



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETO
*TRANSPORTO INŽINERINĖS EKONOMIKOS IR
VADYBOS (621N18001)*
VERTINIMO IŠVADOS

EVALUATION REPORT
***OF TRANSPORT ENGINEERING ECONOMICS AND
MANAGEMENT (621N18001)***
STUDY PROGRAMME
AT VILNIUS GEDIMINAS TECHNICAL UNIVERSITY

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DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	Transporto inžinerinė ekonomika ir vadyba
Valstybinis kodas	621N18001
Studijų sritis	Socialiniai mokslai
Studijų kryptis	Verslas
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Antroji
Studijų forma (trukmė metais)	Nuolatinė (1.5)
Studijų programos apimtis kreditais	90
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Transporto ir logistikos magistras
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	621N18001
Study area	Social Sciences
Study field	Business
Kind of the study programme	University studies
Level of studies	Second
Study mode (length in years)	Full-time (1.5)
Scope of the study programme in credits	90
Degree and (or) professional qualifications awarded	Master of Science 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* (state code - 621N18001) Master study programme. Given the institutional background explained in delivered Self-evaluation Summary (hereinafter SES), the Review Team (henceforth the Reviewers) understands the position of VGTU in the primary market of Lithuania (LT). Vilnius Gediminas Technical University is the only institution in Lithuania carrying out second-cycle studies in the field of “Transport and Logistics”.

The second-cycle *Transport Engineering Economics and Management* study programme submitted for evaluation has been updated twice since the last evaluation (carried out in 2005), i.e. the admission to the programmes reorganised according to respective requirements was held in academic years 2010 and 2011. The last group of Master's graduates who had studied from the beginning of the reporting period (2007) graduated in 2011. The first group of students to study, according to the updated study programme in the reporting period, was admitted in 2010 and graduated in winter 2012 (the main change of the programme was making it shorter to 1.5 years). The second reorganisation of Master's study programme took place in the academic year 2011 and therefore, only the second group of students is currently studying according to this version. The **first** group will graduate in the winter of 2013.

The study programme was prepared based on the description of general requirements for Master's studies approved by the Order No. V-826 of the Minister of Education and Science of the Republic of Lithuania, 3rd June 2010 (Official Gazette, 2010, No. 67-3375), a description of continual and extended studies by the Order No. ISAK-1026 of the Minister of Education and Science of the Republic of Lithuania, 15th May 2009 (Official Gazette, 2009, No. 59-2325), and methodical instructions for preparing the description of intended study programmes and its compliance with the special requirements applicable to study programmes approved by the Order No. 1-01-163 of the Director of Studies for Quality Assessment, 20 December 2010 (Official Gazette, 2010, No. 156-7954), and Vilnius Gediminas Technical University Studies Regulations (approved by Resolution No. 22-2 of VGTU Senate of 25 June 2003).

The *Transport Engineering Economics and Management* Master's study programme has two specializations: Organisation of International Transport and Transport Logistics.

The SES was finished by 31st of August 2012. The group who composed this SES was represented by the following members: Assoc. Prof. Dr. Aidas Vasilis Vasiliauskas, Prof. Dr. Habilitus Ramūnas Palšaitis, Assoc. Prof. Dr. Jonas Lazauskas, Daina Rinkevičienė (Administrator of affairs), Assoc. Prof. Dr. Mindaugas Mazūra, Antanas Šimelis Director of JSC “Vilniaustraszitas” and Saulius Petreikis - Representative of Students.

The onsite visit took place on May the 3rd 2013. In accordance with their findings, the Review team finalized this Report on *Transport Engineering Economics and Management* (hereinafter: TEEM). The Reviewers commended the SES as a detailed, thorough and professionally-composed document.

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 and that they are based on the academic and/or professional requirements, public needs and the needs of the labour market. Principally, in terms of outcomes, this means that Masters' graduates in *Transport Engineering Economics and Management* should be able to demonstrate a high level of theoretical knowledge and understanding and be able to apply both, practically to the contemporaneous problem-solving and professional advancement in Transport Engineering Economics and Management and also to Logistics. They also should have developed an open and strong capacity for independent work, be adaptable in team membership, be sympathetic towards and willing participants in life-long learning.

