including study marketing and programme. The aim of the Transport Engineering study programme is in line with the mission, objectives of activities and strategy of the HEI.

The aim and expected learning outcomes are in line with the Description of the Group of Engineering Study Fields and requirements applicable to the first-cycle college studies. The level of complexity of the learning outcomes conforms to the Level 6 qualification requirements under the European and Lithuanian Qualifications Framework for higher education.

The existing coherence between the programme content and qualification awarded enables the graduates to work in the transport sector. The graduates awarded with the vocational Bachelor of Engineering Sciences degree are employed at vehicle maintenance or service companies, vehicle technical inspection companies and transport service companies. Graduates have the possibility to seek higher university education by studying at universities.

Considering the decreasing number of the students applying for the field programme, the decision to abandon the specialisation of Cargo Vehicle Service in the programme and, instead, include individual cargo vehicle topics into the programme is considered timely and reasonable. In view of the employment rates upon graduation and the facilities and human resources available to the HEI, the limitation of offering only one study programme in the study field of Transport Engineering is considered reasonable. Still, the college might change its marketing strategy to attract more students not only from its own districts but also from other districts.

The variety of opinions about the priorities in teaching the experts perceived reflect the usual contradictions between the emphasis on hands-on education as opposed to a sound theoretical foundation and a process-oriented approach. Given the profile of the college as a regional champion not chosen by students because of specific specialities it is obvious that the college tries to serve all interests in a somehow equal way. It is unrealistic to expect the college to achieve top quality in all fields.

The college has shown flexibility in adapting the programme in a pragmatic way to attenuate weaknesses it has identified. The direction of the changes broadly reflects the changes desired by stakeholders.

By ensuring the close link between theory and practice, the coherent and logical structure of the curriculum enables the students to successfully reach the learning outcomes.

Compared with other similar college programmes, the college offers a minimum of electives for specialisation and individualisation.

The topics of the theses are in line with the topics taught and the learning outcomes to be achieved.

The strategy to engage social partners in the process of preparation of the final theses is assessed positively. It should be noted that in the assessment period the commissioned final theses accounted for 40% of all the final theses. It appears reasonable to continue developing this practice for avoidance of duplication of the topics in the future.

The expert panel identified two systematic deficiencies in final-thesis papers: language errors and lack of technical drawings. It is necessary to act quickly and consequently in these fields.

There is some cooperation of the HEI with local partners in research, but mainly restricted to joint publications. The experts did not find unambiguous signs of a link between the content of studies and the latest developments in science and technology. The college might not have decided whether to take a broad, extensive approach on research or an intensive approach focusing on special fields or selected partners. Trying both at the same time does not appear to be a sustainable strategy for achieving consistent results.

The College provides sufficient information about Erasmus+ programme and opportunities to study and internships; it also provides all the necessary assistance to students about their study process and student life.

A continuous monitoring of the progress of students in the study field is ensured. Everyday feedback is conducted in a personal way. The expert panel appreciate that during interviews with students they emphasised the personal atmosphere in the college. Additionally, students have the chance to submit their opinions on the study content and the teaching methods at the end of each semester, by filling in a questionnaire for each course.

The faculty collects its own data on the monitoring of graduates' careers, which allows assessing fully the changes in the position of graduates in the labour market and their career changes.

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

Teachers have a large workload, limiting the possibilities for systematic implementation of applied research in the science field of Transport Engineering, publication of their results in scientific journals, participate in national and international scientific and practical events. A low intensity of publication of research results in scientific journals in the field of Transport Engineering should be noted in this context. On the other hand, the

decreasing number of students have led the pedagogical work load of some teachers of speciality subjects to an unsustainably low level.

The cooperation with social partners appears very good and the active involvement in the allocation of final practice placements is successful and useful to the students. Furthermore, participation of the teachers-practitioners in the programme is considered a positive aspect. To ensure students' preparedness for practice, company employees are invited to supervise the professional practice placements, research final theses and to teach the subjects intended for acquisition of the competences of the special (professional) part.

Considerable attention is given at the HEI to improvement of international scope of activities. Nonetheless, there were just nine teachers who participated in the exchange programmes (including lectures or internship at foreign schools of higher education) during the assessment period. It should be noted that there were no visiting teachers of the field subject during the assessment period. 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.

Favourable conditions have been provided for professional development of the teaching staff. During the assessment period, all teachers working under the study programme improved their qualifications in various ways.

Despite the claim that the laboratory equipment is fully functional and suitable for organising an efficient and high-quality teaching process and achieving study results there are some lacks with the equipment. Engine testing and mechatronics laboratories with equipment for automatic and hybrid transmission, engine control and training stands as well as stands with hydraulic components are not sufficient.

Given the fact that the college is a small organisation one cannot expect high-quality laboratory equipment. That is why the expert panel comes to the conclusion that the resources in place are just sufficient for adequate teaching, though not for research. Stakeholders must play a major role for the college keeping capable of fulfilling its educational and training duties. For assessment of the numerous improvements planned it is necessary to wait for implementation.

At the library there are sufficient methodological resources and resources are available for students physically and remotely.

In the light of the organisation being fairly small, the sophistication of the quality process and its regulation is high. Though the seemingly high degree of formality stands in some contrast to the familiar atmosphere, the experts do not find that this compromises the decision-taking process. The college appears to succeed in taking ad-hoc decisions successfully.

The strong focus on local relationships is obvious in this area too. The local stakeholders are essential for the programme to be run successfully. That might pose problems if the local economy runs into a crisis somehow. It is therefore recommended that the college sets clear priorities of what it wants to achieve in a worst-case scenario.

The scope and frequency of information-gathering and the publication of the information gathered is adequate. The requirements of the quality process in this area (opinions of students) are fully met.

Expert panel signatures:

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