



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETO
***TRANSPORTO INŽINERINĖS EKONOMIKOS IR
VADYBOS (612N18001)***
VERTINIMO IŠVADOS

EVALUATION REPORT
***OF TRANSPORT ENGINEERING ECONOMICS AND
MANAGEMENT (612N18001)***
STUDY PROGRAMME
AT VILNIUS GEDIMINAS TECHNICAL UNIVERSITY

Grupės vadovas: Team Leader:	Andreas Knorr
Grupės nariai: Team members:	Terence Clifford-Amos Vanja Kenjic Dainius Petravičius Monika Kavaliauskė

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DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	Transporto inžinerinė ekonomika ir vadyba
Valstybinis kodas	612N18001
Studijų sritis	Socialiniai mokslai
Studijų kryptis	Verslas
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Pirmoji
Studijų forma (trukmė metais)	Nuolatinė (4), iššęstinė (5.5)
Studijų programos apimtis kreditais	240
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Transporto ir logistikos bakalauras
Studijų programos įregistravimo data	2009-08-31, Nr.1-73, akredituota iki 2013-12-31

INFORMATION ON ASSESSED STUDY PROGRAMME

Name of the study programme	Transport Engineering Economics and Management
State code	612N18001
Study area	Social Sciences
Study field	Business
Kind of the study programme	University studies
Level of studies	First
Study mode (length in years)	Full-time (4), part time (5.5)
Scope of the study programme in credits	240
Degree and (or) professional qualifications awarded	Bachelor in Transport and Logistics
Date of registration of the study programme	2009-08-31, No.1-73, accredited until 2013-12-31

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I. INTRODUCTION

The objective of this report is to evaluate the *Transport Engineering Economics and Management* BA (state code - 612N18001) study programme which is taught at the Vilnius Gediminas Technical University (hereinafter: VGTU). Given the institutional background explained in delivered Self-Evaluation Summary (hereinafter SES), the Reviewers understand the position of VGTU in the primary market of Lithuania (LT). In Lithuania there exist eight Higher Education Institutions all offering Logistics programmes - The General Jonas Žemaitis Military Academy of Lithuania, Vilnius Gediminas Technical University, International School of Law and Business, Klaipėda State College, V. A. Graičiūnas Higher School of Management, University of Applied Social Sciences, Alytus College and Utena College.

The study programme was approved by the Ministry of Education and Science on August 31st, 2009. Successful completion of the study programme will earn the graduate the degree of Bachelor in Transport and Logistics (hereinafter TEEM). The first graduates of this programme are due in spring 2015. Two study options exist: Full-time (duration of studies: 4 years) and extended (duration of studies: 5.5 years). The language of instruction in all course units is Lithuanian.

On 3rd of May, 2013 - following analysis of the programme's Self-Evaluation Summary (SES) and the preparation of Preliminary Reports - the Expert team: Dr. Andreas Knorr (group leader), Prof. Dr. Terence Clifford-Amos, Vanja Kenjić, Dainius Petravičius visited Vilnius Gediminas Technical University. Ms Monika Kavaliauske was a member of the team but was unable to attend the on-site visit.

The visit to the University involved meetings with the following groups:

1. The Administrative staff;
2. The staff responsible for preparation of SES;
3. The Teaching staff;
4. The Students;
5. The Alumni;
6. The Social partners.

II. PROGRAMME ANALYSIS

1. Programme aims and learning outcomes

The Reviewers can confirm that the programme aims and learning outcomes are well defined, clear and publicly accessible. The programme aims and learning outcomes of the TEEM programme are based on the academic and/or professional requirements, public needs and the needs of the labour market.

The *aim* of the first cycle TEEM Bachelor study programme is to prepare specialists in contemporary business and economics who would know the field, its trends, scientific and technological developments and the advancement of particular machinery, important to transport and logistics in Lithuania and the EU. Important to the general aim are theoretical knowledge, business law, economics, engineering, analytical and problem-solving skills as applied to new conditions in the advancement of science and technology and globalisation. It is aimed also that

students would be equipped to use up-to-date research and practical application and be able to undertake relevant research relevant to transport and logistics, as well as develop their knowledge of innovation, evaluative skills and be able to interpret the consequences of important decisions and assume responsibility for them. More generally, it is aimed that students would be able to work within the demands of State and the EU and develop a high-level of specialism in the transport sector and have developed the transferable skills enabling them to contribute to the shaping of a democratic and civil society in Lithuania.

The aims of the programme are clear, well-defined, and correspond to the type and cycle of the studies. The purpose of the programme and anticipated learning outcomes are published on the website of VGTU.

The study programme is first of all approached as a system, 'where the interests of the main participants of the programme (the learners, the University, business and public sector) interact' (SES, p.8, para.22). The programme seeks to prepare the highly-qualified specialists and professionals necessary for the Lithuanian labour market, who would be able to work in the Lithuanian transport and logistics sector. Analysis of the aims of the programme and the results of studies include the dynamics of gross domestic product and the contribution of transport activities to GDP, the change in number of economic entities operating in the transport sector, and the number and percentage of vacancies in Lithuanian transport companies. In the process of reorganisation of the study programme, not only were university employees included, but also graduates from the programme, and, most importantly, potential employers of the graduates – the representatives of transport companies.

The Reviewers can confirm that study subjects and/or modules are spread evenly and that their themes are not repetitive. The Reviewers can confirm that the content of the subjects and/or modules is consistent with the type and level of the studies. The content of the programme and the course structure seem to be of a good standard. The logic is that the Bachelor programme focuses on knowledge, skills and competences for the three semesters and apparently simultaneously on their application, and also research and writing the research-oriented thesis.

