



CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

EVALUATION REPORT
STUDY FIELD of CIVIL ENGINEERING

at VILNIAUS TECHNOLOGIJŲ IR DIZAINO KOLEGIJA

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6. Ms. Diana Malkova, *students' representative.*

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Study Field Data*

Title of the study programme	Civil Engineering	Engineering Systems of Buildings	Road Engineering
State code	6531EX018	6531EX019	6531EX022
Type of studies	College studies	College studies	College studies
Cycle of studies	First cycle	First cycle	First cycle
Mode of study and duration (in years)	Full-time (3 years), part-time (4 years)	Full-time (3 years), part-time (4 years)	Full-time (3 years), 2012-2018 part-time (4 years) 2012-2019
Credit volume	180	180	180
Qualification degree and (or) professional qualification	Professional Bachelor of Engineering Sciences	Professional Bachelor of Engineering Sciences	Professional Bachelor of Engineering Sciences
Language of instruction	Lithuanian	Lithuanian	Lithuanian
Minimum education required	Secondary education	Secondary education	Secondary education
Registration date of the study programme	30-08-2002	30-08-2002	01-02-2012

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

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I. INTRODUCTION

1.1. BACKGROUND OF THE EVALUATION PROCESS

The evaluation of study fields is based on the Methodology of External Evaluation of Study Fields approved by the Director of the 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) *site visit of the expert panel to the higher education institution*; 3) *production of the external evaluation report (EER) by the expert panel and its publication*; 4) *follow-up activities*.

On the basis of this 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 then the study field is not accredited.

The study field and cycle are **accredited for 7 years** if all evaluation areas are evaluated as exceptional (5 points), very good (4 points) or good (3 points). The study field and cycle are **accredited for 3 years** if one of the evaluation areas was evaluated as satisfactory (2 points). The study field and cycle are **not accredited** if at least one of evaluation areas was evaluated as unsatisfactory (1 point).

1.2. EXPERT PANEL

The expert panel was assigned according to the Experts Selection Procedure (hereinafter referred to as the Procedure) as approved by the Director of Centre for Quality Assessment in Higher Education on 31 December 2019 [Order No. V-149](#). The site visit to the HEI was conducted by the panel on 6th December, 2021.

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Dr. Mindaugas Gikys, *Director of JSC “AIF.LT” (Lithuania)*;

Ms. Diana Malkova, *student of International Business Studies at Vilnius University of Applied Sciences (Lithuania)*.

1.3. GENERAL INFORMATION

The documentation submitted by the *Vilniaus technologijų ir dizaino kolegija* (hereafter – VTDK, college) follows the outline recommended by 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.	Access to the VCTD Moodle System
2.	Annual budget figures for equipment renewal was sent by email

1.4. BACKGROUND OF THE STUDY FIELD/STUDY FIELD POSITION/STATUS AND SIGNIFICANCE IN THE HEI

The college was formed by way of merging the reorganised Vilnius Technical College with the Vilnius College of Civil Engineering and Design by resolution of the Government of the Republic of Lithuania No. 785 of 1 September 2008. The name of the Vilnius College of Civil Engineering and Design was changed to the Vilnius College of Technology and Design (VTDK). VTDK is a public legal entity operating as a public institution with autonomy combined with accountability to the public. The college's main field of activity is conducting higher education on the basis of professional practice and applied research, experimental development, providing professional higher education and providing opportunities for life-long learning.

Students who have completed higher education study programmes are awarded a professional bachelor's qualification degree in the respective field and are issued a professional bachelor's diploma and a diploma supplement. The activities of the college are based on the Constitution of the Republic of Lithuania, the Law of the Republic of Lithuania on Science and Studies, the Statute of the College and other legal acts.

The management structure of the college is the College Council and the Academic Council with the sole governing body being the Director of the College. The college has three faculties of Design, Civil Engineering and the Technical faculty. The faculties consist of departments. The quality of the study programmes is ensured by Study Programme Committees managed by the Heads of the study programmes. The college offers 16 first study cycle programmes in 11 fields of studies.

In order to encourage self-sufficiency of faculties and departments, to resolve issues of academic activity, social partnership and other issues relating to the process of studies, the academic activities planning has been decentralised.

The minimum number of study places of those accepted for first study cycle integrated studies at state higher education institutions during the first stage of the main enrolment is 10 for study programmes of the field of engineering technology research studies. The civil engineering study field programmes are unique to the city of Vilnius and there is synergy between the engineering and design study programmes.

During the assessment period, the college had three study programmes in the study field of civil engineering: Civil Engineering, Engineering Systems of Buildings and Road Engineering. In recent years few young people chose the Road Engineering programme. In 2019 and 2020 no students enrolled on the Road Engineering programme. For this reason, admission to this programme is not available from 2021 and this programme will not be carried out in the college in the future. In June 2022, the last cohort of students from the Road Engineering programme will graduate. No self-analysis on the Road Engineering programme is provided in the Self-Evaluation Report (hereafter – SER).

The content of the study programmes in Civil Engineering and Engineering Systems of Buildings has been updated. The competencies developed by students meet the expectations of construction employers and the construction sector.

The last time the study programmes Civil Engineering and Engineering Systems of Buildings were assessed by an international expert group was in 2016. According to the results of the external assessment, the study programmes were accredited for a maximum period of six years until 2023.

Study programmes in the field of civil engineering are one of the most popular among the students in the college. The college has been carrying out studies in the field of civil engineering for 18 years.

II. GENERAL ASSESSMENT

Civil Engineering study field and first cycle at Vilnius College of Technologies and Design is given **positive** evaluation.

Study field and cycle assessment in points by evaluation areas

No.	Evaluation Area	Evaluation of an Area in points*
1.	Intended and achieved learning outcomes and curriculum	3
2.	Links between science (art) and studies	3
3.	Student admission and support	4
4.	Teaching and learning, student performance and graduate employment	3
5.	Teaching staff	3
6.	Learning facilities and resources	4
7.	Study quality management and public information	3
	Total:	23

*1 (unsatisfactory) - there are essential shortcomings that must be eliminated;

2 (satisfactory) - meets the established minimum requirements, needs improvement;

3 (good) - the field is being developed systematically, has distinctive features;

4 (very good) - the field is evaluated very well in the national and international context, without any deficiencies;

5 (excellent) - the field is exceptionally good in the national and international context/environment.

STUDY FIELD ANALYSIS

3.1. INTENDED AND ACHIEVED LEARNING OUTCOMES AND CURRICULUM

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

The three civil engineering study field programmes are denominated as Civil Engineering (hereafter - CE), Engineering Systems of Buildings (hereafter - ESB) and Road Engineering (hereafter -RE) of the VTDK as stated in the (SER). The Road Engineering programme was not evaluated since this programme will not be available after 2021. Lists of both programmes outcomes are presented in Annex 3. Subjects of both programmes are in Annex 1: part 1 (CE) full-time, part 2 (CE) part-time, part 3 (ESB) full-time and part 4 (ESB) part-time. The approach used to assess students is described in Annex 1.

The SER indicates that the goals of the study programmes comply with the requirements from the construction stakeholders taking into account the cooperation with local authorities and with the strategic plans of European, national and regional bodies in terms of construction developments and the needs of professionals in the civil engineering discipline. The SER states that the programmes have an emphasis declared on sustainability and on digitalisation to train graduates for the foreseeable future based on the documents *Strategy on Shaping Europe's Digital Future* and *Circular Economy Action Plan*, as in page 12, footnote 6.

The separation between Civil Engineering and Engineering Systems of Buildings contributes to the intended specialisation of both programmes. According to the SER page 7, learning outcomes have been reviewed and updated according to these references. Some new modules (course units) have also been added, goals of both programmes and themes of final projects have been adapted to address subjects related to sustainability in civil engineering. According to the SER the VCTD management is considering more transformations in the programmes due to the emergence of other innovation themes in civil engineering like new materials in construction and digitalisation.

