



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Vilniaus technologijų ir dizaino kolegijos  
**STUDIJŲ PROGRAMOS**  
***GELEŽINKELIO TRANSPORTO INŽINERIJA (653E22004)***  
**VERTINIMO IŠVADOS**

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**EVALUATION REPORT**  
***OF RAILWAY TRANSPORT ENGINEERING (653E22004)***  
**STUDY PROGRAMME**

at Vilnius College of Technologies and Design

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Išvados parengtos anglų kalba  
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Vilnius  
2015

**DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ**

Studijų programos pavadinimas	Geležinkelio transporto inžinerija
Valstybinis kodas	653E22004
Studijų sritis	Technologijos mokslai
Studijų kryptis	Sausumos transporto inžinerija
Studijų programos rūšis	Koleginės studijos
Studijų pakopa	Pirma
Studijų forma (trukmė metais)	Nuolatinė (3) iššęstinė (4)
Studijų programos apimtis kreditais	180
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Geležinkelių transporto inžinerijos profesinis bakalaūras
Studijų programos įregistravimo data	2012-02-01

**INFORMATION ON EVALUATED STUDY PROGRAMME**

Title of the study programme	Railway Transport Engineering
State code	653E22004
Study area	Technological studies
Study field	Transport engineering
Type of the study programme	College studies
Study cycle	First
Study mode (length in years)	Full time (3) Part time (4)
Volume of the study programme in credits	180
Degree and (or) professional qualifications awarded	Professional bachelor in Railway Transport Engineering
Date of registration of the study programme	February 2, 2012

## CONTENTS

<b>I. INTRODUCTION .....</b>	<b>4</b>
1.1. Background of the evaluation process .....	4
1.2. General.....	4
1.3. Background of the HEI/Faculty/Study field/ Additional information.....	5
1.4. The Review Team.....	5
<b>II. PROGRAMME ANALYSIS .....</b>	<b>6</b>
2.1. Programme aims and learning outcomes.....	6
2.2. Curriculum design .....	7
2.3. Teaching staff .....	8
2.4. Facilities and learning resources .....	9
2.5. Study process and students' performance assessment.....	10
2.6. Programme management .....	11
2.7. Examples of excellence * .....	12
<b>III. RECOMMENDATIONS .....</b>	<b>13</b>
<b>IV. SUMMARY.....</b>	<b>14</b>
<b>V. GENERAL ASSESSMENT .....</b>	<b>15</b>

## I. INTRODUCTION

### 1.1. Background of the evaluation process

The evaluation of on-going study programmes is based on the **Methodology for evaluation of Higher Education study programmes**, approved by Order No 1-01-162 of 20 December 2010 of the Director of the Centre for Quality Assessment in Higher Education (hereafter – SKVC).

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

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

The programme is **accredited for 6 years** if all evaluation areas are 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 HEI follows the outline recommended by the SKVC. Along with the self-evaluation report and annexes, the following additional documents have been provided by the HEI before, during and/or after the site-visit:

No.	Name of the document
1	2015-2017 College Strategy plan
2	2014-2015 Applied research plan
3	Questionnaires and analysis (students, social partners, teaching staff)
4	Lithuanian National strategy for land transportation 2015
5	Quality manual
6	Department action plan

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

Vilnius College of Technologies and Design (VCTD) was formed on 1 September 2008 by a merger of Vilnius Technical College and Vilnius College of Construction and Design. VCTD is currently the largest College of technology and arts in Lithuania. The College has a long tradition of educating qualified professionals of technology, art and social sciences. VCTD programmes are focused on the practical application of scientific knowledge in close contact to industry and the business world. The College develops applied research, art and consultancy, organises training courses, interacts with the stakeholders and participates in Erasmus and other programmes.

Management bodies of the College are the College Director, being the sole governing body, the Council of the College and the Academic Council. Students' interests are represented by the Students' Union. VCTD centrally administers financial and material resources and the use of accounting, procurement, document management, staff recruitment and dismissal, student enrolment and withdrawal. The college management is regulated by VCTD statute, faculty regulations, rules of procedures, description for qualification requirements for teachers and other College documents.