This fact demonstrates that the programme aims and learning outcomes are based on the academic and/or professional requirements, public needs and the needs of the labour market. Due to close cooperation of all stakeholders, the results of the TEEM Bachelor study programme correspond to the aims of the programme and precisely describe the purpose of the study programme. The learning outcomes of the TEEM Bachelor study programme are divided into 4 groups: subject skills (knowledge), cognitive skills, practical skills and transferable skills, which are compatible with each other.

The Reviewers can confirm that the programme aims and learning outcomes are consistent with the type and level of studies and the level of qualifications offered. According to what the Reviewers observed from the SES and during the on-site visit, the standard of the students' work reflected good analytical skills and also a good understanding of real business world challenges. There is a good balance between the academic and the practical approaches. It is also clear that the programme aims and learning outcomes are well defined and are reflected in the outcome of the programme. The Reviewers can confirm that the name of the programme, its learning outcomes, content and the qualifications offered are also compatible with each other. The Reviewers could see from the SES, on-site visit and interviews with lecturers, students and Alumni that there are no repetitive teaching units in the syllabus and in the courses as they exist. In discussion with the very involved and active social partners of the TEEM Bachelor programme, Reviewers observed graduate quality to be good, which met the objectives of the programme and the demands from the business world.

However, the Reviewers consider that there is a room for further improvements in relation to the aims. It suggested that the aims are comprehensively assembled but tend towards a rather broad perspective. Programme management should therefore consider strengthening the focus on the core curriculum in accordance with presented courses units, the available pedagogical materials, as well as the teaching methods. Reviewers found that the defined learning outcomes are in line with the programme aims and awarded qualification, though it should be said that during on-site interviews students did not convey a convincing awareness of their existence and function.

There is comprehensive involvement of social partners in curriculum design and student assessment. The TEEM programme has a strong focus on labour market needs; however stronger focus on foreign language, especially English is highly recommended for immediate development. It would be advisable to ensure that learning outcomes are backed up by realism in the practice of students' assessment. Marketing of the programme has been rather limited on a domestic market (web page, job fairs etc.), since it is offered only in Lithuanian language. If the TEEM is to succeed with the ambition of recruiting a substantial number of international students and staff, a marketing plan has to be developed and resources have to be allocated for this purpose.

2. Curriculum design

The Reviewers can confirm that the curriculum of BA programme (state code - 612N18001) design meets legal requirements. The compliance of the programme composition with the set requirements is presented in Appendix 8.5.3. The composition of the study programme is divided on: A- General courses of university studies (fundamental and general courses - 18 ECTS credits), B- Study field courses (fundamental, main, special courses, professional practice and graduation project – 184 ECTS credits) and C- Specialisation section (specialisation courses and electives – 38 ECTS credits), giving in total programme of 240 ECTS credits.

The Bachelor programme in *Transport Engineering Economics and Management* is in the Reviewer's opinion well designed and obviously a demanding programme for the students. The *Transport Engineering Economics and Management* study programme includes continual studies and extended studies.

The *Transport Engineering Economics and Management* study programme (continual studies) has two specializations: *Transport Economics* and *Transport Logistics*. The programme provides for 50 compulsory modules for both specializations, 8 of which are different between specializations, and in the sixth and seventh term (in both specializations), the students must choose a course from the list of elective courses. The duration of studies is 4 years and the volume is 240 credits (SES, p12, para.42.) 11,1 % of study time (continual studies) is dedicated to lectures, 0,8 % to laboratory work, 7,5 % to exercise, 19,4 % to class work load, 22,7 % to independent work, 3,2 % to practice, 3,8 % to thesis, 29,7 % to non-class work, 1,7 % to consultations.

The *Transport Engineering Economics and Management* study programme (extended studies) is identical to the programme of continual studies in terms of the number of modules of courses, their volume, and the number of examinations, course projects and papers. The programme has one specialization: *Transport Logistics*. The programme includes 43 mandatory modules and 7 elective modules (out of 16 possible choices) and students must choose one course from the list of elective courses in the first, second, third, fourth, sixth, and eighth term. The duration of studies is 5.5 years and the volume is 240 credits (SES, p.13, para.50). 6,6 % of study time (extended studies) is dedicated to lectures, 0,5 % - to laboratory work, 4,3 % - to exercise, 11,4 % - to class work load, 3,2 % - to consultations, 67,4 % - to independent work, 6,6 % - to a thesis.

The Reviewers can confirm that study subjects and/or modules are spread evenly and that their themes are not repetitive. The Reviewers can confirm that the content of the subjects and/or modules is consistent with the type and level of the studies. The content of the programme and the course structure are of a good standard and reveal careful assembly of academic grounding and progression. At the Bachelor programme the Reviewers were informed that in total there is (circa.) 30 outgoing students (the majority of them to Denmark, Turkey, and Finland) and about 8 incoming students (exchange not degree award-seeking). There have been some improvements regarding the internationalisation of the Bachelor programme since TTEM introduced 4 courses in English language, but those courses are electives and not obligatory.

Nevertheless, the comprehensively assembled programme aims and learning outcomes are supported by the content and methods in order to achieve the intended learning outcomes. Even though the teaching process is supported by partially implemented teaching courseware, Moodle, Reviewers found no required compulsory reading for the courses, which was confirmed during the discussion with the students and Alumni group. The transition from the old to new courseware software programme has been rather incremental. Reviewers found the effectiveness of students' self-study questionable. In September 2013 the Moodle will become obligatory as a course management system.