(2) Expert judgement/indicator analysis

The site visit virtual meetings revealed that cooperation exists between the VCTD administration and academic staff with related labour market representatives, namely alumni and construction companies. It was noted that there is a lack of involvement in European related associations of education and training in civil engineering. Accordingly, it was noted that employers value the competencies of graduates and some encourage further qualification studies. It was also noted that salaries offered by employers are above the median national average reflecting the need for specialists like those from these programmes. The SER reveals the influence of relevant policy documents related to civil engineering in the response to market and to societal changes.

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

According to the SER, the study programmes aims and outcomes are aligned with VCTD's mission of being a partner in creating a sustainable society. The VCTD graduates are specialists that are expected to be responsible in the areas of engineering and design. Results of research and of development are supposed to be accessible and useful to the general public and businesses. The aims of the civil engineering programme are to prepare a competitive specialist in the labour market in its general activities. In a similar approach the Engineering Systems of Buildings programme objectives are to provide training of competent graduates with responsibility towards the needs of the related labour market. New disciplines and subjects have been added to both programmes to ensure compliance with current tendencies and needs for both types of programmes. According to the SER the outcomes of course units have been updated. The programme changes of CE and ESB also took in consideration the VCTD strategic action plan. There was also the creation of a task with the activity of compliance of learning outcomes with strategic documents of relevant sectors and relevant United Nations Sustainable Development Goals. Several examples of the influences of these decisions are given in terms of curriculum changes.

(2) Expert judgement/indicator analysis

The SER and related documents state the changes of the programmes intended outcomes and the mission, objectives of activities and strategy of the college and other related documents. According to the site visit virtual meetings, the surveys of students and the employer's statements reveal suitability between the expected performance of graduates and the needs of employers in accordance with the declared VCTD goals and strategy.

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

(1) Factual situation

Annex 1 of the SER presents the study plans of both programmes. The civil engineering study field programmes have duration of six semesters for full-time students and eight semesters for part-time students. The number of course units vary in each semester and have different weekly workloads. The number of credits in both options is 180 ECTS credits. Both programmes award a degree of a professional bachelor of engineering sciences. These presentations indicate several characteristics of both programmes such as study hours and assessment modes. Table 1 of the SER compares specified requirements of legal acts and the characteristics of the study programmes in terms of credits. The civil engineering study field programmes comply with *the Description of the Study Cycles, General Requirements for the Conduct of Studies* and the *Description of the Engineering Group of Study Fields*.

There is a list of programme outcomes provided in Annex 3 showing the distribution of modules/course units for both programmes. Several updates in terms of disciplines and

subjects are presented in terms of examples to reflect the changing needs of the engineering subjects and of the labour market needs.

(2) Expert judgement/indicator analysis

The SER includes a statement that the legal requirements of both programmes of the civil engineering study field are met by the programmes. Concrete references and descriptions that support and justify that compliance for both programmes with legal requirements are not available in the SER and annexes. This conclusion derives from the fact that a comparison of the legal requirements with the programme characteristics is not presented. For instance, in terms of the European Qualification Framework competence descriptors for knowledge, there is no indication of which competence descriptors of the programmes are in compliance. Although it is not a legal requirement, it was noted during the analysis of the SER and annexes, and in the site visit virtual meetings that the programme outcomes did not take into account any European quality label of an academic or professional nature. The examples presented as updates of the programmes, modules and outcomes, support the evaluation that VCTD has taken actions that support a real intention of following the modernisation of the programmes.

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

Annex 3 of the SER presents a matrix correlating the distribution between programme outcomes and the respective course units/subjects learning outcomes. Description in detail or examples of the contents of the matrices and lists of Annex 3 is not provided for the assessment and the study methods. The SER states, without any justification besides the matrices and lists of programmes outcomes in Annex 3, that learning outcomes of each subject are consistent with the results of the study programmes.

(2) Expert judgement/indicator analysis

No justification is made about the rationale (educational or pedagogical model) used to attribute to each course unit an effective contribution to each programme outcome. The same observation is made concerning teaching methods and related assessments. The SER and site visit virtual meetings did not clarify how the distribution of the programme outcomes among the different course units was obtained and shown in Annex 3. There is a lack of description of the teaching methods for each subject and of the rationale to expect learning outcomes from each subject. That missing information curtails the benefits of any verification of compatibility and of alignment between learning outcomes and teaching methods. There is also no defined rationale about the alignment model between learning outcomes and assessment methods. The SER, annexes and site visit virtual meetings suggest that the programme outcomes of graduates are satisfactory for the expected demands of the labour market and for employability.

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

According to the SER and annexes, both programmes outcomes are defined in terms of the subject names and related contents. It is stated, without demonstration, that the totality of the course units/subjects learning outcomes provides the necessary competences to graduates. According to the SER and annexes, it is expected that the accumulation of those subjects/modules will provide the necessary competencies to graduates. In Section 1.5 of the SER general ideas are presented to guarantee a consistent development of student competencies in terms of different types of study subjects: general, field, programme and special study. Presentation of the justification of the development of competencies of students with the programmes outcomes is not available. Statements are made about their consistent development but without concrete written justification.

(2) Expert judgement/indicator analysis

The SER, annexes and site visit virtual meetings provided information about the contribution of each subject/course unit to the achievement of the programme outcomes. However, it is missing the rationale or pedagogical model used to ensure that each of the programme outcomes was transformed into final student competencies. Also, the same judgement applies to the adequacy of the types of assessment methods of competencies (programme outcomes) chosen by teachers to ensure the verification of the different types of competencies (learning outcomes) to be achieved by graduates of the programmes. It is noted that programme outcomes have social and personal skills instead of the European Qualification Framework competencies of level 6 called attitudes (autonomy and responsibility). European Qualification Framework competencies and the Lithuanian National Qualification Framework are organised in Knowledge, Skills and Attitudes (called Autonomy and Responsibility).

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

The SER and annexes refer to both programmes (CE and ESB) as the civil engineering study field programmes. According to the SER and annexes 1 to 4, it was noted that students may choose some subjects/course units in the second half of the study plans like Sociology or Psychology. The total is twelve credits with four course units/subjects of three credits each. Students can also choose to participate in the Erasmus+ placement in a foreign higher education institution. Students can also choose the topic/theme of the final practice and project. According to the SER some students attend course units/subjects after graduation to improve their personalisation of their studies.

(2) Expert judgement/indicator analysis

Students may choose the topics of the final practice and thesis/final project together with four course units/subjects from a pool of twelve. Therefore, it is adequate to consider that each student can adjust the personalisation of the last part of their study programme to respective inclinations of deepening competencies in one or more areas of interest.

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

(1) Factual situation

According to the SER both civil engineering study field programmes have established procedures to handle final theses elaboration in accordance with the *Description of Procedure for Preparation, Assessment and Storage of Final Projects*. There is a College Qualification Commission composed by academics and by professionals that evaluate each thesis proposal and supervises respective elaboration and assessment. According to the SER, in the Civil Engineering and in the Engineering Systems of Buildings programmes, there have been attempts to respond to local needs of the labour market and of society when selecting the topics of the theses/final projects. Titles of themes of theses comprise mostly new constructions, repair and rehabilitation/renovation of existing constructions and design and execution of engineering systems in buildings. The SER presents a table with seven recommendations for the Civil Engineering programme and six recommendations for the Engineering Systems of Buildings programme from a previous external assessment and how VCTD responded to those recommendations.

(2) Expert judgement/indicator analysis

The titles of theses/final projects reflect a professional trend leading towards the application of techniques and of knowledge acquired with the acquisition of the study programme outcomes. The cooperation with professionals and with companies stated in the SER and in the site visit virtual meetings provided compliance between the intended learning outcomes of each programme with the thesis/final project results.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. Cooperation with local stakeholders in the Civil Engineering and in the Engineering Systems in Building programmes areas.
2. Matrices connecting the programmes outcomes and each course unit learning outcomes facilitate the understanding about the usefulness of each subject.
3. Topics of final projects are related to the needs of stakeholders and of the labour market.
4. The topic of the final project is chosen by each student.
5. New course units and related learning outcomes allow for the updating of graduate competencies.
6. Salaries of civil engineering study field graduates are above average.