Towards gaining these high-order professional competences, the main aim of the *Transport Engineering Economics and Management* study programme is to prepare specialists as Masters of Science in *Transport and Logistics* (SES, p.8, paras.21-22). Master graduates are required to be multi-skilled in planning, operations and evaluation. This means the gaining of confident and sophisticated knowledge, skills and attitudes in economic operations and events of transport management and logistics and be able to formulate and oversee the work of those in their charge. As potential leaders and senior managers, graduates should possess strong analytical, evaluative and reporting skills and be able to plan and undertake scientific research in the field of transport and logistics. The successful application of evaluated research results to professional practice in the field, and the ability to apply soundly-informed independent decisions at senior levels of management, are key skills developed and illustrated in the graduate learning outcomes. Such outcomes are imperative in developing the ability to hold a managerial position in various business companies and state institutions. Graduates are also prepared for continuing their studies at doctoral level (SES, p.8, para.22).

In accordance with programme overall aims, the learning outcomes (SES, p.9, paras.24-26) require a high-level of overall knowledge, expectation and skill acquisition appropriate to the demands of a Master programme. The learning outcomes expect students to have acquired a knowledge of trends, theories and current innovations, the particular facets of transport, logistics, management and business relevant to Lithuania and how their bases function and the importance of applied research. Graduates will also be competent in understanding business modelling, theoretical stances, the wholeness and harmony of transport and logistics and their relationship with ecological, political, social, economic and cultural concomitants. The applicability of scientific research, its evaluation, management practices, the ability to problem-solve theoretically and practically and to engage in high-level decision-making and effective management in times of certainty and uncertainty are areas of advanced learning at Master level. Graduates are also expected to show strengths in handling innovation, be able to assimilate new knowledge and skills quickly, engage in effective strategic planning and evaluation and in independent and team-working and to have developed robust capacities for effective communication with colleagues, customers and other personnel. Graduates should be operative, independent critical thinkers throughout their professional lives.

- 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 SES and during the onsite visit, the standard of the students' work reflected good analytical skills and also a good understanding of real business-world challenges. So it was apparent to the Reviewers that a good balance between the academic and the practical approaches was in evidence.

It was also clear that the programme aims and learning outcomes were well-defined and reflected in the outcome of the programme. The Reviewers can also confirm that the name of the programme, its learning outcomes, content and the qualifications offered are compatible with each other. The Reviewers could see from the SES, onsite visit and interviews with lecturers, students and Alumni that there are no repetitive teaching units in the different syllabus and the existing courses. In discussion with the very involved and active social partners of the TEEM Master programme, the Reviewers observed graduate quality to be good and that it met the objectives of the programme and the demands from the business world.

It can be concluded that the aims are comprehensively assembled and have been designed from a broad perspective, in that students are prepared in a multi-skilled portfolio of competences in readiness for the professional world in which they will enter, and also are equipped for further study at doctoral level. In accordance with presented course units, available pedagogical materials, as well as used 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. 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.

2. Curriculum design

The Reviewers can confirm that the curriculum of the Master programme (state code - 621N1800) design meets legal requirements. The Master programme in *Transport Engineering Economics and Management*, in the Reviewers' opinion, is well-designed and obviously a demanding programme for the students.

The duration of studies is 1.5 years and the volume is 90 credits. The duration of a term from the first to the second term is 20 weeks (class sessions take 15 weeks, examination session is 4 weeks, and independent work is 1 week). During the third term (20 weeks in total with 12 weeks for class sessions, 1 week for examination session and 7 weeks for preparing the thesis), a Master's thesis is prepared and defended before the Committee for Awarding the Master's Degree.

The curriculum was designed with inputs of not only university employees in the process of reorganisation of the study programme, but also the graduates from the programme, and, most importantly, potential employers of the graduates – the representatives of transport companies.

Marketing of the programme has been rather limited on a domestic market (web page, job fairs etc.), since it is offered only in the Lithuanian language. If TEEM is to succeed with the ambition of recruiting a substantial number of international students and faculties, a marketing plan has to be developed and resources have to be allocated for this purpose.

The Reviewers can confirm that study subjects and/or modules are spread evenly and that their themes are not repetitive. Moreover, the content of the subjects and/or modules is consistent with the type and level of the studies. Of the subjects available, the illustrative range of specialisms comprising - quality management, transport policy and innovations, HR, basic research, international economics, e-business, warehouse and inventory management, mathematical simulation of transport systems, marketing research, financial analysis and management, economics of transport service, innovation theory, international private law, reverse logistics, strategic supply chain management, transportation services of international trade, resource and operation management in logistics and the 3 final work units – are sound and discrete at Master level, though they have obvious academic and professional interrelationships.

