



**STUDIJŲ KOKYBĖS VERTINIMO CENTRAS
CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION**

INFORMATICS ENGINEERING FIELD OF STUDY

Panevėžys Kolegija

EXTERNAL EVALUATION REPORT

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I. INTRODUCTION

1.1. OUTLINE OF THE EVALUATION PROCESS

The field of study evaluations in Lithuanian higher education institutions (HEIs) are based on the following:

- Procedure for the External Evaluation and Accreditation of Studies, Evaluation Areas and Indicators, approved by the Minister of Education, Science, and Sport;
- Methodology of External Evaluation of Study Fields approved by the Director of the Centre for Quality Assessment in Higher Education (SKVC);
- Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

The evaluation is intended to support HEIs in continuous enhancement of their study process and to inform the public about the quality of programmes within the field of study.

The object of the evaluation is all programmes within a specific field of study. A separate assessment is given for each study cycle.

The evaluation process consists of the following main steps: 1) Self-evaluation and production of a self-evaluation report (SER) prepared by an HEI; 2) A site visit by the review panel to the HEI; 3) The external evaluation report (EER) production by the review panel; 4) EER review by the HEI; 5) EER review by the Study Evaluation Committee; 6) Accreditation decision taken by SKVC; 7) Appeal procedure (if initiated by the HEI); 8) Follow-up activities, which include the production of a Progress Report on Recommendations Implementation by the HEI.

The main outcome of the evaluation process is the EER prepared by the review panel. The HEI is forwarded the draft EER for feedback on any factual mistakes. The draft report is then subject to approval by the external Study Evaluation Committee, operating under SKVC. Once approved, the EER serves as the basis for an accreditation decision. If an HEI disagrees with the outcome of the evaluation, it can file an appeal. On the basis of the approved EER, SKVC takes one of the following accreditation decisions:

- **Accreditation granted for 7 years** if all evaluation areas are evaluated as exceptional (5 points), very good (4 points), or good (3 points).
- **Accreditation granted for 3 years** if at least one evaluation area is evaluated as satisfactory (2 points).
- **Not accredited** if at least one evaluation area is evaluated as unsatisfactory (1 point).

If the field of study and cycle were **previously accredited for 3 years**, the re-evaluation of the field of study and cycle is initiated no earlier than after 2 years. After the re-evaluation of the field of study and cycle, SKVC takes one of the following decisions regarding the accreditation of the field of study and cycle:

- To be accredited for the remaining term until the next evaluation of the field of study and cycle, but no longer than 4 years, if all evaluation areas are evaluated as exceptional (5 points), very good (4 points) or good (3 points).
- To not be accredited, if at least one evaluation area is evaluated as satisfactory (2 points) or unsatisfactory (1 point).

1.2. REVIEW PANEL

The review panel was appointed in accordance with the Reviewer Selection Procedure as approved by the Director of SKVC.

The composition of the Review Panel (RP) was as follows:

1. Prof. dr. Peeter Normak, Professor at Tallinn University, School of Digital Technologies, the head of the Applied Informatics academic direction (Estonia);
2. Prof. dr. Elmar Cochlovius, Professor at Hochschule Furtwangen University, Dean of Studies Faculty Computer Science and Applications (Germany);
3. Prof. habil. dr. Piotr Artiemjew, Professor at University of Warmia and Mazury Faculty of Mathematics and Computer Science, Head of the Computer Science Institute (Poland);
4. Justas Selenkovas, Co-Founder Join-Stock company „Softeta” (Lithuania);
5. Rokas Stankūnas, Fourth-year student of Vilnius University's first-cycle study program Information Systems and Cyber Security (Lithuania).

1.3. SITE VISIT

The site visit was organised on 13 November 2025 onsite.

Meetings with the following members of the staff and stakeholders took place during the site visit:

- Senior management and administrative staff of the faculty
- Team responsible for preparation of the SER
- Teaching staff
- Students
- Alumni
- Social stakeholders including employers

The meetings were conducted in English. There was a need for translation during the meetings (except on the meeting with students).

1.4. BACKGROUND OF THE REVIEW

Overview of the HEI

Panevėžys University of Applied Sciences (hereinafter – *the College* or *PK*) is a public higher education institution founded in 2002, by merging Panevėžys Higher School of Technology, Panevėžys Andrius Domaševičius Higher School of Medicine and Rokiškis Higher School of Pedagogy. The College has three faculties: the Faculty of Biomedical Sciences, the Faculty

of Social Sciences and the Faculty of Technological Sciences. The College offers 22 accredited study programmes in the fields of health sciences, social sciences, engineering, informatics, education, business and public management, and law (19 first-cycle and 3 short-cycle programs). The Faculty of Technological Sciences offers five study fields: Informatics Engineering, Development and Maintenance of Information Systems, Electromechanics, Electric and Automatic Equipment, Electronics Engineering and Robotics, Construction.

Overview of the study field

The study field Informatics Engineering comprises two study programmes: Informatics Engineering (hereafter IE; renamed from "Computer Networks Administration" on September 1st, 2022, hereafter CNA) first-cycle programme and Development of Business Online Systems (hereinafter DBOS) short-cycle programme. The CNA program has been offered at the college since 2012 in both full-time and part-time formats. The DBOS program has been offered in a full-time study format at the College since 2022.

Previous external evaluations

The CNA programme was accredited in 2017 for a period of three years. The main recommendations were to recruit more academic staff with practical and international experience and introduce the students to the new trends in the areas of WiFi and the Internet of Things (Cyber-physical systems).

Documents and information used in the review

The following documents and/or information have been provided by the HEI before or during the site visit:

- *Self-evaluation report and its annexes (SER)*
- *Final theses*
- *Panevėžys Kolegija Study Field Programme Management Regulations (in Lithuanian).*
- *Study Programme (Programmes) Committee Regulations*
- *The list of individuals participating in an Erasmus+ mobility program during the period 2021–2025 (incoming students, outgoing students and visiting lecturers)*
- *Minutes of the 9.05.2025 and 5.06.2025 meetings of the Committee on Programmes in the Fields of Study in Informatics Engineering and Software Systems*
- *Admission statistics for years 2023 and 2024 (in Lithuanian).*
- *Statistics on minimum, average and maximum competitive scores for years 2022 to 2025, separately for state-funded and non-state-funded studies.*
- *Statistics on the number of requests to recognize credits in years 2021 to 2025.*
- *Statistics on the number of students who received scholarships in 2022 to 2025.*
- *Templates of questionnaires:*

- *for students regarding the quality of their studies*
- *for students regarding the quality of a subject and its teaching*
- *for students on the quality of internship*
- *for the first-year students on admission experiences*
- *for the first-year students on adaptation*
- *for university graduates regarding professional activity and the alignment of acquired skills with the needs of the job market*
- *for employers on the needs of specialists and their competences*
- *for employers and social partners on the readiness of graduates for the labour market.*

Additional sources of information used by the review panel:

The Review Panel had access to a large number of PK regulations available in English on public websites, including the following (a selection):

- The Statute of Panevėžys Kolegija.
- The Study Regulations of Panevėžys Kolegija.
- Panevėžys Kolegija Action Strategy and Strategic Action Plan for 2021-2026.
- Manual of the Internal Quality Assurance System for Studies.
- The description of the procedure for the assessment of academic progress.
- The description of Panevėžys Kolegija student support and student adaptation procedure.
- The Requirements for the Formalization of Written Work for Studies.
- Regulation of the Panevėžys Kolegija Appeals.
- Code of Academic Ethics of Panevėžys Kolegija.
- The Description of the Procedure for Prevention of Plagiarism and Ethical Use of Artificial Intelligence Tools in the Preparation of written Works of Panevėžys Kolegija.
- The description of the procedure for the admission of foreign citizens to Panevėžio Kolegija/State Higher Education Institution.
- The Description of the Procedure for the Organisation of Internships at Panevėžio Kolegija/State Higher Education Institution.
- The Description of the Procedure for the Assessment and Academic Recognition of Education and Qualifications of Applicants to Panevėžys Kolegija.