The programme includes sufficient courses in physical science, technological science and the course papers necessary to achieve the aims of the programme, to develop creative skills, and to apply the theoretical knowledge. There are also alternative and optional courses (SES, p.14, para. 56). Specialty courses are arranged in a logical sequence and are based on previously studied courses. Concerning learning outcomes, the Department faces difficulties integrating some imported course contents (e.g. mathematic courses which are provided by other faculties) adequately into curriculum. An unhelpful attitude exists regarding some ECTS credit allocations, and it can be viewed, in this respect, that no custom-tailored approach has been made to meet the specific needs (in terms of learning outcomes) of transport and logistics students. This has been confirmed during the discussion with lecturers, the SES Team and administration, and in recognizing the limits set by the University, the lack of coordination between the faculties. Evaluation of the curriculum design involves an analysis of requirements for the Bachelor's final thesis. For example, in the SES, p. 28, the Self-evaluation Team describes the Bachelor thesis as completed, on approval by the research advisor, and the Head of the Department gives permission to defend it. The thesis is evaluated by a reviewer – a teacher of the Department of Transport Management, and after the public defence, it is evaluated by the Committee for Awarding the Bachelor's Degree (comprising 5 members, 3 of whom must have scientific degrees), which is chaired by an experienced representative of industry. At the end of the defence sitting, the arithmetic average of evaluation results is calculated and entered in the register sheet. After the defence, the chairpersons of the committees make their comments and suggestions to the teachers in the Department meeting. This evaluation is also used as a valid input at VGTU for further improvements of curriculum design.

3. Staff

The courses of the study programme of *Transport Engineering Economics and Management* are taught by the teachers from 3 faculties; the ratio between full-time and part-time employees is almost 50:50. The lectures are given by experienced and highly-qualified teachers, professors and associate professors (SES, p.16, para.68).

The academic staff at the VGTU are appointed via the procedure of open competition according to the rules defined in the Law of Higher Education and Research. Candidates must have qualifications defined in the documents approved by the University. All the teachers meet at least

the minimum qualification requirements and the majority of them exceed them considerably. This is very well described in Appendix 8.2. In order to take up a respective teaching position, the teachers must undergo the certification procedure, that is, they must meet the minimum requirements applicable to the employees who wish to take up a teaching position set by VGTU Senate (SES, p.18, para.80).

The Reviewers can confirm that the study programme is provided by the staff meeting legal requirements. In discussion with lecturers on the programme during the on-site visit, Reviewers found a good level of staff satisfaction. However, the number of scientific areas the professors cover, reaches up to 5 per teaching staff in some cases and seems to be quite broad (SES, Appendix 8.2.).

According to the SES, the composition of the personnel of the Department of Transport Management is suitable for work with the Bachelor students and is of necessary competence towards achieving the results of the study programme. In Appendix 8.2, the presented faculties included represent all employees of the 3 Faculties (45 in total. There are 3 professors, 10 associate professors and 4 lecturers and the number of students at the TEEM Bachelor programme is 420 across all 4 study years; so the ratio between the students and faculties seems rather high at 24,7 students per staff). In the future, considerable focus should be on hiring new academic colleagues in order to support the increasing student numbers.

As the SES, p.18, para.81) shows the age and the turnover of teachers is a problem area, but it seems that at this time the TEEM is considering the employment of 3 doctoral students. Almost 50 % of the faculties participating in the programme are younger than 45 years old, while other 50 % are older.

The Reviewers can confirm that the qualifications of the teaching staff are adequate to ensure the learning outcomes; The Reviewers noted the qualification schemes (Appendix 8.3.). It is of most importance to give strong support and training programme improvements in proficiency levels in English. This is needed and appreciated by teaching staff and as such is seen as an important measure for improving and strengthening the international learning experience on the programme. It is possible to take courses of English language, but employees have to pay themselves. Stronger support and flexibility from the University is needed, since the TEEM programme is one of the most popular, and the incoming fees seem to be evenly spread across every faculty inside the university. The Staff Development Scheme is centralised only at the University level (as shown at the organigram, appendix 8.5) and the lecturers on the programme do not receive incentives for additional professional specialisation and training (as confirmed at the meeting with lecturers).

Similarly, investment in the international development within the Faculty through, for example, the funding of attendance at conferences and workshops, reflects the aspiration but also recognises the limitations that the Lithuanian context places on international Staff Faculty recruitment. One can conclude that the Staff Development Unit is operational at the University level, but is lacking in more systematic information about all accessible and offered courses, and professional improvement possibilities (with the exception of Moodle courseware and other ICT courses and Staff internships).

The teaching experience of the majority of teachers working with Bachelor's students exceeds 10 years; many of them have taught several courses and have written several course books on the subjects they teach. Mandatory educational internships in industrial or research institutions (to be undertaken once every 5 years) were introduced in the University.

The teachers of the *Transport Engineering Economics and Management* study programme have been giving lectures in foreign higher schools for several years; however, academic internships

and lectures in foreign higher education institutions are among the most problematic activities. Lack of international academic experience has several reasons: the age of the teachers, insufficient knowledge of English, the relatively small number of partner institutions, very few agreements with the universities of neighbour countries and the high workload of teachers.

The Reviewers can confirm that the teaching staff of the programme are involved in research directly related to the study programme being reviewed. It was also clear to the Reviewers that the TEEM programme faculties have very good connections to the corporate world through a variety of activities, such as board memberships, council memberships, consulting, case development, guest lectures, commissioned research and executive education. The teaching staff have an obligation to work more with the business community. This seems to be a good match. On the other hand, there is a need for more internationalisation. At the same time, the teaching staff are doing more to become international and to gain more international experience through research cooperation across borders, stronger focus on international publications, cooperation with recognised school and programme content that focuses on international issues.