Academic planning activities are decentralised in order to promote the autonomy of the faculties and departments. VCTD has four faculties: Design, Civil Engineering, Petras Vileišis Railway Transport, and Technical.

The supreme faculty academic self-governance is the Faculty Council. The Faculty Council makes proposals to the Academic Council on study programme implementation and enforcement of quality assurance, assesses the activities of the departments, the quality of studies and applied scientific research. The Dean of the Faculty ensures the quality of studies and oversees the scientific research.

The committee of the Railway Transport Engineering study programme, which consists of stakeholders, university representatives, the College representatives and students, is responsible for the monitoring and updating of the study programme. The Study Programme Committee provides suggestions on programme improvements to the dean.

The study programme of Railway Transport Engineering has been carried out in the form of full and part-time studies at Petras Vileišis Railway Transport Faculty (RTF) since 2012. The aim of the study programme is to prepare competitive, highly-qualified professionals in the field of Railway Transport Engineering.

The self-evaluation of the Railway Transport Engineering study programme was carried out by a team of 7 people, including the dean, lecturers and students.

### ***1.4. The Review Team***

The review team was completed according *Description of experts' recruitment*, approved by order No. 1-01-151 of Acting Director of the Centre for Quality Assessment in Higher Education. The Review Visit to HEI was conducted by the team on 26 November 2015.

1. **Prof. Dr. Clive Neal-Sturgess (team leader)** Emeritus Professor of Mechanical Engineering, University of Birmingham (UK),
2. **Prof. Dr. Haldor Jochim** Professor of Railway and Transport Planning, Aachen University of Applied Sciences (Germany)
3. **Mr. Ger Reilly**, Head of School, Mechanical & Design Engineering Dublin Institute of Technology (Ireland),
4. **Prof. Dr. Bojan Dolšak**, Dean of the Faculty for Mechanical Engineering, University of Maribor (Slovenia);
5. **Mr. Audrius Jasėnas**, *Director of public establishment “Intechcentras” (Lithuania)*,
6. **Ms. Monika Simaškaitė**, Student at Kaunas Technical university (Lithuania)

## II. PROGRAMME ANALYSIS

This section of the report generally refers to both the full-time and the part-time programme. Specific remarks about each programme are indicated as such.

Since the self-evaluation report (SER) is segmented into paragraphs, the text will refer to the relevant SER paragraph (§) numbers.

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

The programme aims and learning outcomes are defined in a generic form for application on several modules (§19). More detailed and module-specific learning outcomes are entailed in the course descriptions. At the end of each subject description,

- the learning outcomes of the study programme,
- the subject learning outcomes,
- the learning and teaching methods and
- student achievement assessment methods

are presented.

The learning outcomes are based on the international guidelines; they are published in the College website. The study programme is based on several documents by the Lithuanian government and the Lithuanian railways about long-term-strategies of the transport and railway systems in Lithuania as it was also evident and presented during the on site visit.

The College states that part of the learning outcomes may be adjusted due to “rapid change of railway traffic management systems, their maintenance and exploitation technologies” (§31). It should be more specific about the relevant aspects of the rapid change mentioned and which learning outcomes may be affected. For instance, there is no strategy for the case of a change in the environment concerning the main employer, the Lithuanian State Railways. Secondly, according to the open-access policy of the EU, a national strategy worked out by a National Railway soon will be a thing of the past. There may still be a national rail network, but there will be more than one player in other railway services in the future. The College does not have a strategy for this yet. There is some case for the development of an independent assessment method by the College itself.

Between 88 and 99 per cent of each year's graduates have found employment (§115), which is a good achievement, fostered also by the Career Centre (§109). It can thus be said that the programme fulfils the needs of the labour market. As stated during the visit the main employee is Lithuanian State Railways and big portion of students are also already working in this company and college provides upscaling of qualification.

