



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Panevėžio kolegijos

**STUDIJŲ PROGRAMOS *ELEKTRONINIO VERSLO  
TECHNOLOGIJOS***

*(valstybinis kodas – 653E16001)*

**VERTINIMO IŠVADOS**

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**EVALUATION REPORT  
OF *ELECTRONIC BUSINESS TECHNOLOGY*  
(state code – 653E16001)**

**STUDY PROGRAMME**

At Panevėžys College

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Išvados parengtos anglų kalba  
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## DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	<i>Elektroninio verslo technologijos</i>
Valstybinis kodas	653E16001
Studijų sritis	Technologijos mokslai
Studijų kryptis	Informatikos inžinerija
Studijų programos rūšis	Koleginės studijos
Studijų pakopa	Pirmoji
Studijų forma (trukmė metais)	Nuolatinės (3), iššęstinės (4)
Studijų programos apimtis kreditais	180 ECTS
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Programų sistemų inžinerijos profesinis bakalauras
Studijų programos įregistravimo data	Įsakymo nr.: SV6-27, 2013-04-10

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## INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	<i>Electronic Business Technology</i>
State code	653E16001
Study area	Technological Sciences
Study field	Informatics Engineering
Type of the study programme	College type studies
Study cycle	First
Study mode (length in years)	Full-time (3), Part-time (4)
Volume of the study programme in credits	180 ECTS
Degree and (or) professional qualifications awarded	Professional bachelor in Software systems engineering
Date of registration of the study programme	10-04-2013, No. SV6-27 Study Quality Assessment Centre

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## I. INTRODUCTION

### 1.1. Background of evaluation process

The evaluation of on-going study programmes is based on the **Methodology for Evaluation of Higher Education Study Programmes**, approved by the Order No 1-01-162 of 20<sup>th</sup> December 2010 of the Director of the Centre for Quality Assessment in Higher Education (hereafter, SKVC). Evaluation is intended to help higher education institutions to constantly improve their study programmes and to inform the public about the quality of studies.

The evaluation process consists of the main following stages: 1) *self-evaluation and the Self-evaluation Report prepared by a Higher Education Institution (hereafter, the HEI)*; 2) *a visit of the Review Panel at the higher education institution*; 3) *preparation of the evaluation report by the Review Panel and its publication*; 4) *follow-up activities*.

On the basis of the study programme external evaluation SKVC takes a decision to accredit the study programme either for 6 years or for 3 years. If evaluation of the programme is negative such programme is not accredited.

The programme is **accredited for 6 years** if all evaluation areas were evaluated as “very good” (4 points) or “good” (3 points).

The programme is **accredited for 3 years** if none of the areas was evaluated as “unsatisfactory” (1 point) and at least one evaluation area was evaluated as “satisfactory” (2 points).

The programme is **not accredited** if at least one of evaluation areas was evaluated as “unsatisfactory” (1 point).

### 1.2. General

The application documentation submitted by the Higher Education Institution (HEI) follows the outline recommended by SKVC. Along with the Self-evaluation Report (SER) 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.	Additional teaching staff CVs missing from the SER annex
2.	
3.	

### ***1.3. Background of the HEI/Faculty/Study field/Additional information***

Panevezys College (hereafter, the College) is a public HEI founded in 2002. The College has undergone several structural reforms from its original faculty organization to a departmental organization in 2014 and now back to a faculty organization in 2016. The College is organized into three faculties.

Electronic Business Technology is a three-year Professional Bachelor programme for full-time students and four-year for part-time students. The Electronic Business Technology Study Programme is hosted by the Faculty of Technological Sciences.

The Review Panel was asked to evaluate two study programmes at the College in addition to Electronic Business Technology, namely Computer Network Administration and Information Systems. These study programmes have several similarities, such as several overlapping study subjects, overlapping teaching staff and a shared management structure. These similarities are reflected in the three SERs, which have several identical descriptions. Consequently, this report has similar descriptions as the two other evaluation reports when addressing aspects that are common to the programmes. However, the Review Panel want to emphasize that each of the study programmes has been evaluated individually on its own merits according to the information provided.

### ***1.4. The Review Panel***

The Review Panel was composed according to the *Description of the Review Team Member Recruitment*, approved by the Order No 1-01-151, 11/11/2011 of the Director of the Centre for Quality Assessment in Higher Education. The visit to the HEI was conducted by the Panel on 2<sup>nd</sup> of March, 2017.

