



CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

EVALUATION REPORT
STUDY FIELD of CIVIL ENGINEERING
at KLAIPĖDOS VALSTYBINĖ KOLEGIJA

Expert panel:

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3. **Associate Prof. Dr. Ernesta Liniauskienė**, *member of academic community;*
4. **Dr. Mindaugas Gikys**, *representative of social partners;*
5. **Ms. Diana Malkova**, *students' representative.*

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Report language – English

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Study Field Data*

Title of the study programme	Construction Engineering
State code	6531EX012
Type of studies	College studies
Cycle of studies	First cycle
Mode of study and duration (in years)	Full-time (3 years), part-time (4 years)
Credit volume	180
Qualification degree and (or) professional qualification	Professional Bachelor of Engineering Sciences
Language of instruction	Lithuanian
Minimum education required	Secondary education
Registration date of the study programme	29-05-2003

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

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I. INTRODUCTION

1.1. BACKGROUND OF THE EVALUATION PROCESS

The evaluation of study fields is based on the Methodology of External Evaluation of Study Fields approved by the Director of 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 the 9th December, 2021.

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Professor Dr. Alfredo Soeiro, *professor at Porto University (Portugal)*;

Associate Prof. Dr. Ernesta Liniauskienė, *Assoc. Prof. at Kaunas Forestry and Engineering University of Applied Sciences (Lithuania)*

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 HEI 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 Moodle Virtual Learning Environment

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

Klaipėdos valstybinė kolegija (hereafter – college, KVK) is a state higher education institution of the Republic of Lithuania. The KVK conducts college studies based on professional practice and applied research, experimental development, provides higher college education and creates conditions for lifelong learning. The college management and inter-departmental relations are regulated by the Lithuanian Legal Acts.

The college has three faculties (Business, Technology and Health Sciences) and ten departments that administer the implementation of 25 study programmes in 21 fields of study. The Faculty of Technology has four departments of Environmental and Civil Engineering, Engineering and Informatics, Transport Engineering and Food Technology and Nutrition. The Departments implement ten study programmes. The uniqueness of the Faculty of Technology is its close cooperation with business enterprises and a great deal of attention is paid to the practical preparation of students.

The civil engineering study field programme is one of the most popular among those who choose to study in the college. The Construction Engineering study programme (hereafter – Programme) has been taught at the college since 2003. The last external assessment of the programme was carried out on 26 October 2016 by the expert group of the Study Quality Assessment Centre. The Construction Engineering programme is accredited until 30 June 2021.

II. GENERAL ASSESSMENT

Civil Engineering study field and first cycle at Klaipėdos valstybinė kolegija 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	4
5.	Teaching staff	4
6.	Learning facilities and resources	4
7.	Study quality management and public information	4
	Total:	26

*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 civil engineering study field programme is denominated as Construction Engineering (hereafter – Programme), Department of Environmental and Civil Engineering of the college as stated in the Self Evaluation report (hereafter - SER). The goals of the study programme, according to the SER, comply with the requirements from the legal frameworks, with construction stakeholders, with digitalisation of construction and with priorities of smart specialisations of the labour market. The Klaipeda Economic Development Strategy 2030 and the Lithuanian Progress Strategy 2030 have been considered to formulate the goal and results of the Programme. For instance, the lack of qualified specialists has been mentioned in the public space for some time as one of the most striking trends in the country's labour market according to the publication *Engineering industry specialists in Lithuania: how to properly train for a changing job faster than ever*, Invest in Lithuania, 2019.

The learning outcomes utility of the Programme have also been validated by an institutional survey of professionals and of employers. The graduates from the Programme assume jobs in a wide range of functions reflecting the comprehensive nature of their competencies. These competencies are grouped in six dimensions as shown in Table 1.2 of the SER showing the distribution of programme outcomes among these groups. A survey of the opinion of employers on the readiness of the college graduates for the labour market (2018), showed that the opinions of employers operating in Western Lithuania, on the readiness of graduates for the labour market in 2018, that 91.8 per cent of employers positively assess the compliance of the competencies of the Programme specialists with the needs of the labour market, according to the SER.

(2) Expert judgement/indicator analysis

According to the SER and related documentation (examples of course units, explanatory video and study plans) the Programme outcomes have incorporated recent tendencies and innovations in terms of construction engineering requirements for professionals. The list of competencies is in accordance with standards of practice accepted for construction engineering in many similar programmes of the civil engineering study field nationally and internationally. One example is that, according to the SER, during the preparation of the graduate papers requests from companies are received so the topics to be chosen by future graduates will be used in the activities of the companies as shown in Annex 2.

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 and with the assistance of Table 1.1, the programme presents a list of competencies that is intended to prepare the graduates to fulfil the aims and strategy of the college as stated in the respective *Strategic Action Plan*. There is no concrete evaluation of the stated conformity in this section of the SER. The SER describes the Programme and it is clear that its management and staff are conscious of the college strategy and mission and have declared intentions concerning the programme that are mutually aligned.

(2) Expert judgement/indicator analysis

The analysis of the SER and related documents do not show a match, based on the evidence provided, between the programme intended outcomes and the mission, objectives of activities and strategy of the college besides the statement affirming that compliance. According to the SER and with the site visit virtual meetings of academic staff, of students and the employers the statements reveal coherence between the competencies acquired and the college mission and goals like the high quality of higher education studies, experimental development and the creation of conditions for lifelong learning.

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

(1) Factual situation

The Programme has duration of six semesters for full-time students and eight semesters for part time students. The number of disciplines varies in each semester and has different weekly workloads. The total number of credits is 180 from the ECTS framework. Annex 1 and Table 1.1 of the SER describes the credits, the number of course units and percentages of the Programme compared with the requirements from legislation. According to Table 1.1 there is formal compliance with legal requirements for this type of study programme. Table 1.2 of the SER presents the Programme study outcomes grouped in six dimensions. These programme outcomes are declared, without concrete evidence, to be in compliance with the descriptors of level 6 of the Lithuanian Qualifications Framework (LQF) and with the framework of the European Higher Education (Dublin descriptors). Compliance could have been shown with a table or list comparing each programme outcome with one or more descriptors of the LQF or of the Dublin descriptors and presenting the reason(s) for compliance. What it is presented in the SER are just phrases without written support.

There are periodic revisions of the Programme outcomes in accordance with legal, professional and societal demands to ensure their quality. An example is presented of Construction Work Technology that exemplifies the accomplishment of complex and

complicated study outcomes distributed by two course units. Examples are given for course units with general knowledge and with professional competencies. There are surveys of students and feedback to the college management system.

(2) Expert judgement/indicator analysis

A comparison table between the Programme outcomes (competencies) and the current competence frameworks at national and European level could help the verification of compliance. In fact, the list of the Programme outcomes is not organised in terms of knowledge, skills and attitudes like the prevalent qualification frameworks like Lithuanian or European Qualifications Frameworks. Although these programme outcomes are mentioned in the SER as meeting requirements of the study field descriptor these are not presented in the format of the Lithuanian or the European Qualifications frameworks. This discrepancy may hinder a clear verification of compliance. Although it is not a legal requirement, it was noted during the site visit virtual meetings that the programme outcomes did not take into account any European quality label for engineering education or professional competencies.