7. Updating of programmes goals is in accordance with sustainability and digitalisation needs to train specialists according to labour market and society needs.

(2) Weaknesses:

1. The lack of involvement with European quality engineering education models and labels in academic and professional terms.
2. The choice of assessment methods in terms of the module learning outcomes are not linked with any common pedagogical or educational model.
3. The choice of teaching/learning methods not justified in relation to the respective intended learning outcomes.
4. Construction safety competencies/learning outcomes are not sufficiently represented in the study programmes outcomes.
5. The establishment of a permanent commission with stakeholders to observe the need for programme outcomes updates.
6. According to the SER and annexes there is no clear quality control system of the programmes.
7. International mobility of graduates may be hindered due to the lack of involvement with European engineering international professional and academic organisations.

3.2. LINKS BETWEEN SCIENCE (ART) AND STUDIES

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

The college presents a yearly report to the Ministry of Education, Science and Sport indicating the data and funding of applied research work. Over the review period the research work generated 39,106 Euros in 2017, 59,487 Euros in 2018 and 55,693 Euros in 2019.

One of the college's aims is to increase the competencies of students in the research area. To achieve that aim the college created *Science WorkShops*. Students together with teachers develop projects in the applied research field such as *Possibilities of waste paper sludge recycling and the effect of Nano SiO₂ on cement hydration and properties* and *Dependence of air conditioning system operating parameters on cooling air temperature*. The college encourages teachers to participate in research activities and created the *Research Foundation* to support the teachers. The teachers of the civil engineering study field programmes received 30.000 Euros for their research work. The college cooperates with external social partners in the field of civil engineering including various Lithuanian and foreign companies and research institutions.

The research results have been published in research publications. During the evaluation period the teachers of the civil engineering study field published over 34 research articles of which 5 were published in research publications referenced in other international databases, and 11 in other peer-reviewed research publications. During the evaluation period the teachers with co-authors published 4 assignment books for students. The college together with foreign partners participate in the International project *Inclusive Research Involving Society with Higher Education*.

The priority scientific research activities at the college in the field of engineering sciences are Sustainable Development, Concrete Structures and Properties, Use of Biofuel Ash, Digital Modelling and Sustainable Life Cycle of Buildings and Efficient Use of Resources and Energy.

(2) Expert judgement/indicator analysis

According to the current situation in the college, there are links between science (art) and study activities evidenced by:

- the scientific articles published by the teachers;
- the teachers and students' activities in the Science WorkShops, International projects, local and international conferences and seminars;
- participation in the research activities in of civil engineering science themes.

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

(1) Factual situation

The College's teachers are analysing these latest developments in the civil engineering field:

- Concrete with Various Admixtures and Wastes;
- Energy and Environmental Assessment Research.

The application of new technologies in the civil engineering sector and the implementation of innovative systems are thus included in the content of study subjects *Building Architecture and Constructions, Building Design Practice, Buildings Maintenance, Sustainable Environment and Human Safety*.

(2) Expert judgement/indicator analysis

The college has links between the content of civil engineering study field programmes and the latest developments in civil engineering science. The main indicators are:

- the College is interested in innovative themes for civil engineering science;
- the newest themes for civil engineering science are included in the teaching materials.

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

The students of the college are directly involved in the civil engineering science research field as evidenced by their:

- Participation in local and foreign conferences. For example the research materials have been published in *The 2nd Entrepreneurship and Family Enterprise Research International Conference (EFERIC 2018 – Edinburgh, United Kingdom, 27-29 June 2018)*, in *The 47th International Symposium on Agricultural Engineering* (Opatija, Croatia, 5-7 March 2019 (p.379-388). Opatija: University of Zagreb), in *The 4th International Conference on Innovative Materials, Structures and Technologies (IMST 2019 – 25-27 September 2019, Riga, Latvia)*, in *The 13th International Conference Modern Building Materials, Structures and Techniques* (16-17 May 2019, Vilnius, Lithuania) and others;
- Preparation of scientific articles. Some of the scientific articles have been published in publications with an IF-impact factor and belonging to quartiles Q1, Q2 and Q3. For example, MALAISKIENE, Jurgita; VAICIENE, Marija; GIOSUE, Chiara; TITTATELI, Francesca *The Impact of Bitumen Roofing, Production Waste (BTw) on Cement Mortar Properties* Construction and Building Materials (Oxford – Elsevier Ltd., ISSN 0950-0618, eISSN 1879-0526, 2020 Vol. 234, art. No. 117350, p. 1-10 DOI: 10.1016/j.conbuildmat.2019.117350).

During the evaluation period the students together with the teachers presented their results in 25 reports at various student research and practical conferences.

(2) Expert judgement/indicator analysis

Students are encouraged to be involved in scientific activities for example:

- preparing papers for publication;
- participation in specialised events;
- motivated cooperation between teachers and students.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. There are scientific articles published by the teachers and students.
2. Participation in research activities in new and innovative civil engineering themes.
3. The newest themes for civil engineering science are involved in the teaching materials.
4. The teachers and students are cooperating in research projects.

(2) Weaknesses:

1. There are low numbers of scientific articles published by teachers.
2. There are low numbers of students participating at the International level (including Erasmus).

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

Admission to the civil engineering field programmes can be by admission to state funded and state non-funded places or by direct admission to state non-funded places. The most important student admission criterion is the competitive score.

During the assessment period, the requirements for the competitive score for those entering the study programmes in the field of civil engineering changed every year and the minimum score is currently 4.3. In addition, individuals who apply for studies in state-funded places have to pass a state or school maturity examination of Lithuanian language and literature or an international maturity examination of a foreign language and a state maturity examination of Mathematics with at least 25 points.

The minimum requirements for applicants to non-state-funded places in the 2018-2020 periods were the secondary education and at least one state maturity examination passed. Additional points may be added to the competitive score in accordance to the criteria laid down by the Ministry of Education, Science and Sport. Information about the admission to the study programmes in the field of civil engineering is published on the website of the college.

The number of students who signed agreements in the field of civil engineering has fluctuated from 103 in 2018 to 87 in 2019 and 126 in 2020. Approximately one-third of the students enrol in the *Engineering Systems of Buildings* programme and two-thirds enrol in the *Civil Engineering* programme. The competitive scores of students admitted in full-time and part-time study modes fluctuate. Many forms of publicity are used to attract students to the college.

(2) Expert judgement/indicator analysis

Admission to first year of the *Civil Engineering* and *Engineering Systems of Buildings* programmes is controlled by the regulations set out in the national Lithuanian Ministry of Education, Science and Sport and by criteria set by the college. Admission to later years of the programme is based on the recognition of prior learning. The number of students admitted to the programmes fluctuates but remains strong and higher than other higher education institutions in Lithuania. The evaluation panel notes that the last intake of the *Road Engineering* programme was in 2018 with the final programme graduates in 2022.

The employers confirmed that there is a serious shortage of graduates with the civil engineering and engineering systems specialist knowledge. The evaluation panel is of the opinion that promotion of the Civil Engineering and Engineering Systems of Buildings programmes to prospective students could be enhanced by promoting these careers to second level students with the assistance of the social partners.

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

The recognition of qualifications acquired abroad, periods of study and previous non-formal and informal learning is carried out in accordance with the college procedure which is published on the college's website. A total of 229 credits were credited to the students of the study field of civil engineering, who studied at 15 educational institutions of other countries in the 2018–2020 academic period under a part-time study agreement. A total of 72 credits were credited to four interns in construction companies of other countries and one student was on a 3-months' post-graduate internship.

Information on the crediting of foreign qualifications, learning outcomes of the partial study periods, previous and other studies is provided to students at the Dean's Office of the Civil Engineering Faculty and the Studies and Career Centre. There is a college procedure for assessment of competencies acquired through non-formal and informal learning. It applies to persons wishing to assess the non-formally acquired achievements. During the assessment period, there were no applications for the recognition of competencies acquired non-formally in the study field of civil engineering. In the 2018-2020 academic period, unclassified students participated in the non-formal adult education training courses carried out at the Civil Engineering Faculty. Qualification development courses were also organised during the assessment period.