The augmentation of teaching staff could be improved by inviting young lecturers or visiting teachers from abroad, thus attracting a broader prospect of electives and, secondly, in testing future staff member candidates' foreign language skills, especially in English. Younger teaching personnel should also have a positive impact on this index: it is likely that new teachers will know English better and will be able to use the relations of the University and the possibilities offered by various programmes to give lectures, or go on an internship in foreign higher education institutions (SES, p.16, para.76).

Evaluation of teaching staff performance should include the following areas: academic rank and scientific degree; teaching experience; research interests; subjects taught; practical work experience in the area, published papers, and international experience.

In accordance with the observation for the TEEM programme stated in 2005: *Employees' workload is sometimes too high, so it is not possible to ensure adequate Faculty participation in other activities*, employees', workload remains, generally, too high; so it remains difficult to ensure adequate teaching staff participation in other activities. The Reviewers found that because of high staff workloads, maintaining the quality of teaching and research, as well as the Loyalty Payments Scheme, do not work as well as they should. A high number of lecturers participate in teaching on similar programmes in other colleges and universities.

During the on-site visit the Reviewers also identified some lack of responsiveness from senior university management to the specific needs of the Department and the personal and professional needs of the Department's lecturers. The conclusion of Reviewers is that considering the previous Reviewers' remarks, staff workloads remain at a very high level with respect to maintaining the quality of teaching and the research process. Staff expressed concerns about the rapidly increased student intake without an adequate complement of appropriate staffing and infrastructure.

4. Facilities and learning resources

In the Department of Transport Management, both common University or Faculty classrooms and the classrooms managed by the Department are used for work with the students.

Educational wings are scattered all over the city, several or even a dozen kilometres away from the central administration. The Faculty of Transport Engineering is also divided, and the distance between some Departments is around 10 kilometres (SES, p.6, para.13). Teachers' working places in the classrooms are equipped with computers and multimedia projectors as well as internet connection. 11 classrooms equipped with 14 computers with internet connection and printers are allocated for the work of teachers and technical staff. All housings of VGTU have

wireless internet connection, which allows the students, the teachers, and the visitors to use the internet freely.

In the Department of Transport Management, both common University or Faculty classrooms and the classrooms supervised by the Department are used for work with second-cycle students. The Department of Transport Management has 4 classrooms and a computer room, which belongs to Transport Management Educational Laboratory. The teachers' working places in the classrooms are equipped with computers and multimedia projectors, as well as internet connection.

The educational laboratory of Transport Management has 23 computerized working places. Standard MS Office package and the following programmes are used for teaching the students and their practical work: route planning programme AutoRoute 2010; transport exchange programme TC Cargo; logistics programme Arc GIS ArcLogistics10; production management programme QAD Enterprise 2011; statistical programme RGui.

The library of Vilnius Gediminas Technical University is a modern library of a Lithuanian higher school, which satisfies informational needs for research and studies of the University community. It is well stocked, both in terms of academic and scientific literature and electronic resources in general – including 19 Lithuanian and foreign databases such as EBSCO, Emerald, Springer LINK, Cambridge Journals Online, Taylor and Francis, as well as a large collection of e-books - all of which are accessible free of charge to students. Library users have access to 3.941 titles of e-books' collections, and an additional 405 academic e-books through the web-site. In total, students can access up to 26.158 e-journal titles and 182.262 titles of e-books. The library is in the process of implementing the opening of the *Online Research databases for Lithuania* for the period 2012-2015. For the programme alone, BA students of TEEM can access 525 e-journals and 853 e-books' titles. The library is open 24/7 hours-a-day. Students and lecturers have 24/7 access to all electronic collections through VPN, even from their homes, but there is a study room and library facilities open for them 24/7. Study-programme-related literature is available in adequate supply in general. The library is well-equipped and managed and offers a guarantee for productive and meaningful research studies. In the library, 694 working places are equipped for the readers; 52 of them are computerised.

As previously mentioned, the Programme utilises some of the data generated via Moodle that relates to student and staff use of the learning management system. Staff use of Moodle is not mandatory before September 2013. Moodle can potentially provide a rich set of data about the ways in which students use the online environment and the effectiveness of different activities.

Analysis of some of the above-mentioned data could provide extensive information that could boost the development of interventions in order to assist students to learn more effectively and to minimise drop-out. Also, the Reviewers identified that courseware software Moodle was poorly managed during the transition from the old courseware to the Moodle – for distance learning students in particular. It would be extremely helpful to hasten the transition from the old courseware to the new one (Moodle) since it seems quite impossible for students to track the curriculum, although the use of e-mail was seen to be an interim solution.

For investments towards updating equipment, a budget of 94.296,66 Litas for the 2008-2012 period was allocated by the Department of Transport Management.

During the on-site visit Reviewers also identified that there is no access to the student canteen in the main building, as well as there being no bespoke facilities made for the TEEM Bachelor study programme. One of the Reviewers' observations during the on-site visit concerned the contradictory evidence regarding the number of available computer room facilities (SES vs

statements of the lecturers). The lack of auditorium capacity requires teachers to find new facilities, including the university downtown campus.

5. Study process and student assessment

Admission is by general procedure to all study programmes of all higher schools of Lithuania simultaneously; a candidate may indicate up to 12 study programmes in the application (previously it was 20). The shortcoming of the general admission is that the students with strong performance in qualifications but who are not particularly interested in the field of studies may be enrolled. However, the advantage is that the prospective entrant does not have to go to different higher schools to submit documents in the event of not being enrolled to one school; there is no risk of lateness for admissions to another higher school. Applications for admission to study have been accepted online since 2010 (SES, p.23, para.117). Admission to the TEEM study programme is regulated through admission procedures which are based on the minimum admission requirements stipulated by the Ministry of Education and Science. The admission process relies on a competition-based, open-access system. Preference is given to candidates with higher scores.