- 1. Prof. dr. Frode Eika Sandnes** (Chair of the Team) – *Oslo and Akershus University College of Applied Sciences, Norway.*
- 2. Prof. dr. Jose Luiz Fiadeiro** - *Royal Holloway University of London, The United Kingdom of Great Britain and Northern Ireland.*
- 3. Adj. Prof. dr. Kjell Lemstrom** – *University of Helsinki, Finland.*
- 4. Mr. Tomas Kazragis** – head of IT department, *Adform, Lithuania.*
- 5. Mr. Ričard Siliuk** - *student of Information Systems, Kaunas University of Technology, Lithuania.*

## **II. PROGRAMME ANALYSIS**

### ***2.1. Programme aims and learning outcomes***

The aim of the Electronic Business Technology Study Programme is *to train software systems engineering professionals being able to create, maintain and develop electronic business solutions to optimize business processes which are related to the provision of services, organization of activities and production*. The learning outcomes are consistent with this aim as most of the learning outcomes are directly related to various aspects of Electronic Business Technology. The programme aims and learning outcomes are clear and well defined. They are publicly accessible in English on the College's Web site (<http://panko.lt/en/programa/elektroninio-verslo-technologijos/>).

The SER claims that the College use regular consultation meetings with graduates and social partners as key means to ensure that the programme aims and learning outcomes reflect professional requirements, public needs and the needs of the labour market. However, although only six students have graduated from the programme (in 2016) and the programme has so far attracted very few students the social partners interviewed during the visit support the programme. The Review Panel assess that it is premature to warrant a conclusion in relation to the demand for this Study Programme. It is, however, positive that the College has consulted the internationally recognized ACM curriculum guidelines for Computer Science degrees when the Study Programme was designed.

Overall, the programme aims and learning outcomes are consistent with the type and level of studies and the level of qualifications offered. The name of the programme, its learning outcomes, content and the qualifications offered are compatible with each other. The review panel commends the College in particular for having made sure that the learning outcomes are closely aligned with the subject domain.

### ***2.2. Curriculum design***

The curriculum of the Programme has been designed to comply with the description of the general requirements for the first cycle conferring degree full-time study programmes (Ministry of Education and Science, Order No. V-501, 2010), the General Regulation of Technological Sciences (Engineering) Study Field (Order No. ISAK-734, 2005) and in accordance with the Statute of Panevezys College.

The curriculum meets the legal requirements for first degree Professional Bachelor (college) study programmes as the scope of the Programme is 180 ECTS (minimum: 180 ECTS, maximum: 210 ECTS) of which 135 ECTS are defined as being in the study field (minimum: 135 ECTS). There are 15 ECTS of general college-level study subjects (minimum: 15 ECTS), 33 ECTS of internship practice (minimum: 30 ECTS) and a 9 ECTS final thesis of (minimum: 9 ECTS). The subjects are evenly distributed across the semesters as no semester contains more than 7 subjects, which is the legal maximum.

The scope of the programme is sufficient to ensure learning outcomes and its content reflects, to a good extent, the latest achievements in technologies. The review panel commends the College in particular for offering a wide range of subjects that contribute directly to the subject matter of the programme.

However, although the content of the subjects is consistent with the type and level of the studies, the curriculum is not fully aligned with the learning outcomes. In particular, Physics and Industrial & Civil Safety do not directly contribute to the learning outcomes, namely the first learning outcome (*to attain general knowledge needed to understand business environment and processes*), which concerns the understanding of business environments and processes. In particular, the term “Electronic” in the programme title does not require any knowledge of Electronics or any other physical science. The topics of Applied Mathematics and Statistics related to derivatives, integrals and differential equations are largely irrelevant to the Study Programme and the Expert Panel is not convinced that these contribute to learning outcomes 1 (*to attain general knowledge needed to understand business environment and processes*), 4 (*ability to apply the data analysis methods and tools researching business environment, monitoring business processes in terms of productivity and establishing improvement activities*), 5 (*ability to design e-business solutions to automatize processes and operations*), 6 (*ability to apply existing software systems, platforms or frameworks adapting them according to the specific needs of the company and integrating with existing systems*) or 7 (*ability to create new e-business systems, maintain and develop the available ones applying programming, database control, multimedia and mobile technologies*) as claimed in the documentation. Moreover, the contents of Applied Mathematics & Statistics and Discrete Mathematics overlap in terms of mathematical logic. Although mathematical logic is important it seems excessive and redundant to cover this in two different subjects. Judging from the descriptions Discrete Mathematics does support learning outcomes 1, 4, 5, 6 and 7, however, these connections are not explicitly stated in the documentation.

The review panel commends the College for including IT-related topics in Law. The Expert Panel strongly recommend that the College follow the same pattern and introduce topics more directly related to the Study Programme in Social Sciences, Professional Ethics, Psychology, Economics and Management.

The Review Panel encourages the College to establish a subject in Human-Computer Interaction, as Human-Computer Interaction and user-centric development is highly relevant for electronic business. Human-Computer Interaction is an interdisciplinary field that includes elements of cognitive psychology.