The programme also leads to the qualification for higher research at universities if a bridging course jointly developed with Vilnius Technical University is attended. The expert team appreciate this co-operation between a college and a university in related programmes as a valuable achievement.

The framework of programme aims, learning outcomes and course units is designed in a strictly top-down way. Each learning outcome is related with several course units, so that many course units appear several times, assigned to more than one learning outcome. The college and programme committee should review these to ensure that each course unit is listed only if it makes a significant contribution to the learning outcome referred to.

The courses fulfil specific learning outcomes, which are a subset of more generic aims of the study programme. In other words: The learning outcomes achieved in a module represent just a part – or piece - of the aims of the study programme. All courses taken together in one set make sure that the aim of the study programme is achieved which is a good systemic approach.

Apart from the anomalies mentioned in the previous point, the programme fulfils this requirement, as it entails railway transport engineering, fundamental technological sciences, railway traffic management systems, structures and work technologies. Coursework and final papers show a generally high academic level. The required level of Professional Bachelor is clearly achieved.

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

As is obvious from the references in the SER, the curriculum design meets the legal requirements. The scope of the programme – 180 ECTS credits. General subjects of collegial studies comprises of 15 ECTS credits, for practical placement it is dedicated 30 ECTS and final thesis consist of 12 credits.

The subjects are spread fairly evenly (6-7 subjects per semester) and the exams and course papers are too (2-4 per semester and 0-1 per semester, respectively). The practice modules are more concentrated. As far as the credits are concerned this is taken care of by a slightly lower number of examinations in those semesters. The internships (professional practice) take place in blocks at the beginning and the end of terms, so that the teaching of the modules is not interrupted and every student has the opportunity to attend all modules. Since the employers do not seem to feel overwhelmed by several students entering their internships at the same time, this concept is viable.

The modules are structured in a logical and systematic way. It is obvious that there has been a process of coordination, so that module contents are not repetitive. In some cases the modules are small in size, with just 3 ECTS. That might be a concern if it led to a number of exams higher than otherwise necessary, but, according to the opinions of students and alumni that does not seem to be a problem (§33)

During the on-site inspection interviews with teachers showed that there is some variation of teaching methods, though not in a consistent manner. Some teachers use innovative teaching methods such as group work, presentations by students and creative workshops, but others do not seem to do so. Extensive course work by students is a regular part of the teaching. Accumulative scores are also used in many modules; the students have favourable views about this method.

Teaching for part-time students is blocked so that they can get block release from work, which is attractive to both the students and the employers, thus contributing to the attractiveness

of the programme. Students are also taken care of individually, including on Saturdays, and tutored with their work; they can also use the training facilities of the Lithuanian Railways.

In summary, the content and modules are generally appropriate for the achievement of the intended learning outcomes, though there is some scope of improvement as to the systematic use of a variety of teaching methods.

As the programme leads to a “Professional Bachelor” degree, the main focus should lie on practice-related competences rather than scientific achievements. The structure of most of the modules, many of them very specific (e.g. Line Block Systems, Station Systems, Technical Diagnostics of Rolling Stock, Visual and Security Systems, Railway Information Systems, Railway Track and Station Equipment), show that this objective has been pursued in the setup of the curriculum.

Since the emphasis of the organisation is on educating students for the workplace, rather than research and academia, the level of knowledge to be conveyed is likely to be achievable in the context of the organisation and staff.

That said, there is still some gap between modules such as Philosophy or Law, which have no obvious correlation to the practical work of the graduates to come, and modules such as “Line Block Systems”, which are entirely focused on practical application on the workplace.

The introduction of general-knowledge modules has been due to the recommendations by evalag in 2012. In order to offer some choice for the students, the modules are open for students of other faculties as well, preventing them from being tailored to the requirements of the course. Though staff, students, alumni and employers appear to be happy with this concept there is some scope for rethinking the contents of those modules to link them better to the needs of the students. For instance, a module such as Economics would offer plenty of opportunity to relate its contents to transport and railway topics.