The linear progression and coherence of the Master programme lies largely in the focus on knowledge, skills and competences for 3 semesters and on the application of these, together with concentration on research and writing the research-oriented thesis during the remainder of the programme. Furthermore, the comprehensively-assembled programme aims and learning outcomes are supported by the content and methods in order to achieve the intended learning outcomes.

However, even though the teaching process is supported by partially-implemented teaching courseware, Moodle, Reviewers found no required compulsory reading for the courses. This has been confirmed during the discussion with the students and Alumni group. The transition from old to new courseware software programme has been rather incremental. Reviewers found questionable evidence as to the effectiveness of students' self-study, but the management stated that the usage of Moodle will be obligatory in September 2013 for all teachers.

The Faculty of Transport Engineering faces some difficulty in integrating some imported course contents (e.g. mathematics courses, which are provided by other faculties) adequately into the curriculum, since in some cases there appears to be an unhelpful attitude regarding the allocation of ECTS credits. This has been confirmed during the discussion with lecturers, the SES team and the administration and also in some apparent lack of coordination between the cooperating faculties.

Following the review of both programmes, the Reviewers, through informed opinion during interviews, believed that there could be greater differentiation between the Bachelor and Master programme and a more distinctive M-levelness in aspects of the Master programme. This was confirmed by the students, staff, social partners and Alumni. However, this view must be weighed against the University's standpoint, which is that the Master programme pursues deeper and deepening levels of study in advanced theoretical content. Certainly, the aims and learning outcomes are set appropriately at the level of Master in their emphasis on high-level problem-solving, evaluation, justification of findings, dissemination and senior management capabilities.

3. Staff

The Reviewers can confirm that the study programme is provided by the staff meeting legal requirements. It seemed to the Reviewers that the largest workload per year by individual is 33.8 working hours per week (1352.50 total working hours per week/ 1352.50/40=33.8 working hours per week). In discussion with lecturers on the programme during the onsite visit, Reviewers found a good level of staff satisfaction. All the teachers meet at least the minimum qualification requirements and the majority of them exceed them considerably. However, the number of scientific areas the professors cover, reaches up to 5 per staff in some cases and seems to be quite broad (SES, Appendix 8.2.).

According to the SES, p.16, para.71) the composition of the personnel of the Department of Transport Management is suitable for work with the Master's students, is of necessary competence, and sustains the opportunity and possibility for the achievement of learning outcomes within the study programme. Although there are just 3 professors, 10 associate professors and 4 lecturers, the number of students on the TEEM Master programme is 67 in both study years, so the ratio between the students and faculties seems to be rather satisfactory (3.94 students per teaching staff).

The majority of Master's students have graduated from the Bachelor's studies of Management and Business Administration and are working in field of their speciality; therefore, they know their prospects and the motivation to study. Other students, who were admitted from other specialities, must study transport courses more assiduously and take more active interest in the actualities of the transport market and sector.

As the SES shows (Table 4.2, p.16), the age and the turnover of teachers is a problematic area, but it appears that at this time, the TEEM is considering the employment of 3 young doctoral students. Almost 50 % of the faculties participating in the programme are younger than 45 years, while the other 50 % is older, and for the time-being, the staff balance is satisfying.

The Reviewers can confirm that the qualifications of the teaching staff are adequate to ensure learning outcomes. The Reviewers were acquainted with qualification schemes (Appendix 8.3.). It is most important to give strong support and training programmes to meet Faculty needs in achieving proficient English. This is appreciated by the Faculty and, as such, is seen as a highly important means for improving and strengthening the international learning experience on the programme. (It is possible to take courses in English language at the other universities but employees at VGTU 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 fees are evenly spread to 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 of the existing staff through, for example, the funding of attendance at conferences and workshops, reflects good aspiration but also recognises the limitations that the Lithuanian context places on international staff recruitment. It can be concluded that the Staff Development Unit is operational and facilitates at 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 Master'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 Reviewers can confirm that the teaching staff of the programme are involved in research (art) directly related to the study programme being reviewed. It was also clear to the Reviewers that the TEEM programme faculties have very good connections with the corporate world through a variety of activities, such as board memberships, council memberships, consulting, case development, guest lectures, commissioned research and executive education. Faculties have an obligation to work more with the business world. This seems to be a good match. On the other hand, there is a need for more internationalisation of staff. However, at the same time, the Faculty is doing more to become international and to acquire more international experience through research cooperation across borders. A stronger focus on international publications and cooperation with recognised schools and developing programme content that is focused on international issues is being developed.