(2) Expert judgement/indicator analysis

The Study Programme Committees evaluate the recognition of formal and non-formal education of prospective students according to college policies and procedures. From the number of credits recognised for formal learning during the assessment period, and discussions with staff during the site visit virtual meetings, the evaluation panel determined that the college procedures for the recognition of student prior learning are implemented.

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

(1) Factual situation

Internationality of studies in the field of civil engineering is developed by organising academic mobility through *Erasmus+*, *Nordplus* programmes, project activities and inviting foreign higher education lecturers to give lectures.

The college runs a selection contest for Erasmus+ opportunities and information is available on the college's website. In addition, information meetings with students are organised to prepare students for the competition and to explain the processes to them if successful. Meetings with students who have participated in an exchange programme are organised at least twice a year, where they share the gained experience on studies, challenges, insights and suggestions for study improvement and other relevant issues.

During the assessment period, a total of 19 students from VTDK in the field of civil engineering availed of the *Erasmus +* programme: 15 students went on part-time studies to foreign higher education institutions and 4 students went on internships in foreign companies.

Twenty-two students came to study civil engineering programmes from foreign higher education institutions. In the assessment period, no foreign students came for full-time studies in the field.

During the assessment period, students and lecturers in the field of civil engineering participated in international projects and also actively participated in the projects of the Nordic-Baltic International Cooperation Programme *NordPlus*, which are aimed at strengthening cooperation between higher education institutions and increasing the student's responsible attitude towards sustainable construction.

(2) Expert judgement/indicator analysis

Opportunities to participate in academic mobility for a semester or for a practical placement element of a programme is available to students where the credits and work experience achieved in the foreign higher education institution is recognised when students return to college. VTDK advertises the Erasmus+ opportunities and supports students with a Co-ordinator within the college.

The evaluation panel notes that the number of Lithuanian students opting to carry out practical placement or part-time studies abroad is low. At the meeting with students, they indicated that they have received sufficient information on the opportunities to study abroad but many have part-time work or families which makes travel difficult. The panel noted that no foreign students came to VTDK as the two programmes are offered in the Lithuanian language.

The evaluation panel recommends that the academic mobility of students be encouraged further with an emphasis on the benefits of mobility promoted to students. Additional English language support may be necessary.

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

Each academic year students are provided with academic, social, financial and other supports. Information is provided to students in a timely, systematic and appropriate manner. Study field lecturers and final project supervisors are in constant contact with students and provide them with study-related assistance.

Students in the field of civil engineering have the opportunity to avail of state-supported loans and financial support. Students who meet the selection criteria for all modes of studies in both state-funded and non-state-funded positions have the opportunity to receive a bursary. During the analysed period, all students of the study field received bursaries. The best full-time students studying in state funded positions receive incentive scholarships. Between 2018 and 2020 one hundred and thirty-three students in the field of civil engineering were paid incentive scholarships. Also, seventy-nine students were given incentives for active public and scientific research activities, project activities and achievements in competitions and sports.

Students studying in senior years who are unable to attend lectures according to the approved schedule are granted the right to study according to an individual schedule in accordance with the procedure established by the college. Eighteen students availed of this opportunity. Students may take a study break due to health problems or for personal reasons. The college has a Studies and Career Centre, whose specialists consult students on job search issues, organise training and meetings with graduates and social partners. All students are given the opportunity to reside in the modernised dormitories of the college and to be involved in sporting activities.

(2) Expert judgement/indicator analysis

The number of students who receive scholarships, bursaries and other financial support from the Lithuanian state and the college is very high. The evaluation panel is impressed with the range of academic and financial supports available for students and recommends that this be

further extended to supporting students to get more involved in presenting academic and project work at conferences.

3.3.5 Evaluation of the sufficiency of study information and student counselling

(1) Factual situation

The Dean's office of the Civil Engineering Faculty provides information to students of the Civil Engineering and Engineering Systems of Buildings programmes. The Department of Civil Engineering, the Studies and Career Centre, the Students' Representation and the *Students* section of the college's website also provide relevant information to students.

Appropriate information is sent to students in group mails or handed over during meetings with faculty administration staff. Lectures on the *Introduction to Studies* are organised for first-year students, during which students are introduced to the study programme, its structure, study process organisation and optional subjects. The library staff acquaints students with the library's funds and the possibilities of using databases. Study field lecturers acquaint students with the aims of the subject and the learning outcomes, the syllabus of the subject taught, the assessment system and criteria, the form of examination and the counselling opportunities.

(2) Expert judgement/indicator analysis

Students are provided with appropriate programme information by the college, faculty, department and staff commencing with induction in first year. Face-to-face meetings and electronic information tools are utilised to provide students with up to date information at appropriate times. Discussions with staff and students during the site visit virtual meetings provided confirmation to the evaluation panel that the study information is sufficient.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. The criteria and procedures to admit students to the civil engineering study field programmes is clearly defined. The number of students studying the Civil Engineering programme is high but no students were admitted to the Road Engineering programme over the last two years.
2. The academic, financial, social and personal support available to the students of the civil engineering study field is communicated to them and is used by the students.
3. Students have the opportunity to study according to an individual schedule or take a break in their studies without losing the status of a student.
4. There is a clear procedure for recognising prior learning and it has been implemented in the civil engineering study programmes.
5. The information given to students about their studies is timely, systematic and relevant.

(2) Weaknesses:

1. The evaluation panel recommends that the academic mobility of students be further encouraged with an emphasis on the benefits of mobility promoted to students. Additional English language support may be necessary.
2. Engagement with the social partners could be improved to promote civil engineering and construction careers to second level students and hence the civil engineering study field programmes.

3.4. TEACHING AND LEARNING, 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

Study Regulations and *The Description of the Procedure for Assessment of Learning Outcomes* are documents which regulate the teaching and learning process. Commonly used methods, (lectures, practical works, seminars, simulations, discussions, case study, projects methods, lectures in real environment or in construction companies,), in the classical way or remotely, and compatible to learning outcomes, are put in place.

The assessment methods, (examination, project, test, report, presentation and defense of the independent work), also derive from the intended learning outcomes. They are part of the subject description. In order to get the information regarding students' achievements, continuous during the semester, compulsory mid-term assessments are performed. The obtained results are the basis for individually feedback to students. A ten-point grade system and individual cumulate index (ICI) are applied for assessment of learning. The study process is characterized and driven by the attention paid to individual work. Namely, at the beginning of the semester, the teachers introduce the students to the essence of the individual work and the way it is accomplished and evaluated.

An examination or the defense of the individual work is carried out at the end of the subject studies and after receiving all positive mid-terms. The results of all performed assessments are available through the electronic diary of the Study Administration System.

The college offers the opportunity for progression from the college to university study. Namely, graduates from VTDK (civil engineering study field) can enroll in Kaunas University of Technology by passing bridging courses (may take up to 1 year - 30 credits), which is possible for certain study programmes (Civil Engineering, Construction Management, Structural and Building Products Engineering, Sustainable and Energy Efficient Buildings) and thus prepare for master's study (This is especially acceptable for part-time students, due to

their practical experience). Additionally, taking bridging courses (30-120 credits) is the option for college graduates to develop their university education for several study programmes (Construction Technology and Management, Structural Engineering, Building Materials and Products, Building Information Modelling). The above is necessary for enrollment in the master's studies in the civil engineering study field. There is one more opportunity for continuous study through so called compensatory studies. This is a two-year study programme (120 credits), available for admission to master's studies.

(2) Expert judgement/indicator analysis

There is a variety of teaching, learning and assessment methods, (in the real and virtual environments), as a basis for successful achievement of the intended learning outcomes. The focus is on the individual work, bearing in mind the opportunity for developing the skills of learning, working with information and its analysis.