Another issue that needs attention is that of inconsistent descriptions of subjects that are shared, or seemingly shared, across different study programmes. For example: The subject Programming for Mobile Devices is offered to two other study programmes in addition to Electronic Business Technology, namely Information Systems and Computer Network Administration. This subject gives 6 ECTS for both the Information Systems and Electronic Business Technology Study Programmes, which share the same abstract and learning outcomes. However, the distribution of hours is different and the wording of the contents is different although they appear similar. However, a subject with the same name offered to the Computer Network Administration Study Programme has the same abstract and learning outcomes as the subject offered to Electronic Business Technology students, yet the number of hours is half and it only results in 3 ECTS.

The subject Databases and Information Systems is also offered to the three study programmes with the same number of credits. Those offered to Information Systems and Computer Network Administration are essentially the same apart from the learning outcomes, which are worded differently. The version offered on the Electronic Business Technologies Study Programme is however different from the other two in that, essentially, ORACLE APEX is taught instead of MS Access. There are also major overlaps between the mathematics subjects of the different study programmes, some with the same name and others with different names.

The College is encouraged to ensure that subjects that are shared across several study programmes are given consistent descriptions and the same number of ECTS. Subjects that are not shared between several study programmes should have unique names to prevent confusion. The College is also encouraged to rationalise the teaching of mathematics across all study programmes.



The review panel also highly recommends that the English version of the Applied Mathematics subject is revised as has several language issues, in particular: “Bull’s algebra” should probably be “Boole’s algebra”, “Tailor” should be “Taylor”, “MacLean” and “Macloren” should be “Maclaurin”. Moreover, it is not clear what is meant by “Lines of Figures and Functions”; it is not clear whether “series” or “polynomials” is referring to “Spreading functions in Furze line” related to Fourier series/transforms or if “Greius’s application codes” is “Gray’s code”.

The Study Programme is relatively young and this is reflected in the curriculum as some of the subjects are relatively updated and current such as Electronic Business Platforms and Tools, Web-based Systems Design and IT Security. The Review Panel therefore finds that the content of the programme sufficiently reflects the latest achievements in science, art and technologies.

### ***2.3. Teaching staff***

The Electronic Business Technology Study Programme is taught by 32 professors, docents, lecturers and assistants. All teachers hold at least a Bachelor degree, and 18.8% of the teachers hold doctoral degrees.

According to annex 3 of the SER, teaching experience appears to have been included as practical experience in the study field. Consequently, the reported percentage is therefore artificially high. The Review Panel interpret the Lithuanian regulations regarding 50% of the teaching staff having three years or more practical experience, as practical experience from the professional practice field, such as industry, to bring best practices into the Study Programme. Based on the CVs provided as an annex to the SER the Review Panel identified that 17 teachers, that is 53.1% of the teachers, appears to have more than 3 years of practical experience in the subjects they teach. Although, the legal requirement is met with a small margin, the College is vulnerable to sudden teaching staff changes and should therefore take preventative steps to reduce the risks of falling below the 50% minimum requirement.

In their comments to this report the College insists that 68.75% have 3 years of relevant practical experience. The Review Panel have carefully reviewed the CVs and the resubmitted staff list. The Review Panel finds that the College is somewhat rather flexible in their interpretation of what is considered practical experience and the Review Panel is not convinced by the explanations. For example, one teacher is listed as having 14 years of experience relevant to Electronic Marketing, Integrated Communication and Creative Strategy. However, this teacher is

listed only as having worked at Panevezys College as Head of the Project Department and as Head of the International Relations and Marketing Department. It is therefore not obvious to the Review Panel how this work experience from the College can match that of local businesses. Moreover, one teacher is listed as having 12 years of practical experience relevant to Programming Module, Computer Networks, Web-based Systems Management Practice, Programming for Mobile Devices and Framework Programming all based on serving as Head of the Panevezys College Cisco Computer Network Academy (since 2006) and engineer in KTU Panevezys faculty from 1979-1981. Clearly, there were no Web and mobile programming during 1979-1981 when this teacher worked as an engineer and it is therefore impossible to have this experience from this work. Moreover, it is not feasible that a Head of a Cisco Computer Network Academy will have practical experience with Mobile Devices and Framework Programming. Similar arguments can be presented for the teacher listed as having 12 years of experience related to Web-based Systems Management Practice, Technological Practice by working at Panevezys College and the teacher who is listed as having 9 years of experience related to Professional Ethics simply by working at Panevezys Sugar Works and Panevezys College.

According to annex 4 of the SER and additional documentation provided the educational background of the teaching staff comprises a total of 48 degrees (BA, MA and PhD), where only two degrees were obtained outside Lithuania (Russia and Belarus). The College therefore may consider prioritising applicants with foreign degrees in future recruiting processes to improve the academic diversity at the College. However, 16 teachers have strengthened their international experience through academic visits at foreign HEIs.

