STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Vilniaus Gedimino technikos universiteto

STUDIJŲ PROGRAMOS

KELIŲ EISMO SAUGUMO INŽINERIJA (621H22001)

VERTINIMO IŠVADOS

EVALUATION REPORT

OF *ROAD SAFETY ENGINEERING* (*621H22001)*

STUDY PROGRAMME

at Vilnius Gedinimas technical University

1. **Prof. Philippe Bouillard (team leader)** *academic*
2. **Prof. Alfred Strauss,** *academic*
3. **Prof. Tõnu Meidla,** *academic*
4. **Prof. Juan Martinez,** academic
5. **Dr. Mindaugas Gikys,** *representative of social partners*
6. **Mr. Simonas Bulota,** *students' representative*

Evaluation coordinator - *Mr. Pranas Stankus*

Išvados parengtos anglų kalba
Report language - English

Vilnius
2016

DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	*Civilinė inžinerija*
Valstybinis kodas	621H22001
Studijų sritis	Technologiniai mokslai
Studijų kryptis	Statybų inžinerija
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Antra
Studijų forma (trukmė metais)	Nuolatinė (2), Ištęstinės (2,5)
Studijų programos apimtis kreditais	120
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Civilinės inžinerijos magistro laipsnis
Studijų programos įregistravimo data	2009-08-31

INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	*Road Safety engineering*
State code	621H22001
Study area	Technological sciences
Study field	Construction Engineering
Type of the study programme	University studies
Study cycle	Second
Study mode (length in years)	Full time (2), Part time (2,5)
Volume of the study programme in credits	120
Degree and (or) professional qualifications awarded	Master's Degree in Civil Engineering
Date of registration of the study programme	August 31st, 2004

CONTENTS

I. INTRODUCTION

1.1. Background of the evaluation process

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

The evaluation is intended to help higher education institutions to constantly improve their study programmes and to inform the public about the quality of studies.

The evaluation process consists of the main following stages: *1) self-evaluation and self-evaluation report prepared by Higher Education Institution (hereafter – HEI); 2) visit of the review team at the higher education institution; 3) production of the evaluation report by the review team and its publication; 4) follow-up activities.*

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

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

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

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

1.2. General

The Application documentation submitted by the HEI follows the outline recommended by the SKVC. Along with the self-evaluation report and annexes, the following additional documents have been provided by the HEI before, during and/or after the site-visit:

No.	Name of the document
1.	Examples of student questionnaires
2.	Timetable of students
3.	Department action plans
4.	List of incoming/visiting teachers

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

This report presents the findings of an evaluation of the master programme *Civilinė inžinerija* (621H22001). This two year full-time (3 years part-time) programme leads to a Master of Road Safety engineering qualification.

This report is based on an analysis of the document "Civil Engineering Field of Study. Road Safety Engineering (State Code 621H22001). Self-Assessment Report, Vilnius, 2016" (consisting of 33 pages main text, excluding annexes) and information gathered by the Review Team during a site visit to Vilnius Gediminas Technical University on 17 November 2016.

The site visit included:

- discussions with senior faculty administration staff,
- discussions with staff responsible for preparation of Self-Evaluation Reports (SER),
- discussions with teaching staff,
- discussions with students,
- discussions with employers of graduates and alumni,
- inspection of student coursework including final year projects,
- inspection of teaching premises and equipment including auditoria, library, computing facilities and laboratories.

The Review Team found it necessary to get clarification of some issues reported in the SER and was satisfied with the clarifications provided during the site visit.

It is worth mentioning that the same Review Team also evaluated the bachelor and master of Construction Technologies and Management (612J80003, 621J80003 resp.), the bachelor of Urban Engineering (612H27001) and the masters of Urban Planning and Engineering (621H27001) and Civil Engineering (621H20002). Many common aspects were present in these programmes. Therefore, the corresponding evaluation reports may contain some duplicate comments due to identical data, situation or concerns in order to be read independently.

The review was conducted in accordance with current regulations and guidance furnished to the Review Group through documentation and training by SKVC. The Review Group was also expertly assisted by Mr. Pranas Stankus in discharging its responsibilities to SKVC.