In accordance with the recommendation for the TEEM programme made in 2005: *Employees' workload is sometimes too high, so it is not possible to ensure adequate Faculty participation in other activities*, the Reviewers found that staff workloads remain at a very high level. With regard to maintaining the quality of teaching and research as well as the Loyalty Payments Scheme, institutionally these are not progressing as well as they should, vis-à-vis the very high number of lecturers who participate in teaching at other educational institutions on similar programmes.

During the onsite visit the Reviewers also received evidence indicating some lack of responsiveness by senior University management to the specific needs of the Department and the personal and professional needs of lecturers.

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 second-cycle students. The Department of Transport Management has 4 classrooms and a computer room, which belong to the Transport Management Educational Laboratory. 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. There are 11 classrooms equipped with 14 computers with internet connection and printers for the work of teachers and technical staff.

The library of Vilnius Gediminas Technical University is a modern library of a Lithuanian higher school, which satisfies the informational needs for the 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 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, the MA students of TEEM can access 525 e-journals and 853 e-books titles. The library is open 24/7. 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.

As already mentioned, the programme utilises some of the data generated via Moodle that relates to student and staff use of the learning management system. At present, most of the SES provides meaningful information about student-learning, or of the effectiveness of design of the learning experiences. 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. Analyses of some of the 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 in the transition from the old courseware with the potential for creating particular problems for distance-learning students. It would be very helpful to quicken the transition from the old courseware to the new one (Moodle) so that students are enabled to track the curriculum according to their own immediate needs.

Some solutions have been found however, notably via email. But as noted earlier in the Report, in September 2013, Moodle usage will be obligatory for all teachers. 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.

The budget of the 94.296,66 Litas for the 2008-2012 periods was allocated by the Department of Transport Management for investments in equipment update.

During the onsite visit, Reviewers also identified that there is no access to the student canteen in the main building and that there are no bespoke facilities for the TEEM Master 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

The students entering second-cycle studies are not only the graduates of the *Transport Engineering Economics and Management* study programme, but also the students having management and business administration diplomas as other specializations.

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. The entrants to the second-cycle studies may indicate up to 16 positions in the application, which are listed in order of descending priority. The selection is carried out in the computerised database of admission to the second-cycle studies in the VGTU information system. The admission to Master's studies has been transferred to VGTU Committee for Admissions. There are no entry examinations to the Transport Engineering Economics and Management study programme. The persons admitted to second-cycle university studies must have graduated from the Bachelor's studies and have at least the Bachelor's degree in the same or a similar area of study or a degree of Professional Bachelor and having completed additional studies relevant to the Master programme. The basic criterion is the weighted average of Bachelor's studies; additional points are added to it for scientific activities, ie. scientific publications.

The candidates with the highest entrance scores are admitted to the planned number of positions. Persons whose studies are completely funded by the state and persons paying the full tuition are admitted to second-cycle university studies by competition (SES, p.22, para.120). The demand for entering the TEEM Master programme increased from 2007 to 2012, that is from 29.96% -257 in 2007 to 334 in 2012. The number of admitted part-time students decreased from 11 in 2010/11 to 8 in 2012/13, bearing in mind that the number of admitted SES students increased from 38 in 2007/08 to 67 in 2011/2012. The increased intake of full-time students reflects the strong demand for the TEEM Master's programme and the students' position in the Lithuanian job market.

The drop-out rate was rather small from 2007 till 2012: cancelling studies due to transfer to another higher school from 2007-2012 - only 4 students cancelled; cancelling studies by choice from 2007-2012 - only 8 students cancelled; cancelling studies due to low performance from 2007-2012 - only 6 students cancelled; cancelling studies due to failure to return after a break of studies from 2007-2012 - only 5 students cancelled.