Continuous study is ensured through the prospect for moving from the college to the university (bridging courses necessary to enter Kaunas University of Technology and Vilnius Gediminas Technical University, as well as compensatory studies, as a mandatory requirement for studying at master level).

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

(1) Factual situation

The academic environment at the VTDK is adapted to the socially vulnerable groups and students with special needs. The physical adaptations are provided. There are special parking places for these students. The applied teaching and learning methods ensure realization of the study process at an individual pace, which means that consultations with study field teachers could be organized by an individual schedule, where Moodle or the MS Teams platform are used as the virtual learning environment.

In order to facilitate the process of assessment, the faculty administration should inform the teachers that a person with special needs is registered for the assessment. Moreover, the conditions for realization of the assessment according to the kind of disabilities, (increasing the font of the text, extending the time for assessment, adapting the physical environment), should be provided. Flexible forms of realization of the assessment are used, bearing in mind the specifics of the disabilities.

The financial support offered by the college, is based on the procedure named as *Description of the Procedure for Providing Financial Assistance to Persons with Disabilities*. The number of students with special needs recorded in the previous evaluation period was 2 in 2018 and 2020, and 3 in 2019. Except in the first paragraph, the text referring to this study area does not contain details of supporting the socially vulnerable groups.

(2) Expert judgement/indicator analysis

The college supports, to the certain extent, the participation of socially vulnerable groups and students with disabilities in the academic area, respecting the basic human rights and principles for ensuring the inclusive academic environment for every student. There is a legal act dealing with the procedure for financial support of the students with special needs.

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

(1) Factual situation

The *Description of the Procedure for the Assessment of Learning Outcomes* is a college legal act on which the assessment of achieved knowledge, skills, and competences is based.

There are different levels for monitoring the study's achievement. It is carried out through mandatory mid-term assessment (evaluation of a certain part of the subject), as well as through the defence of individual work and the examination session, on the student's level. There is a faculty administrator in charge of contacting the student and, if there is a need, informing them about the possibility for additional consultations. The process of monitoring each student group is based on the analysis of achievements of the group of students. The obtained results are subject of discussions at the department meetings, as well as the study programme committee and faculty meetings. The achievement of the intended learning outcomes by students, at the end of study year, is a basis for taking the measures, if needed.

Constant feedback to the student is related to the individual level of achieved learning outcomes provided after the publication of the assessment results. Additionally, extensive feedback is important for more comprehensive understanding the study subject content. Feedback to the group of students is useful for the achievement of broader knowledge through comparing the individually obtained results as well as examples of good practice.

Results of the student's survey are a good instrument for providing the feedback and students' self - assessment. The results should be presented during the students' and teachers' meetings no later than two months after the collection of data by respecting the principle of confidentiality. This way of providing the feedback enables self-assessment and student's development in the study process.

One of the recommendations of the previous expert team referred to the necessity for *serious approaches that ensure the continued and active participation of students and social partners in committees and assessment groups* (Self Evaluation Report), and remarks towards involving the Alumni Club. Therefore, the representatives of social partners participate in the study programme committee. They are also involved in delivering practical classes, final project, defenses, monitoring and supervising the internships. They are part of the teams which carry out joint projects, study field lectures, and participate in joint research and conferences, too. Social partners and students are included in programme development. Moreover, the *Description of the Procedure for Feedback to Improve the Quality of Studies* is in place.

(2) Expert judgement/indicator analysis

The Self Evaluation Report provides a detailed summary of the college's approach to the students' progress monitoring and feedback. Therefore, the expert team is pleased to note that there are continuous mid-term assessments, evaluation of the individual work and examination sessions, and at different levels (the department, Study Programme Committee, Faculty).

Organized monitoring and evaluation of this indicator is a basis for self-evaluation and students' professional development. Additionally, there is a procedure that regulates the assessment of intended learning outcomes. Providing constant feedback on achieved learning outcomes (realized at the individual level, at the level of a group of students, or through organized surveys) is a good basis for development of students' theoretical and practical knowledge, as well as their skills and competencies.

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

(1) Factual situation

Data from different sources are included in the process of monitoring the graduates' career. (Employment Service under the Ministry of Social Security and Labour, the Career Management Information System, and surveys organized inside the Institution). There is a Centre in the college which activities are oriented towards helping the graduates in finding the new job opportunities and development of their career on the basis of the labour market trends and monitoring and analysis of graduates' employability. The study programme committee is also involved in these processes through conducting different surveys and organizing of events (Career Days, conferences, roundtables).

The data regarding employment of graduates, collected and analysed on the national level, (Government's Strategic Analysis Centre - STRATA), indicate that not all graduates are employed as highly qualified specialists right after completing the programmes in the civil engineering study field. (In 2018, 43 graduates out of 65 of the study programme Civil Engineering and Engineering Systems of Buildings). In accordance with the data provided by the Employment Service under the Ministry of Social Security and Labour, the employability of graduates from Civil Engineering and Engineering Systems of Buildings study programmes was 96% in 2019, and 99% in 2020.

The employers' opinion regarding knowledge, skills and competences of graduates is valuable for improving the study programmes, (Building Design Practice, Joint Semester Project, Project Management are included), as well as preparing graduates in line with labour market requirements. The employers' (93%), have a positive opinion, (excellent and very good), related to the provided professional skills and competencies of graduates. Additionally, the average income of graduates in Civil Engineering and Engineering Systems of Buildings, is relatively high (1.363EUR, twelve months after graduation – STRATA, 2018).

The graduates are also satisfied with the obtained theoretical and practical knowledge, (96% and 88% respectively, which is perceived as excellent or very good). Moreover, 84% of respondents think that practical training performed in the college's laboratories is excellent and very good. Their opinion regarding the quality of teaching staff is also positive. The above presented results were obtained during the survey organised by the study programme committee.

(2) Expert judgement/indicator analysis

The level of graduates' employability is very high, (institutional and national sources). The surveys of graduates and employers indicate high level of satisfaction regarding knowledge, skills and competencies, obtained during the realisation of study process at the college. Their opinion is taken into account in the creation and upgrading of the study programmes. On the other hand, during the discussions with different target groups, the expert panel found that there is a need for a higher level of involvement of the graduates and employers in the process of creating the college's study programmes.

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

(1) Factual situation

Several legal acts towards implementation of policies for ensuring academic integrity, tolerance and non-discrimination are put in place. Namely, *Study Regulations, Vilnius College of Technologies and Design Code of Academic Ethics, Statutes of the Ethics Committee, Description of the Procedure for the Prevention of Harassment, Sexual Harassment or Persecution, Involvement and Equal Opportunities Assurance Policy*, regulate the ways of creating, promoting and maintaining a culture of academic integrity, as a basis for a fair, transparent and non-discrimination study process.

Moreover, the Ethics Committee is a College body which is responsible for respecting and implementing the principles of academic ethics (*Student's Declaration of Integrity* is a document signed by the student at the beginning of the programme of study, oriented towards declaring and providing the honest student's performance of the academic work as a whole).

Confidentiality in the assessment process is achieved through individual assignments for different kinds of student's work and assessment information provided individually to each student. Violations of the Code of Academic Ethics in the civil engineering study field have not been recorded in the current evaluation period.

(2) Expert judgement/indicator analysis

Legal acts as well as the college Ethics Committee deal with the implementation of policies for promoting, supporting and upholding a culture of academic integrity, tolerance and non-discrimination for students and staff.

3.4.6. 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

Students have the right to submit appeals on the basis of the *Description of the Procedure for Students' Appeals Regarding the Study Process, Evaluation of Student Knowledge and Procedural Violations*. The mentioned right refers to violations of the knowledge evaluation score and/or violations in the assessment procedure. When it comes to the evaluation of the final project, only the appeals for violations made during its defence can be submitted. There were no appeals during the period which is subject of evaluation in this report.

(2) Expert judgement/indicator analysis

College regulations regarding application of procedures for submission and examination of appeals and complaints, give more details on how the Institution considers complaints and appeals, from early consideration through to formal resolution, and information on how to make a submission under each stage.