The Study Programme is offered full-time (three years) and part-time (four years). The programme has had two intakes of students: in 2013, nine students were admitted to the programme, and in 2016 five students. So far all students study part-time. The Study Programme can be viewed as still being in a start-up phase as there has only been two moderate intakes of students, namely 9 students in 2013 and 5 students in 2016. Therefore, during the academic year 2015-2016 there was only 6 students enrolled giving a low student/teacher ratio of 0.19. This ratio, however, may be misleading since most of the teaching staff also teaches on several other Study Programmes. However, the Review Panel is convinced that the individual needs of every student are adequately accommodated. In order to utilize the teaching staff more efficiently the College should make explicit efforts to attract more students.

There was a low teaching staff turnover during the reporting period. On one hand this is beneficial as this stability ensures continuity. On the other hand the College risks unfavourable

stagnation. At the moment the average age of teachers is approximately 52 years which relatively high. Overall age profile should be carefully considered in future recruitment processes.

The staff has produced an acceptable quantity of publications, also in international forums as all but 13 of the teachers have their works listed on Google Scholar.

According to the SER the teaching staff has limited pedagogic training. The College is therefore encouraged to offer its teaching staff formal pedagogical training and consider whether such courses should be compulsory for newly employed teachers, and that attendance and passing also could be a requirement for contract renewal of existing teachers.

#### ***2.4. Facilities and learning resources***

The College is located in the city centre and is therefore easily accessible through public transport. The College occupies several buildings that have varying levels of quality. The main building appears recently renovated. Other buildings, especially the one housing most of the Study Programme activities appear to require urgent maintenance, as their standard is far below the standard of the work environments found in enterprises where students will work after graduating. The main building is adapted for people with disabilities; however this is not the case for other buildings on campus. The buildings on campus should all be made accessible for disabled individuals. It is difficult to navigate between the buildings as there are very little signposting. It would be easier for all to navigate around campus if the College put up additional signs in strategic locations.

The SER states that the classrooms for lab work and practice are well-equipped and with enough work spaces to fit all programme students. However, the Review Panel did find that the facilities matched the descriptions in the SER during the site visit. The computers in classrooms vary in age. Each computer is accessed with one account, and students do not have any individual student accounts. Some of the computers appeared bloated as students store their work in the same desktop environment. Some of the rooms are spacious and others feel cramped. For example, students are paired in the network lab where they must work together using one table which looks uncomfortable. A few classrooms have a good standard, such as the computer-aided design (CAD) classroom.

The SER states that student can bring their own laptops to classes, but the rooms inspected during the site visit had insufficient number of power outlets, and power outlets in hard-to-reach locations requiring students to unplug class machines. The Review Panel experienced some

problems with Wi-Fi network. However, the students reported that the Wi-Fi-network is unproblematic.

The software described in the SER matched what was observed during the site visit. Most of the computers run newer version of the Windows operating system and students have access to Office 365. Some laboratories have outdated software and hardware, for example Windows XP, and the Review Panel got the impression that teachers have no plans to newer platforms, citing hardware driver issues as an excuse. Students use free software where possible and are issued with software licences when required, allowing them to work at home.

Random tests during the site visit revealed that the software configuration appeared to have some problems. For example, one computer could not be used until 10 minutes after startup. The College is recommended to review workstations configurations and install centralized configuration management tools. Moreover, all workstations operate with one common account shared by all students. All documents are stored on workstation desktop allowing everyone to access everything. The College should carefully consider making use of a centralized user management system, e.g. LDAP or Active Directory to improve the security.

The Library appears to be in good condition. According to the students the College's library is rarely visited by the students. The stock of printed textbooks is outdated. However, students have access to more recent e-books and access to research databases. The lecturers are responsible to use recently updated textbooks and materials, while some textbooks used in the curriculum is somewhat dated. According to the students most of the study materials are obtained from Moodle, and the students expressed satisfaction with this practice. However, to improve the relevance and quality of the material offered to students the College is recommended to systematically monitor and analyse teaching materials usage and needs.

The College provides sufficient arrangements for student practice. Students can choose from a list of companies or find a company themselves. The College has several agreements with various businesses in the region. Several students get job offers from the company where they did their practice.

## ***2.5. Study process and students' performance assessment***

The admission process to studies at Panevezys College is certified by the Ministry of Education of the Lithuanian Republic. Therefore, the admission and selection criteria are clear and openly available.

A document describing the study process is openly accessible via Panevezys College website (<http://panko.lt/>). The organisation of the studies appears simple and efficient and follow the typical pattern in Lithuania where 16 weeks are set aside for studies and 4 weeks for exams. The College offers several optional subjects. Lecturers present evaluation criteria and goals during the first lecture of the semester. Students' performance is monitored and reported to the administration in order to prevent students from dropping out or failing. A couple of first year students drop out from the study programme each year. The College explains this is due to students not checking the formal requirements and the expected work demands before enrolling.