Candidates with the highest entrance scores are admitted to the planned number of positions. The persons whose studies are completely funded by the state and the persons paying the full tuition are admitted to first cycle university studies by competition. In analyzing the demand for entering the TEEM Bachelor programme since 2007, the number of admitted students has decreased from 56 to 27 for the full-time option. However, in relation to state-funded places, the number of admitted students has increased from 16 to 130 for the full-time option, paid place; the number of admitted students has increased from 9 to 51 for the extended option, fee-based studies. The average scores of accepted students have gone down from 19.11 to 15.2 for the students with state-funded places, as well as the average scores for fee-based studies students, which have decreased from 17,3 to 11,1.

The total number of students on the Bachelor study programme could not be determined. In the SES Appendices 8.5.6 and 8.5.9., the numbers of students differ.

The drop-out rate was rather high between 2008 and 2012. Because of cancelling studies due to transfer to another higher school from 2008-2012, 45 students cancelled their studies; cancelling the studies by choice from 2008-2012 numbered 66 students; cancelling studies due to low performance from 2008-2012, numbered 53 students; cancelling the studies due to failure to return after a break of studies from 2008-2012, numbered only 9 students; cancelling the studies due to the failure to defend Bachelor's Thesis or unsuccessful defence of Bachelor's Thesis from 2008-2012, numbered 14 students; and due to the failure to pay tuition from 2008-2012, a total of 55 students is recorded. So, in total, due to various reasons the cancellation of study from 2008-2012 is 250 students.

Financial premiums are granted by Lithuanian National Road Carriers' Association to the authors of the best Bachelor's theses. Offers of additional support to the students include: scholarships granted by transport companies and stakeholders; 2 target scholarships for the spring term of 2008-2009 were granted by DPD Lietuva, UAB; in 2010-2011, the scholarships of Girteka, UAB were introduced; and in 2011-2012, the stakeholder Girteka, UAB allocated 2 scholarships. Continuing cooperation with the Department of Transport Management, DKV Euro Service Baltikum, UAB established 3 financial premiums of Lt- 1000 each for student theses with the highest evaluation.

The TEEM Bachelor students of the Department of Transport Management are encouraged to take part in research activities. To this end, the courses in research methods are included in studies. The students are invited to participate in the Conference of Young Researchers, which is organised every year. A new practice has begun: 10 students have been involved in implementing the EU research project: Connecting Authorities for Safer Heavy Goods Traffic in the Baltic Sea region (C.A.S.H). The students assisted in the research and processing the data.

VGTU Career Days are organised for all students in spring. The specialists of the companies known to the students give lectures and communicate with them and students are able to find places for practice and even employment. The employees of the Department of Transport Management consult the students on career opportunities related to their studies. The students are consulted about the significance of the branch of the programme and mandatory and elective courses and the possibilities of future careers. The teachers of the programme actively cooperate with the employers: Schenker, UAB, Girteka Group, DSV, UAB, DKV Euro Service Baltikum, UAB, Eugesta, UAB, DPD, UAB, Skubios Siuntos, UAB, 3plogistic, UAB, AxisTransport, UAB. Cooperation agreements now exist with the Lithuanian National Road Carriers' Association LINAFA, Lithuanian Logistics Association, Lithuanian Railways, AB, Lithuanian National Freight Forwarders Association LINEKA, State Enterprise Transport Investment Directorate, and other transport organizations.

Students' independent class-work makes up 50% of the final mark. A broad range of assessment methods is applied. The total number of assessments is high, but not burdensome according to students, who argued that it prepared them well for the job market environment; there is a large number of student tasks to be assessed by staff. This also contributes to the heavy workload.

Academic and social support of students is comprehensive and, according to students, effective, throughout the TEEM Bachelor programme. According to discussions in meetings with students and Alumni, all students are satisfied with the assessment system, in the knowledge that learning outcomes are assessed objectively and systematically. The assessment system is composed of various assessment methods including group work, presentations, simulations and projects. Apart from interim assessments, every course unit concludes with a final assessment. All tests are given a weight coefficient.

The mandatory internship enables the student to be in touch with the real problems in the sector. The pedagogical approaches are in line with the criteria. The staff of the Programme have timely access to the data about student enrolments, subject choice and subsequent class sizes that allows managers to allocate teaching loads and ensure that there are sufficient qualified teaching staff available to meet the instructional needs each semester.

The Reviewers found that the personal development of the students is in line with the learning outcomes set for the programme, not least through the tutor system, but also through a variety of exercises such as presentations, case discussions and projects. The compulsory project is a good example of this type of development activity. Even though the students wish for more individual training, the Reviewers believe this is well taken care of in the programme.

When it comes to the international aspects of the programme, there are still challenges especially when it comes to the quality of the international partners and the number of exchange students studying abroad. The number of the students going abroad on exchange for Erasmus studies, given in Appendix 8.5.9, is increased (from 2007) from 13 students, up to 23 in 2012 (almost 50%) The content of the programme with international textbooks, international projects, international internships and international guest lectures, assists with the international learning experience and the preparation of the students as international participants.

The method of having different professors during the teaching process on the programme and the student's assessment process has given assessment system more objectivity. The lecturers participating in the programme have the possibility to use plagiarism software, but during the visit, Reviewers could not confirm this practice.

The corporate interactions in the programme meet the interests of the ESG (Standards and Guidelines for Quality Assurance in the European Higher Education Area) requirements regarding achieving the necessity of link between the corporate world and the curriculum, as well as the knowledge, skills and competences of graduate Bachelor students. The programme serves 'the interests of students as well as employers and society more generally in good quality higher education'.¹ The applied approach to the delivery of courses could be further enhanced if a more systematic approach to the inclusion of guest lecturers from outstanding business people in the future was adopted.