Strengths and weaknesses of this evaluation area:

(1) Strengths

1. Recognising the role of individual work in establishing the study environment based on the closer relations between students and teachers and opportunities for development of different kinds of students' skills.
2. Continuous monitoring of students' progress and providing feedback.
3. The college recognises that academic integrity, tolerance and non-discrimination are essential for realisation of the study process.
4. The appeals and complaints procedures enable students to bring matters of concern about study process to the attention of the college.

(2) Weaknesses:

1. Participation of graduates and employers in the creation of improvements for the study programmes.
2. Support for socially vulnerable groups and students with special needs.

3.5. TEACHING STAFF

Study field teaching staff 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

(1) Factual situation

In VTDK there are 25 teachers working in the study field of civil engineering of which 4 are associate professors, 20 are lecturers and 1 is an assistant. Eleven of the teachers have a doctoral degree and 1 is studying for a PhD.

The number of permanently working study field teachers (at least half-time and with at least 3 years professional experience) is 19 for civil engineering study field programmes. The teachers seldom rotate but do so due to retirement, personal reasons, parental leave or change of residence. Practical experiences are supervised by study field lecturers who have at least a master's degree or an equivalent qualification of higher education and at least three years of teaching or practical activities in the field of study.

During the evaluation period civil engineering study field teachers published over 34 research articles of which 5 were published in research publications referenced in other international databases, and 11 in other peer-reviewed research publications. During the evaluation period the teachers with co-authors published 4 assignment books for students.

The qualifications and experience of the academic staff is appropriate to ensure the achievement of the learning outcomes of the civil engineering study field programmes.

(2) Expert judgement/indicator analysis

The teaching staff has appropriate qualifications and competencies. The SER has highlighted the following in relation to the teaching staff on the programme:

- the number of teaching staff is sufficient to deliver the programme;
- the teaching staff publish scientific articles;
- the teaching staff have the appropriate scientific and teaching background;
- the teaching staff are active in competitions and events, including International events.

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

The teachers of the college have the opportunity to engage in international mobility under the Erasmus + programme and/or other programmes. Teachers are paid a salary, conference and seminar fees are funded and other expenses are also covered.

During the evaluation period, 24 lecturers in the field of Civil Engineering went from the college to educational institutions in 18 countries under the Erasmus+ exchange programme, and 30 lecturers from institutions abroad visited the Civil Engineering Faculty of VTDK. During the evaluation period the college staff participated in the Erasmus+ Key Action 1 project. The teachers of the civil engineering study programme gave lectures, participated in discussions and conducted research as part of this project.

Foreign higher education institution teachers read lectures for students, participated in conferences, shared experiences and discussed possible fields of cooperation. During the last few years, 22 foreign university teachers arrived in VTDK to deliver lectures.

(2) Expert judgement/indicator analysis

Academic mobility of the teaching staff is improving. The Self-evaluation Report has highlighted the following in relation to the mobility of the teaching staff on the programme:

- The teachers are encouraged to improve their competences;
- The teachers participate in the Erasmus + exchange programme;
- Foreign teachers are involved in the delivery of the programme.

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

(1) Factual situation

The college has the clear Description of the Procedure for the Development of Teaching Competencies of the Study Field. The description regulates the aims, tasks, forms, planning and organisation of the professional development of study field lecturers. The college provides opportunities for the teachers to improve the qualifications by paying for the qualification courses from the state budget, from the college's funds or from other sources.

The teachers of the civil engineering study field programmes improve their qualifications by participating in short-term training, courses, seminars, conferences, traineeships, Erasmus+ and other international programmes.

The college has a minimum requirement for the improvement of teachers (traineeship – 1 per term, 16 academic hours per study year for the development of didactic competencies and at least 4 academic hours per study year for the deepening of subject competencies).

During the evaluation period, the global covid-19 pandemic had a direct impact on the mobility of lecturers in the civil engineering study field where the mobility reduced and the teaching process transitioned to a virtual teaching and learning environment.

(2) Expert judgement/indicator analysis

The programme teachers are improving their competences on an on-going basis. The Self-evaluation Report has highlighted the following in relation to the teachers improving their competencies:

- The teachers together with the Head of Department plan the development of their competencies each year;
- The college pays expenses to teachers to improve their competencies;
- It is possible to get financial support from the state budget, the Erasmus+ programme and other funds raised by the college or from other sources;
- The college recommends that the teachers improve their practical competences.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. The teaching staff publishes scientific articles.
2. The teachers are encouraged to improve their competences.
3. The teachers participate in the Erasmus + exchange programme.
4. The teachers together with the Head of Department plan the development of their competences each year.

(2) Weaknesses:

1. The teaching staff are not involved in international associations.
2. The teachers are not very active in International conferences outside of Lithuania.

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

The SER indicates that the existing material resources of the college (*auditoriums, laboratories, library, gym*) located at the Faculty of Civil Engineering, Antakalnio str. 54, Vilnius is used for the implementation of the Programmes.

The SER states that the study process of the civil engineering study field programmes is carried out in 30 auditoriums and 5 laboratories. The auditoriums and laboratories have been renovated, two new computer classrooms have been installed, an amphitheatre auditorium for streaming lectures and two cooperation space auditoriums for team and group work of students are available. The average number of workplaces in the stream auditoriums of the civil engineering study field programmes is 105, in the auditoriums it is 41 workplaces, in the information technology auditoriums it is 26 workplaces and in laboratories it is 28 workplaces.

Auditoriums and laboratories are equipped with modern, specialised software (*OS Windows, Microsoft Office 2019, AutoCad 2021, Autodesk Revit 2021, Autodesk Robot Structural Analysis 2021, Tekla BIM sight, Sistela Sqmata 2016, AutoCad Civil 3D 2019, Agisoft Photogrammetric Kit Professional Edition, "Surveyor Tools" (GeoMap, File, Inventory), ArcGIS (package), etc.*) used in the teaching process. The auditoriums and laboratories comply with the requirements of occupational safety and hygiene standards.

The SER states that the college has installed a sloping threshold at the central entrance, special parking spaces, the width of the doors in the building and the corridors are adapted for people with special needs in order to ensure that students with special needs can graduate from these programmes. In the college, the physical environment is adapted for students with special needs (hearing, movement or other disabilities) with good lighting and accessibility to the required place are ensured. It was also stated during the site visit virtual meetings that the college had purchased facilities and equipment for students with special needs, but only a few adjustable tables and equipment for students with hearing impairments were identified. There were two students with special needs entering the programmes in 2018, three in 2019 and two in 2020.

Civil engineering study field students complete internships in companies that apply the latest technological process management methods, use modern technologies and the most advanced equipment in the construction sector.

The college cooperates with the following companies:

- JSC YIT Kausta;
- JSC Staticus;
- JSC Inhus Engineering;
- JSC Statinių priežiūra;
- JSC Vėsa ir partneriai;
- JSC Kovenda;
- JSC Statvista;
- JSC Vilniaus šilumos tinklai;
- JSC Ukmergės statyba;
- JSC Eikos statyba;
- JSC Aktinis;
- JSC Termodinamika.

A tripartite agreement is established for the period of the internship, the organisation of the internship is regulated by the Description of the Procedure for the Organization of the Internship of the College, 2018.

In the college library, 945 methodological resources of different titles are relevant to the study field of civil engineering, of which 120 titles are published no later than in 2015. The library subscribes to paper periodicals, eight of which are relevant to the civil engineering study field. Methodological resources are acquired taking into account the needs of the programmes, recommendations of students and lecturers and ordering them from Lithuanian and foreign scientific publishers. The collection of relevant publications is annually supplemented with both Lithuanian and foreign methodological resources. Seven relevant publications were purchased for the study field of civil engineering between 2018 and 2020. The library's e-mail is used to search for publications in the college 's virtual library, which contains both paper publications and electronic resources from subscribed databases, subscriptions and free access e-mails, e-books and e-magazines.

The college participates in the project of the Lithuanian Association of Academic Libraries "eMoDB.LT3: Opening of Electronic Research Databases for Lithuania", during which the college library subscribes to three international databases: *EBSCO Publishing, Taylor & Francis Online Library and Emerald Management eJournals Collection*.