The module descriptions of the specialist modules show that state-of-the-art technology is generally taught. However, the definition of state-of-the-art technology has been more or less left in the hands of the Lithuanian Railways. It is not a matter of course that current technological development or research is included in this definition.

The module “Railway Track and Station Equipment” is a case in point. It contains some expertise in tracklaying, alignment and related areas, such as geodesy and capacity considerations. However, with 6 ECTS credits the workload cannot possibly be sufficient for teaching all these subjects in any detail. Examples of contents most certainly not entailed are slab track construction and clothoid turnouts.

Thus there is some scope for improvement in the curriculum if the college relaxes its adherence to the current ideas of the Lithuanian Railways somewhat and puts in some more own ideas about innovative module contents.

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

The pedagogical workload of the lecturers is governed by the legal acts of Lithuania, recommendations of the Ministry of Education and Science, documents approved by the College Description of college lecturers’ workload formation procedures. According to the documents the pedagogical workload of the lecturers consists of 1,548 hours (§73).

This approximates 18 teaching hours per week, which is in line with international standards for lecturers at Universities of Applied Sciences and comparable organisations.

According to general academic standards, teachers should have at least the level of qualification their students are to achieve. As all teachers have at least Master qualification this requirement is fulfilled. About two thirds of teachers have more than three years of industry experience.

The recommendation by evalag to invite foreign guest lectures has not been pursued to a sufficient degree, as it has happened on only one occasion in 2014 (§65).



There are 36 teachers on the list the College has provided. Some of them do not teach in both the full-time and the part-time course, so that the teacher numbers quoted in §§ 51 and 141 differ. The calculation of the student-teacher ratio is not self-explanatory, but the on-site interviews with teachers and students have shown that adequate teaching is provided.

Staff turnover is low, with just four new teachers during the assessment period 2012-2015 (§52). Though staff turnover can be a driver and motivator for staff, in teaching a high degree of continuity tends to be beneficial for the quality of teaching. The average pedagogical experience is 16 years and ranges from 1 year to 32 years. There is no over-representation of certain ages in the teaching staff.

Some part of the professional development of staff is done by academic exchange with other universities (§63). Four to six staff took part in such exchanges each year. Three teachers have participated in company internships.

Moreover, teaching/education projects, attendance of conferences and publishing in scientific journals are practised as further elements of staff development. The number of such activities is not very high (usually a handful), but in total there are some activities to be seen (§§65-68). The claim from the self-evaluation report (§69) that all lecturers have equal conditions for qualification could be confirmed during the site visit. The lack of funding for staff development the evalag report of 2012 mentions does not seem to be a major problem any more, which has been confirmed by the senior administration.

Research is not in the focus of teachers' attention. Just two cases of lecturers being active in research are mentioned in the self-evaluation report (§59). This finding was confirmed by the meeting with the teachers and the administration – who, incidentally, claimed three researchers. The College itself states that activities of applied research are insufficient (§75), though during the visit the administration reported that they had installed five-year plans and three-year plans for research and announced that participation in an EU research network programme is being planned.

The evaluators had the impression - reinforced by teachers' remarks during the visit - that the lack of applied research is mainly due to the fact that the College relies upon the Lithuanian Railways providing it with research ideas and topics. Some members of staff confirmed that their industry partners were not always as innovative as they, college staff, themselves would wish. The peers had the chance to find some confirmation for this claim during the interviews with external stakeholders, who defined applied research more narrowly than an academic organisation usually does. The peers recommend the College to additionally develop and pursue its own research strategy. The aim should be to develop project ideas for applied research that could then be offered to the Lithuanian Railways or other railway-related companies.

It seemed to the evaluators that the Lithuania-based perspective is a restriction for the programme as a whole. Some engagement in an international context could generally be beneficial to the long-term prospects of the programme.

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

There are 15 classrooms for various purposes and of various sizes (§76). The three largest classrooms have 60 places each. With 93 students in total (§55), there are about 30 students each year, so that classroom sizes are sufficient. Computer classrooms are smaller, so that streaming has to take place (sensibly, in the case of self-learning units).