The Student Scientific Society organizes research conferences and represents College in several national events. Students are also encouraged to attend subjects that introduce research, such as the subjects Applied Research, Computer Literacy and Information Control. The Student Scientific Society have their own research journal. The Review Panel thus finds that the students are sufficiently encouraged to participate in research, artistic and applied research activities.

The College has signed several mobility agreements with other HEIs from other countries with similar study programmes. Students therefore have opportunities to participate in international exchange programme. Students are introduced to mobility programmes during the Introduction Week, through meetings with former Erasmus students and College staff. Mobility opportunities do exist but some students are prevented from participating, usually due to financial reasons. During the lifetime of the Electronic Business Technology Study Programme two students participated in the Erasmus mobility programme. Two students on outbound mobility is acceptable given the low total number of students enrolled into the Study Programme. The Review Panel thus finds that students have good opportunities to participate in student mobility programmes.

Academic support for students appears adequate as the College organizes Introduction Week, assigns tutors for academic groups as well as the provision of individual tutors on request. The College uses the Virtual Learning Environment, Moodle. Social scholarships are also available. Students can postpone their assignment deadlines, and change exam dates. From the second year and onwards students are free to attend some classes on individual schedule. Students mentioned that teachers try to address issues that arise during classes and are generally responsive. Students are also free to attend student organized sports and entertainment events.

Students access their grades and assessment methods via AKADIS. Assessment of learning outcomes is done using a grade system with 10 levels. At the beginning of each subject the

teacher presents the subject description, learning outcome and assessment criteria. The grade in each subject consist of an aggregated result from coursework and the exam. Both oral and written exams are used. Students who fail an exam have chances to retake the exam. Therefore, the Review Panel finds that the assessment system of students' performance is clear, adequate and publicly available.

AKADIS is also used at the end of the semester to run questionnaire surveys related to the subjects. Students mentioned that they are asked to complete these questionnaires, but that there never had been any issues.

The College organizes annual student research conferences and takes part in other conferences organized by other HEIs. In addition, a periodical collection of student research studies are published. Since 2012, the College has been organizing the international electronics and informatics contest – EITech. Students are encouraged to participate in both conferences at the College and other HEIs.

So far very few students have completed the Electronic Business Technology Study Programme and there have been few chances to solicit feedback from employers regarding the graduates. The SER states that the College monitors students' career and average salaries, but other information may be equally relevant such as the reasons why some students do not work in the IT field and why some students have left the country. The College is recommended to maintain contact with Alumni and systematically solicit feedback from graduates and their employers as this may provide the College with valuable information for amending and improving the Study Programme.

## ***2.6. Programme management***

According to the SER the College quality management system adheres to the standard requirements of ISO 9001:2008 (specifies requirements for a quality management system where an organization needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements, and aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements) and LST EN ISO 9001:2008 (Lithuanian version of approved ISO standard 9001:2008, regulates the same aspects of quality management process). It has been outside the scope of this evaluation to validate conformance with these standards, however, the

Review Panel commends the College on their general efforts to follow such international and national quality standards.

There have been several organizational changes during the history of the College. The Study Programme is now hosted by a Faculty which until recently was a Department. This is a reversal to a similar structure set up when the College was established in 2002. However, the new organization from 2016 does not seem to have fully penetrated the organizations as several paragraphs of the SER still refers to the old department organization of 2016 and prior. The argument for the current organization is that the faculty deans resume more power. Consequently, the director has lost power.

The organization of the responsibilities for decision and monitoring of the implementation of the programme are similar to what is employed in other Lithuanian HEIs. The study programme is overlooked by the Informatics Engineering Programme Committee, which is organized within the Faculty. The chair of the Programme Committee reports to the Faculty dean. The Programme Committee is responsible for monitoring and analysing the study programme quality, develop the programme and evaluate changes to the subjects made by the teachers. The study committee is also responsible for maintaining contact with graduates and social partners. The Programme Committee also advises the Faculty head during the selection of new staff.

The strategic action plan of the College focuses on 11 criteria that according to the SER are regularly monitored, including students' final practice, percentage of students on exchanges abroad, students drop off, etc. Information about the employment of graduates leaving for abroad is also collected. According to the SER social partners and employers are regularly asked to complete surveys to correlate the suitability of the program to the needs of society and students. Occasionally, other areas are receive specific focus such as a survey of students' academic honesty 2014-2015, students experience with practice in 2015 and issues related to final year theses in 2016. The College is one of 25 Lithuanian HEIs that participate in the national Career Management Information System. According to the SER its consolidated report is used to analyse the employment situation of graduates.

The Electronic Business Technology Study Programme is relatively young as it started in 2013 and only 5 students have graduated. It is therefore very little sample of evidence to assess whether data about the programme is collected and analysed. For instance, the SER states that an analysis of the relevance of the programme was carried out in 2015. It is not clear how this survey was carried out as there were no graduates at the time. The Expert Panel is left with an

impression from the visit that surveys and reporting are performed routinely and mechanically, but that these materials could be analysed and discussed of more extensively and strategically.