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

According to the SER, Table 1.3 presents the correspondence between the 14 programme learning outcomes and the course units. It was stated during the site visit virtual meetings and in the SER that the design of course units was made following consecutive steps leading to teaching methods and to assessment techniques. According to the SER the choices made for each course unit do not follow a specific pedagogic or educational method or model. These options are made based on each lecturer's competence, experience and wisdom. There is a Study Programme Committee (hereafter – SPC) that supervises the quality of each course unit and respective learning outcomes, teaching/learning and assessment methods. Description of eleven study subjects in detail with an abridging scope and related necessary information is provided. These descriptions illustrate the institutional approach detailing the planning of the course units. There is use of laboratories, of new books and of software to develop student's competencies in construction.

(2) Expert judgement/indicator analysis

The SER and site visit virtual meetings clarify that the structure and procedures of each course unit were not established in terms of any common educational or pedagogical model/theory like the constructive alignment model between learning outcomes and assessment methods. Similar conclusions were made in terms of the definition of learning outcomes and teaching and respective teaching/learning methods.

It should be underlined that the eleven examples of description of course units reflect a clear concern and attitude towards pedagogical and educational quality.

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

Section 1.5 of the SER presents the general principles that were used to guarantee a consistent development of student competencies. There is a constructivist and linear approach to the sequence of the course units. The development of the justification of the choices made about the design of the programme's subjects/modules and to align these with the expected student competencies is not provided. It was noted in the site visit virtual meetings that there is concern and involvement from attending teachers in terms of providing a consistent development of student's competencies and the quality of the course units.

(2) Expert judgement/indicator analysis

There is training for new teachers on how to address the design of the course units. It was also mentioned that, for assessing the quality of education, that interviews with professionals are used to calibrate the effectiveness of course units to provide the expected competencies in terms of knowledge, skills and attitudes. Programme orientation follows a constructivist approach of building blocks and of combining theory and practice as expected by the programme outcomes.

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

(1) Factual situation

According to the SER and study plans, it is noted that students may choose some courses in two semesters in the middle of the study cycle with a total of six credits (two courses of three credits each). These optional courses are mandatory. There is also an alternative of a choice between BIM subjects and repair technologies. Students can opt for final practical training in the final semester. Students can also choose to participate in the Erasmus+ placement in a foreign higher education institution for up to 30 ECTS credits.

(2) Expert judgement/indicator analysis

Taking into account that students have to choose some courses, the topic of the final thesis and the final practical training, it is adequate to consider that each student can adjust the professionalization part of their studies to respective inclinations of deepening qualifications in a subject of interest. The number of credits for optional courses is six, which are obligatory in the study cycle, plus the option of a three credit course unit between two subjects and may also provide insights for students on subjects external to the programme.

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

(1) Factual situation

According to SER and to the list of final theses, the theses topics may be related to the final practical training allowing for in-depth study of a professional topic that may lead to a specialisation. Titles of themes of theses comprise mostly new constructions, repair, renovation and/or rehabilitation of existing constructions. The college has an established procedure to choose the topics of the final projects *Procedure for Preparation, Defence and Storage of KVK Graduates Paper*. External consultants are involved to help the evolution of each final thesis with benefits for the utility of the work done and for the connection with professional stakeholders. The procedure intends to guarantee that the intended learning outcomes of each thesis are met in compliance with the programme outcomes. The Table on page 13 of the SER presents the self-assessment criteria used to verify if final theses comply with the requirements in terms of study objectives, outcomes and content.

(2) Expert judgement/indicator analysis

According to the SER and the list of final theses, the titles reflect a professional trend leading towards application of techniques and of knowledge acquired during the study cycle. Subjects are related with new and old constructions reflecting the professional profile of the civil engineering study field programme in the college. Topics are proposed in cooperation with companies and with professional bodies leading to useful publications and to contributions to related stakeholders. The list of topics available also indicates a close cooperation between academic staff and the professional world.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. Cooperation with local stakeholders in the construction engineering area.
2. Surveys of students and feedback to the college management system.
3. Updating of educational and of professional software.
4. Final thesis topics are chosen by each student and linked to their final practical training.
5. Cooperation with construction companies regarding new competencies for programme outcomes and topics of theses.
6. The motivation of teachers to treat students individually and to provide quality education was evident in interventions during the virtual site visit meetings.
7. The clear definition of intended competencies of the final papers for self-assessment.
8. Use of laboratories, new books and software to develop student's competencies in construction.

(2) Weaknesses:

1. Lack of involvement with European quality engineering educational and professional models and/or labels.
2. The choice of assessment methods in terms of module learning outcomes are not linked with any common educational or pedagogical model.
3. The choice of teaching methods is not justified in relation to the respective intended learning outcomes in terms of any common educational and pedagogical model.
4. Construction safety and sustainability competences are not sufficiently represented in the study programmes outcomes.
5. Although the list of the Programme learning outcomes are stated in the SER as complying with the Study Field Descriptors, this list is not presented in accordance with the structure of the Lithuanian and European Qualification Framework distributed by classes of Knowledge, Skills and Attitudes. This may be a difficulty for European recognition or for involvement with engineering international professional organizations.
6. In the SER it is not clear if the Construction Engineering Study Committee is permanent and integrated in the college organisation or if it is an ad hoc committee. If it is the latter, and given the interest of the college in serving the region and society, this committee could be more effective if it has a permanent and definitive role in the decision making process of the Construction Engineering programme outcomes.

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 develops applied research and experimental development in the fields of technology, social, medical, health and natural sciences necessary for the region of Western Lithuania and carries out educational activities that enable the integration of scientific knowledge into study programmes. The college monitors research activities especially applied research and experimental development, dissemination of publications and presentation of scientific reports. The civil engineering study field teachers specialise in the research areas of Sustainable Environment, Information Technology and Inclusive and Creative Society.

During the evaluation period the Programme teachers have prepared and presented 14 reports based on ongoing applied research and project work (for example, the most relevant reports are *Influence of the Baltic Sea Water on Klaipeda Seaport Hydrotechnical Structures*

and the *Geotechnical Means of Sea Breakwaters' Monitoring System*. Eighty-six percent of reports were presented at international scientific conferences in Lithuania and abroad.

There are some research reports published in the *WoS Proceedings* publications of the Institute of Scientific Information databases. The main scientific articles are *Influence of the Baltic Sea Water on Klaipeda Seaport Hydrotechnical Structures, Geodetic and Geotechnical Means of Sea Breakwaters' Monitoring System* and others.

During the evaluation period the Programme teachers published 28 scientific articles. Three scientific articles were published in the publications of the Institute of Scientific Information database *Clarivate Analytics Web of Science*, 5 were published in the publications of the database of the Institute of Scientific Information *WoS Proceedings* and 17 were published in publications referenced in international databases.

During the evaluation period the civil engineering study field teachers provided consultations to clients in Lithuania and abroad. The main themes of their consultations are in the areas of safety and health regulations, modernisation of buildings and financial planning for the installation of building engineering systems and integration of new technologies in real estate.

During the evaluation period the Programme teachers completed 12 research projects. Five applied research projects are carried out with academic partners, three of which are carried out with researchers from foreign universities.

(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 teacher's activities in the International projects, local and international conferences and seminars;
- participation in the research activities in the themes of civil engineering science.