There are several laboratories, with a variety of hardware and software products related to railway technology and operation (fire alarm system, track circuits, traffic lights, turnouts, crossings, control cabinet, axle counters, traffic management system).

The laboratories cover the variety of old and new technologies currently used by railways. Basic technologies such as an air brake simulator are available, and complex technologies relay simulators are also represented. New technological equipment has considerably improved since the last accreditation, mainly by acquisition of a modern cab

simulator and two simulators of solid-state interlocking signal boxes. Especially the donations of equipment by social partners are a good achievement and to be encouraged also for the future. The combination of old and new technologies, which are both currently in use in practice, provides excellent preconditions for up-to-date and hands-on teaching.

If there is any qualification about the overall quality of facilities, it is about the state of the college building and in particular the social/recreational, dining and circulation spaces. There have been visible improvements of this old building in recent years, but the general quality is still not good. Since this does not affect the quality of the learning facilities as such and can be influenced by the college management only to a limited degree, it is not taken into account in the marking.

The Industrial Practices I and II (internships) as well as the Final Practice are implemented in the study programme, so that opportunities for students' practice are available in sufficient measure. Usually students apply for an internship themselves, though the College has the final say in its assignment. There is a formal agreement between the provider of the internship and the College, and the college as well as the company send supervisors. Part-time students usually do their internships at their usual workplaces. Internship locations are spread roughly evenly within Lithuania, reflecting the structure of the Lithuanian Railways and enabling most students to find a place near where they live. Part-time students live in dormitories during their spells at the college.

During the first programme accreditation it had been found that the library stocks were not sufficient for conducting a modern scientific study programme. The college has improved on this point considerably. The claim from the self-evaluation report could be positively confirmed during the site visit. Relevant textbooks are now available, mostly online as e-books; one teacher has written relevant textbooks himself. Additionally, the railway library in Vilnius is also available to the students. The students confirm that they use both this facility and the college library extensively for study and literature research.

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

The admission procedures are stipulated by the Ministry of Education and Science of the Republic of Lithuania and executed by the Association of Lithuanian Higher Education Institutions for Organising Joint Admission, a public body (§86). Admission is based on a weighted score of the school-leaving results of the applicants. The weighting of the scores varies according to the study subject. This seems to be an adequate procedure, but, as the admission process is not under the jurisdiction of the College, is not subject to the accreditation decision.

The module descriptions and the response to the peer questions during the on-site visit showed that the study process is adequately organised. The College appears to have much experience in teaching. Teachers are responsible for outlining the module descriptions and carrying it out; the study plan is adequately spread, and the students as well as alumni have also shown their satisfaction with the way teaching is organised.

A weak point might be the drop-out rate, which appears to have increased from 12% (quoted in evalag's report from 2012) to 26%. In the context of a part-time programme, 26% would be in line with other such programmes, but for a full-time programme this would be relatively high. The senior management explains that the drop-out rate reflects the students' necessity to work, which results in gaps or break-ups of study careers and has become an even stronger trend in recent years.

The students, when asked about the drop-out rate, added that in a few cases individual lack of motivation and the academic level of the course may have led to drop-outs but denied that any inherent problem with the programme, such as bad organisation or exaggerated workload, were the cause for the drop-outs. From the peers' point of view, this seems plausible.

A few students have taken part in mobility programmes (§102), but the College itself states that *“the number of students who participate in international exchange is not big”* (§116). During the site visit students and alumni confirmed that they would not see much advantage in going abroad because they expect to find jobs with the Lithuanian Railways. In addition, they argue that the cost of going abroad into a Western European country would be too high. As a consequence, those who have been abroad went to other Eastern European countries (Latvia, Poland, Bulgaria) and found their experience not comparable to what would have been possible in a Western European country. Senior management points out that it is also difficult to find study programmes to match in other countries, due to the specificity of the programme. From the discussion with students, it seems that they are not well aware about the opportunities for applying for Erasmus scholarships.