During the Reviewers' meetings with SES Team, lecturers and Alumni, it was confirmed that there is increasingly difficulty with students' final thesis supervision due to the increasing number of students. This needs to be addressed as soon as possible. It is also recommended that there should more systematic involvement of Alumni in curriculum evaluation and redesign.

In student admission it was found that the performances of the best students were in line with peer expectations regarding an institution of this rank. However, based on feedback of Alumni, lecturers and social partners, other students do not perform better than their counterparts in the universities of applied sciences. Although the students have good support service in the TEEM Bachelor programme, perhaps student support services and career centre activities should be more decentralized in order to meet the requirements of the ever-increasing student population in the teaching staff of the TEEM Bachelor programme in Transportation and Logistics.

6. Programme management

The compilation and implementation of the study programme is coordinated by the Committee for Studies (Programme) of the teaching staff, comprised of the representatives of different Departments of the Faculties, the representatives of the Deanery (Faculty Administration), and the representatives of students and stakeholders. Moreover, each programme has had a mentor since 2010.

Distribution of responsibilities among the members of the study process is regulated by various regulatory documents of VGTU. There exist several documents that regulate the VGTU internal operations, as well as ethical codes for teachers and students and published descriptions of minimum qualification requirements for the teachers and researchers.

The last assessment of TEEM study programme was carried out in 2005. A foreign expert group visited the University during the assessment of the programme, familiarised itself with the administration of the Faculty and the Department, talked to the employees of the Department, the students, the Alumni, and invited potential employers of graduates from the Department. They also familiarised themselves with the presented self-evaluation report summary.

The Reviewers observed strong commitment by all stakeholder groups to the strategy of the TEEM Bachelor programme. There also appears to be a strong and active link between programme lecturers and the regional business community. However, the link to Alumni (except some sporadic contact) is relatively weak. Guest lecturers, projects, internships, and potential jobs are provided for TEEM Bachelor students and graduates. However, engagement of the

¹ EAQAHE (2009) *Standards and Guidelines for Quality Assurance in the European Higher Education Area*, Helsinki.

programme student body, and students generally in the decision-making and activities of the Department itself is in need of improvement and strengthening. So far it is more limited to a small group of students.

The TEEM programme collects a large set of information about students, staff and external stakeholders; this information is also available to the relevant organizational units. The Reviewers are of the opinion that the inclusion of different stakeholders' perspectives is strong, especially when considering the involvement of business people and the students. However, the level of active participation by the different stakeholder groups is variable; and it seems that this is a consequence of the fact that the procedures and instruments for communicating and for receiving regular feedback are not always working consistently, that or efficient mechanisms for them do not exist. Although, a general report of these evaluations is available on the web, it was not apparent how widely it was used and known among the stakeholders at large, including the students and the Alumni.

Programme Management should be more accessible and visible in a support role and more active in practical strategy and strategy implementation. The Alumni Association is lately becoming active and is currently involved in the creation of an Alumni database, which should further solidify the role and participation of the Alumni in TEEM affairs.

Although there is no question about the leadership's stated responsibility and clear commitment to promoting the Quality Assurance in the TEEM programme, the actual practices and true impacts still need to be described in detail. Also, measurable quality objectives are often either lacking or poorly defined. The TEEM Bachelor's programme management shows clear commitment towards quality assurance, though the awareness and everyday practices of QA among the staff still need time to develop to full effectiveness. During the on-site visit, the Reviewers identified only one instrument for quality assessment (the survey for the lecturers). Excepting the bi-annual meetings with social partners and their inclusion in various types of student assessments, there is no instrument for measuring the development or improvement at course level (regardless of the lecturer) or at the programme level.

There are also many examples of the teaching staff using the input from these stakeholders in the development of the programme and in developing new programmes. The periodic review process is effective both for internal and external involvement. In the SES (SES, p.29 para 163.), the TEEM Bachelor programme lists as its main stakeholders, the staff and the management itself, the students and the Alumni, outside employers, and also some invited external consultants, all of whom could be involved and positively interact in the development of the programme studies, teaching and further education.

The main changes determined by the results of the last external evaluation in 2005 were as follows: reorganisation of the programme according to the most recent order of the Minister of Education and Science of the Republic of Lithuania; growing number of students (popularity of the programme); a certain turnover of personnel; updating the material base; updating the methodical base; and more active cooperation with the stakeholders (SES, p.39 para.320). Some of the above mentioned problems/disadvantages have been treated with priority consideration and show considerable improvements, while others (mostly due to much centralised new university governance) are treated sporadically and are far less of a priority.

After the visit held on 3rd of May 2013, the Reviewers concluded that teaching staff are very much able to manage themselves, though management should be more accessible and visible at all levels in a support role and more active in practical strategy and strategy implementation.

Unlike students, faculties, social partners and Alumni were well aware of both, the strengths and weaknesses of the Bachelor Programme.

III. RECOMMENDATIONS

1. Develop a plan regarding the rapidly increased student intake with an adequate complement of staffing and infrastructure; take into consideration the programmes' aims and learning outcomes and their realism, and fully and comfortably integrate the imported courses.
2. Develop provision for an expanded range of staff development relating to online pedagogy and the encouragement of active and engaging course sites that do more than present contents/materials;
3. Work out a more committed strategy for internationalisation - beyond the domestic market;
4. Consider ways to develop capacity/allocate more permanent resources to the International Office, Alumni and Careers Centre for the purposes of strengthening the student support services;
5. Become more familiarised with the *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (ENQA) in order to develop a more systematic and organized quality assurance system and consider the recommendations made by the E4 Bologna Group;²
6. Although the University has launched the Plagiarism Detection Programme in spring 2013, Reviewers recommend that as the TEEM Bachelor programme is moving towards greater use of the online learning environment, it should be consider a stricter policy against plagiarism and the use of plagiarism detection software across all electronically submitted assignments.