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 civil engineering study field teachers apply the research results directly to the Programme and help to improve the content of study course units. The programme teachers analyse the obtained research results, prepare publications, prepare reports for scientific conferences and prepare the themes for the final thesis. The content of the study programme is constantly updated taking into account the latest scientific and technological achievements. The teachers update the content of course units paying great attention to sustainable construction, energy performance modelling and building information modelling. During the

evaluation period Building Information Modelling, Geodesy and Structural Modelling in BIM environment course units were updated.

During the evaluation period eight outsourced applied research and experimental development studies were carried out. Outsourced research on applied scientific and experimental development was performed at the request of social partners. Students were also involved in these research activities. The aim is to ensure that tasks respond to the real problems in practice and to help reduce the gap between theoretical and practical perceptions. One of example is that the construction engineering students, together with their lecturers, prepared an inter-directional study.

(2) Expert judgement/indicator analysis

The college has links between the content of programmes of study 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 involved in the teaching materials;
- The construction engineering students, together with the teachers, prepare research documentation.

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 Programme students are involved in research activities as follows:

- by performing practical/laboratory work;
- during professional practice or in industrial enterprises;
- preparing term and graduate papers.

The students publish the scientific articles in International conferences. The most relevant articles which were published included the *Economic analysis of multi-storey houses renovation in Lithuania*, and the *Analysis of A + energy efficiency class requirements for sports buildings*. Both articles were published in the publications of the International Student Conference *Students on their Way to Science*.

The college organises a seminar for students of the field of civil engineering. The students are introduced to the structure and services of the library, of the virtual libraries and of the capabilities of e-catalogue. Students have the opportunity to initiate research themselves (by participating in a competition of scientific ideas together with lecturers). The programme students can participate in various national and international competitions such as *Young Builder*, *Smart City* and others.

(2) Expert judgement/indicator analysis

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

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

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, together with students, prepare papers and publications.
5. The teachers and students are cooperating in research projects.

(2) Weaknesses:

1. There are low numbers of teachers participating at the International level.
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

The general admission of students is carried out centrally through the Lithuanian Higher Education Association's general admission information system (LAMA BPO IS). Admission is carried out in accordance with the legal acts of the Ministry of Education, Science and Sport of the Republic of Lithuania. The rules for admitting students to the college are approved every year by the order of its Director and published on the KVK website.

Applicants with at least a secondary education are admitted to the Construction Engineering study programme and are ranked according to a competitive score. The competitive score is calculated from four subjects of the state examination (mathematics, physics, any other taught subject and Lithuanian language and literature). All applicants are subject to the minimum competitive score set by the Ministry of Education, Science and Sport which from 2019 is a 4.3 score. Additional scores are awarded to applicants to state-funded study places and non-state funded study places according to the main criteria provided by LAMA BPO. Students who have studied at the college or other higher education institutions may be admitted to the first or higher years of the Construction Engineering study programme in accordance with the procedures established in *KVK Study Regulations*. The rules for admitting students are published on the college's website and are presented at various events, exhibitions and meetings with students or other stakeholders.

Civil engineering study field programmes are attractive to prospective students because the number of applicants is increasing, especially to study places not financed by the state. Applicants who have signed study agreements to state-funded and non-state-funded study places has varied over the last three years with 42 in 2018, 36 in 2019 and 74 in 2020 with the majority in non-state funded places in 2020. There was a substantial increase in 2020. During the analysed period, the average competitive scores varied by year and was 3.03 in 2018, 5.38 in 2019 and 4.04 in 2020.

(2) Expert judgement/indicator analysis

Admission to first year of the Construction Engineering programme 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 programme remains strong and higher than many higher education institutions in Lithuania. The evaluation panel notes that the number of students admitted in 2020 almost doubled the number admitted in the other years with the majority in non-state funded places.

The employers confirmed that there is a serious shortage of graduates with the Construction Engineering specialist knowledge and skills. The evaluation panel is of the opinion that promotion of this programme to prospective students could be enhanced by promoting construction careers to second level student 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 Description of the Procedure for Crediting the Results of KVK provides for the possibility for persons who have studied at another higher education institution or foreign higher education institution to credit study outcomes after coordination of the study content. In this way, credits of programme learning outcomes are also performed for students of the

Construction Engineering study programme who have gone abroad for studies or internship under the Erasmus + exchange programme.

The study results of persons who have studied, or are currently studying, at the same or another college, including foreign universities, shall be recognised in accordance with the college *Recognition Procedure*, following an assessment of the formal study result requirements and the compliance thereof with the course learning outcome-related requirements of the desired study programme.

In accordance with the Procedure of Assessment and Recognition of Non-formal and Informal Education and Self-study Achievements in the college, persons with knowledge and skills acquired through work experience, non-formal learning, self-study, voluntary learning, etc., may formalise non-formal learning achievements. During the analysed period, two persons took advantage of this opportunity.

The decision on crediting of study outcomes is formalised by the *Card of Crediting Study Outcomes*. As of 01 October 2020, of the 162 students on the Construction Engineering study programme in the previous three years, thirty-five students (21.6%) were provided with the card of crediting study outcomes. Requests to credit previously acquired study outcomes are received every year.

Pursuant to the college crediting procedure, the studied course module shall be recognised if the scope thereof constitutes no less than two-thirds of the scope of the programme module specified in the study programme pursuant to which the person wishes to study or is currently studying, and if it is compliant with the core objectives and the main parts of the programme module contents. Optional course modules were credited without restriction. Recognition may be awarded to no more than 75 per cent of the scope of the desired study programme.

(2) Expert judgement/indicator analysis

The Study Programme Committee evaluates the recognition of formal and non-formal education and experience of prospective students according to the college's policies and procedures. From the number of credits recognised for formal learning during the assessment period, and discussions with staff, the evaluation panel confirmed that the college's 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

The International Relations Department organises student exchanges under bilateral agreements (Erasmus +) and promotes participation in international projects. Twice a year, the department staff organises meetings with students at the faculty. During the meetings, students are introduced to mobility opportunities, requirements to go on exchange programmes and questions are answered. Information is sent to all students by email and

published on the bulletin board. Opportunities for students to participate in mobility programmes are provided for in the *Coordination Procedure of the KVK Erasmus + Mobility Programme*.

The Construction Engineering study programme students, selected by the International Relations Department, can choose foreign institutions from Erasmus + partner institutions (13 countries in total) with which the college has signed cooperation agreements (35 in total). Students are advised by the Head of the Department of Environmental and Civil Engineering on the suitability of internships and the choice of programme modules. Information is also provided on social networks and at meetings with students.

Participants in the mobility programme are paid a grant for travel and subsistence expenses. When students return to the college their learning is credited by preparing a crediting card for study outcomes. Erasmus + experience is disseminated to students where experience sharing is organised for returning students. The college website in English is supplemented with useful information for students coming from abroad. There were no foreign students coming for the Construction Engineering study programme during the analysed period.

Students of the Construction Engineering programme usually choose the institutions of the main (strategic) academic foreign partners for practice. However, the number of outgoing students remains low with between 3% and 8% of students availing of this opportunity during the review period. A student survey was conducted to find out the reasons for students' reluctance to participate in exchange programmes. The main reasons given by the students are the Covid-19 pandemic, job loss if a student works while studying, academic differences that may arise after returning and reluctance to change the study environment.