1.4. The Review Team

The review team was completed according *Description of experts' recruitment*, approved by order No. 1-01-151 of Acting Director of the Centre for Quality Assessment in Higher Education. The Review Visit to HEI was conducted by the team on 17/11/2016.

1. **Prof. Philippe Bouillard (team leader)** Head of BATir (Civil, Architectural and Urban Engineering) department at Université Libre de Bruxelles, (Belgium);
2. **Prof. Alfred Strauss,** Head of the Institute of Structural Engineering at University of Natural Resources and Life Sciences (Austria);
3. **Prof. Tõnu Meidla,** Head of Department of Geology at Faculty of Science and Technology in University of Tartu (Estonia);
4. **Prof. Juan Martinez,** Professor of Civil Engineering at (Institut National des Sciences Appliquées (INSA) of Rennes (France);
5. **Dr. Mindaugas Gikys,** Director of joint stock company AIF (Lithuania);
6. **Mr. Simonas Bulota,** PhD Student in Material Science at Kaunas University of Technology (Lithuania).

II. PROGRAMME ANALYSIS

2.1. Programme aims and learning outcomes

The aims of the programme are well defined and clear, indicating that VGTU is running a strong Road Safety Engineering programme that is generally well targeted. The aims of the programme are made public on the VGTU website and the programme is compiled in compliance with Lithuanian qualifications framework 7th and level VII of European qualifications framework and European higher education qualifications framework.

The aims and learning outcomes of the Road Safety Management master programme are arising from the Road Safety Directive and its application in Lithuania. The aims are articulated with high clarity. The position and competences of graduates are well defined and in compliance with the directive but the actual legal framework and position (later operational competency) of the graduates is not entirely clear (contradictory information about the later compulsory certification was delivered by different stakeholder groups). The programme is generally consistent with the type and level of studies and the level of qualifications offered, being largely in compliance with the principles of creating study programmes elsewhere in Europe.

The demand for the graduates of the Road Safety Engineering Programme is not argued in a fully convincing manner. Needs of the labour market are generally met but the preference of the graduates of this particular programme was not fully understood by the representatives of social partners employing specialists in the field of road safety. No specific analysis of the possible employment of graduates was provided. 10-11 graduates were reported in 2014 and 2015 but they were not represented in the group of students meeting the assessment team during the site visit.

The programme is offering relevant competencies and the depth of requirements on knowledge and obtained skills are generally conforming with the overall requirements to the master studies. The learning outcomes are consistent with the programme in general terms, but the institution provided insufficient evidence on practical application of the learning outcomes in the programme development. The stakeholders (teaching staff, students, graduates, employers) were not confident about the learning outcomes.

The specific features of the programme of Road Safety Management Programme are well reflected by its title and clearly referring to the European directive. The content of the programme conforms to the title. The qualification offered to the graduates is also in agreement with the title of the programme, although the acting competences of graduates may need to be

further attuned to the requirements of the licensing rules. The Review Team also questions whether or not it is necessary to have so many closely related separate civil engineering programmes in VGTU.

2.2. Curriculum design

The Road Safety engineering curriculum (120 credit points, 60 credit points per year) meets all legal requirements regarding its structure and individual components.

The graduation thesis comprises 39 credit points and this is remarkably exceeding the lower limit of credit points in the regulations (30).

The sequence of modules and courses of the Road Safety Engineering programme is logical and generally balanced. The list of courses is short and no unnecessary overlaps could be detected in the content of courses.

The practical training is granted exclusively through the graduation thesis, as no other practical training is included in the programme. This solution may not be optimal, considering the demand for practice-oriented graduates with strong engineering background. Therefore, the Review Panel recommends including lab training, including risk analysis, in the programme.

The content of courses and modules in the Road Safety Engineering programme is generally consistent with the master level studies and is sufficiently supporting an academic study. Professional content of the modules is sufficient for developing qualified specialists.