On the other hand, some foreign guest students have been at the VTDK (from Spain and Turkey), which is also an aspect of internationalisation.

The self-evaluation report (§§104 and 109) outlines a variety of methods used to support students with their current and further academic activities. In fact, the students are aware especially about the existence of scholarships, but at the same time repeatedly stated that they would wish the College to offer even more of them. So there should be some motive for the College to try and improve the coverage of scholarships.

If a greater variety in teaching and learning methods is to be achieved, though, a greater variety in exam formats should also be provided. At least some credit points, either of exams or as part of the accumulative score of modules should be earned orally to broaden the variety of competences examined.

Though the module descriptions do not always state clearly what kind of exam is held, the students seem well aware of what is expected from them, so that the details of publication do not seem to be an issue. The structure and extent of contact hours and course work as depicted in documents vary considerably, but, according to the interviews on-site, the actual structure is clear and easy to deal with for all insiders. It is recommended that the documents are brought into line with actual practice.

During the on-site visit, all groups interviewed showed their overall satisfaction with the graduates. The employers added that it is necessary for the graduates to carry on learning and improving on their jobs; the willingness and motivation to do this as well as the talent of graduates vary in this respect, though that did seem to be a general qualification of graduates from anywhere in general.

## **2.6. Programme management**

The decision-making process is described in minute detail in the self-evaluation report (§§117-121). According to this, there is a clearly structured procedure for developing the study programme, which involves all stakeholders, such as teachers, faculty management, college management, and students. (Only alumni do not seem to have been invited for collaboration systematically, since none of them displayed any knowledge about the documents.) It combines top-down with bottom-up processes, e.g. by stipulating that the initiative for improvements can come from any stakeholder involved.

The Committee for the Study Programme (§ 118), in which all major stakeholders are represented, is not only responsible for programme development but also for their implementation. According to §§123 and 124, students also participate in implementation - by active involvement and participating in surveys. The responsibilities of the other participants in the processes are stipulated in detail in §§126 and 127. According to the senior management, there is at least one external member per study programme committee. The senior management emphasises the contributions by external stakeholders that are made through informal co-operation, in meetings etc, and point out that a significant number of teachers have been employed full-time as well as part-time from the external partners (mainly Lithuanian Railways

and their subsidiaries), so that professional contacts have been held up continuously. The peers acknowledge this.

On the other hand, the faculty itself states that “students and stakeholders are not sufficiently involved in the quality assessment of the programme”, producing some contradiction to its own words. The administration clarified that they would have liked more involvement in writing the SER from external stakeholders, though they were satisfied with the discussion about the report once the draft had been presented to the external partners.

As to data about the implementation and management of the programme, several surveys are undertaken for analysing the success of the programme. There is an elaborate system of documents, which could be viewed during the on-site visit. The self-evaluation document was assembled as group work with contributions from students, staff and employers, who met at least once a month for this purpose.

This system is to be lauded, though there is also some room for improvement. First, it appeared that quantitative measures are not much used. Secondly, and more significantly, the students interviewed said that, usually, they just participate in the teaching evaluation and the end-of-semester survey, but almost never get a feedback by either teachers or the faculty about the results of those evaluations. Both items should be dealt with, so that the processes actually help the improvement of the programme. It is recommended that the college, first, broaden the participation of students in the quality process and, secondly, find a way to make sure that feedback is given to the students about the results of the teaching evaluation in an appropriate way.

## ***2.7. Examples of excellence \****

The laboratory equipment is outstanding, even in comparison with international standards, in terms of its variety of technologies relating to the programme, from old (but still-in-use) to very modern. Students get a very good impression of the operating technologies railways use and excellent opportunities for being trained in those technologies before entering the workplace. The quality of the equipment is also a sign of the employers’ very strong support for the organisation as there is evidence of some equipment having being donated by industrial suppliers to the programme.