(2) Expert judgement/indicator analysis

Opportunities to participate in academic mobility for a semester or for a practical placement element of the programme is available to students where the credits and work experience achieved in the foreign higher education institution is recognised when students return to the college. KVK advertises the Erasmus+ exchange programme and supports students with a dedicated International Relations Department.

The evaluation panel notes that the number of Lithuanian students opting to avail of Erasmus+ exchanges 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 on Erasmus + exchange to the programme as it is offered in the Lithuanian language. The evaluation panel recommends that there should be further encouragement and support for students to incentivise them to participate in the Erasmus+ exchange programme.

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

The college provides academic, financial and other supports for students and this information is available on the college's website, in the section *Student Support*.

Academic support is the counselling of students on study and study-related issues. Academic and career counselling for Construction Engineering study programme students is provided at the Dean's Office, the Department and the Centre for Studies and Careers. Lecturers consult students according to the prepared consultation schedule. The schedule for student counselling is published for the entire semester of studies. Lecturers consult students individually, by email, and remotely.

Students experiencing difficulties can seek the *help of a psychologist*. Psychologist consultations are provided once a week, by prior registration, by phone or email.

Students can receive several types of scholarships and other financial support provided by both, the college and other public institutions, organisations or individuals. Depending on the outcomes of studies, applied science and social activities, the student can receive incentive and one-time scholarships. The incentive scholarship, which is awarded for the entire semester of study, depends on the student's progress. One-time scholarships are awarded for active participation in applied scientific, sports, social and cultural activities or promotion of the college's name. Social scholarships for students are awarded and administered by the Lithuanian State Science and Studies Foundation who provide loans to students to pay tuition fees, living expenses and part-time studies in accordance with international treaties and agreements. Students with financial difficulties may pay the tuition fee in instalments.

Targeted support can be provided to disabled people studying in the college. State financial support for students with disabilities is coordinated by the Department of Disability Affairs under the Ministry of Social Security and Labour. Students studying at their own expense and having successfully passed the session may apply for a vacant state-funded position. Students with the best results can be reimbursed from the state budget.

The number of Construction Engineering study programme students who received incentivised scholarships is 105 in 2018, 99 in 2019 and 32 in 2020. Student numbers who received other supports was 66 in 2018, 67 in 2019 and 32 in 2020.

The college Students Union also takes care of students' affairs and provides them with various information and assistance. The Students Union also organises cultural and entertainment events. Students have the opportunity to engage in sporting activities.

(2) Expert judgement/indicator analysis

The number of students who receive scholarships and other financial support from the Lithuanian state and the college is high. Meetings with students confirmed that the range of financial and academic supports for students of the programme is adequate. The evaluation panel is impressed with the range of academic and financial supports available for students.

3.3.5 Evaluation of the sufficiency of study information and student counselling

(1) Factual situation

KVK implements an induction programme for first-year students to create a motivating study environment and to help first-year students to integrate into higher education society. The induction programme sets out the specific activities of the faculty administration, department staff, curators and faculty student representation. Introductory lectures for students in the first week of their studies outlines the study process, students' rights and responsibilities, study documents, introduction to the study programme, traditions and requirements. Students are supported by group tutors, who are the lecturers of the department who help their supervised group to solve problems related to their studies throughout the study period. At the end of the first semester, a survey of first-year students is conducted to determine the effectiveness of the induction programme. The results of the survey are discussed with the academic community, student union, and group tutors.

Student representatives are included in the Study Programme Committee, college Academic Council and college Council. This ensures the dissemination of information about changes related to study programmes. Every year, *Career Days* during which students are introduced to career opportunities, are organised.

(2) Expert judgement/indicator analysis

Students are provided with appropriate programme information by the college, faculty, department and staff commencing with induction in the 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 teachers and students provided confirmation to the evaluation panel that the study information is sufficient.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. Academic, financial, social, personal and other supports for students are available, implemented and communicated to students.
2. There is a clear procedure for recognising prior learning outcomes and it is implemented for the Construction Engineering programme.
3. The criteria and procedures to admit students to the Construction Engineering programme are clearly defined and implemented.

4. The numbers of students admitted to the Programme has almost doubled in 2020 with the number admitted to non-funded places increasing.
5. The information given to students about their studies is timely, systematic and relevant and the advice helps them achieve learning outcomes.

(2) Weaknesses:

1. The evaluation panel recommends that there should be further encouragement and support for students to incentivise them to participate in the Erasmus+ exchange programme.
2. Engagement with the social partners could be extended to promote the Construction Engineering careers to second level students and hence the Construction Engineering programme.

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

The Civil engineering study field programme at the college is conducted in full-time and part-time modes. The scope of the programme is 180 credits. The full-time semester programme comprises 30 credits and the part-time programme varies between 21 and 24 credits. Students' contact work lasts no more than 8 academic hours per day (the schedule of lectures is published on the college's website).

During the site visit virtual meetings, it was mentioned that there is a distance and blended teaching/learning approach used to deliver the Programme. During the COVID-19 pandemic, the Moodle virtual environment was used extensively in the study process. The hands-on activities were conducted in small groups of students while maintaining the safety requirements of the COVID-19 pandemic.

The teaching methods applied in the Programme include search analysis and systematisation of technical literature, theoretical modelling, problem-based learning, study of learning materials in a virtual learning environment Moodle, seminars, public presentation and defense of papers, situation analysis, comparative analysis, preparation of scientific articles, data synthesis, individual and team work and design, practical and laboratory work, experiments, reading and creating technical drawings, verification calculation, mastering and consolidation of specialised programme tools, modelling, design, planning and organisation, practice-based learning and virtual learning.

The college has a cumulative assessment system that encourages students to actively study throughout the semester.

In the Programme, an average of 54 % is allocated for independent work from the entire scope of the study subject. The method of organizing students' independent work and the methodology of assessment are provided by the subject teacher when preparing the description of the study subject. Students are introduced to the planned self-study tasks by the teacher at the commencement of the subject and this information is also placed in the Moodle virtual learning environment.

Students use library resources, teaching materials placed in the Moodle environment, methodological tools as well as taking additional consultations.

When organizing students' independent work, the subject teacher follows the "*Procedure for Assessment of KSC Study Achievements*" (2017).

Feedback is provided at the end of each semester through electronic student surveys. The teacher, based on the results of the feedback, constantly improves the tasks of independent work and their scope. When assessing student achievements of the civil engineering study field programme, the "*Procedure for the Assessment of KSC Study Achievements*" (2017) and the "*Regulations for the Study of the KSC*" (2017) are followed.

Graduates of the Programme have the opportunity to continue their studies at Lithuanian and other European universities and to pursue a master's degree.

(2) Expert judgment / indicator analysis

The teaching and learning process in the college is organized appropriately, adapting to the current complex, COVID-19 pandemic situation. According to the opinion of the administration, teachers and students expressed during the virtual site visit meetings, distance and blended teaching/ learning will continue to be used in the college, as it is a very convenient way to combine work with studies, the opportunity to attend lectures at home and study on a flexible schedule.

The procedures for organizing students' independent work and assessing their achievements are set out and based on clearly formulated objective criteria in the *KSC Study Achievement Assessment Procedure* (2017) and the *KSC Study Regulations* (2017). The cumulative assessment system applied in the college allows for a full and objective assessment of all student achievements.