At this point, we would like to note that at times there was confusion due to the difference in information on the website and in the SER. For example, the document "Panevėžys Kolegija Action Strategy and Strategic Action Plan for 2021–2026" (on the website) was entitled "College's Operational Strategy and Strategic Activity Plan for 2021–2026" in the SER. Another disadvantage was that the SER pages were not numbered.

II. STUDY PROGRAMMES IN THE FIELD

	Short cycle/LTQF 5	First cycle/LTQF 6
Title of the study programme	Development of Business Online Systems	Informatics engineering
State code	5701BX003	6531BX017
Type of study (college/university)	College	College
Study cycle	short	First
Mode of study (full time/part time) and nominal duration (in years)	Full-time - 2 years; Part-time-2,5 years.	Full-time - 3 years; Part-time-4 years
Workload in ECTS	120	180
Award (degree and/or professional qualification)	Programmer professional qualification	Professional Bachelor in Informatics Engineering
Language of instruction	Lithuanian	Lithuanian
Admission requirements	Secondary education	Secondary education
First registration date	2022-07-05	2012-04-19
Comments (including remarks on joint or interdisciplinary nature of the programme, mode of provision)		

III. ASSESSMENT IN POINTS BY CYCLE AND EVALUATION AREAS

The **short cycle** of the *Informatics engineering* field of study is given a **positive** evaluation.

No.	Evaluation Area	Evaluation points ^{1*}
1.	Study aims, learning outcomes and curriculum	3
2.	Student admission and support	3
3.	Teaching and learning, student assessment, and graduate employment	3
4.	Teaching staff	3
5.	Learning facilities and resources	3
6.	Quality assurance and public information	2
Total:		17

The **first cycle** of the *Informatics engineering* field of study is given a **positive** evaluation.

No.	Evaluation Area	Evaluation points ^{2*}
1.	Study aims, learning outcomes and curriculum	3
2.	Links between scientific (or artistic) research and higher education	3
3.	Student admission and support	3
4.	Teaching and learning, student assessment, and graduate employment	3
5.	Teaching staff	3
6.	Learning facilities and resources	3
7.	Quality assurance and public information	2
Total:		20

^{1*}

1 (unsatisfactory) - the area does not meet the minimum requirements, there are substantial shortcomings that hinder the implementation of the programmes in the field.

2 (satisfactory) - the area meets the minimum requirements, but there are substantial shortcomings that need to be eliminated.

3 (good) - the area is being developed systematically, without any substantial shortcomings.

4 (very good) - the area is evaluated very well in the national context and internationally, without any shortcomings.

5 (exceptional) - the area is evaluated exceptionally well in the national context and internationally.

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IV. STUDY FIELD ANALYSIS

AREA 1: STUDY AIMS, LEARNING OUTCOMES AND CURRICULUM

1.1.	Programmes are aligned with the country's economic and societal needs and the strategy of the HEI
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FACTUAL SITUATION

1.1.1. Programme aims and learning outcomes are aligned with the needs of the society and/or the labour market

PK Informatics engineering study programmes demonstrate strong strategic alignment by positioning graduates to contribute directly to Lithuania's strategic documents on information society and economic development, including the Public Governance Development Program 2021–2030 (2021), the Regional Development Program 2021–2030 (2022), and the Panevėžys Region Development Plan 2021–2027 (2021).

Ultimately, the programmes support the development of a "smart society" by producing skilled professionals who possess the core competencies necessary to drive digitalization and innovation across critical sectors.

Although every study programme includes a subject in the field of computer security and security aspects are also covered in some other subjects, business representatives have explicitly communicated a requirement for more skilled students in cybersecurity.

1.1.2. Programme aims and learning outcomes are aligned with the HEI's mission, goals, and strategy

The College's self-evaluation report states a close alignment between the objectives of its Informatics Engineering (IE) and Business Online Systems development (DBOS) study programmes and its mission to "deliver higher education studies based on scientific knowledge and practical skills, equipping students with contemporary competencies that add value in a smart society," as well as with strategic goals to "provide high-quality and competitive studies" and "strengthen the College's partnerships with the business and public sectors." These objectives are further described as integral to enhancing Panevėžys Kolegija competitive advantage and its impact on regional and national development through innovative studies and applied research.

PK identifies the uniqueness of its studies as a focus on specific skills such as computer networking and server administration. However, students' stated primary goal is to become software developers or cyber security expert.

Current observations indicate limited interaction between students and social partners, with students not involved in joint projects. Both students and lecturers experience limited access to scientific research and experimental activities based on real-world scenarios due to a lack of joint projects with businesses. Furthermore, the College lacks formal communication channels with social partners, and businesses do not have a formal procedure for providing feedback, relying instead on informal, individual cases that are not coordinated on a regional level. Despite the stated strategic goal of enhancing competitive advantage, the actual number of students is declining rapidly, with students opting for other universities.

ANALYSIS AND CONCLUSION (regarding 1.1.)

The PK Informatics engineering study programmes are strategically aligned with national and regional development goals, particularly in fostering a "smart society" through digitalization. However, several operational aspects indicate a gap between strategic intent and practical execution, impacting programme effectiveness and labour market responsiveness.

Engagement with social partners, though formally structured with annual meetings, suffers from low business attendance and a lack of formalized, collective feedback mechanisms. This informal and fragmented feedback process, despite occasionally leading to positive adjustments in student skills, hinders comprehensive and proactive curriculum development.

The discrepancy between the College's emphasis on infrastructure skills and students' preference for software development indicates a misalignment. This can lead to a mismatch between student expectations and programme content, potentially affecting satisfaction and enrolment. Furthermore, the explicit demand from businesses for cybersecurity skills represents a labour market need and a missed opportunity for enhanced collaboration and programme development. The current internship assignment process, lacking student choice, may also limit students' ability to explore diverse career paths and tailor their practical experience to their emerging interests.

1.2.	Programmes comply with legal requirements, while curriculum design, curriculum, teaching/learning and assessment methods enable students to achieve study aims and learning outcomes
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FACTUAL SITUATION

1.2.1. Programmes comply with legal requirements

Both study programmes – first-cycle „Informatics Engineering“ programme and short-cycle „Development of Business Online systems“ programme – comply with all legal requirements. The study programmes have been developed and are continuously updated in accordance with the legislation in force in Lithuania, such as the Law on Higher Education and Research, adopted by the Resolution of the Seimas of the Republic of Lithuania, and the Descriptor of the General Requirements for the Implementation of Studies approved by the Ministry of Education and Science of the Republic of Lithuania.

The amounts of credits and study hours in each of the two study programmes have been selected in such a way as to meet the requirements defined in the above-mentioned documents. The IE programme comprises 180 credits, out of which 33 credits (18,3% of the total credits of the study programme) are for Practices module, 21 credits are for elective courses and 9 are for the Final Thesis. In total, the proportion of practical learning covers approximately one third of the curriculum. The DBOS programme comprises 120 credits, out of which 40 credits (33%) are for the Practices module and 5 credits for the Final Project. In total, the proportion of practical training covers approximately 45% of the study programme. This can be justified since DBOS is a short-cycle program, which has to be strongly focussed to fulfil immediate needs of the labour market.

Both the IE and the DBOS programme can be studied either full-time or part-time. The workload is evenly distributed over the academic years, i.e. for full-time studies, 30 Credits are allocated for each semester.

The College has established processes to regularly review and update the contents and structure of the study programmes according to changing legislative requirements as well as feedback provided by professionals from relevant industry sectors of the region.

1.2.2 Programme aims, learning outcomes, teaching/learning and assessment methods are aligned

The faculty follows processes to ensure that aims of both programmes, learning outcomes, teaching, learning and assessment methods are aligned. Lecturers of study subjects, together with the Study Programme Committee, review appropriate study and assessment methods applied in achieving the study outcomes. Different and suitable learning activities are used throughout the curriculum in order to help students to achieve the learning objectives. Thus the learning outcomes of each study course are linked to the learning outcomes of the study programme.

Assessment of students is regulated by a separate document called *Order Description of the Assessment System of Students' Academic Progress*. This document also lists general principles of assessment: validity, reliability, understandability, expediency, objectivity, publicity, and mutual respect. In addition, the teaching and assessment methods of each subject are identified and selected based on: the subject itself, the resources available, the best practices of the particular lecturer and her personal didactic skills.