Students are insufficiently encouraged to attend lectures in English. Although the participation of guest lecturers was mentioned in the report provided by the Department, the assessment team did not gain evidence that these lectures represent an integral part of regular studies. Including compulsory elements, lectures and courses in English language could be the first steps towards ‘internationalisation at home’ and might also further encourage the students to accept the proposals for international mobility. Wider application of English language in teaching could be implemented, inter alia, by introducing student paper summaries in English and by developing course material in English. Today, the Review Team observed insufficient attention to the development of professional English and this is considered a weakness of the programme.

Appropriateness of the professional content of the modules and subjects is evident from the materials provided by VGTU. The teaching methods, however, are rather traditional, not remarkably innovative. A particular feature of the programme at VGTU is a rather limited number of contact hours but scope of the programme is sufficient to ensure learning outcomes. The content of the programme is in most aspects reflecting the recent achievements in science

and technologies, the individual subjects being mainly provided by specialists with a PhD or equivalent degree.

Considering the large proportion of students combining their studies with a job, the Review Panel recommends making full usage of ECTS opportunities in terms of crediting work experience or club association projects.

2.3. Teaching staff

The analysis of the documentation shows that teaching staff meets legal requirements with more than 80 % holding a scientific degree and more than 60 % showing compliance between research field and teaching topics. There are four teachers holding a Professor position involved in the Road Safety Engineering Programme, three of them being involved exclusively in supervising thesis works and one is in charge of a second semester module. As already recommended in the previous evaluation, the Review Panel considers that the involvement of Professors in this second cycle programme should be increased.

The teaching staff is recognised as committed and qualified; the great majority coming from the departments of Roads, Urban Engineering and Automobile Transport, are involved in research and/or industrial projects, some of them at international level, producing quite good records of publications: scientific journals, conference proceedings and popular science magazines.

During the academic year 2015-2016, twenty-two teaching staff were involved in the programme of Road Safety Engineering with an equal number of students. During the period 2013-2016, the average ratio staff/students was about one which is quite comfortable for ensuring the programme in excellent conditions. However, the Review Team observes that about two thirds of staff are part-time teachers who, by definition, cannot be deeply involved in faculty concerns.

Regarding the movements of teaching staff from 2013-2014 to 2015-2016, the Review Team counts four departures versus five arrivals which shows a quite stable teaching staff. During the same period, three promotions were awarded and one people moved to a lower position, showing that teaching staff structure is not static and that there is a strict appraisal procedure.

The pedagogical workload of teaching staff inside the programme saw light variations during the three years period analysed with a decrease of about 10 % from academic year 2013-2014 to 2015-2016. In 2015-2016 the average teaching load was about 75 academic hours by

person, with a huge dispersion (from 10 to 225 hours/person) explained by the presence of full-time and part-time staff and by the involvement of most teachers in other programmes too.

Teacher staff is given the opportunity to attend industrial, teaching or research traineeships, from one to four months duration, either in Lithuania or abroad. More specifically, during the analysed period, international exchanges were quite active and balanced with twenty five outgoing missions and twenty-nine incoming visits.

The Review Panel recommends developing training of teaching staff on the subject of learning outcomes, as they are not yet playing a central role in the study process.

2.4. Facilities and learning resources

VGTU makes auditorium rooms, dedicated laboratories, reading rooms within the library and specialised databases and software available to the students. 25 auditorium rooms are available with some recently renovated. The classes take place in the premises of the Faculty of Environmental Engineering, Saulėtekio al. 11 and the Urban Engineering Department laboratory, Linkmenų str. 28. There are no problems to use two different locations because there is no need to travel to any other location on the same day. There are plans in the future to move the laboratory from Linkmenų str. 28 to Saulėtekio Avenue 11.

Modern and operational multimedia equipment, including internet connection, is available in the rooms, sometimes sponsored by social partners. Health and safety conditions of auditorium rooms are complying with the regulations. The students have the opportunity to work in the main class rooms with 30 places and computer room with 20 workplaces (department of Roads). An additional computer room (15 places) is available as well in the laboratory of Urban Traffic. The Review Team considers that the premises are very good and suitable to deliver the programme.