Since the Study Programme only has existed since 2013 it has not yet been subject to an external evaluation. Given the fact that very few students yet have graduated from the programme it does not seem feasible to have performed an elaborate external evaluation before now. In fact, the Review Panel did not meet any graduates during the visit. However, the SER also emphasize that the ACM recommendations on curriculum design is consulted. The Expert committee applauds such efforts to align the curriculum design with international standards and conventions.

According to the SER lectures are involved in the quality improvement processes as they communicate with students, can propose changes to the study programme to the Programme Committee and the Dean of the Faculty. Similarly, students are regularly surveyed and are represented in the Programme Committee. Students can also voice their opinion via the College feedback system Ask. The SER states that representatives of employers are often invited in committee work when the study programme is revised. They are also participate in final thesis evaluation, where they get an impression of the qualification of the students.

The SER emphasises the important role of social partners in the development of the programme since the relevance of the curriculum is paramount to the success of the Study Programme. The Faculty therefore attempts to keep close contact with the practice field and local businesses. The expectations of social partners are therefore solicited regularly and used to revise the study programme. Representatives from the college regularly visits companies in the region and the college encourages internships in companies for its teaching staff. The involvement of stakeholders were confirmed during the site visit.

The SER emphasizes that students can voice their opinion in the Academic Council. However, there are no Electronic Business Technology students with seats on the Academic Council. Currently, one of the Information Systems student in the same Faculty holds such a seat as a student representative. However, it was not possible for the Review Panel to explore whether the Electronic Business Technology students are able to channel concerns via this student representative in practice.

The College has a well-defined study programme management structure on paper, but the management structure appears to leave room for improvement in term of its effectiveness and efficiency in practice. One serious issue that has not been captured by the internal quality



assurance system is the practical experience of the teaching staff. The SER states that 61.47% of the teaching staff have more than 3 years of experience in the subject field they teach. According to the CVs in Annex 4 of the SER the Expert panel find that only 53.1% of the teachers satisfies this criteria. There is thus a discrepancy between the College and Review Panel's calculations indicating that the management effectiveness needs improvement. The College needs to improve its routines for monitoring staff competence. Moreover, it is matter of concern that the College has been unable to detect and correct the problems associated with the apparent maintenance needs in some buildings.

The English version of the Study Programme description has several language problems. The SER also has several language mistakes. Moreover, the change from Department to Faculty has not been consistently propagated throughout the document, making the documentation harder to understand. This College explains this as follows: the organizational change was adopted in June 2016 and went into effect in September 2016, that is, the same time as the SER was first sent to the SKVC. The SER was prepared the first quarter of 2016, that is, a few months before the change was adopted. The Review Panel would like to point out that the College had a chance to send an updated version of the SER to SKVC at the beginning of 2017 with correct organisational descriptions as the material was not sent to the Review Panel before January 2017.

There are also several issues that are included in the SER that does not appear to apply to the Study Programme, such as the 2015 survey of graduates. It appears as if the SER appendices use different titles to describe the same subjects such as Economics basics versus Economics fundamentals, and Web-based technology versus web based system design. These are all signs that efficiency and effectiveness of the Study Programme management can be improved.

### **III. RECOMMENDATIONS**

1. Remove the redundant overlap in the contents of Applied Mathematics and Statistics and Discrete Mathematics.
2. Consider to replace Physics and Industrial & Civil Safety with subjects that better support the learning outcomes and is more relevant to Electronic Business Technologies.
3. Consider to revise Social Sciences, Professional Ethics, Psychology, Economics and Management with content that more directly address the learning outcomes of Electronic Business Technologies.
4. Introduce Human-Computer Interaction and user-centric development.
5. Ensure that each subject with distinct descriptions or number of ECTS is given a unique name, and that shared subjects are given the same name, descriptions and number of ECTS, to avoid misleading stakeholders.
6. Rationalise the teaching of mathematics across all study programmes.
7. The English Study Programme description needs careful proofreading and a major revision.
8. Recruit more staff with 3 years or more of practical experience related to the Study Programme.
9. More accurately monitor teachers' relevant practical experience, and emphasize relevant practical experience when employing new teachers.
10. Recruit more staff with foreign degrees or substantial international experience.
11. Take steps to lower the average age of teaching staff.
12. Offer compulsory pedagogical courses for newly recruited teacher and for teachers with renewed contracts.
13. Make the College accessible to students with disabilities.
14. Renovate and maintain the College buildings.
15. Evaluate the current power outlet situation and install additional power outlets at suitable locations throughout parts of the College used by students.
16. Abolish the practice of one common account for College computers and instead introduce centralized user management achievable with technologies such as LDAP or Active Directory.
17. The library should systematically monitor and analyse students learning resource needs.