### **III. RECOMMENDATIONS**

1.  
The college should develop strategies for the case that EU regulations change the market of railways in a way that the Lithuanian Railways may cease to exist in its current form.
2.  
There is some scope for adapting the contents of the generic modules to link them more to the needs of the students.
3.  
The college might relax its adherence to the current ideas of the Lithuanian Railways somewhat and puts in some more own ideas about innovative module contents.
4.  
The college should uphold and intensify its efforts of internationalisation as to the exchange of teachers and students in both directions.
5.  
For improving its research record, the college might develop project ideas for applied research that could then be offered to the Lithuanian Railways or other railway-related companies.
6.  
At least some credit points, either of exams or as part of the accumulative score of modules should be conferred orally to broaden the variety of competences examined.
7.  
The college should find a way to make sure that feedback is given to the students about the results of the teaching evaluation in an appropriate way.

#### **IV. SUMMARY**

The Railway Transport Engineering programme of the VTDK has shown its merit to be reaccredited for a period of further six years due to a number of good points to be appreciated.

First of all, the programme is very well adapted to the needs of the main employer of its graduates, the Lithuanian State Railway. The employers are generally very satisfied with what the college does in terms of students' education and training and support the college in many ways, such as with donations of equipment and contacts useful for organising and supporting internships to provide the students with hands-on practical training and insights for their needs as graduates.

The students also appreciate the quality of the teaching and the job prospects they are offered through attending this programme and are very supportive of the college. Some use the bridging course negotiated with Vilnius Technical University to proceed to Master studies. The high standard of expertise in teaching bears fruit in the high quality of students' coursework and theses.

Thanks to the donations and some shrewd exploitation of EU funding opportunities the college has acquired quite a good stock of laboratory equipment that is well suited to serve the needs of students and teachers. It is also visible that the college has improved significantly in this respect since the last evaluation in 2012.

The panel have also identified some areas where the college could improve on its record.

One area of improvement concerns the industry's current domination by an established national railway carrier, which is small in a European context and not very research-active.

The college, on the other hand, should seek ways to improve its research record more actively. To achieve this, it could possibly seek international partners, also in view of pending international developments in the railway business. More international exchange for both staff and students, in both ways, is also recommended to support this objective.

As to its internal affairs, the peer review team recommends the college to disseminate the results of internal evaluation college-wide in a way that swift feedback from teachers and administration to students becomes possible, thus closing the feedback loop of its quality assessment.

## V. GENERAL ASSESSMENT

The study programme Railway Transport Engineering (state code – 653E22004) at Vilnius College of Technologies and Design is given **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	3
3.	Teaching staff	3
4.	Facilities and learning resources	4
5.	Study process and students' performance assessment	3
6.	Programme management	3
	<b>Total:</b>	<b>19</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: Clive Neal Sturgess

Grupės nariai:

Team members: Haldor Jochim

Ger Reilly

Bojan Dolšak

Audrius Jasėnas

Monika Simaškaite

&lt;...&gt;

## VI. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus technologijų ir dizaino kolegijos studijų programa *Geležinkelio transporto inžinerija* (valstybinis kodas – 653E22004) vertinama **teigiamai**.

Eil. Nr.	Vertinimo sritis	Srities įvertinimas, balais*
1.	Programos tikslai ir numatomi studijų rezultatai	3
2.	Programos sandara	3
3.	Personalas	3
4.	Materialieji ištekliai	4
5.	Studijų eiga ir jos vertinimas	3
6.	Programos vadyba	3
	<b>Iš viso:</b>	<b>19</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)

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## IV. SANTRAUKA

Tai, kad VTDK vykdoma studijų programa *Geležinkelio transporto inžinerija* yra kas šešis metus akredituojama iš naujo, yra privalumas, kurį patvirtina daugelis gerų šios programos ypatybių.