1.2.3 Curriculum ensures consistent development of student competences

The structure and sequence of the study courses is mostly well-defined. Participants start their studies focused on building up a substantial body of basic knowledge relevant to their programme. As they progress into higher semesters, study courses concentrate on enabling students to develop necessary skills and competencies required by the labour market.

During the interview students consistently emphasized the relevance of practical skills and abilities they feel they would need as graduates. They expressed the desire to learn programming as well as software design and engineering as early as possible. Currently, programming in C# is taught not before the 2nd semester. Java is even taught in the 5th semester. However, a course on work safety is part of the first semester, when students may find it challenging to understand the importance and relevance of this topic as they still have some semesters ahead of them before they can enter the job market.

1.2.4 Opportunities for students to personalise curriculum according to their personal learning goals and intended learning outcomes are ensured

The study plan provides various opportunities and variants for students to personalize and individualize their study programme. Participants in the IE programme can freely select two elective subjects as well as two modules from a list of alternatives.

Participants of the DBOS programme can choose their field of specialization out of a list of alternative subjects: between “Frameworks and Services” and “Mobile Programming” and between “Graphical User Interface for information systems” and “Mobile Application Testing”.

One important possibility of personalizing the study plan could be the Erasmus+ programme. For students it is usually very attractive to spend some time at an international academic institution abroad. Unfortunately, while Erasmus+ is offered to the students and is promoted within the faculty, students of the IE programme seem to hesitate to enrol and apply for an Erasmus+ scholarship.

1.2.5 Final theses (applied projects) comply with the requirements for the field and cycle

The faculty has established a process which defines the definition, execution and defence of the final project which marks the end of both study programmes reviewed. Together with external partners, the scope and the nature of commissioned projects have been determined in a joint agreement.

As the organization of the final project is very critical for the students' success, all information required to follow the process has been compiled and made available to the students in a virtual learning environment.

Guided by her supervisor, the student has to defend her final project in a well-ordered sequence of separate steps. It starts with the internal first defense, followed by a second defense. If successful, the final defense of the project takes place in a public meeting of the Qualification Commission meeting.

ANALYSIS AND CONCLUSION (regarding 1.2.)

The study programmes – first-cycle Informatics Engineering programme and short-cycle „Development of Business Online systems“ programme – both comply with all legal requirements. The study programmes have been developed and are continuously updated in accordance with the legislation in force in Lithuania. The amounts of credits and study hours in each of the two study programmes have been selected in such a way as to meet all relevant requirements. Both the IE and the DBOS programme can be studied either full-time or part-time.

To reflect changing legal requirements and address feedback from social partners, the SPC has established processes to regularly review and update the contents and structure of their study programmes.

The faculty ensures that aims of both programmes, learning outcomes, teaching, learning and assessment methods are well-aligned. However, the process of objectively selecting the most suitable teaching, learning and assessment methods for each subject area could be better clarified and formalized.

The study plans are well-structured to allow evenly distributed workloads across all semesters. The particular sequence and order of the subject courses could limit the ability to establish a clear focus and profile of the Informatics Engineering study programme, as e.g. programming skills do not seem to play a pivotal role.

The study plan provides various opportunities for students to personalize and individualize their study programmes.

AREA 1: CONCLUSIONS

AREA 1	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Short cycle			X		
First cycle			X		

COMMENDATIONS

1. None

RECOMMENDATIONS

To address shortcomings

1. Setup procedures to formally review the position, weight, and content of all study subjects to guarantee that they are well-aligned to build, support and reinforce a strong and distinctive profile of the IE study programme both inside the institution and externally to prospective students.

For further improvement

1. Assign a person from administration who is responsible for arranging regular more formal discussion with social partners on the relevance of the study programs and areas.
2. Arrange more internship possibilities for the students where they could get related to real business problems and generate their final thesis.

AREA 2: LINKS BETWEEN SCIENTIFIC (OR ARTISTIC) RESEARCH AND HIGHER EDUCATION

2.1.	Higher education integrates the latest developments in scientific (or artistic) research and technology and enables students to develop skills for scientific (or artistic) research
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FACTUAL SITUATION

2.1.1. Research within the field of study is at a sufficient level

During the evaluation period, informatics engineering teachers published 10 articles indexed in Web of Science and 19 articles in other international databases. The publications concern, among others, component models for IoT search engines, crowdsourcing systems using AI, database technologies, analysis of student recruitment data, ultrasonic and CO₂ sensors, big data analytics in the cloud, PV/T technology, green enterprises, blockchain, mathematical logic, programming, and sustainable and green education.

The research results were presented at international and national conferences, such as the 13th European Symposium on Computational Intelligence and Mathematics, COIA'22, conferences in London, Riga, Daugavpils, and the Science and Education in Globalisation (SCEDU 2022–2024) series and other events at Lithuanian universities.

The research topics are related to the Informatics Engineering programme and are used in subjects such as software engineering, distributed systems, the Internet of Things, information security, databases, data analytics, cloud computing, embedded systems, sensors, green IT, mathematical logic and programming.

Research projects, including those in the field of AI-based digital forensics, secure V2V communication, generative AI for furniture configuration, and innovative electronics testing technologies, are used as case studies and topics for student projects.

The research is conducted in cooperation with foreign universities, such as Riga Technical University, National Sun Yat-sen University, University of Thessaly, University of Castilla-La Mancha, Mersin University, International Hellenic University, Magna Graecia University, University of Algarve, University of Navarra, University of Sarajevo, and with business partners in the Panevėžys region, including MB 'Protorithm', UAB 'Furnisystems', UAB 'Infociklas', UAB "Valresta", MB 'Kodo vizija', UAB 'Baltų tinklo prekyba', AB 'HISK', UAB 'Ieškok komunikacijos', AB 'Kalnapilis', AB "Lietkabelis", AB 'Adax'.

However, the majority of lecturers are not registered with Google Scholar and publish in low-level journals: only 5 teachers out of 17 have publications in WoS indexed journals. Consequently, the number of citations to these articles is also relatively low.

2.1.2. Curriculum is linked to the latest developments in science, art, and technology

PK lecturers are active researchers and transfer the results of their work into study courses.

Research on IoT component models, blockchain based trust and AI enhanced information systems is integrated into subjects on Internet of Things, Distributed Systems, Software Engineering and Information Systems Security. Results on big data analytics, cloud computing and database technologies are used in subjects Database Systems, Big Data Analytics and Cloud Computing. Work on digital forensics, AI driven network management and CMUT based sensors updates content in Artificial Intelligence, Computer Networks, Embedded Systems and Digital Forensics

New R&D projects, such as AI enabled 3D face reconstruction for digital forensics, secure V2V communication (SecVVenC), innovative electronics testing technologies and the Furnisystems project on generative AI for modular furniture, are used as case studies and student project topics.

Participation in COST Action CA17124 further enriches courses related to data mining, distributed systems and evidence analysis.

2.1.3. Opportunities for students to engage in research are consistent with the cycle

The main form of research activity is the preparation of research based final theses, which are closely linked to ongoing R&D topics and to commissioned projects from business and other organisations. However, it is worth noting that the topics of the works are not very diverse.

Students work under the individual supervision of academic staff, who are at the same time active researchers and leaders or members of applied research projects. Students are also involved in applied research and experimental development for companies: over the last three years four students have completed commissioned experimental development work for business partners.

The share of Informatics Engineering students involved in applied scientific activities has increased from 24.1% in 2022 to 25.0% in 2023 and 26.7% in 2024. Informatics Engineering students participate in the Student Scientific Society (SMD), present their work at the annual

international conference SCEDU – Science and Education in Globalization and at the student conference "Roots of Science", where their papers are published in proceedings.

ANALYSIS AND CONCLUSION (regarding 2.1.)

Research in Informatics Engineering is at a sufficient level. There is a stable volume of publications, including papers indexed in Web of Science and other international databases.

The curriculum is clearly informed by current research topics such as AI, IoT, blockchain, data analytics, cloud computing and green technologies.