18. Ensure that the evaluations focus on issues of importance such that critical areas are identified and necessary action is taken.

#### **IV. SUMMARY**

The College has developed a Study Programme that is likely to be highly relevant to small and medium sized businesses in the local community. The Electronic Business Technology Study Programme has a clear aim and learning objectives that are captured very well by the Study Programme name. The curriculum is relevant for the given learning outcomes, although there are some unnecessary overlaps across certain subjects and other subjects are not sufficiently related to the learning outcomes. The curriculum would perhaps be even more relevant for local businesses if there were more human-computer interaction and user-centric processes included as most business software involves user interfaces and people.

The teaching staff meets minimum requirements. However, the percentage of teachers with relevant practical experience is close to the minimum limit. The average age of the teaching staff is high. Their formal pedagogical training is limited.

The College has satisfactory facilities and learning resources. Some of the buildings are in need of maintenance.

The study process and students' performance assessment are good and on par with other Lithuanian HEIs.

The Study Programme management is evaluated as good. The College regularly collects data and conducts surveys and oversee processes for improvements of the Study Programme. The Electronic Business Technology Study Programme is still young with few graduates, and it is thus too early to fully assess how well the Study Programme is managed. However, there are already signs of management inefficiencies such as incorrect tracking of teaching staff competences and low quality of documentation in English. It is of utmost importance that a technological Study Programme such as Electronic Business Technology is responding to changes in technology, international trends, professional practices, demographics, society expectations and staffing situations in a timely manner.

## V. GENERAL ASSESSMENT

The study programme *Electronic Business Technology* (state code – 653E16001) at Panevėžys College is given a positive evaluation.

*Study programme assessment in points by evaluation areas.*

No.	Evaluation Area	Evaluation of an area in points*
1.	Programme aims and learning outcomes	3
2.	Curriculum design	2
3.	Teaching staff	2
4.	Facilities and learning resources	2
5.	Study process and students' performance assessment	3
6.	Programme management	2
	<b>Total:</b>	<b>14</b>

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

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

3 (good) - the field develops systematically, has distinctive features;

4 (very good) - the field is exceptionally good.

Grupės vadovas: Team leader:	Frode Eika Sandnes
Grupės nariai: Team members:	Jose Luiz Fiadeiro
	Kjell Lemstrom
	Tomas Kazragis
	Ričard Siliuk

**PANEVĖŽIO KOLEGIJOS PIRMOSIOS PAKOPOS STUDIJŲ PROGRAMOS  
ELEKTRONINIO VERSLO TECHNOLOGIJOS (VALSTYBINIS KODAS – 653E16001)  
2017-07-07 EKSPERTINIO VERTINIMO IŠVADŲ NR. SV4-154 IŠRAŠAS**

## V. APIBENDRINAMASIS ĮVERTINIMAS

Panevėžio kolegijos studijų programa *Elektroninio verslo technologijos* (valstybinis kodas – 653E16001) vertinama **teigiamai**.

<b>Eil. Nr.</b>	<b>Vertinimo sritis</b>	<b>Srities įvertinimas, balais*</b>
1.	Programos tikslai ir numatomi studijų rezultatai	3
2.	Programos sandara	2
3.	Personalas	2
4.	Materialieji ištekliai	2
5.	Studijų eiga ir jos vertinimas	3
6.	Programos vadyba	2
	<b>Iš viso:</b>	<b>14</b>

\* 1 - Nepatenkinamai (yra esminių trūkumų, kuriuos būtina pašalinti)

2 - Patenkinamai (tenkina minimalius reikalavimus, reikia tobulinti)

3 - Gerai (sistemiškai plėtojama sritis, turi savitų bruožų)

4 - Labai gerai (sritis yra išskirtinė)

<...>

## IV. SANTRAUKA

Kolegija parengė studijų programą, kuri, tikėtina, bus labai svarbi vietos bendruomenės mažoms ir vidutinėms įmonėms. Elektroninio verslo technologijų studijų programai nustatytas aiškus siekis ir studijų tikslai, kurie tinkamai atsispindi studijų programos pavadinime. Atsižvelgiant į nustatytus studijų rezultatus, studijų turinys yra tinkamas, nors jame randama nereikalingo dalykų dubliavimosi, o kai kurie dalykai nėra pakankamai susiję su studijų rezultatais. Studijų turinys galbūt būtų dar aktualesnis vietos verslams, jeigu į jį būtų įtrauktas žmogaus ir

kompiuterio sąveikos aspektas bei į vartotoją orientuoti procesai, nes dauguma atvejų verslui skirta programinė įranga veikia pasitelkus vartotojo sąsają ir žmones.