In the SER and during the site visit virtual meetings, the evaluation panel was not provided with detailed information on the possibility for students to continue their studies in other higher education institutions corresponding to the Civil Engineering study field.

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

(1) Factual situation

Disabled people and people with special needs studying at the college are provided with the opportunity to consult with a lecturer individually, have an individual study plan, have the right to pay for their studies in alternative ways and have access to psychologist consultations. For students with special needs, all required information is available on the college's website. According to the site visit virtual meetings, the college offers an adaptation programme for students with special needs in the first year, provides additional counseling, organises career support and provides the option to participate in various training. There were no students with special needs on the Programme during the analyzed period.

(2) Expert judgment / indicator analysis

The college's management and staff adapt the study process for socially vulnerable groups of students and students with special needs. The college also creates optimal workplaces for students with disabilities, adapts the physical and information environment and has purchased special software and hardware.

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 students' progress is monitored at different levels. At the individual level, teachers are responsible for monitoring, informing, and helping students progress by encouraging students to use self-assessment tools (self-assessment questions and assignments). In addition, at the end of each semester, students' achievements are analyzed at the faculty level in accordance with curricula and programme sections, and the results are presented to the academic community of the faculty. Mid-term reviews are conducted twice a semester and student performance is analyzed. The Head of Department and teachers conduct individual interviews with students regarding the assessment of progress and teachers improve the assessment criteria and teaching methods of their course units. Since the proportion of students who completed their studies in three years gradually decreased, three main groups of reasons for student dropouts were identified as personal (a change of place of work or residence), financial (lack of funds for living or tuition fee) or academic (weak readiness to study, lack of motivation).

After completing the work assignment, the teacher analyses and discusses the results achieved by the group of students (in accordance with the provisions of the General Data Protection Regulations). KVK uses a Learning Management System (EDINA) in which students can view the midterm and final grades for the semester, and the teacher can provide the

student with personalized comments (such as the strengths and weaknesses of a self-study assignment). According to the college *Student Satisfaction Survey* between 2018 and 2020, Construction Engineering students are satisfied with the regular feedback from teachers.

(2) Expert judgement/indicator analysis

The monitoring of students' study progress is considered adequate. The monitoring is carried out on different levels. In the virtual learning environment Moodle, the self-monitoring questions and assignments are placed for students to monitor their academic progress on their own. To determine the reasons for student dropout, the college conducts regular surveys which are considered a good way of improving the study process. In addition, the Learning Management system is used that helps students review the grades and the feedback from the teacher.

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

(1) Factual situation

The college carries out systematic monitoring of graduates' employment and career that are obtained from the State Social Insurance Fund Board under the Ministry of Social Security and Labour, the Employment Service, the Government Strategic Analysis Centre, the Education Management Information System and others. The average employment of Construction Engineering graduates is 68% with 52% working in highly qualified jobs.

Annual roundtable discussion with employers, social partners and alumni is organized to provide feedback to and from all stakeholders to help improve the study process. The graduates' survey is conducted online 6 months and 12 months following graduation. Analysis of the survey indicates that graduates were satisfied with their programme of study.

(2) Expert judgement/indicator analysis

Based on the information provided during the site visit virtual meetings and in the SER, it can be stated that the college is taking sufficient steps to provide the career tracking and monitoring of the graduates' employment. The average employment level is sufficiently high and there is a variety of methods used to determine the level of satisfaction of the study process. The graduates and employer's representatives are encouraged to express their opinion to ensure improvements to the study quality.

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

(1) Factual situation

The college has the Code of Academic Ethics which regulates the ethical norms for the activities and behaviour of members of the academic community.

Each student signs a Student Declaration of Academic Integrity. Any member of the college who encounters violations of the principles of academic integrity, tolerance and non-discrimination may submit a written complaint to the Academic Ethics Commission.

During the evaluation period there were no violations of the principles of academic integrity, tolerance and non-discrimination.

(2) Expert judgement/indicator analysis

The college has the Code of Academic Ethics which ensures academic integrity, tolerance and non-discrimination.

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

The college has a procedure for submitting and examining appeals and complaints relating to the study process. It provides the methodology for lodging an appeal, forming an appeal commission and examining the appeal. During the evaluation period there were no appeals from the Programme students.

(2) Expert judgement/indicator analysis

The students have the right to appeal if they are unsure about the implementation of the assessment procedures and can make a complaint about any aspect of the study process.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. There is a systematic monitoring of students' study progress and feedback to students supported by different college procedures.
2. The teaching and learning process is adequately organised and delivered enabling students to achieve the intended learning outcomes.
3. The college provides good conditions ensuring socially vulnerable groups and students with special needs can complete their studies.

4. The college is taking sufficient steps to provide graduate career tracking and monitoring of the graduates' employment.
5. The implementation of policies to ensure academic integrity, tolerance and non-discrimination is in place.
6. The application procedures for the submission and examination of appeals and complaints regarding the study process within the study field are in place.

(2) Weaknesses:

1. Access to full versions of BIM and REVIT could be available to students as they are limited by the students' versions.

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

The teachers of the college are selected according to the requirements for the teacher's qualifications. The course units of the civil engineering study field are delivered by teachers who have education in civil engineering, electrical engineering, mechanical engineering, environmental engineering, management, law and other relevant areas. All teachers have obtained at least a master's degree in the engineering study field or a higher education corresponding to this degree.

There are 26 teachers delivering the Programme of whom 13 have been working for at least three years and for at least half their working time. There are six teachers who deliver general college subjects and five teachers with less than half of the full-time position. There are enough teachers to deliver the teaching tasks. During the evaluation period 83.33% of the academic staff are teachers and the remaining academics are associate professors. Teacher's experience of pedagogical and practical work varies from 3 to 40 years and the workload of teachers varies from 0.5 to 1.44 full-time. Five teachers have a doctoral degree in technological science. Some of the teachers are invited from Kaunas University of Technology and social partner companies.

The average age of teachers in the civil engineering study field is 49 years. During the evaluation period new teachers joined the college which ensures the application of new scientific and technological achievements in programme course units. More than 50% of the Construction Engineering teachers work with foreign students giving lectures, leading practical classes, supervising term papers, preparing exam assignments and assessing interim assignments. As the number of students coming to the college under the Erasmus + programme increases, it is necessary for teachers to be able to teach in a foreign language.

(2) Expert judgement/indicator analysis

The teaching staff has appropriate qualifications and competences. 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 college is a member of the Erasmus + Higher Education Charter and the mobility of teachers in the civil engineering study field is encouraged as follows:

- all teachers have opportunities to apply for academic mobility;
- everyone who has passed the selection is given the opportunity to leave;
- a grant is awarded to cover travel and subsistence expenses;
- teachers are paid an average salary during academic trips.

The main goal of mobility is to gain experience in the field of international studies, to get acquainted with the culture, economy and social environment of another country, to improve knowledge of a foreign language and to acquire new course unit knowledge and skills.

The main college partners for staff mobility are:

- Varna Free University Chernorizets Hrabar (Bulgaria);
- VIA University College, the School of Technology and Business (Denmark);
- School of Pedagogical & Technological Education (ASPETE) (Greece);
- Polytechnic institute of Guarda (Portugal);
- Fatih University Mustafa Kemal University (Turkey).