There is a link between ongoing R&D projects and the content and learning outcomes of taught modules. Opportunities for student involvement in research are consistent with the cycle.

Final theses are the main research-type activity and are connected with applied projects and external commissions. Students participate in SMD activity and present at conferences such as SCEDU and "Roots of Science".

The share of Informatics Engineering students involved in applied research has grown from 24.1 percent in 2022 to 26.7 percent in 2024. This shows a positive trend, even though the overall participation could be further expanded.

There are no major weaknesses identified. However, the visibility of research in research portals (Google Scholar, WoS, Scopus) as well as impact - the number of citations to the articles in international journals - could be higher. The topics of students' final theses are also not in good agreement with the students' own preferences.

AREA 2: CONCLUSIONS

AREA 2	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Short cycle			-		
First cycle			X		

COMMENDATIONS

1. Student engagement in applied research is supported by theses linked to real projects.

RECOMMENDATIONS

To address shortcomings

1. Increase the visibility and impact of academic staff's research activities by increasing the proportion of publications in top international journals.
2. Diversify the topics of final projects by establishing and applying procedures that ensure broader coverage of Informatics Engineering areas beyond computer network and monitoring system design.

For further improvement

1. Expand the range of final project topics that systematically utilise the available laboratory facilities and ongoing applied research projects.
2. Develop and implement incentive mechanisms to encourage academic staff to participate more actively in international conferences abroad.

AREA 3: STUDENT ADMISSION AND SUPPORT

3.1.	Student selection and admission is in line with the learning outcomes
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FACTUAL SITUATION

3.1.1. Student selection and admission criteria and procedures are adequate and transparent

The process for student admissions and the allocation of additional ranking points at PK adheres to the centralized admission process for Lithuanian higher education institutions, which is managed by the Lithuanian Association of Higher Education Institutions for Centralized Admissions (LAMA BPO). The College's specific admission procedure is detailed in the "Student Admission Rules to Panevėžys Kolegija" and made publicly available on its official website. Admissions for IE study programs are open to individuals who have completed secondary education and satisfy the specified entry criteria.

Over the 2022–2025 period, the competitive admission scores for IE indicate sustained interest in the programme, with State-Funded (SF) places consistently requiring higher scores than Non-State-Funded (NSF) places. For SF places, the minimum scores ranged from 4.71 in 2024 to 5.03 in 2022, while average scores increased gradually from 5.71 to 5.86, and maximum scores rose from 6.39 to 6.92. NSF places exhibited lower thresholds, with minimum scores decreasing from 5.51 in 2022 to 3.11 in 2025, and average scores following a similar downward trend. In contrast, the DBOS programme shows limited data, with only 2022 scores available for SF places, where the minimum, average, and maximum scores were 4.39, 4.89, and 6.45, respectively. Overall, SF places remain more competitive than NSF places, particularly in IE, highlighting the continuing demand for state-supported positions in this field. It's worth mentioning that the PK website contains public admission statistics only for the period between 2018 and 2022.

The College is experiencing a decline in the number of local applicants for its informatics study programmes. In response, PK has implemented a strategy to increase student numbers by inviting international students. Additionally, the short-cycle study programme in Business Online Systems development (DBOS) currently also receives insufficient attention from students.

The number of applications submitted for the IE and DBOS study programmes was limited during the 2022 to 2024 observation period. In 2022, the IE program received 55 applications, resulting in 5 signed study agreements, while DBOS had only five applicants, but successfully signed agreements with all applicants. However, 2023 saw a complete absence of applications for both the IE and DBOS programmes. In 2024, applications for the IE program rebounded to 40, leading to nine signed agreements, while the DBOS program again received no applications.

PK attributes the significant reduction in its enrolment to a broader, nationwide decline across all Lithuanian higher education institutions. This negative trend is partially linked to demographic changes that have led to a smaller pool of high school graduates. Looking ahead, PK acknowledges that planned regulatory changes are likely to further affect applicant numbers. Specifically, the introduction of stricter state exam requirements may impact the overall volume of applications submitted to higher education institutions. To address this, PK has initiated a partnership with Panevėžys 'Minties' Engineering Gymnasium (which opened an engineering class in 2024) and the establishment of the Academy of Engineering Sciences in the Panevėžys region with local industry and municipal partners.

During the 2022 - 2024 observation period, the study programme had 4 voluntary dropouts (2 in 2022 and 2 in 2024). PK attributes this due to limited academic preparation of admitted students in secondary education, contributing to high first-year dropout rates.

3.1.2. Recognition of foreign qualifications, periods of study, and prior learning (established provisions and procedures)

The College formalizes the evaluation and recognition of prior learning, including partial studies and informal/self-directed learning, under two specific internal procedures (both established in 2020). This recognition process operates on principles of accessibility (information is public and provided to first-year students), transparency and objectivity (evaluation is based on approved procedures and official documents), equivalence (matching prior knowledge to program learning outcomes), and flexibility (accepting knowledge from diverse sources).

Recognition of student credits, encompassing both partial studies and competencies acquired through formal education, is governed by established institutional procedures guided by principles of accessibility, transparency, equivalence, and flexibility. For previous formal studies, a student initiates the process by submitting an application to the Faculty Dean, along with a certificate and module description. This request is subsequently reviewed and formalized through the Study Program Committee and Dean approval before the recognized results are recorded in the academic system.

For the evaluation and recognition of competencies derived from informal and self-directed learning, a separate structured process is utilized. Applicants receive consultation and must prepare a competency portfolio, which is then assessed by a commission specifically formed for this purpose. The final recognition decision is determined at a commission meeting and formalized in a protocol. Despite these clear mechanisms being in place, the institution noted a low application rate for both formal and informal prior learning recognition during the evaluation period. For the period between 2021 and 2025, 21 students had credits recognized for formal and informal competencies.

ANALYSIS AND CONCLUSION (regarding 3.1.)

PK maintains clear, transparent, and well-structured procedures for student admission, the allocation of ranking points, and the recognition of prior learning, ensuring accessibility, equivalence, and fairness. Over the 2022–2025 period, state-funded places, particularly in the IE programme, remained competitive, reflecting sustained demand, while overall application numbers were limited. The College has proactively addressed these challenges through local partnerships and initiatives to strengthen the regional engineering education pipeline.

At the same time, there is a discrepancy between the implementation of the College's policy and the practical result: although the College has implemented various student recruitment measures, the number of admitted students is low.

3.2.	There is an effective student support system enabling students to maximise their learning progress
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FACTUAL SITUATION

3.2.1. Opportunities for student academic mobility are ensured

PK currently maintains 27 bilateral Erasmus+ exchange agreements with higher education institutions across ten European countries: Latvia, Poland, Macedonia, Croatia, Hungary, Turkey, Italy, Greece, Portugal, and Spain. These agreements specifically facilitate study abroad opportunities for students enrolled in the IE and DOBS study programmes.

During the observatory period of 2021-2025 currently, 28 students participated in incoming and 7 students participated in outgoing academic mobility. PK organized a survey in 2022, which indicated that the main obstacles for participating in mobility were insufficient financial resources, inadequate foreign language skills, lack of self-confidence and reluctance to leave current jobs. In a previous SKVC evaluation, providing professional English courses to community members were recommended. During the on-site visit, the administration noted that there is a possibility for lecturers to receive English training, however the feedback received doesn't show this as a problem in recent years.

During the on-site visit, students acknowledged that initiatives to foster academic mobility were in place. However, it was also observed that further measures could be implemented to enhance the promotion of such opportunities among students. Moreover, an examination of the PK website revealed that information pertaining to Erasmus+ academic mobility is presented in a somewhat convoluted manner, possibly rendering it challenging for students to identify appropriate points of contact or to ascertain the correct procedures for document submission.