Master students of the Department of Transport Management are encouraged to take part in research activities. To this end, courses in research methods are included in the process of studies. Students are invited to participate in the *Conference of Young Researchers*, which is organised every year.

Second-cycle students prepare scientific articles for this conference on studies related to their theses. The best defended Master's theses may be submitted to competitions organised by the Lithuanian National Road Carriers' Association, LINAVA.

The solutions presented in the theses may be submitted to relevant institutions. Each Master's student must prepare at least one scientific paper during the period of study. This possibility is provided by the *Conference of Young Scientists* organised every year, which is also attended by young scientists from abroad.¹

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 also argued that it prepares them well for a job market environment with a large number of tasks which will be assessed by superiors.

The academic and social support of students is comprehensive and, according to students, effective throughout TEEM Master's programme. According to the discussions in meetings with students and Alumni, all students are satisfied with the assessment system and are confident that learning outcomes are checked 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 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 personal development of the students is in line with the criteria, 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 students wish for more individual training, the Reviewers believe this is well taken care of in the programme.

When it comes to international aspects of the programme, there are still challenges, especially in terms of the quality of 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 8.5.10 is rather small and varies from 1 student in 2007 to no students in 2011. The current content of the programme with international textbooks and projects, international internships and international guest lectures, could take care of the international learning experience and also the preparation of the students as international managers.

The method of having different professors during the teaching process on the programme and the student's assessment process has given the 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.

¹ The Conference of Young Scientists = The Conference of Young Researchers (both titles are used for the same Annual Conference (SES, p. 23 para 131. and SES, p. 25 para 147)).

The corporate interactions in the programme meet the interests of the ESG (*Standards and Guidelines for Quality Assurance in the European Higher Education Area*) regarding achieving the necessity of link between the corporate world and the curriculum, as well as the knowledge, skills and competences of graduate Master students. The programme serves ‘the interests of students as well as employers and society more generally in good quality higher education’.² 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 the SES Team, lecturers and Alumni, it was confirmed that there is a growing difficulty with the supervision of student’s final thesis due to the increasing number of students. This matter needs to be addressed. It would also be recommendable to consider more systematic involvement of Alumni in curriculum evaluation and redesign. Also, it should be stated that the admission of students – the performances of the best students - were in line with peer expectations regarding the institution of this rank.

Even though the students have good support services in the TEEM Master’s programme, perhaps student support services and career centre activities should be more decentralized in order to meet the requirements of the even larger student population in the Faculty of the TEEM Master’s programme

6. Programme management

The compilation and implementation of the study programme is coordinated by the Committee for Studies (Programme) of the Faculty, 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.

Teaching and research are regulated by various regulatory documents of VGTU, which includes approved ethical codes of teachers and students and published descriptions of minimum qualification requirements for the teachers and researchers. The ethical code for teachers: ‘University staff related to research and studies, act in compliance with the Code of Academic Ethics’ of Vilnius Gediminas Technical University is in accordance with the *Resolution on approval of the Statute of Vilnius Gediminas Technical University* (2011). The VGTU website outlines the minimum qualifications required for research and teaching staff. These requirements, generally, conform to the habilitation procedures and standard qualifications required by other EU countries, save that a Master’s degree is a minimum requirement for teaching assistants. Not all EU counties require a second-cycle qualification for the level of assistant.

The Reviewers observed strong commitment by all stakeholder groups to the strategy of the TEEM Master programme. There appears to be a strong and active link between programme lecturers and the regional business community. However, the link with Alumni (except some sporadic contact) is relatively weak. Guest lecturers, projects, internships, and jobs are provided for TEEM Masters, students and graduates. However, engagement of the programme student body, and students at large in the decision-making and activities of the Department itself is in need of broadening and strengthening; currently, the process is more or less 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. In some cases the information is available only to the TEEM Master’s programme management. The TEEM SES

² EAQAHE (2009) *Standards and Guidelines for Quality Assurance in the European Higher Education Area*, Helsinki.

Report clearly indicates the periods during the academic year at which the different types of information are collected.

The Reviewers are of the opinion that the inclusion of different stakeholders' perspectives is strong, especially in 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, or that 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 quality assurance in the TEEM programme, the actual practices and true impacts still need to be described in detail. The time-span since implementing the major steps towards a QA system and restructuring the programme from 2011 (SES, p.8, paras.17-18) is short. Judging experiences from elsewhere in Europe, it really takes time for a culture of quality to develop throughout a Faculty. Measurable quality objectives could be better defined. The TEEM Master'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 onsite visit, Reviewers identified only one instrument for quality assessment (the survey for the lecturers). Excepting 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 programme level.