The college library subscribes to e-books published by VGTU Publishing House *Technika* and KTU Publishing House *Technologija*. Most of these books are in Lithuanian. The study field of Civil Engineering includes electronic books with 453 titles.

The virtual library of the college is created through the system of the Lithuanian Academic Electronic Library (eLABa), where the students and lecturers of the college can search for the necessary resources and read the electronic standards published by the Lithuanian Department of Standardization.

The Library also offers open access sources for the civil engineering study field: the Journal of Civil Engineering and Management, the Baltic Journal of Road and Bridge Engineering, KTU

Electronic Journal of Sustainable Architecture and Civil Engineering, Springer Open, DOAB of Open Access Books, DOAJ (Directory of Open Access Journals), Intech, Applied Technology and Innovations, Digital Commons Network, etc.

In the library, students can use modern facilities, reading rooms and computerised workplaces. The college uses the electronic learning environment Moodle, which uploads teaching materials prepared by lecturers and methodological works for students, which can be accessed remotely by students.

(2) Expert judgement/indicator analysis

The assessment was based on the *VTDK Self-Evaluation Report 2021* and the information was obtained during the site visit virtual meetings that the premises (auditoriums, laboratories) with the appropriate equipment are sufficient for the quality implementation of the study programmes, the appropriate tools and equipment are used in the study process including software to achieve the study results.

In the description of the SER and during the site visit virtual meetings, the panel were not provided with detailed information about the special equipment (a few adjustable tables and equipment for students with hearing impairments) available at the college for students with special needs. For this reason, the evaluation panel believes that the amount of tools and equipment available to ensure an effective learning process for students with special needs is insufficient, as no indication of specific equipment is available.

Due to close cooperation with social partners and business representatives, the college has created suitable conditions for civil engineering students to carry out professional practice. Therefore, it is very important that the contact established with various companies in the Vilnius region and established cooperation agreements remain valid.

The methodological resources in the college library (textbooks, books, periodicals, databases) for the civil engineering study field are appropriate, sufficient and available in various forms. The library funds are updated annually, supplemented by both Lithuanian and foreign methodological resources. The work of the library is fully computerised. Students can use the reading rooms and computerised workplaces in the library for independent work.

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

(1) Factual situation

The resources required for the implementation of the study field programmes at the college are planned in the strategic activity plans of the college. College funds for the acquisition and renewal of resources are allocated from three sources: funds for investment projects, funds allocated by the Government and funds earned by the college.

Each calendar year, a plan for the need to acquire or upgrade laboratory equipment for the civil engineering study field is drawn up. The plan foresees specific measures and funds for

their acquisition (budget figures for material resources: 2019 - 20,000 Eur, 2020 - 24,000 Eur and 2021 – 35,000 Eur). Equipment required during the study year is also updated and purchased such as 3D printer Craft Bot; linear laser level and rotary laser level; unmanned drone *DJI Phantom 4Pro Obsidian su video camera 20 Mpx Exmor R 1“CMOS, FOV 84°*.

Significant assistance in upgrading the equipment is also provided by the social partners. Under a loan agreement wall insulation demonstration stand (*Polystyrene Foam Association*) and a software package Instal System (*UAB Tece Balticum*) was acquired.

Participating in the project *Integration of the Open Access Modern Communication Technology Centre into the College Multidisciplinary Training Centre at Kaunas Technical College*, generated 81,000 Euros for the civil engineering study field programmes (*computer virtual and augmented reality class*).

(2) Expert judgement/indicator analysis

After evaluating the information provided in the SER and the information received during the site visit virtual meetings, it can be concluded that the planning and updating of resources required for the civil engineering study field programmes takes into account the needs of teachers and students when planning the acquisition of equipment to improve the study process.

The recommendations made by the evaluation panel in the previous evaluation have been taken into account by the college and action has been taken to implement them:

1. It is recommended to increase as much as possible the number of methodological tools placed in the electronic information platform (Moodle) used by the college. *Constantly supplemented.*
2. It is recommended that the library is provided with the means to acquire the Eurocode standards required for the design of structures. *Implemented.*
3. It is recommended to compile a comprehensive portfolio of each subject in order to assess the achievement (fulfilment) of the study results of the subject. *Implemented.*

Strengths and weaknesses of this evaluation area:

(1)Strengths:

1. Programmes of the civil engineering study field are ensured by using a sufficient number of up-to-date laboratories with modern technological equipment, computerised workplaces with the latest technical and software that meets the needs of students and teachers and allows programmes outcomes to be achieved.
2. The quality of the library is very good in the provision of appropriate literature with the civil engineering study programmes abundantly provided with appropriate textbooks, books, periodicals, databases and other resources in Lithuanian and foreign languages, which are sufficient and available in various forms both using them in modern library reading rooms and computerized workplaces.

3. Students of the civil engineering study field programmes conduct internships in companies that apply the latest technological project management methods, use modern technologies and the most advanced equipment in the construction sector. Therefore, students are provided with excellent opportunities to do an internship using the material base available to the social partners.

(2) Weaknesses:

1. The college does not provide suitable conditions for students with special needs to study.

3.7. STUDY QUALITY MANAGEMENT AND PUBLIC INFORMATION

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

Quality assurance is based on the Standards and Guidelines for Quality Assurance in the European Higher Education Area as well as considering the recommendations of experts of internal assessment and external assessment of study programmes. It is ensured on four levels:

- College level - Academic Council formulates a policy for the quality of education, approves an internal system for ensuring the quality of education and monitors its implementation (organising and conducting student admissions, consulting on student career issues, analysing data on employment opportunities at the Lithuanian Labour Exchange);
- Faculty level - the Dean of the faculty ensures the quality of studies and activities organised in the faculty, initiates professional training of the teaching staff, the supply and maintenance of the material base and provides feedback to study process participants;
- Department level - The department ensures material and methodological needs, development of relations with social partners, appointment of final project supervisors, reviewers and other issues;
- Study Programme Committee level - The study programme committee ensures the content of the study programme and the results of student assessment achievement at least once a semester, carries out follow-up activities of study programmes, analyses the results of surveys of students, lecturers and social partners and provides feedback to them and analyses the needs of the labour market, alumni and employers' suggestions.

The college has established Study Programme Committees. The Study Programme Committees consist of five members: head of the study program, students, lecturers and representatives of employers. The cooperation with departments is established to submit proposals on improving the study programme content and the final project topics.

Tools that are used to analyze the indicators of quality assurance are surveys of the quality of training, the annual assessment of the performance of teachers in the field of study, certification of teachers in the field of study every five years, employment statistics, analysis of student assessments and the intensity of classes.

(2) Expert judgement/indicator analysis

Based on the information provided during the site visit virtual meetings and in the Self-evaluation Report, it can be stated that the college is taking sufficient steps to provide quality education and improve the civil engineering study field programmes. Annual revisions of the study programmes are undertaken to allow new innovations and technologies to be incorporated. Surveys are used for students and employers to allow changes to the study processes to be made for the civil engineering study field programmes.

7.2 Evaluation of the effectiveness of the involvement of stakeholders (students and other stakeholders) in internal quality assurance

(1) Factual situation

Students, lecturers, graduates and employers are involved in the process of assessment and improvement of programmes in the study field of civil engineering. The stakeholders' contribution to the improvement of the programmes is manifested in several ways including lecturers are required to improve their experience in companies, educational trips to major companies are organised to get them acquainted with the latest technologies, company representatives give lectures to students and accept students for practice elements of the programmes.

Also, mentoring days in companies for the development of practical competencies of future specialists were organised (for example on 12-16 November 2020, *YIT Lietuva Mentoring Day* was held remotely).

Gathering information from stakeholders is performed through surveys, interviews and roundtable discussions. The summarized results of the analysis of the feedback data are provided to the stakeholders no later than three months after they are obtained.