3.2.2. Academic, financial, social, psychological, and personal support provided to students is relevant, adequate, and effective

PK provides academic support through a network of specialized staff and departments. Module lecturers provide direct assistance by preparing and hosting study materials (lectures, videos, assignments, and self-tests) on the MOODLE virtual environment and offering consultations on course content. The Study Program Committee Chairperson offers guidance on complex academic matters, including alternative subject selection, the recognition of credits and informally acquired competencies, and the organization of final thesis preparation. Procedural and administrative support is managed by the Faculties (advising on study organization, scholarships, and academic leave) and the Studies, Career, and Employment Centre (coordinating study process organization, elective choices, and freshman orientation). Furthermore, specialized departments facilitate career-related and international opportunities: Practical Training Managers consult on internship organization and placement, and the International Relations Department advises on the ERASMUS+ exchange program. Finally, the College Library actively supports the academic process by ensuring access to scientific information resources and assisting students with information search strategies.

PK offers a financial aid system to its students by providing various forms of support for both state-funded and self-funded places, and allows students to receive multiple aid types concurrently. Support for state-funded students includes incentive, one-time, and Erasmus+ mobility scholarships, state-supported loans for living costs, social scholarships, and benefits for disabled individuals. Self-funded students are eligible for tuition fee compensation for top academic performers, state-supported loans for tuition and living costs, social scholarships, disability benefits, and partial tuition fee compensation provided by PK funds. The College actively allocates a portion of its annual budget to form a student support and scholarship fund, complementing state and other financial sources. Incentive scholarships are merit-based, while one-time scholarships are granted for significant achievements (scientific, artistic, social) or in cases of severe hardship (e.g., loss of a parent or accident). The system also features targeted financial support for students in pedagogy programs, those studying informatics and engineering fields crucial to the region's needs, and descendants of the Lithuanian diaspora. Furthermore, the College can grant financial concessions, such as tuition fee reductions or decreased dormitory costs, generally requiring coordination with the Faculty Dean, unless the support is mandated by a Government resolution.

Between 2021 and 2025, scholarship distribution across the academic years showed variation in both type and quantity. Targeted scholarships were consistently awarded each term, generally ranging from 4 to 8 per period, while merit scholarships were concentrated mainly in the first two semesters of each year, peaking at 13 in 2021–2022. One-time scholarships were less frequent and sporadic, with occasional awards each year. From 2023–2024 onward, R&D scholarships were introduced, with 2 awarded per relevant term. Overall, targeted scholarships remained the most consistently distributed, merit awards fluctuated, and new scholarship types like R&D gradually appeared.

Moreover, PK previously collaborated with the Lithuanian Student Union on a project that offered students free, confidential psychological consultations with a professional psychologist working on-site. Following the conclusion of this project's funding, the College is seeking new opportunities to reinstate psychological services for both its student body and staff.

Lastly every academic group, particularly first-year students, is assigned both a Curator (lecturer) and a Mentor (senior student) who serve as primary contacts, offering initial information on studies, course structure, elective options, examination specifics, and administrative procedures (like appealing grades or settling disputes). All official communications, including relevant personal information, are sent to the student's College-administered email inbox, which is the main channel for all institutional correspondence. Beyond initial group support, students can reside in the College dormitory, ensuring housing accessibility. Students with disabilities are prioritized, as the administration actively works to adapt study conditions through internal investments and project participation. For academic management, the AKADIS information system allows students to personally track grades, register for elective subjects, and order academic statements. Lastly, the administration also provides indirect personal support by fostering a vibrant student life, encouraging the activity of student clubs and sections, and providing resources to student organizations (such as the Student Representation and ALUMNI club).

3.2.3. Higher education information and student counselling are sufficient

Upon signing a study agreement, each new student is provided with a student guide published by PK, which serves as a concise reference for all essential information, including faculty contacts, building maps, timetable principles, and available services. The academic

year for first-year students officially commences with a dedicated introduction to studies period, during which students engage with heads from the College and Faculty, staff from the Study, Career, and Employment Centre, and other key departments. Students are briefed on the Study Regulations, evaluation system, academic and financial support structures, material study resources, and academic exchange opportunities. A key formality is the signing of a Declaration of honest study. Furthermore, the Study Program Committee (SPC) Chairperson provides a detailed overview of the program's content and remains available for continuous consultation and information on relevant program-specific issues throughout the student's tenure.

ANALYSIS AND CONCLUSION (regarding 3.2.)

PK provides a comprehensive and multi-layered system of academic, administrative, and personal support that encompasses course guidance, career services, international mobility, and access to study resources. Financial support is diverse and adaptable, covering state-funded and self-funded students through merit-based, targeted, and one-time scholarships, as well as loans and tuition concessions, with a consistent effort to align funding with regional and strategic priorities. PK further promotes student well-being through mentoring, curatorship, accessible dormitories, disability accommodations, and ongoing engagement with student organizations, though formal psychological support is currently limited. Orientation programs, student guides, and continuous advisory services ensure that both new and continuing students receive sufficient information and guidance to navigate academic, administrative, and career pathways effectively.

AREA 3: CONCLUSIONS

AREA 3	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Short cycle			X		
First cycle			X		

COMMENDATIONS

1. Thorough orientation and onboarding processes, including student guides, introductory programs, and mentoring/curatorship for first-year students.
2. Active promotion of student engagement through clubs, ALUMNI, and student representation.

RECOMMENDATIONS

To address shortcomings

1. Develop and implement a strategy aimed at increasing student enrolment.

For further improvement

1. Develop and implement effective study programme marketing mechanisms.
2. While psychological support services are yet to be provided by PK, create a dedicated page on PK website about other ways PK community members can receive psychological support.
3. Provide of Erasmus+ and academic mobility information on the PK website in a more clearly understandable manner.
4. Create and establish processes and mechanisms to increase the academic mobility of students on an international scale, e.g. by further supporting and fostering student exchange programmes such as Erasmus+.

AREA 4: TEACHING AND LEARNING, STUDENT ASSESSMENT, AND GRADUATE EMPLOYMENT

4.1.	Students are prepared for independent professional activity
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FACTUAL SITUATION

4.1.1. Teaching and learning address the needs of students and enable them to achieve intended learning outcomes

The primary document regulating the organization of studies is the Study Regulations of Panevėžys Kolegija (2023). According to this document, lecturers are obliged to inform students at the beginning of each course about the most important aspects of the course (content, intended learning outcomes, assessment criteria, etc.). In addition to Moodle, the College's main learning management system, other digital tools such as Kahoot and Mentimeter are used for specific purposes. Intermediate results of the subject are reflected in the AKADIS system, where students can see their progress and results. The evaluation of study achievements is regulated in the *Panevėžys Kolegija Study Achievement Evaluation Procedure Description* (2024). Although the SER claims that this document is publicly available on the College's website, the review team was unable to find it there. A student who has failed an exam or otherwise not completed a course has the right to retake the exam or complete the course once free of charge during the rescheduled examination week (except in cases of academic misconduct). A separate document (*Description of the Procedure for Organizing Students' Independent Work*, 2020) regulates issues related to students' independent work. Special attention is paid to supporting first-year students. This is also regulated by a separate document - *Description of Student Support and Student Adaptation Procedure*.

The lectures are recorded and are available to students (including those from the previous year). Short audio commentaries on the lectures are also available on Moodle. Most students preferred practical learning; this was also their main argument for choosing PK. However, during the meeting with the students, they expressed the view that the proportion of practical exercises in the actual learning process could be greater (i.e., the proportion of theory is according to their opinion too high).

Students are not currently involved in joint projects with social partners. Internship possibilities exist, but placements are assigned by the College, and students do not have the

option to choose between different types of roles. Following internships, feedback is collected from social partners and reviewed by the Study Programme Committee, which then provides adjustments to the study programmes.

4.1.2. Access to higher education for socially vulnerable groups and students with individual needs is ensured.

PK actively supports students with limited work capacity and disabilities by adapting the study process, which includes flexible assessment and accommodations. A consultant for students with special needs is employed at the Study, Career, and Occupation Centre, and efforts are made to include these students in developing favourable learning and living conditions. The College has enhanced its physical and informational environment with specialized equipment like lifts, stair climbers, adapted furniture, and Braille reading software, partly through the State Study Fund project "Increasing Study Accessibility." Additionally, students with disabilities are eligible for financial support from sources specified under Lithuanian legislation and European Union funds, with information available publicly, although there were no students with special needs enrolled in IE and DOBS study programmes during the evaluation period.