Dėstytojai tenkina minimalius reikalavimus. Tačiau dėstytojų, turinčių su studijų programa susijusios praktinės patirties, procentinė dalis tesiekia minimalų reikalavimą. Vidutinis dėstytojų amžius yra didelis, o formalusis pedagoginis pasirengimas – ribotas.

Kolegija turi patenkinamą materialiąją bazę ir metodinius išteklius. Kai kuriems pastatams reikia remonto.

Studijų procesas ir studentų mokymosi rezultatų vertinimas yra geri ir lygiaverčiai kitų Lietuvos aukštųjų mokyklų vykdomam studijų procesui ir studentų mokymosi rezultatų vertinimui.

Studijų programos valdymas yra geras. Kolegija reguliariai renka duomenis, vykdo apklausas bei prižiūri studijų programos tobulinimo procesus. Elektroninio verslo technologijų studijų programa yra dar nauja, absolventų nedaug, todėl per anksti visapusiškai vertinti studijų programos valdymą. Tačiau jau dabar pastebima neveiksmingo valdymo požymių, kaip netinkamas dėstytojų kompetencijų atsekamumas ir prasta dokumentų anglų kalba kokybė. Labai svarbu, kad vykdant tokią technologinę studijų programą kaip „Elektroninio verslo technologijos“ būtų laiku reaguojama į technologijų pokyčius, tarptautines tendencijas, profesinę praktiką, demografiją, visuomenės lūkesčius ir aprūpinimo personalu situaciją.

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### **III. REKOMENDACIJOS**

1. Iš taikomosios matematikos ir statistikos bei diskrečiosios matematikos dalykų turinio pašalinti nereikalingą besidubliuojančią informaciją.
2. Apsvarstyti galimybę pakeisti fizikos bei pramoninės ir civilinės saugos dalykus tokiais dalykais, kurie leistų pasiekti studijų rezultatus ir būtų labiau susiję su Elektroninio verslo technologijų studijų programa.
3. Apsvarstyti galimybę atnaujinti socialinių mokslų, profesinės etikos, psichologijos, ekonomikos ir valdymo dalykų turinį taip, kad jis padėtų tiesiogiai siekti Elektroninio verslo technologijų studijų programos tikslų.
4. Įtraukti žmogaus ir kompiuterio sąveikos bei į vartotoją orientuoto kūrimo aspektus.
5. Kad dalininkai nebūtų klaidinami, užtikrinti, kad kiekvienas dalykas, kuriam parengtas aiškus aprašas ar nustatytas ECTS kreditų skaičius, turėtų unikalų pavadinimą, o

bendriems dalykams būtų naudojami tie patys pavadinimai, aprašai ir apimtis ECTS kreditais.

6. Racionalizuoti matematikos dėstymą visose studijų programose.
7. Anglų kalbos studijų programos aprašą būtina atidžiai patikrinti ir iš esmės atnaujinti.
8. Priimti į darbą daugiau nei 3 metų ar didesnės su studijų programa susijusios praktinės patirties turinčių dėstytojų.
9. Atidžiau kontroliuoti tinkamą dėstytojų praktinę patirtį ir priimant į darbą naujus dėstytojus ypatingą dėmesį skirti jų tinkamai praktinei patirčiai.
10. Priimti į darbą daugiau dėstytojų, įgijusių mokslinį laipsnį užsienio šalyse arba turinčių didelę tarptautinę patirtį.
11. Imtis veiksmų siekiant sumažinti dėstytojų vidutinį amžių.
12. Padaryti pedagoginius kursus privalomus naujai priimtiems dėstytojams ir dėstytojams, kurių sutartys buvo atnaujintos.
13. Neįgaliems studentams užtikrinti galimybę patekti į Kolegijos patalpas.
14. Renovuoti ir suremontuoti Kolegijos pastatus.
15. Įvertinti esamą padėtį dėl elektros lizdų ir visose Kolegijos patalpose, kuriomis naudojami studentai, tinkamose vietose įrengti papildomus elektros lizdus.
16. Panaikinti vienos bendros Kolegijos kompiuterių paskyros naudojimo praktiką ir įdiegti centralizuotą vartotojų valdymą taikant tokias technologijas kaip LDAP protokolas arba aktyvusis katalogas (angl. *Active Directory*).
17. Biblioteka turėtų sistemingai kontroliuoti ir analizuoti studentų poreikius metodiniams ištekliams.
18. Užtikrinti, kad atliekant vertinimą dėmesys būtų skiriamas svarbiems klausimams ir būtų nustatytos kritinės sritys bei imtasi reikiamų veiksmų.

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Paslaugos teikėjas patvirtina, jog yra susipažinęs su Lietuvos Respublikos baudžiamojo kodekso 235 straipsnio, numatančio atsakomybę už melagingą ar žinomai neteisingai atliktą vertimą, reikalavimais.

Vertėjos rekvizitai (vardas, pavardė, parašas)