There are also many examples of the 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, the TEEM Master 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 progressive changes determined by the results of the last external evaluation in 2005 include the reorganisation of the programme according to the directive made by the Minister of Education and Science of the Republic of Lithuania; the popularity of the programme, which has led to increased student numbers; some turnover in personnel; updating in both the material and methodical bases; and more active cooperation with the stakeholders. (SES, p.35, para.209)

However, contemporary concerns have increased in terms of constraints to lecturers, namely that workloads have tended to increase without internal action to remedy them, causing less than adequate staff participation in other activities. Two other major issues concern: relatively low salaries and insufficient connections with higher education institutions abroad. This latter problem always carries the potential to limit the exchange opportunities for teachers as well as students. Some of the above mentioned problems/ disadvantages have been treated with high consideration and show considerable improvements, while others (mostly due to much centralised new university governance) are treated sporadically and with less pressing concern.

After the visit held on 3rd of May 2013, Reviewers concluded that teaching staff are very much able to manage themselves. However, management at all levels should be more accessible and

visible in a support role and more active in practical strategy and also in strategy implementation. Faculties, social partners and Alumni were well aware of both the strengths and weaknesses of the TEEM Master's programme.

III. RECOMMENDATIONS

1. Work out a more committed strategy for internationalisation beyond the domestic market;
2. Develop additional and integrate the existing instruments for Quality Assurance system in order to enhance the measurement of quality improvements at the programme; teaching staff should face less difficulty in integrating some imported ECTS-bearing courses; indicate and illustrate a more differentiated approach between Master and Bachelor programmes; and review the possibility of a staff workload decrease;
3. Consider ways to develop capacity/allocation of more permanent resources to the International Office, Alumni and Careers Centre for the purposes of strengthening student support services;
4. Become more familiarised with the detail contained *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;
5. Although the University has launched the Plagiarism Detection Programme in spring 2013, Reviewers recommend that the TEEM Master's programme moves towards greater use of the online learning environment. Consideration should be given to developing an obligatory policy against plagiarism and the use of plagiarism detection software across all electronically submitted assignments supported by student education in relation to academic integrity.

IV. SUMMARY

On a general level, the TEEM has been implementing 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 is 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 supplier of the future leaders for the regional business community. The curriculum reforms are driven by a dedicated committee; proposals are being processed through the Department's decision-making bodies, and passed to the Senate of the University.

It is also evident that the second Bologna cycle is clearly still in development (taking into consideration the decrease in study programme length). Like most other European countries, the institutions, students and the employers are still shaping the 'Master' landscape which is a rather fragmented market concerning its contents (specializations vs. general), 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 Master portfolio and its quality objectives, which appear to be rather 'supply driven', largely based on what already existed in the pre-Bologna era and on the internal resources. Also, there are great efforts towards a clear 'demand driven' vision and a strategic plan for developing the second Bologna cycle in all its aspects, ranging from pre-experience, specialized programmes to post-experience executive education modules.

As the Reviewers understood, the TEEM is still in the process of further implementation and improvement of reforms. Support units and staff prove to be consistent in the 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 curriculum improvements, which are taken very seriously by all stakeholders involved. The Department may want to focus more on developing a clear strategy on its future position in the Master's market. In addition, quality objectives/evaluations may be set more explicitly at various unit levels (curriculum, Department, and programme) instead of the lecturers' level only.

The Reviewers expressed some concern 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 Department level. Questions regarding the spatial integration of the University are increasing. In recognising and accepting the situation where the TEEM has to invest more in the internationalization of staff, international marketing and brand-building as well as becoming able to operate efficiently with increased international and domestic competition, the governance system could potentially represent major challenges.

One of the really strong aspects of the TEEM is its corporate connections and lucrative market demands for its graduates. Reviewers learned that representatives of the business community are included in various committees; however, more systematic involvement of Alumni in curriculum evaluation and redesign is recommended. Corporate partners have considerable influence on important issues such as programme development and output results such as employment and job offers. In these, and many others areas, the TEEM continues to perform very well.