During the site visit it was additionally noted that the physical infrastructure is mostly sufficient for people with physical disabilities - elevators are present for travelling between floors and all commonly used auditoriums are accessible without additional difficulties.

It is worth mentioning that PK has a dedicated detailed Violence and Harassment prevention policy in place. The policy defines unacceptable behaviours, reporting procedures, investigation processes, and responsibilities. It establishes clear rules, protections, and preventive measures to ensure a safe, respectful environment for all community members.

ANALYSIS AND CONCLUSION (regarding 4.1.)

Teaching and learning address the needs of students and enable them to achieve intended learning outcomes and access to higher education for socially vulnerable groups and students with individual needs is ensured: the physical environment is sufficient and teaching and learning well regulated.

Since the lectures are recorded, learning groups are very small (8 and 10 students) and each learning group is assigned a mentor, the support for the students is sufficient.

However, the meeting with student representatives was extremely ineffective, as the participants were mainly first-year students (8 out of 11), who had only studied at the College for just over two months and were unable to contribute much to the substantive conversation. The remaining three students were from the second year. There were no third-year students, as there were no admissions to the evaluated study programmes in 2023.

4.2.	There is an effective and transparent system for student assessment, progress monitoring, and assuring academic integrity
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FACTUAL SITUATION

4.2.1. Monitoring of learning progress and feedback to students to promote self-assessment and learning progress planning is systematic

Assessment is regulated in the document the *Description of the Assessment System of Students' Academic Progress*. This document establishes the assessment principles of the learning outcomes of study programme modules, the assessment methods, the organization of assessment and ethics (although the College also has a separate document *Code of Academic Ethics*) at the College.

Feedback to students mainly takes place in the Moodle environment. Other means used include e-mail, as well as oral consultations - both individual and group consultations. Each academic group is assigned a mentor (curator) who ensures the dissemination of information between students and staff and provides support when needed. The lecturers regularly offer consultation hours for students. Since the Moodle learning platform is used, there is a comprehensive overview of the students' learning progress.

4.2.2. Graduate employability and career are monitored

Panevėžys Kolegija monitors graduate employability using several data sources. Until 2023, employment information was obtained through the Career Management Information System (KMIS); however, this system is no longer operational, and current data from KMIS is unavailable. The College conducted its own graduate employment survey, but the number of responses was too small to be representative.

At present, the College relies on data from the Lithuanian Education Management Information System (ŠVIS). According to ŠVIS, most programme graduates in 2023 and 2024 were employed shortly after completing their studies, including several in highly qualified positions. Employer feedback collected in the 2022/2023 academic year indicates positive evaluations of graduates' theoretical knowledge, practical skills, and general competencies.

A monitoring system exists, but available employment data is limited and not fully up to date. The small amount of feedback does not allow for sufficient input to advance the study programmes.

4.2.3. Policies to ensure academic integrity, tolerance, and non-discrimination are implemented

Main documents regulating integrity related aspects are the *Code of Academic Ethics of Panevėžys Kolegija* and the *Description of the Procedure for the Prevention of Plagiarism and Ethical Use of Artificial Intelligence Tools in the Preparation of written Works at Panevėžys Kolegija*. There is a clause in the learning agreement/study contract whereby the student undertakes to study honestly. The declaration confirming adherence to the principles of honesty should also be included - and in fact is - on the title page of the final thesis. The principles of ensuring equal opportunities, as well as the measures for their implementation and monitoring are set out in the *Equal Opportunities Policy Implementation and Supervision Principles Description* (2018).

4.2.4. Procedures for submitting and processing appeals and complaints are effective

Procedures for submitting and processing appeals and complaints submitted by students are stated in the *Regulations of the Panevėžys Kolegija Appeals*. Appeals are submitted to the dean of the faculty who will form an Appeal Commission (AC). A lecturer whose assessment has been appealed may not be a member of the AC. The AC can use experts if needed. The appeal should be considered within three working days. Then the AC has another three working days for formulating the decision and submitting to the dean and to the appellant.

ANALYSIS AND CONCLUSION (regarding 4.2.)

Requirements, principles and activities related to learning and teaching (including assessment) are well covered by the College's regulations. The system for monitoring and evaluating student academic performance and ensuring academic integrity is functional.

However, there is not a sufficient overview of what knowledge and skills would require in-depth study at the College to achieve success in professional life.

AREA 4: CONCLUSIONS

AREA 4	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Short cycle			X		
First cycle			X		

COMMENDATIONS

1. PK has a detailed policy for preventing violence and harassment.

RECOMMENDATIONS

To address shortcomings

1. Develop and implement an effective alumni employment monitoring system.

For further improvement

1. Analyse students' IT preferences and take the results into account when developing the study programme.

AREA 5: TEACHING STAFF

5.1.	Teaching staff is adequate to achieve learning outcomes
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FACTUAL SITUATION

5.1.1. The number, qualification, and competence (scientific, didactic, professional) of teaching staff is sufficient to achieve learning outcomes

Informatics Engineering studies at PK meet the general legal requirements for conducting first cycle and short cycle studies in the Republic of Lithuania. The programmes in the field are delivered by 17 teachers. The student–teacher ratio in the field is 1.13, which ensures good access to teachers. All teachers hold at least a master's degree. Six teachers hold a PhD, which is 35.3 percent of the teaching staff. All researchers work with a workload of at least 0.5 full time equivalent. Overall, 94.1 percent of teachers are employed at the College as their main workplace. Of these, 70.6 percent work full time and 23.5 percent have at least

half time positions. In short cycle studies, researchers teach 30.4 percent of study field modules. In professional bachelor studies, researchers teach 31.7 percent of study field modules.

Teachers with at least three years of practical work experience in the field of the taught subject make up 66.7 percent of staff in short cycle studies and 75.0 percent in professional bachelor studies.

The workload of teachers consists of teaching, supervision of student projects and theses, participation in research and applied research activities, methodological work and service to the College community.

In 2024 all teachers on permanent contracts were evaluated as meeting the minimum qualification requirements for their positions and were accredited.

The teaching staff is formed in accordance with the Law on Science and Studies and the General Study Implementation Requirements.

ANALYSIS AND CONCLUSION (regarding 5.1.)

The number, qualifications and competences of the teaching staff in Informatics Engineering are sufficient to achieve the intended learning outcomes.

The field is delivered by a stable core of 17 teachers with a student–teacher ratio of 1.13. All staff hold at least a master’s degree and 35.3 percent hold a PhD, which is adequate for short cycle and professional bachelor studies.

Researchers teach about one third of study field modules, which meets national requirements and supports the research based updating of course content.

Between 66.7 and 75.0 percent of study field teachers have at least three years of practical work experience in the area they teach, and those without recent practice undertake practical internships.

At the same time, the alignment between lecturers' research specialisation and students' field preferences could be further strengthened. While students demonstrate a clear interest in software technologies, this area is not currently a primary research focus of academic staff. In addition, the representation of the students' second priority area, cybersecurity, within lecturers' research activities remains relatively limited.

5.2.

Teaching staff is ensured opportunities to develop competences, and they are periodically evaluated

FACTUAL SITUATION

5.2.1. Opportunities for academic mobility of teaching staff are ensured

Panevėžys Kolegija has Erasmus+ cooperation agreements with foreign higher education institutions in the Informatics Engineering field, and teachers are encouraged to use Erasmus+ and other programmes for teaching and training mobility.

During the evaluation period, 11 teachers of the Informatics Engineering study field, that is 64.7% of the teaching staff, went abroad to lecture or train at institutions such as Rezekne Academy of Technologies (Latvia), University of Foggia (Italy), International Institute of Management (France), University of Daugavpils (Latvia), University of the Aegean (Greece),

Inonu University (Turkey), Thomas More College (Belgium), Juraj Dobrila University of Pula (Croatia) and others.

During the evaluated period, teachers from the University of Daugavpils (Latvia), Wloclawek Higher School (Poland), Cankiri Karatekin University (Turkey), Goce Delcev University (North Macedonia), Malaysia Sabah University (Malaysia) and other institutions delivered lectures to students in the Information Systems and Informatics Engineering field.