The college has 30 cooperation agreements with foreign higher education institutions in the civil engineering study field. The Construction Engineering teachers and students can go to education institutions in France, Greece, Estonia, Spain, Denmark, Belgium, Hungary, Macedonia, Poland, Portugal, Romania, Serbia, Turkey. During the evaluation period, the number of construction engineering teachers who left for teaching or learning purposes ranged from 30 to 61 per cent. In the spring of 2020, mobility declined sharply in the wake of the global pandemic.

In the case of academic exchanges, relations are established, agreements are signed with new foreign higher education institutions and international knowledge, ideas and practices are exchanged.

(2) Expert judgement/indicator analysis

Academic mobility of the teaching staff is improving. The SER 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 a clear system of quality improvement of teachers, based on state and college policies and procedures. An improvement plan for every teacher is prepared on an annual basis. Funding support may be provided from a college grant or from EU Structural funds. The need to improve the qualification of teachers (teaching, learning, research, general competencies) is estimated during the annual interview with their Head of Department and partly based on the data of students' satisfaction with the quality of course unit delivery.

The construction engineering teachers have the opportunity to study for a doctorate, internship in Lithuanian and foreign research and training institutions, to constantly improve their qualifications, maintaining their salaries, granting leave, creating a flexible work schedule and more. The teacher's minimum academic qualification is a Master's degree in the study area or an equivalent Master's degree. The teachers should also be creative in preparing methodological material for independent studies and participate in experimental and applied research activities as well as international projects.

The rotation of teachers in the study programme is low. Three Doctors of Science and ten teachers with Master qualifications deliver the Construction Engineering programme. 69% of the construction engineering teachers have not less than 3 years of practical work experience. Teachers who have and not less than three years of teaching and practical experience in the civil engineering study field supervise practical training of students.

In 2020, the study plan of the Construction Engineering programme was updated to include new optional study units.

(2) Expert judgement/indicator analysis

The programme teachers improve their competencies on an on-going basis. The SER 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 competences 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;
- The teachers develop their practical competences in local region companies.

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.
5. The teachers develop their practical competences in local region companies.
6. The teachers are members of various professional associations.

(2) Weaknesses:

1. The teaching staff has limited involvement with international associations.
2. The teachers are not very active in International conferences outside of Lithuania.
3. Most of the scientific articles are published in 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 of the college indicates that the space allocated for the implementation of the Programme is 10655.5 m², of which 1531.2 m² is intended for the auditoriums, 2803.2 m² for laboratories and practical training premises and 589.0 m² for the library premises. On average, one student has a total space of 12m². There are 28 auditoriums (850 workplaces) including two streaming rooms with a total area of 340.84 m² (with 349 workplaces) and 13 laboratories with a total area of 808.38 m² available for delivering the Programme. Students also have access to other facilities of the college including assembly halls, gyms, sports grounds. 342 computers are used for the Construction Engineering programme (303 units - general purpose computers, 19 units - individual computers at training stands and 20 units - administration computers). 205 computerized workplaces were installed in 17 specialized computer practice rooms.

The Programme provides students with 12 specialised laboratories using modern hardware and software to develop their practical skills (AutoCAD 2020, Tekla Structures 2020, Revit 2020, ProSama 5G, Staad pro Vi8, Staad.pro connect edition, V22, ESTIMATE, Construction project management Wstatyba, Autodesk Robot, Pix4D, Bentley Microstation, ArcGIS Pro, Geomap); has been established a GIS competence centre, many innovative laboratory and computer equipment have been purchased (3D scanner, drone with active (LiDAR scanner) and passive (photo and thermal cameras) scanning systems, computers – workstations, multifunctional, wide-format and 3D printers); the latest generation of software packages (3D Reconstructor, TerraSolid, etc.) were purchased for data processing; equipped one of the largest research laboratories for low-energy smart buildings among Lithuanian colleges, for students to introduce and perform heat flow measurements in buildings and partitions. Online access is available in college dormitories where students can use their computers to search for information and work outside of lectures.

During the site visit virtual meeting, the representatives of the group of students stated that they face problems with the software Tekla Structures, Revit used in the college, because only the basic packages of these programmes are currently used for individual assignments, students are forced to look for additional information.

The SER and the site visit virtual meetings indicated that in order to ensure the quality of studies for students with special needs, the college has access and lifts, adapted sanitary units for the disabled, special software (SuperNova Magnifier 13.03 (increases text on the screen), JAWS 14 for Windows (analyses information and converts text to audio), Win Taker Voice 1.6 (converts information to audio in Lithuanian), keyboards for the visually impaired, alternative computer mice (for students with motor disabilities) and an ergonomic chair.

Internships at the college are organized in accordance with the *Description of the Procedure for Organizing and Evaluating Internships, 2018*. Students of the Civil Engineering study field perform internships in Construction Products (for part-time students), internships in Construction Technologies, internships in Construction Organisation and Final Internship in construction companies. The student finds the internship company and coordinates the possibility of the internship with the company's administration. The student concludes a tripartite practical Training Agreement before the start of the internship. The final Internship is carried out in companies operating in Lithuania and abroad, where modern equipment and facilities are used with modern technologies. Cooperation agreements have been concluded with companies as listed in the SER.

The Self-Evaluation Report states that the college Library is located in the premises of three faculties of the college. The premises of the library of the Faculty of Technology of the Programme have 108 workplaces, of which 68 are computerized. By January 2020, the library consisted of 113,512 documents of which the civil engineering study field programme at the Faculty of Technology had 46,625 documents. Students have the opportunity ask the library to purchase books needed for study or research.

All information about the existing and newly received books in the library is available in the library's electronic catalog as well as in the college's virtual library. The college's virtual library provides access not only to the college's library resources, but also to the Lithuanian Academic Electronic Library's eLABa, subscribed databases, and open access electronic resources.

Between 2018 and 2020, the range of publications in the fields of technology and physical sciences was replenished with 1344 items of documents, of which 350 were in foreign languages. During the site visit virtual meeting with student representatives, they mentioned that the college library lacks newer literature sources (textbooks, books) in the Lithuanian language. Currently used literature sources (textbooks, books) in Lithuanian normally range from 2008 to 2015.

Electronic sources are purchased for the college library with VGTU publishing houses providing 653 titles, Electronic books of KTU publishing house providing 965 titles, Skillsoft IT electronic book collection providing over 10,000 titles, electronic database of full-text sets of legal acts, electronic database of standards in Lithuanian and English as well as students use of the college's e-book platform.

The college subscribes to international databases of full-text scientific articles including Taylor & Francis, Emerald Management eJournals Collection, EBSCO Publishing (eIFL.net database package), as well as the students and lecturers can avail of the international databases subscribed by Klaipėda University (Springer eBooks Collections), ScienceDirect, SAGE IMechE Journal Collection, and others). Students have the opportunity to use open access sources including databases subscribed by the National Library of Lithuania remotely, MRU electronic books, Lithuanian scientific periodicals on the internet, magazines and books, Directory of Open Access Journals, Directory of Open Access Books and others.

EZproxy software is subscribed to provide staff and students with remote access to the content of subscribed electronic resources from both personal and college computers.

Teachers prepare methodological material for the Programme such as lecture notes, instructions for practical classes, laboratory work, independent, coursework and final theses, all of which are stored in a virtual Moodle environment, which is accessible to students at any time from personal computers or college computers.