V. GENERAL ASSESSMENT

The study programme *Transport Engineering Economics and Management* (state code – 621N18001) 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 Kenjić

Dainius Petravičius

Monika Kavaliauskė

**VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETO STUDIJŲ PROGRAMOS
TRANSPORTO INŽINERINĖ EKONOMIKA IR VADYBA (VALSTYBINIS KODAS –
621N18001) 2013-07-30 EKSPERTINIO VERTINIMO IŠVADŲ NR. SV4-290 IŠRAŠAS**

<...>

V. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus Gedimino technikos universiteto studijų programa *Transporto inžinerinė ekonomika ir vadyba* (valstybinis kodas – 621N18001) 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

Apskritai Transporto inžinerinės ekonomikos ir vadybos programa įgyvendina Bolonijos procesą. Universitetas, parengė pirmos (bakalauro), antros (magistro) ir trečios (daktaro) pakopos programas, laikydamasis 4+2+4 sistemos (atsižvelgiant į tai, kokias studijas studentas pasirinkęs – Studijų kokybės vertinimo centras

nuolatinės ar iššęstinės). 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. programos reformas skatina savo darbui atsidavęs komitetas, pasiūlymus nagrinėja sprendimus priimančios fakulteto institucijos ir perduoda Universiteto senatui.

Be to, akivaizdu, kad antrasis Bolonijos (proceso) ciklas vis dar tobulinamas (atsižvelgiant į studijų programos trukmės sumažėjimą). 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. iššęstinės studijos vs. nuotolinis mokymasis) atžvilgiu. Transporto inžinerinės ekonomikos ir vadybos savianalizės suvestinėje pateikiama informacija apie dabartinį magistro 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. Be to, labai stengiamasi pereiti prie „skatinimo paklausa“ vizijos ir strateginio antrojo Bolonijos ciklo kūrimo plano visais jo aspektais, pradedant išankstine patirtimi, specializuotomis programomis ir baigiant švietimo ir mokymo moduliais įgijus patirties.

Kaip suprato vertinimo grupė, Transporto inžinerinės ekonomikos ir vadybos magistro 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. Katedrai vertėtų daugiau dėmesio skirti 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.

Vertinimo grupė išreiškė tam tikrą susirūpinimą valdymo sistema, 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.

Vienas tikrai svarbus Transporto inžinerinės ekonomikos ir vadybos programos aspektas yra jos ryšiai su socialiniais partneriais 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 pasiūlymais. Šioje ir daugelyje kitų sričių Transporto inžinerinės ekonomikos ir vadybos programos rezultatai labai geri.

III. REKOMENDACIJOS

1. Parengti stipresnę tarptautiškumo strategiją, išeinančią iš už vidaus rinkos ribų;
2. Sukurti papildomas ir įtraukti esamas kokybės užtikrinimo sistemos priemones, siekiant sustiprinti programos kokybės pažangos vertinimą; akademiniam personalui neturėtų būti taip sunku integruoti kai kuriuos „importuotus“ studijų dalykus su nustatytais ECTS kreditais; nurodyti ir paaiškinti magistrantūros ir bakalauro programų skirtumus ir apsvarstyti darbuotojų darbo krūvio sumažinimo galimybę;
3. Apsvarstyti kaip vystyti kompetencijas / skirti daugiau nuolatinių išteklių Tarptautinių ryšių skyriui, Alumni klubui ir Karjeros centrui, siekiant stiprinti paramą studentams;
4. Geriau susipažinti su „Europos aukštojo mokslo kokybės užtikrinimo standartais ir gairėmis“ (angl. ENQA), siekiant sukurti sistematiškesnę ir labiau organizuotą kokybės užtikrinimo sistemą, ir atsižvelgti į E4 Bolonijos grupės parengtas rekomendacijas;
5. Nors 2013 m. pavasarį Universitetas pradėjo įgyvendinti Plagijavimo kontrolės programą, vertinimo grupė rekomenduoja, kad įgyvendinant Transporto inžinerinės ekonomikos ir vadybos (TIEV) magistrantūros programą būtų vis daugiau naudojamosi internetine mokymosi aplinka. Reikėtų apsvarstyti privalomos antiplagijavimo politikos sukūrimo ir plagiatiui nustatyti skirtos programinės įrangos naudojimo, nustatant visas elektroniniu būdu pateiktas užduotis, klausimą.