The students are not trained to perform experiments in the laboratories in this programme but some final thesis requires experimental work. The laboratory equipment and measurement instruments are relevant for this purpose. The equipment is maintained operational and sometimes renewed. The safety conditions in laboratories should however be improved by clearly demarcating restricted areas where appropriate. A further attention should be given to training the students to health and safety issues in laboratories, beyond getting their signature on a standard form. Lab training should be developed and include assignments on risk analysis.

The students are trained to use specialised software as well. The list of software is extensive and very well suited for the study process. The programmes are up-to-date and useful

for the urban engineering market. A better attention should be given on further implementing the BIM software and collaborative approach in the study programme.

The accessibility to resources for undergoing practical training is good. The Departments are participating in the real-life projects, performing feasibility analyses, developing collaboration with several Lithuanian Associations, municipalities and private companies. The departments have developed relevant collaboration with the social partners and are making effort to support the students in getting in contact with practical case-studies.

VGTU has a Central Library with 11 reading rooms and 330 working places. The Central library offers very flexible working time and access to databases, books, journals and other e-resources. The Central library is also providing printing, scanning, binding services.

Recent books and journals are available in English and Lithuanian both in the Central library and reading rooms. There are also some specialised books in Lithuanian published by VGTU which also edit their own scientific journals. During the study process, the students have the opportunity to use ALEPH computer system, which includes 10 Lithuanian libraries, and the Lithuanian Standardisation Department database.

The teachers are using handouts, slide presentations, videos, special equipment and software. The teachers and students are using the learning management system Moodle. The Review Panel appreciates the large use of Moodle but recommends considering further its possibilities and other internet tools, beyond the basic information transfer. The number of resources available in Lithuanian and English are suitable for the study process.

2.5. Study process and students' performance assessment

The admission to the Road Safety Engineering study programme is open to students who hold a bachelor degree in Construction and Engineering. Graduates of other bachelor study programmes can apply if they are reaching requirements for general and special completed subjects. There is no entrance exam and all applicants are rated by weighting bachelor degree final grade, subject exams marks and research papers. Admission is organised by the Student Admission and Information Centre of University.

Considering the number of applications from 2012 to 2015, there is a decent increase of interest for the full-time study programme from 54 applicants in 2014 to 100 applicants in 2015, which is almost the same level as in 2012. The number of applicants who chose this study programme as first priority and the number of admitted students are also started to increase in 2014. This shows a rising interest of highly motivated students for this study programme. The average competition score stayed at the same level for the whole period.

The programme is available for full-time studies. The schedule for both classes and examinations is rational. Classes start in the afternoon since most of the students are already employed but the Review Team suggests making full use of ECTS opportunities in terms of crediting work experience or club association projects.

The students have the opportunity to participate in Young Scientist Conference "Science – Future of Lithuania" which is hosted by VGTU. More options for student participation in research should be encouraged.

Student mobility is encouraged by VGTU International Relations Office. Students claimed that they are getting regular information about Erasmus mobility from University administration, but lack of time and concerns losing their position in company are the main reasons why Erasmus mobility figures remain so low. The Review Panel however noticed a very large consensus of the need and relevance of international exchanges and recommends urgently analysing the current barriers, proposing and implementing appropriate solutions.

The students have access to good multiple sports, health and cultural facilities. There is an active VGTU Students Association which organising various events and activities and represents students inside and outside of university. Accommodation is provided to non-resident students. VGTU Carriers and Integration Office provides individual and group consultations for students about career opportunities also they organising Career days. Multiple scholarships are available for students based on study, merit or social circumstances. Student loans are subsidised by state.

The students have good access to several sports, health and cultural facilities. There is an active VGTU Students Association which organises various events and activities and represents the students inside and outside of university. Accommodation is provided to non-resident students. VGTU Carriers and Integration Office provides individual and group consultations for students about career opportunities, including during Career days. Multiple scholarships are available for students based on study, merit or social circumstances. Student loans are subsidised by state.