5.2.2. Opportunities for the development of the teaching staff are ensured

Teachers participate in trainings on innovative teaching methods and student-centred learning, such as Effective Methods for Teaching Students and Conducting Classes for Pupils,

Teachers also continuously develop their subject and research competences by attending specialised trainings and events that introduce the latest scientific and technological trends, for example Google Cloud Platform Fundamentals, Windows Server Management and Security, Computer Vision in Industry 4.0, Artificial Intelligence Applications in Modern Systems, Information Management and Big Data, Artificial Intelligence Methods and Applications, as well as courses on digital tools and distance teaching, research methodology, AI tools for research and academic ethics.

Additional development opportunities are provided through participation in projects such as Digital Education Transformation (EDTECH), Deal with Digital Work-Based Learning and 3LoE – Three-level Centres of Professional Excellence. The planning and reporting of teachers' qualification improvement is carried out annually and is integrated into the procedure for establishing and accounting for teachers' full-time workload. The results of competence development are evaluated in the periodic teacher certification process conducted every five years. This ensures that staff development is systematic, monitored and aligned with the College strategy.

ANALYSIS AND CONCLUSION (regarding 5.2.)

Conditions for academic mobility and competence development of teaching staff in Informatics Engineering are well established and systematically implemented. A high proportion of staff is internationally active, with 64.7 percent of teachers in the field participating in teaching or training visits abroad and regular incoming visits from foreign universities. This supports internationalisation, foreign language development and exposure to different teaching and research cultures.

Opportunities for competence development are comprehensive and accessible. Teachers involved in the Informatics Engineering programmes have improved their didactic, professional, digital and research competences during the assessed period.

Staff develop competences through participation in national and international projects. Planning and monitoring of qualification improvement are integrated into the annual workload system and reinforced by a structured certification process every five years.

In general, no significant weaknesses were identified. However, during the interviews with the teaching staff, it became clear that the training of teachers in the use of the latest technologies such as AI in the teaching and learning process needs to be intensified. For this purpose, if necessary, by involving external experts.

Overall, however, the conditions for teaching staff development and their periodic evaluation are sufficient.

AREA 5: CONCLUSIONS

AREA 5	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Short cycle			X		
First cycle			X		

COMMENDATIONS

1. A high proportion of Informatics Engineering teachers engage in international mobility, with 64.7 percent participating in teaching and training visits abroad and active incoming mobility from partner universities.

RECOMMENDATIONS

To address shortcomings

1. Develop and implement a solution that, in the best possible way, ensures the harmonization of faculty competence, study programme, student interests, and needs of the industry.

For further improvement

1. Create a structured scheme for regularly inviting leading experts in computer science and related fields as guest lecturers, particularly in the areas of software engineering, cloud computing, artificial intelligence and machine learning, cybersecurity, data analytics, and emerging digital technologies, in order to better take into account students' field preferences and to complement the existing expertise of the teaching staff.
2. Expand and systematically plan staff competence development activities to enable more effective use of modern technologies in teaching and in the supervision of short cycle students' final projects and theses.

AREA 6: LEARNING FACILITIES AND RESOURCES

6.1.	Facilities, informational and financial resources are sufficient and enable achieving learning outcomes
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FACTUAL SITUATION

6.1.1. Facilities, informational and financial resources are adequate and sufficient for an effective learning process

Facilities of PK are on an appropriate level: the classrooms are well equipped for face-to-face and online education. Up to now, five teaching rooms can be used for remote learning. Also there is sufficient space available for the students for recreational activities and for socializing. Students have access to specialised computer rooms and laboratories, e.g. the „Informational

Technology Study and Innovation Centre“, which has been constructed for appr. 1.5 Mio €, and which is used by participants of the IE and DOBS programmes. As the study programmes emphasize on practical skills requested by the labour market, PK students can also exercise in a robotics lab and an electrical engineering laboratory.

Computer rooms and labs are equipped with sufficiently powerful machines to enable students to gain practical programming experience. Various software packages have been licenced to be used by the faculty and the students. These include a substantial number of Zoom licences to enable remote teaching, which are provided by the Lithuanian Distance Education Network, of which PK is a member.

The department has a long history since 2005 of hosting a local CISCO Computer Networks Academy. This allows the institution to award official CISCO certificates to students passing various network academy modules successfully. While interviews with social partners and representatives from the local industry reveal that these competencies are highly valued by future employers, it was noted that a broader exposure to alternative suppliers of network technology would be appreciated.

Students and faculty use the virtual learning and collaboration environment Moodle. Teachers upload their digital content of study subjects, choose different forms of organization of study subjects, organize practical activities in various ways, share study tools, evaluate students' achievements and monitor their progress, receive and provide feedback. Students use Moodle to submit their accomplishments and learning results for evaluation and assessment.

PK premises are equipped with special equipment to accommodate and support students with certain disabilities which require special support, e.g. for vision impairment or motor disorders. Examples include lift and elevator, screen magnification devices and screen readers.

Students have access to the on-site library of the institution. In addition, they have access to a sufficiently large number of eBooks. The library subscribes to 21 periodicals in both Lithuanian and foreign languages.

However, the server room does not meet security requirements and there are not enough outlets in lecture rooms to allow students to use their personal laptops more.

6.1.2. There is continuous planning for and upgrading of resources.

The department at PK has a strong focus on developing practical skills of its students. In particular, this is important for the IE and DBOS study programmes. These practical skills are trained and exercised in professional practice modules which are organized in close cooperation with partners from the local industry.

To ensure the quality of the practice modules, the department has signed more than 200 agreements with social partners. However, only 16 of them are directly related to the field of Informatics Engineering, which might limit the options available to students searching for an adequate internship or job-position for a young professional.

The institution is aware of the fact that computer hardware and software suffer from rapid aging. This means it should be replaced on a regular and timely basis to ensure that participants of the study programmes have access to state-of-the-art equipment to train their skills and competencies.

ANALYSIS AND CONCLUSION (regarding 6.1.)

All facilities and resources at PK dedicated to the study programmes seem to be on an adequate level to efficiently support the study programmes. Classrooms are in general well equipped for face-to-face and online education. Students also have access to specialised computer rooms and laboratories. Specific facilities for people with special needs are well organised.

The department is a CISCO Computer Networks Academy partner. This is a strong and unique selling point as it allows the institution to award official CISCO certificates to students passing various network academy modules successfully.

In general, learning facilities and resources are adequate. However, while the technological equipment of the laboratories was adequate, the lecture rooms were not adapted for the use of students' personal devices. A conventional room was used as a server room, which was also used as a storage room, among other things.

Both department and institution understand the need of continuous and dedicated investments in infrastructure and equipment to create engaging spaces and stimulating environments adapted to active learning methods.

AREA 6: CONCLUSIONS

AREA 6	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Short cycle			X		
First cycle			X		

COMMENDATIONS

1. The PK institution has been successful to set up and establish the 1.5Mio€ „Informational Technology Study and Innovation Centre“, which is now accessible to the students of the IE and DOBS programmes to help them acquire practical work experience in several important areas such as e.g. robotics.

RECOMMENDATIONS

To address shortcomings

1. Design and implement procedures to ensure adequate infrastructure for students in the lecture rooms (including the installation of a sufficient number of power outlets) and adequate and secured rooms for the IT servers (including replacing the regular door with a security door).

For further improvement

1. Ensure that the number of social partners directly related to Informatics engineering is increased from only 16 to allow students a broader choice for their practice modules.

AREA 7: QUALITY ASSURANCE AND PUBLIC INFORMATION

7.1.	The development of the field of study is based on an internal quality assurance system involving all stakeholders and continuous monitoring, transparency and public information
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FACTUAL SITUATION

7.1.1. Internal quality assurance system for the programmes is effective

A separate chapter in the college statute is dedicated to ensuring the quality of academic activities. The academic council of the college has approved a quality policy, which sets out 10 lines of action for academic activities. The mechanisms and procedures for ensuring the quality of teaching activities are set out in a comprehensive document (49 pages) *Manual of the Internal Quality Assurance System for Studies*. Among other things, the responsibilities of the parties (deputy director, dean, lecturers, students, as well as different collegial bodies) are also stipulated. In the *Strategic Action Plan* for 2021-2026, two of the College's six strategic priorities are dedicated to the quality of studies. Regulations for monitoring quality indicators are laid down in *the Monitoring System of College Performance Indicators* (MSCPI).