(2) Expert judgement/indicator analysis

Based on the college Self-Evaluation Report for 2021 and the information received during the site visit virtual meetings, there are enough premises (auditoriums, laboratories) with appropriate equipment, appropriate tools and facilities available in the study process to achieve the programme outcomes. However, the software available for the Programme only partially meets the needs of students, lacking extensions to Tekla Structures and Revit.

In the SER and during the site visit virtual meetings, the evaluation panel were informed about the equipment available in the college and the special equipment adapted for students with special needs. The evaluation panel has determined that the amount of facilities and equipment available to the programme is designed to ensure an effective learning process for students with special needs.

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 established contact and cooperation agreements with various Klaipeda region and foreign companies remain valid.

The methodological resources (textbooks, books, periodicals, databases) available in the college library for Construction Engineering students are suitable and available in various forms. However, newer literature sources (textbooks, books) published in the Lithuanian language since 2015 are scarce. The library's books are updated annually with methodological resources. The work of the library is fully computerized. Students can use the library and computer workplaces for independent work. The methodological tools prepared for the programme of study (lecture notes, methodological instructions for practical classes, laboratory work, independent work, coursework and final theses) are available to students remotely and at any time in the virtual Moodle environment.

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

(1) Factual situation

Every year, the process of planning and updating the resources required for the implementation of the Programme takes place according to the needs planning procedure commencing with the lecturer, through the department and faculty and then to the college management. A priority procurement list is drawn up, which is discussed in the department, approved by a protocol, and an Annual Procurement Demand Plan and Expenditure Plan are drawn up on the basis of the Programme needs.

The college actively participates in improving the facilities available to the programmes of study such as the installation of the *Low Energy Smart Buildings Laboratory* for the students of the Programme under the project *Modernization of Technology and Biomedical Sciences Infrastructure to Meet the Needs of the Western Lithuania Region*.

During the evaluation period a *GIS Competence Center* was established at the Faculty of Technology, as well as acquiring innovative laboratory and computer equipment (3D scanner, active drone (LiDAR scanner) and passive (photo and thermal camera) scanning systems, computers - workstations, multifunction, wide format and 3D printers; the latest generation of software packages (3D Reconstructor, ArcGIS, Bentley Microstation, Pix4D, TerraSolid).

In the college's SER and during the site visit virtual meetings, it was emphasized that social partners also significantly contribute to the process of updating the resources required for the implementation of the civil engineering study field programme by donating new or partially used measuring, control, computer and other equipment.

(2) Expert judgement/indicator analysis

After evaluating the information provided in the college's Self-Evaluation Report in 2021 and received during the site visit virtual meeting on the planning and updating of resources required for the study programme, it can be concluded that the needs of teachers and students are assessed when planning resources for the improvement of the study process and the college is ready to deliver the Construction Engineering programme.

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. Renovated laboratories, computerized workplaces, a sufficient amount of hardware and software to meet the needs of students and teachers are used for the implementation of Programme, and the technical and hygienic condition of the premises is suitable for programme of study.
2. Students with special needs are provided with appropriate conditions to study according to their special needs.
3. Teaching materials (textbooks, books, periodicals, databases) in the library are appropriate and available in various forms.
4. Students have the opportunity to ask the library to purchase the books needed for study or research.
5. Methodological tools for the Programme are easily accessible to students remotely by using the Moodle virtual learning environment.
6. In cooperation with the social partners in Lithuania and abroad, the college has the opportunity and conditions to properly organize internships and use the material base available to the social partners during the internships.

(2) Weaknesses:

1. The library lacks newer literature sources in Lithuanian for the civil engineering study field programme.
2. Tekla Structures and Revit software extensions should be provided for the Construction Engineering students.

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

The quality management system at KVK complies with the requirements of the management system standard LST EN ISO 9001: 2015 and legal acts regulating the activities of the college. The college Quality Center collects target data on the adequacy of training, analyses the feedback information obtained as a result of annual surveys of stakeholders (satisfaction of students, graduates with the quality of training and others).

The effectiveness of research in this area (process measurement indicators, level of goal achievement (at least twice a year), characteristics of learning outcomes) is monitored and measured. Some data for analysis is provided by the college centers and other departments, while others are obtained through direct observation of the learning process, communication with stakeholders during various meetings and other methods. For example, construction engineering student satisfaction with their programme has increased (in 2018 - 81%, in 2019 - 83%, in 2020 - 86%). Also, after the discussion with the representatives of Klaipėda City Municipality Administration, UAB Litana ir Ko and other companies in 2019 the programme was improved according to their wishes: Tekla Structures software was purchased and installed in the study process.

Responsibility for the quality of teaching is evenly distributed among all members and units of the college academic community (students, teachers, the study programme committee, department, faculty, college) in accordance with their responsibilities, authority and competence. The Head of Department and members of the study programme committee are the main developers, enhancers and evaluators of the Programme. The Head of Department is responsible for organizing and executing applied research activities, analyzing and evaluating the quality of teaching and preparing an improvement plan.

The construction engineering study programme committee consists of a chairman, three lecturers, two social partners and a student representative. The composition of the study programme committee is approved by the director of the college every academic year.

The last improvement of the outcomes and structure of the Programme was made in 2018. The improved study programme was discussed in the SPC and then reviewed and approved by the Academic Council Resolution No. SV1-11 of 05/12/2018.

(2) Expert judgement/indicator analysis

The internal quality assurance system is considered sufficient and the college takes appropriate steps to ensure the quality of education and provides improvements to the study process. Based on the information provided in the SER it can be determined that the

composition of the construction engineering study programme committee is sufficient. In addition, the college's quality management system meets the requirements and system standards.

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

(1) Factual situation

To monitor the progress of students' satisfaction with the quality of their study programme and the effectiveness of the applied measures surveys are conducted annually of students, lecturers, graduates and employers. In all cases, respondents receive feedback after the surveys and after the applied measures. In addition, data on the involvement of social stakeholders in the processes of assessment and improvement of programmes of study are obtained by conducting surveys, inviting them to discussions, seminars and conferences in the college. The graduates and employers submit their comments and opinions relating to their proposed improvement and adjustment of the study programme. Social stakeholders are also included in the construction engineering study programme committee. The following companies are the social partners who cooperate with the college:

- Ruukki Lietuva;
- UAB Intelligent BIM Solutions;
- UAB Litana ir Ko;
- UAB Pamario restauratorius;
- AB Ranga;
- UAB Vakarų inžineriniai sprendimai;
- UAB HNIT Baltic;
- UAB Iširtirtinio būsto statyba;
- And others.

Considering the recommendations of the 2016 Construction Engineering study programme assessment commission, the study was examined to reveal how students and lecturers work together to improve the results of Mathematics and Physics course units and how English language skills have been improved. As a result, the additional classes were implemented (academic areas in these course units decreased by 20%), the scale of the international students and lectures exchanges increased several times.

(2) Expert judgement/indicator analysis

Stakeholders are involved in the Programme implementation process and are included in the composition of the study quality committee. The analysis of the data gained from surveys, discussions and conferences is provided at least annually. After the site visit virtual meetings with the college and the information obtained from the SER, it can be determined that the college has social partners that are encouraged to improve Programme by submitting their comments and opinions during various meetings, discussions, seminars and conferences. In

addition, the college took into account previous recommendations and improved student performance (academic areas in course units (English, Mathematics and Physics) decreased by 20%).