The assessment system is based on a 10 points grading system. It is very clear and publicly available. It could be improved by elucidating the grade significance consistently with the learning outcomes. Students can receive informal feedback about their grades and an appeal procedure is available. In order to encourage Erasmus mobility, the University defined a clear relationship between ECTS and University grading systems. The final grade is a weighted result of exam, course project, course work, integrated project, report and final project marks.

Social partners reported good collaboration with the Departments. It could however be strengthened by developing placement opportunities.

2.6. Programme management

The master in Road Safety Engineering is supervised by VGTU Department of Roads with a collaboration of Department Urban Development (Faculty of Environmental Engineering). The programme is managed by a study programme committee where each department is represented together with student and social partner representatives. Further approval by Faculty study committee, Faculty and University Council is required for the changes to be implemented, which is usual.

The Review Team has noticed many closely related civil engineering programmes and questions whether or not it is necessary. The Review Team observed much confusion about the specificity of each programme among the stakeholders (students, graduates and social partners). The Review Team recommends that VGTU examines the more efficient use of resources.

VGTU has implemented an information system "Alma Informatika" to collect all data related to the study programmes, but there is still a need to further develop the database to include information from graduates (first employment, surveys) and social partners.

Since 2007, an automated student surveying system has been successfully operating in the university information system. Two student surveys on the course units are organised annually: after each term (winter and spring) exam sessions. The survey results reveal the students have a very high level of satisfaction about the courses and teachers. However, the low rate of responses requires further actions to foster student participation.

The internal quality assurance system of the university is based on European Standards and Guidelines for Quality Assurance in Higher Education. VGTU has implemented consistent procedures regarding programme management, students' assessment, staff training, study resources, career services, and students' participation. The Review Team is acknowledging such procedures and encourages VGTU to continuously improve their implementation and quality.

The main responsibility for the programme quality assurance belongs to the study programme committee and the faculty study committee. The Review Team acknowledges that internal quality measures have been implemented and are effective.

The master in Road Safety Engineering has been accredited by SKVC for 6 years in 2012 but VGTU has requested to anticipate the external review process to synchronise all civil

engineering programme accreditation. The Review Panel recommends further to systematically collect information and data on the programme and review it periodically by focusing more on feedback and developing and implementing a coherent plan of actions. Finally, a better attention should be paid to communicating the changes to the stakeholders, particularly if they have been surveyed.

III. RECOMMENDATIONS

1. The Review Team recommends that VGTU examines the more efficient use of resources. The Review Team questions whether or not it is necessary to have so many closely related separate civil engineering programmes in VGTU.

2. The Review Team recommends VGTU to explore the possibility that the degree could serve as a professional certificate as requested by the EU Directive.

3. Whereas the learning outcomes are now available, the Review Panel noticed that they are not yet playing a central role in the study process and recommends developing a systematic formal way to periodically reviewing them involving all the stakeholders (students, graduates, social partners and teaching staff).

4. In this regard, the Review Panel recommends developing training and workshops for the Teaching staff in order to enhance the coherence between learning outcomes, methods and assessment.

5. Regarding the curriculum design, the Review Panel recommends to include lab training in the programme.

6. The Review Panel appreciated the large use of the learning management system Moodle but recommends considering further its possibilities and other internet tools, beyond the basic information transfer.

7. In terms of internationalisation, the Review Panel noticed a very large consensus of the need and relevance of international students' exchanges offered by the Erasmus+ programme but their number remains low. It is recommended to urgently analysing the current barriers, proposing and implementing appropriate solutions.

8. In this regard, the Review Panel would like to repeat the recommendation to improve the students' level in English language by offering courses, learning activities, study material and assigning coursework in English.

9. Regarding the decreasing number of students, the Review Panel recommends to intensify the efforts to increase the visibility of the programme involving all the stakeholders.

10. Considering the large proportion of students combining their studies with a job, the Review Panel recommends making full usage of ECTS opportunities in terms of crediting work experience or club association projects.

11. The Review Panel would like to repeat the recommendation that the involvement of professors be increased to enhance the programme

12. In terms of research, the Review Panel recommends better engaging the Faculty members and the students in national and international research projects.