(2) Expert judgement/indicator analysis

The involvement of stakeholders in internal quality assurance is considered satisfactory. Different types of surveys are conducted (end of the semester, end of practice) as well as implementing other types of information gathering (through interviews, roundtable discussions and other means). Results of the analysis of the survey data are provided to the stakeholders.

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

(1) Factual situation

All the information regarding study programmes, admission criteria, expected learning outcomes of the civil engineering study field programmes, qualifications awarded, assessment procedures and information on the employment opportunities of graduates as well as the progress of improvement and the assessment results thereof are made public to all stakeholders on the college website. In addition, this information is used to improve study programmes in discussions between the college and stakeholders.

Each year, the Faculty organizes *Open Doors Days* and a *Career Day - Žalia gatvė tavo karjerai*, and organises a student conference *Aplinkos apsauga ir inžinerija* to commemorate the Earth Day. The VTDK SSO unified network information system was developed to allow students submit all the information about the programmes.

(2) Expert judgement/indicator analysis

The collection, use and publication of information relating to the civil engineering study field programmes is satisfactory. The data is published on the college website which can be conveniently reached by all stakeholders. The analysis of data is also conducted to plan for programme improvement. The interaction with stakeholders is considered good as they actively participate in the discussions with the study programme committees and the faculty.

7.4 Evaluation of the opinion of the field students (collected in the ways and by the means chosen by the SKVC or the HEI) about the quality of the studies at the HEI

(1) Factual situation

Surveys are organized twice a year to collect students' opinions on the programme and the study process. In addition, the surveys with social partners are organized to determine the market needs and the interaction with the college. The analysis of the study quality dimension Quality of Provided Services revealed that students are satisfied with the quality of the provided services including material resources (laboratory and auditoriums' equipment, computers and software), methodological resources and student support (opportunity to engage in sports activities, participate in cultural life, get acquainted with future career opportunities, provision of accommodation in dormitories). The evaluation of subjects is objective and appropriate. Students are informed in advance of what tasks they will have to perform and are introduced to the main evaluation criteria.

(2) Expert judgement/indicator analysis

Based on the information obtained during the site visit virtual meetings and provided by the SER, it can be defined that surveys influence the decisions taken on the quality of the civil engineering study field programmes.

The majority of students have given positive feedback regarding their programmes of study, the lecturers delivering the programme, the study methods used, and the methods of knowledge assessment. Also, different types of surveys are implemented (end of the semester, end of practice, etc.). This variety helps to analyze different aspects of the students' experience in the college and assists with their improvement.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. The internal quality assurance processes that are implemented on different levels.
2. Results of the analysis of the survey data are provided to the stakeholders.
3. The implementing of a single sign-on system VTDK SSO.

(2) Weaknesses:

1. It is recommended to promote the civil engineering study field programmes with the assistance of the social partners.
2. Further cooperation is needed with students and graduates on the improvement of the study quality.

IV. EXAMPLES OF EXCELLENCE

Not Applicable.

V. RECOMMENDATIONS*

Evaluation Area	Recommendations for the Evaluation Area (study cycle)
Intended and achieved learning outcomes and curriculum	<ul style="list-style-type: none"> • Reflect how the programmes align with the European engineering quality label EUR-ACE. International mobility of graduates may be hindered due to the lack of involvement with engineering international professional organisations. • Link the assessment methods to a common model across the programmes in the civil engineering study field. • Link the choice of teaching methods to the respective intended learning outcomes. • Increase the emphasis on construction safety in the programmes. • Consider the optional subject choices available to students and their role in contributing to the achievement of appropriate learning outcomes of graduates in the civil engineering specialisms. • Establish a permanent commission with stakeholders to observe the need for programme updates.
Links between science (art) and studies	<ul style="list-style-type: none"> • Additional support and further encouragement should be in place for staff and students to participate in international level conferences.
Student admission and support	<ul style="list-style-type: none"> • The evaluation panel recommends that the academic mobility of students be further encouraged with an emphasis on the benefits of mobility promoted to students. Additional English language support may be necessary. • Engagement with the social partners could be improved to promote civil engineering and construction careers to second level students and hence the civil engineering study field programmes.
Teaching and learning, student performance and graduate employment	<ul style="list-style-type: none"> • There is a need for higher level involvement of graduates and employers in the process of creation of the College's study programmes. Additionally, new relevant ways of engaging should be implemented. • Additional measures for supporting the socially vulnerable groups and students with special needs should be considered.

Teaching staff	<ul style="list-style-type: none"> • Teaching staff should be encouraged to be members of international professional associations. • The teachers should be encouraged and supported to attend conferences and publish scientific papers in International journals outside of Lithuania.
Learning facilities and resources	<ul style="list-style-type: none"> • Given the needs of society for access to study programmes, it is recommended to pay more attention to creating appropriate conditions and purchasing special equipment tailored for students with special needs.
Study quality management and public information	<ul style="list-style-type: none"> ○ • It is recommended to promote the civil engineering study field programmes with the assistance of the social partners. • Further cooperation is needed with students and graduates on the improvement of the study quality.

*If the study field is going to be given negative evaluation (non-accreditation) instead of RECOMMENDATIONS main **arguments for negative evaluation** (non-accreditation) must be provided together with a **list of “must do” actions** in order to assure that students admitted before study field’s non-accreditation will gain knowledge and skills at least on minimum level.

VI. SUMMARY

Main positive and negative quality aspects of each evaluation area of the study field of Civil Engineering at *Vilniaus technologijų ir dizaino kolegija*:

Intended and Achieved Learning Outcomes and Curriculum

The main positive aspects of the three civil engineering study field programmes are that they have a good balance between core and elective subjects which produces graduates with competencies and skills relevant to local, regional and national needs. The upgrading of programme content in the areas of sustainability and digitalisation is exemplary and there is good cooperation between the college and the social partners for the final theses. The main weaknesses include the lack of involvement with European engineering quality educational or professional models/labels and that the construction safety competencies are not sufficiently represented in the programmes outcomes.

Links between Science (Art) and Studies

The main positive aspects are that teachers publish scientific articles and together with students cooperate in undertaking applied research and prepare papers and publications. This enables the newest themes in the civil engineering study field to be included in the teaching content of the three programme's subjects. The main weaknesses are that teachers and students need to have greater participation in international conferences and publications outside of Lithuania.

Student Admission and Support

The main positive aspects are that there are clearly defined criteria and procedures to admit students to the programme as well as procedures for recognising formal and non-formal learning. The academic, financial, social, psychological, personal and other supports are available and are communicated to students. The main weaknesses are that there is a need to further encourage and support the mobility of students and teachers and that marketing of the programmes to secondary level students could be enhanced with additional employer support.

Teaching and Learning, Student Performance and Graduate Employment

The main positive aspects are that there is an established teaching and learning process that takes into account the individual student's needs, the teaching and learning process is adequately organised and delivered and that there is a well organised monitoring system of the student's study progress and feedback is provided to students. The main weakness is that there is a need for a higher level of graduate and employer involvement in the process of improving the college's study programmes.

Teaching Staff

The main positive aspects are that the teachers, together with the Head of Department, plan the development of their competencies each year, publish scientific papers and participate in the Erasmus+ mobility programme. The main weaknesses are that the teachers should be further encouraged to attend international conferences, publish outside of Lithuania and be involved in international engineering educational and professional associations.

Learning Facilities and Resources

The main positive aspect of the programme of study is that appropriate study conditions have been created for the students of the three programmes including renewed laboratories, computerised workplaces and sufficient hardware and software appropriate to the study disciplines. Facilities are made available by the social partners during internships and for the practical placement elements of both programmes. Teaching materials in the library are appropriate, sufficient and available in various forms. The main weakness is that the college should further enhance its facilities to support students with special needs.

Study Quality Management and Public Information

The main positive aspects are that feedback is provided to students, alumni and employers regarding their input to improving the study process and the implementation of the new survey system *VTDK SSO*. There are no serious weaknesses, although cooperation between the college and students/graduates on programme improvements could be further improved.

Expert panel signatures:

Dr. Maria Kyne, (panel chairperson), academic