IV. SUMMARY

The TEEM Bachelor programme was developed in accordance with the requirement of the Bologna Process. The University has developed programmes at the first cycle (Bachelor), the second (Master) and the third (Doctorate), following the 4+2+4 system (depending on student status, full-time/part-time). Considerable attention has been given to improving the international dimension of the curricula, establishing closer connections to the business community, and improving students' 'soft skills'. This is primarily driven by the needs and expectations of future employers, and it is consistent with the TEEM overall strategy to remain the prime provider of the future leaders for the regional business community. The Reviewers learnt that the curriculum reforms are driven by a dedicated committee; proposals are being processed through the Faculties' decision-making bodies, and passed to the Senate of the University (described in the SES p.30, para.169.).

As with most other European countries, both the institutions, students and the employers are still shaping the 'Bologna' landscape, which is a rather fragmented market concerning its contents (specializations *vs.* General – BSC/BA), target groups (age groups *vs.* working experience) and didactical approach (fulltime *vs.* part time *vs.* distance learning). The TEEM self-evaluation summary (SES) provides information about the current Bachelor portfolio and its quality

² EUA + ENQA + EURASHE + ESU (in context of cooperation on quality assurance) – Bologna follow-up group consisting of 4 members: European students Union (www.esu-online.org), European University Association (www.eua.be), European Association of Institutions in HE (www.eurashe.eu) and European Association for QA in HE (www.enqa.eu)

objectives, which appear to be rather 'supply driven', largely based on what already existed in the pre-Bologna era and on the existing internal resources.

As the Reviewers understood, TEEM is still in the process of further implementing and improvement of the reforms of the TEEM Bachelor programme. Support units and staff prove to be consistent in quality aspects of their work, and they set targets for improvements each year. All in all, curriculum management at the VGTU appears to show considerable development. There is a strong drive for continuous curricular improvements, which are taken very seriously by all stakeholders involved. Any major curriculum reform proposal must go through the highest decision-making bodies. The Department of Transport Management may wish to focus more on developing a clear strategy on its future position in the Professional Bachelor's market. In addition, quality objectives may be set more explicitly at various unit levels (curriculum, Department, and programme) instead of the lecturers' level only.

The Reviewers were concerned about the governance system, in which significant restrictions on the Department's freedom to act, arise from both senior management constraints and a strong will to self-govern at Departmental level. Questions regarding spatial integration of the University are increasing. In recognising and accepting the situation where TEEM has to invest more in international Faculty marketing and brand-building as well as becoming able to operate efficiently with increased international and domestic competition, the governance system could potentially face major challenges. Also, the programme needs to be supported by more academics in the teaching process.

One of the really strong aspects of the TEEM is its corporate connections and lucrative market demands for its graduates. Reviewers learned that the representatives of the business community are included in various committees; however, more systematic involvement of Alumni in curricular evaluation and redesign is needed. Corporate partners have considerable influence on important issues such as programme development and output results such as employment and job potential. The TEEM Bachelor programme continues to thrive in many aspects of its academic and professional portfolio and offers a sound grounding for both employment and further study at Master level.

V. GENERAL ASSESSMENT

The study programme *Transport Engineering Economics and Management* (state code – 612N18001) at Vilnius Gediminas Technical University is given **positive** evaluation.

Study programme assessment in points by fields of assessment.

No.	Evaluation Area	Evaluation Area in Points*
1.	Programme aims and learning outcomes	3
2.	Curriculum design	3
3.	Staff	3
4.	Material resources	3
5.	Study process and assessment (student admission, study process student support, achievement assessment)	3
6.	Programme management (programme administration, internal quality assurance)	3
	Total:	18

*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:

Andreas Knorr

Grupės nariai:
Team members:

Terence Clifford-Amos

Vanja Kenjic

Dainius Petravičius

Monika Kavaliauskė

**VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETO PIRMOSIOS PAKOPOS
STUDIJŲ PROGRAMOS TRANSPORTO INŽINERINĖ EKONOMIKA IR VADYBA
(VALSTYBINIS KODAS – 612N18001) 2013-07-30 EKSPERTINIO VERTINIMO
IŠVADŲ NR. SV4-289 IŠRAŠAS**

<...>

V. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus Gedimino technikos universiteto studijų programa *Transporto inžinerinė ekonomika ir vadyba* (valstybinis kodas – 612N18001) 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	3
5.	Studijų eiga ir jos vertinimas	3
6.	Programos vadyba	3
	Iš viso:	18

- * 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

Transporto inžinerinės ekonomikos ir vadybos bakalauro programa buvo parengta laikantis Bolonijos proceso reikalavimų. Universitetas parengė pirmos (bakalauro), antros (magistro) ir Studijų kokybės vertinimo centras

trečios (daktaro) pakopos programos, laikydamasis 4+2+4 sistemos (atsižvelgiant į tai, kokias studijas studentas pasirinkęs – nuolatinės ar iššestinės). Daug dėmesio buvo skirta programos turinio tarptautinės dimensijos stiprinimui, glaudesnių ryšių su verslo visuomene užmezgimui ir studentų socialinių emocinių gebėjimų ('soft skills') ugdymui. Tai daryti, visų pirma, skatina būsimų darbdavių poreikiai ir lūkesčiai, be to, tai atitinka bendrą Transporto inžinerinės ekonomikos ir vadybos strategiją – išlikti pagrindiniu būsimų regiono verslo bendruomenės lyderių rengėju. Vertinimo grupė sužinojo, kad programos reformos skatina savo darbui atsidavęs komitetas, pasiūlymus nagrinėja sprendimus priimančios fakulteto institucijos ir perduoda Universiteto senatui (aprašyta savianalizės suvestinėje 169 punkte, p. 30).