13. In terms of quality assurance, the Review Panel recommends to systematically collect information and data on the programme and review it periodically.

14. The safety conditions in laboratories should be improved by clearly demarcating restricted areas where appropriate and training the students to risk analysis.

IV. SUMMARY

This two year full-time (three year part-time) programme leading to a Master of Road Safety Engineering is consistent with the aims and learning outcomes and with the type and level of studies and the level of offered qualifications. The curriculum design meets the legal requirements and the study subjects and/or modules are spread evenly. The content of the modules is generally appropriate for the intended learning outcomes. The staff is well qualified to deliver the programme and staff –student ratio is exceptionally good. The staff is properly engaged in research, professional bodies and self-continuous development, though not always evenly. The facilities in terms of classrooms, libraries, reading rooms, computer rooms are very appropriate. The study process and student assessment are generally adequate. The Master of Urban Planning and Engineering is supervised by VGTU Department of Roads (Faculty of Environmental Engineering). It is managed by a study programme committee. The need to run many closely related programmes in civil engineering by VGTU has however been questioned.

The Review Team further suggested other possible improvements. A better attention should be given to the implementation and review of the learning outcomes by fostering a collaborative approach with all stakeholders and offering appropriate training for the staff. The internationalisation should be extended, starting by offering learning opportunities to improve the English level of the students, fostering Erasmus exchange and enlarge the staff involvement in international projects. Further actions should be taken to make the programme more visible. The quality assurance loop, from self-analysis and systematic data collection to implementing a plan of actions, should be strengthened. Training and safety conditions in the laboratories require a better attention.

V. GENERAL ASSESSMENT

The study programme *Road Safety engineering* (state code – 621H22001) at Vilnius Gediminas Technical University is given positive evaluation.

Study programme assessment in points by evaluation areas.

No.	Evaluation Area	Evaluation of an area in points*
1.	Programme aims and learning outcomes	3
2.	Curriculum design	3
3.	Teaching staff	3
4.	Facilities and learning resources	4
5.	Study process and students' performance assessment	3
6.	Programme management	3
	Total:	**19**

*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: Prof. Philippe Bouillard (team leader)

Grupės nariai:
Team members:

Prof. Alfred Strauss

Prof. Tõnu Meidla

Prof. Juan Martinez

Dr. Mindaugas Gikys

Mr. Simonas Bulota

Vertimas iš anglų kalbos

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V. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus Gedimino technikos universiteto studijų programa *Kelių eismo saugumo inžinerija* (valstybinis kodas – 621H22001) vertinama teigiamai.

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

* 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

Ši dvejus metus dėstoma nuolatinių studijų (trejus metus – ištęstinių studijų) programa, kurią baigus suteikiamas kelių eismo saugumo inžinerijos magistro laipsnis, atitinka tikslus bei studijų rezultatus, studijų tipą, lygį ir suteikiamos kvalifikacijos lygį. Programos sandara tenkina teisinius reikalavimus, o studijų dalykai ir (ar) moduliai paskirstyti tolygiai. Modulių turinys atitinka numatomus studijų rezultatus. Personalas yra kvalifikuotas programai vykdyti, o studentų bei personalo santykis yra išskirtinai geras. Personalas tinkamai vykdo mokslinius tyrimus, dalyvauja profesinių organizacijų veikloje ir nuolat tobulinasi, nors ne visada tolygiai. Auditorijos, bibliotekos, skaityklos ir kompiuterių klasės yra itin tinkamos studijoms. Studijų procesas ir studentų vertinimas yra tinkami. Kelių eismo saugumo magistro studijų programą prižiūri VGTU Kelių katedra (Aplinkos inžinerijos fakultetas). Jai vadovauja studijų komitetas. Keliamas klausimas, ar VGTU reikia vykdyti tiek daug labai panašių civilinės inžinerijos studijų programų.