The procedures for the development and management of study programs are laid down in *the Regulations for the Management of Study Programmes at Panevėžys College*. The most important instrument for development, analysing and monitoring study programs and teaching activities is the study program committee (SPC), whose work is based on the *Study Program Committee Regulations*. Changes to the study program are usually initiated by the Chair of the SPC. The Chair also reviews and discusses student feedback surveys and the improvement measures with the Dean and other stakeholders.

7.1.2. Involvement of stakeholders (students and others) in internal quality assurance is effective

There is no formal procedure for businesses to provide coordinated feedback; feedback is provided mainly informally on an individual company basis. Annual meetings are organized by PK with social partners, however, attendance by business representatives is low. They primarily participate during final thesis defences, with few final theses originating from real-world business cases. Despite these observations, company representatives who attended the meeting with the RP noted that the study programs were adjusted after providing feedback, which led to improvements in students' skills.

Although the self-evaluation report indicates that regular meetings with stakeholders are conducted, feedback from employers and graduates suggests that cooperation practices are not fully clear to all parties. Several business representatives reported limited understanding of how collaboration with the College is organised and expressed uncertainty regarding the specific skills they can expect from graduates, as well as whether the College fully understands the competencies required by companies. Some social partners stated that no formal meetings have been held to align study programmes with business needs.

Current observations indicate limited interaction between students and social partners, with students not involved in joint projects. Internship placements are assigned by the College, which limits student choice. Both students and lecturers have limited access to scientific research and experimental activities based on real-world scenarios due to the lack of collaboration with businesses. Furthermore, the College does not have formal

communication channels with social partners, and businesses provide feedback only through informal, individual cases that are not coordinated regionally.

7.1.3. Information on the programmes, their external evaluation, improvement processes, and outcomes is collected, used and made publicly available

The website of the College contains enough information (study programmes, admission requirements, study documents, employment of graduates, student surveys, etc). However, the website is sometimes inconvenient to use. For example, clicking on a document name in the document list does not open the document, but instead takes you to a webpage that only has the document name, *the Students' book* is from 2023/2024 academic year (https://panko.lt/wp-content/uploads/2023/08/Students_book.pdf). Some information (incl. Study calendar) is clearly outdated.

There is a comprehensive website dedicated to quality issues. On the other hand, although there is also an English version of the website, it mostly redirects to documents in the Lithuanian language.

7.1.4. Student feedback is collected and analysed

There are four feedback surveys targeted to students, about: 1) the subject and its teaching, 2) the study programme and its implementation, 3) the content and organization of the internship, and 4) the adaptation of first-year students. However, since responding to feedback surveys is voluntary, the feedback received may not be representative.

ANALYSIS AND CONCLUSION (regarding 7.1.)

The College has a comprehensive system for ensuring the quality of its educational activities. The very thorough definition of the tasks of study programme councils is particularly commendable.

While direct academic activities are of good quality, the quality of some support activities still has much room for improvement. Two problematic areas in particular should be highlighted here: 1) the marketing of study programmes and 2) the involvement of stakeholders in quality assurance. The fact that only 14 study agreements were signed in a field as important for the development of the country and the economy as Informatics Engineering over three years (2022-2024) is simply unacceptable.

Most of the information about the College's activities is publicly available through the College's websites. However, at times the information on the website was outdated.

In summary, while the quality system is well described in the College's documents, its actual implementation is inadequate.

AREA 7: CONCLUSIONS

AREA 7	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Short cycle		X			
First cycle		X			

COMMENDATIONS

1. The tasks and responsibilities of the study programme committee and the chair of the committee are thoroughly and clearly defined.

RECOMMENDATIONS

To address shortcomings

1. Develop and implement a system for the meaningful involvement of all stakeholders – especially employer representatives – in the development and execution of the quality system.
2. Establish and strengthen a more formal process to collaborate and communicate with social and industry partners to receive rapid and early feedback on current and future skill requirements of the labour market. This will help to sharpen the profile of the IE study programme.
3. Develop and implement mechanisms that would ensure high demand for study programmes.

For further improvement

1. Develop and implement mechanisms that would motivate as many students as possible to provide feedback.
2. Make sure the information on the College's website is up to date.

V. SUMMARY

This report addresses two study programmes of the Panevėžys Kolegija (PK): 1) short cycle study programme Development of Business Online Systems (DBOS) and 2) first cycle study programme Informatics Engineering (IE). Both study programmes is given a positive evaluation (total evaluation points 17 and 20, correspondingly).

The College has a comprehensive system for ensuring the quality of its educational activities. As an example of this, it should first be noted that the tasks and responsibilities for ensuring the quality of the study programmes have been set out in great detail. The Study Programme Committee (SPC) is the most important expert body for developing the study programmes and identifying important problems related to teaching activities and developing solutions, while the task of organising these activities lies with the head of the SPC. The tasks of both the SPC and its head have been described with exceptional thoroughness. At the same time, the fact that there are a number of problems associated with the study programmes and their implementation suggests that the implementation of the regulation governing the work of the SPC is not as expected. The shortcomings of the quality system are primarily evident in the fact that the IE study programme does not adequately consider the professional preferences of students and there is little interest in particular in the DBOS study programme.

The Review Panel (RP) considers the lack of students in assessed study programmes to be the biggest problem: between 2022 and 2024, only 14 students were admitted to the IE program and only 5 students to the DBOS program (this was in 2022; no study agreements were concluded with students for 2023 and 2024). Of these few students, 4 dropped out of their studies in the first year. Improving the situation requires not only doing better or more of what has been done so far, but also rethinking/reconceptualizing all academic activities. And employers and alumni should be more involved in this process than before. The identity of the renewed study programmes, their distinction compared to the study programmes offered by other Lithuanian universities and universities of applied sciences, as well as the perspectives for professional activity and growth should be clearly highlighted. Whether the main distinguishing features will be, for example, the extensive involvement of top specialists from companies in teaching, the transformation of the study programme from subject-based to product development-based, the creation of a module(s) in the study programme that addresses female students, or something fourth or fifth, or a combination of these, parties with broad - including international - experience should be involved in defining this. Of course, this must be accompanied by effective marketing of renewed study programmes.

A problem is the fact that the content of the IE study programme and the wishes of the students were not in line: while the study programme places a significant emphasis on hardware-related courses - computer architecture, networks (local and global), embedded systems, electronics, server administration, IoT, etc.) - the students clearly preferred software engineering and cyber security. Although the majority (8 out of 11) of the students who spoke to the experts were first-year students who had only been at the university for two months and had not yet had any experience of any hardware-related subjects, the aforementioned discrepancy points to clear communication problems – students are either not sufficiently familiar with the study programme, or they were not familiar with it when they entered the College, or the professional opportunities that open up after completing the study programme were not sufficiently explained to them.

Providing support to students and creating opportunities for them to engage in extracurricular activities should also be positively highlighted, through involving students in various clubs and other activities.

All facilities and resources at PK dedicated to the study programmes seem to be on an adequate level to efficiently support the study programmes. Classrooms are in general well equipped for face-to-face and online education. Students also have access to specialised computer rooms and laboratories. Specific facilities for people with special needs are well organised. The College hosts a local CISCO Computer Networks Academy (since 2005 already), and awards official CISCO certificates to students who successfully pass network academy modules.

The College must establish and strengthen a suitable and effective process for collaboration and communication with societal partners in order to better meet student expectations and obtain competent feedback on current and future qualification requirements in the labour market.

The Review Panel was well supported in the course of the preparation and conduction of the visit, why we express our sincere gratitude to the SKVC and PK staff. We note the good readability of the PK self-analysis report (SER) - it was informative, structured according to a system of standards and sufficiently focused. The only difficulty was the fact that the pages of the SER were not numbered.