Kaip ir daugelyje Europos šalių, tiek institucijos, tiek studentai, tiek darbdaviai vis dar formuoja „Bolonijos landšafto“ kontūrus; tai gana suskaidyta rinka turinio (specializacijos vs. bendrieji dalykai – BSC/BA), tikslinių grupių (amžiaus grupės vs. darbo patirtis) ir didaktinio metodo (nuolatinės studijos vs. iššestinės studijos vs. nuotolinis mokymasis) atžvilgiu. Transporto inžinerinės ekonomikos ir vadybos savianalizės suvestinėje pateikiama informacija apie dabartinį bakalauro portfelį (paketą) ir jo kokybinius tikslus, kurie, pasirodo, labiau priklauso nuo pasiūlos ('supply driven')“, daugiausia kurie jau buvo iki Bolonijos laikotarpio, ir nuo turimų vidaus išteklių.

Kaip suprato vertinimo grupė, Transporto inžinerinės ekonomikos ir vadybos bakalauro programos reformos vis dar tebeįgyvendinamos ir tobulinamos. Paramos padalinių ir darbuotojų darbo kokybė, kaip pasitvirtino, yra tinkama, ir kiekvienais metais jie nustato tikslus tobulėjimui. Apskritai, programos vadyba VGTU pastebimai patobulėjo. Stengiamasi nuolat tobulinti programą; šiuos patobulinimus labai vertina visi socialiniai dalininkai. Didesnio masto reformos pasiūlymus nagrinėja aukščiausi sprendimų priėmimo organai. Transporto vadybos katedrai reikėtų skirti daugiau dėmesio aiškios strategijos, susijusios su jos būsima padėtimi profesinio bakalauro rinkoje, kūrimui. Be to, aiškesni kokybės tikslai galėtų būti nustatyti įvairiais lygiais (mokymo plano, katedros ir programos), o ne tik dėstytojų lygiu.

Visi vertinimo grupės nariai buvo susirūpinę dėl valdymo sistemos, kuri smarkiai riboja katedros veikimo laisvę; šie suvaržymai kyla iš vyr. vadovybės ir iš didelio savivaldos troškimo katedros lygmeniu. Vis daugėja klausimų apie universiteto erdvinę integraciją. Pripažįstant tai, kad Transporto inžinerinės ekonomikos ir vadybos programa turi daugiau investuoti į tarptautinę fakulteto rinkodarą ir savitumo kūrimą, taip pat sugebėti veiksmingai funkcionuoti padidėjusios

tarptautinės ir vidaus konkurencijos sąlygomis, valdymo sistema galėtų susidurti su rimtais iššūkiais. Be to, šios programos mokymo procese turi dalyvauti daugiau akademikų.

Vienas tikrai svarbus Transporto inžinerinės ekonomikos ir vadybos programos aspektas yra jos ryšiai su socialiniais dalininkais ir šios programos absolventams naudingi rinkos poreikiai. Vertinimo grupė sužinojo, kad verslo bendruomenės atstovai įtraukiami į įvairius komitetus, tačiau programos vertinimo ir pertvarkymo procese turi nuolat dalyvauti absolventai. Socialiniai partneriai turi nemažos įtakos sprendžiant svarbius klausimus, pavyzdžiui, susijusius su programos tobulinimu ir veiklos rezultatais – įdarbinimu ir darbo vietų potencialo plėtojimu. Transporto inžinerinės ekonomikos ir vadybos bakalauro programa yra patraukli daugeliu akademinio ir profesinio paketo aspektų ir suteikia stiprų pagrindą įsidarbinimui ir tolesnėms magistrantūros studijoms.

III. REKOMENDACIJOS

1. Parengti planą, kaip greitai padidinti studentų skaičių ir atitinkamai papildyti personalą bei išplėsti infrastruktūrą; atsižvelgti į programos tikslus ir numatomus studijų rezultatus bei jų įgyvendinimo realumą ir visiškai integruoti pridėtus studijų dalykus.
2. Numatyti sustiprintą darbuotojų tobulinimą, besisiejantį su internetine pedagogika ir aktyvių bei patrauklių dalykų svetainių, kurios suteiktų daugiau nei dabartinis turinys / medžiaga;
3. Parengti stipresnę tarptautiškumo strategiją, išeinančią iš už vidaus rinkos ribų;
4. Apsvarstyti, kaip vystyti kompetencijas / skirti daugiau nuolatinių išteklių Tarptautinių ryšių skyriui, Alumni klubui ir Karjeros centrui, siekiant stiprinti paramą studentams;
5. Geriau susipažinti su „Europos aukštojo mokslo kokybės užtikrinimo asociacijos (angl. ENQA) standartais ir gairėmis“), siekiant sukurti sistematiškesnę ir labiau organizuotą kokybės užtikrinimo sistemą, ir atsižvelgti į E4 Bolonijos grupės parengtas rekomendacijas;
6. Nors 2013 m. pavasarį Universitetas pradėjo įgyvendinti Plagijavimo kontrolės programą, vertinimo grupė, atsižvelgdama į tai, kad, įgyvendinant Transporto inžinerinės ekonomikos ir vadybos bakalauro programą, vis daugiau naudojamosi internetine mokymosi aplinka, rekomenduoja apsvarstyti, ar nevertėtų taikyti griežtesnės antiplagijavimo politikos ir naudoti plagiato nustatymo programinę įrangą tikrinant visas elektroniniu būdu pateiktas užduotis.