Visų pirma ši programa yra labai gerai pritaikyta pagrindinio jos absolventų darbdavio – *Lietuvos geležinkelių* – poreikiams. Darbdaviai iš esmės yra labai patenkinti tuo, ką kolegija daro, turint omenyje studentų mokymą ir ugdymą, ir remia kolegiją įvairiais būdais, pavyzdžiui, dovanoja įrangą ir nurodo kontaktus, kurie yra naudingi organizuojant ir remiant praktiką, kad užtikrintų studentams praktinį mokymą ir nurodytų, ką absolventai turi mokėti.

Studentai taip pat gerai vertina mokymo kokybę ir darbo galimybes, kurias teikia ši programa; kolegija labai padeda studentams. Kai kurie studentai lanko išlyginamąsias studijas,



dėl kurių susitarta su Vilniaus Gedimino technikos universitetu, kad galėtų studijuoti magistrantūrą. Aukšto lygio dėstytojų kompetencija lemia aukštą studentų darbo studijų eigoje ir baigiamųjų darbų kokybę.

Dovanų dėka ir įžvalgiai pasinaudodama ES finansavimo galimybėmis kolegija įsigijo geros laboratorinės įrangos, atitinkančios studentų ir dėstytojų poreikius. Be to, akivaizdu, kad nuo paskutiniojo vertinimo, atlikto 2012 m., kolegija labai pagerino padėtį šioje srityje.

Vertinimo grupė nurodė ir kelias sritis, kuriose kolegija galėtų gerinti savo veiklą.

Viena iš sričių, kurią reikia tobulinti, yra susijusi su žinomos nacionalinės geležinkelių įmonės (vežėjo), kuri yra maža Europos kontekste ir nelabai aktyvi mokslinių tyrimų srityje, dominavimu pramonės sektoriuje.

Antra vertus, kolegija turėtų ieškoti būdų, kaip daugiau atlikti mokslinių tyrimų. Siekdama šio tikslo ji galbūt galėtų ieškoti tarptautinių partnerių, atsižvelgdama, be kita ko, į tarptautinio masto pokyčius geležinkelių versle. Rekomenduojama, kad daugiau dėstytojų ir studentų dalyvautų tarptautinių mainų programoje; tai taip pat padėtų pasiekti minėtą tikslą.

Dėl kolegijos vidaus reikalų tarpusavio vertinimo grupė rekomenduoja visoje kolegijoje paskleisti vidinio vertinimo rezultatus taip, kad dėstytojai ir administracija galėtų skubiai pateikti studentams grįžtamąjį ryšį ir taip būtų uždarytas su kokybės vertinimu susijęs grįžtamojo ryšio ciklas.

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### **III. REKOMENDACIJOS**

1.

Kolegija turėtų parengti strategiją, taikytiną tuo atveju, jei ES reglamentai pakeistų geležinkelių rinką taip, kad dabartinio pavidalo Lietuvos geležinkeliai gali išnykti.

2.

Yra galimybė derinti bendrųjų modulių turinį labiau pritaikant jį studentų poreikiams.

3.

Kolegija galėtų šiek tiek atsiriboti nuo dabartinių *Lietuvos geležinkelių* idėjų ir turėti savų sumanymų dėl naujoviško modulių turinio.

4.

Kolegija turėtų išsaugoti ir sustiprinti savo pastangas didinti tarptautiškumą keičiantis dėstytojais ir studentais abipusių mainų pagrindu.

5.

Studijų kokybės vertinimo centras

Kad padidintų atliekamų mokslinių tyrimų skaičių, kolegija galėtų kurti projektines idėjas dėl taikomųjų mokslinių tyrimų, kurias vėliau galėtų pasiūlyti *Lietuvos geležinkeliams* ar kitoms su geležinkeliais susijusioms įmonėms.

6.

Siekiant išplėsti tikrinamų kompetencijų įvairovę, bent keli kreditai, egzamino arba kaip kaupiamojo balo dalis, turėtų apimti ir atsiskaitymą žodžiu.

7.

Kolegija turėtų ieškoti būdų, kaip užtikrinti, kad studentai tinkamu būdu gautų grįžtamąjį ryšį apie dėstytojų vertinimo rezultatus.

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