Vertinimo grupė pasiūlė įgyvendinti kitus galimus patobulinimus. Bendradarbiaujant su visais socialiniais dalininkais daugiau dėmesio reikėtų skirti studijų rezultatams įgyvendinti ir vertinti, o personalui suteikti galimybę dalyvauti atitinkamuose mokymuose. Internacionalizaciją

reikėtų plėsti suteikiant mokymosi galimybes, gerinant studentų anglų kalbos žinias, įgyvendinant „Erasmus“ mainų programas ir skatinant darbuotojus aktyviau dalyvauti tarptautiniuose projektuose. Reikėtų imtis veiksmų, kad programa būtų labiau viešinama.Reikėtų stengtis pašalinti kokybės užtikrinimo spragą nuo savianalizės ir sisteminių duomenų rinkimo iki veiksmų plano įgyvendinimo.

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III. REKOMENDACIJOS

1. Vertinimo grupė VGTU rekomenduoja išanalizuoti efektyvesnius išteklių naudojimo būdus. Ekspertams kyla klausimas, ar VGTU būtina vykdyti tiek daug artimai susijusių, bet atskirų civilinės inžinerijos studijų programų.
2. Vertinimo grupė VGTU rekomenduoja išsiaiškinti, ar laipsnis galėtų atitikti profesinį pažymėjimą, kaip to reikalauja ES direktyva.
3. Nepaisant to, kad studijų rezultatai aprašyti, vertinimo grupė pastebėjo, kad jie kol kas studijų procese nevaidina pagrindinio vaidmens, ir rekomenduoja sukurti oficialią sistemą, kaip juos reguliariai peržiūrėti kartu su visais socialiniais dalininkais (studentais, absolventais, socialiniais partneriais ir dėstančiuoju personalu).
4. Šiuo tikslu vertinimo grupė rekomenduoja rengti mokymo kursus ir seminarus dėstančiajam personalui tam, kad studijų rezultatai būtų labiau susiję su metodais ir vertinimu.
5. Kalbant apie programos sandarą, vertinimo grupė rekomenduoja į programą įtraukti laboratorinį mokymą.
6. Vertinimo grupė teigiamai įvertino tai, jog plačiai naudojama mokymosi vadybos sistema „Moodle“, tačiau rekomenduoja toliau plėsti jos galimybes bei naudoti ją ne tik informacijai perduoti, bet išnaudoti ir kitas jos teikiamas internetines priemones.
7. Nagrinėdama internacionalizacijos klausimą vertinimo grupė pastebėjo, kad siūlomos „Erasmus+“ mainų programos atitinka studentų poreikius, tačiau jose dalyvauja nedaug studentų. Rekomenduojama išanalizuoti esamas kliūtis, pasiūlyti ir įgyvendinti atitinkamus sprendimus.
8. Vertinimo grupė norėtų pakartotinai rekomenduoti gerinti studentų anglų kalbos žinias ir organizuoti jiems kursus, mokymosi užsiėmimus, suteikti mokomąją medžiagą ir užduoti parašyti kursinius darbus anglų kalba.
9. Dėl sumažėjusio studentų skaičiaus vertinimo grupė rekomenduoja kartu su visais socialiniais dalininkais didinti pastangas, kad programa būtų labiau viešinama.
10. Atsižvelgdama į tai, kad didelė dalis studentų derina studijas ir darbą, vertinimo grupė rekomenduoja pasinaudoti ECTS galimybėmis suteikiant kreditus už darbinę patirtį ar dalyvavimą klubų asociacijose.
11. Ekspertai pakartotinai rekomenduoja dėstytojams labiau prisidėti prie programos tobulinimo.
12. Vertindama mokslinius tyrimus vertinimo grupė rekomenduoja į mokslinių tyrimų projektus labiau įtraukti fakulteto narius ir studentus, ypač studentus iš užsienio, kad būtų perimta geroji praktika.
13. Kokybei užtikrinti vertinimo grupė rekomenduoja sistemiškai rinkti informaciją ir duomenis apie programą bei juos periodiškai įvertinti.
14. Laboratorijose reikėtų gerinti saugumo sąlygas aiškiai atskiriant atitinkamas riboto patekimo erdves ir mokyti studentus rizikos analizės.

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