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

(1) Factual situation

General programme data is provided from various sources (the Open Information, Counselling and Guidance System (AIKOS), LAMA BPO website, etc.) whereas the KVK website has information about the Programme assessment, accreditation, purpose, objectives, content and professional career opportunities. The college promotes itself by participating in study fairs in Klaipėda and Vilnius, the study programme is presented in the annual publication *Kur stoti* and in other online publications. The events to represent the study programme are also hosted (*Open Day Faculty, Researchers' Night Events, Spaceship-Earth Festival*, and others).

Dissemination of the results of the quality improvement of the programme of study is first disclosed to the lecturers and administration and afterwards the results are presented to students and social partners at meetings, seminars, etc. In addition, the college holds internal assessment actions such as:

- Research of students' satisfaction with the study of the course unit (twice a year);
- Research of students' satisfaction with the study quality (yearly);
- Adaptation survey of first-year students (yearly);
- Survey of graduates (yearly);
- Employer opinion polls (yearly).

After gathering the information, the lecturers plan measures for course unit improvement, which are reviewed by the SPC and the Head of Department and hence decisions are made by the Dean and Deputy for studies and science.

(2) Expert judgement/indicator analysis

The collection, use and publication of the Programme information at the college is appropriate and sufficient. All required and important data regarding the Programme, objectives and expected learning outcomes, admission requirements and progress reports are published using the various internet resources (college website, LAMA BPO website, and others). Based on the information gathered from the site visit virtual meetings and the SER the college conducts sufficient actions on behalf of internal programme and process assessment.

3.7.4. 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

The data about student's satisfaction is gathered in two ways:

- From the mobile study application;
- From the study quality questionnaire.

The analysis of construction engineering students' satisfaction with the quality of their Programme was conducted between 2017 and 2019 and revealed that students' satisfaction with their programme is mostly related to appropriate teaching strategies that motivate students' learning and self-study and academic interests. From the 2021 survey it is seen that the Programme scored 4.68 out of 5, but the rate of participation is quite low – only 6%. The results of the surveys are available online via the college's website (<https://www.kvk.lt/>).

The areas like scheduling lectures, the amount and conditions of information on studies and internships abroad under exchange programmes, the assistance of administrative units and organisation of the programme are improving every year (e.g. a new lecture schedule programme allows students to monitor the schedule and its changes remotely at any time, use distance learning technologies, update existing laboratories, the Building Energy Efficiency Research Laboratory and the Geoinformation Systems Competence Centre were established).

In spring 2020 when the world faced the global pandemic a range of surveys and interviews were conducted to determine the students' opinions. Eventually this resulted in the preparation and distribution of methodological material for mastering the MS Teams platform (for lecturers and students), the IT center conducted regular and periodic consultations on virtual learning issues and additional computer cameras and microphones and SMART cameras for high-quality video recording of lectures were purchased.

(2) Expert judgement/indicator analysis

The college collects opinions of students through different techniques and tools. From the information obtained in the Self-Evaluation Report the level of student' satisfaction is quite high (in 2018 - 81%, in 2019 - 83%, in 2020 - 86%). After the distant learning transition the college took all the necessary steps to provide quality education (surveys, purchasing needed equipment and materials for using online platforms).

Strengths and weaknesses of this evaluation area:

(1) Strengths:

1. The college's quality management system meets the requirements and system standards.
2. Involvement of stakeholders in the Programme implementation process and the composition of the study programme committee.
3. The publication of data on the various internet platforms.
4. Switching to online education during a pandemic while maintaining quality education.

(2) Weaknesses:

1. It is recommended to involve stakeholders in promotion of the Construction Engineering programme.

IV. EXAMPLES OF EXCELLENCE

None Found.

V. RECOMMENDATIONS*

Evaluation Area	Recommendations for the Evaluation Area (study cycle)
Intended and achieved learning outcomes and curriculum	<ol style="list-style-type: none"> 1. Group the programme learning outcomes in terms of the European Qualification Framework (Knowledge, Skills and Attitudes) and thus reflect how the programme aligns with the European quality engineering academic or professional models/labels. 2. Link the assessments methods to a common model across the programme. Link the teaching methods to the respective intended learning outcomes. 3. Increase the emphasis on construction safety and sustainability in the programme and this should be reflected in the programme outcomes.
Links between science (art) and studies	<ol style="list-style-type: none"> 1. Additional supports and further encouragement should be in place for students to participate in international conferences and international professional associations.
Student admission and support	<ol style="list-style-type: none"> 1. The evaluation panel recommends that there should be further encouragement and support for students to incentivise them to participate in the Erasmus+ exchange programme. 2. Engagement with the social partners could be extended to promote the Construction Engineering careers to second level students and hence the Construction Engineering programme.
Teaching and learning, student performance and graduate employment	<ol style="list-style-type: none"> 1. Access to full versions of BIM and REVIT could be available to students as they are limited by the students' versions.
Teaching staff	<ol style="list-style-type: none"> 1. The teaching staff should be further encouraged and supported to attend conferences and publish scientific papers in international journals outside of Lithuania. 2. The teaching staff should be further encouraged to be members of international professional associations.

<p>Learning facilities and resources</p>	<ol style="list-style-type: none"> 1. To supplement and update literature sources in Lithuanian language for the Construction Engineering programme. 2. Provide access to Tekla Structures and Revit programme extensions for the Construction Engineering programme students.
<p>Study quality management and public information</p>	<ol style="list-style-type: none"> 1. Involve stakeholders in the promotion of the Construction Engineering programme.

*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 Klaipėdos valstybinė kolegija:

Intended and Achieved Learning Outcomes and Curriculum

The main positive aspects are that the Programme has a good balance between core and elective subjects which produces graduates with competencies and skills relevant to local, regional and national needs. The regular surveys of students and feedback to them and the college's quality management system is appropriate. The main weaknesses include the lack of involvement with European engineering quality educational or professional models/labels and that the construction safety and sustainability competencies are not sufficiently represented in the study programme 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 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 numbers of students admitted to the programme has almost doubled in 2020 with the number of students admitted to non-funded places increasing. The academic, financial, social, psychological, personal and other supports are available and are communicated to students. The information provided to students about their study programme and related matters is timely, systematic and relevant. The main weakness is that there is a need to further encourage and support the mobility of students and teachers.

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 and that there is a well organised monitoring system of the student's study progress and feedback is provided to students. The college provides good conditions for socially vulnerable groups and students with special needs to complete their studies. The college is taking sufficient steps to provide graduate career tracking and monitoring of the graduates' employment. There are no serious weaknesses.

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 are involved with 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 all students including students with special needs. The laboratories have been renovated providing computerised modern workplaces and a sufficient amount of hardware and software to meet the needs of students and teachers. Facilities are made available by the social partners during internships and for the practical placement elements of the programme. The main weaknesses are that the literature in the library, though well stocked, could be supplemented with additional sources in the Lithuanian language and construction engineering students could be provided with access to the full versions of Tekla Structures and the Revit program.

Study Quality Management and Public Information

The main positive aspects are that the social partners participate in the programme implementation and feedback processes and are members of the study programme committee. Programme quality data is published on the various internet platforms. There are no serious weaknesses, although stakeholders could be further involved in the promotion of the construction engineering programme.

Expert panel signatures:

Dr. Maria Kyne, (panel chairperson), academic