



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Vilniaus Gedimino technikos universiteto

STUDIJŲ PROGRAMOS

MIESTŲ INŽINERIJA (612H27001)

VERTINIMO IŠVADOS

EVALUATION REPORT

OF URBAN ENGINEERING (612H27001)

STUDY PROGRAMME

at Vilnius Gediminas technical University

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Išvados parengtos anglų kalba
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Vilnius
2016

DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	<i>Miestų inžinerija</i>
Valstybinis kodas	612H27001
Studijų sritis	Technologiniai mokslai
Studijų kryptis	Statybų inžinerija
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Pirma
Studijų forma (trukmė metais)	Nuolatinė (4)
Studijų programos apimtis kreditais	240
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Civilinės inžinerijos bakalauro laipsnis
Studijų programos įregistravimo data	1997-05-19

INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	<i>Urban Engineering</i>
State code	612H27001
Study area	Technological sciences
Study field	Construction engineering
Type of the study programme	University studies
Study cycle	First
Study mode (length in years)	Full time (4)
Volume of the study programme in credits	240
Degree and (or) professional qualifications awarded	Bachelor's Degree in Civil Engineering
Date of registration of the study programme	May 19 th , 1997

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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 bachelor programme *Miestų inžinerija* (612H27001). This four year full-time (6 years part-time) programme leads to a Bachelor of Urban Engineering qualification.

This report is based on an analysis of the document “Construction Area of Studies Study Programme Urban Engineering (State Code 612H27001). Self-Assessment Report, 2016 Vilnius” (consisting of 34 pages main text, excluding annexes) and information gathered by the Review Team during a site visit to Vilnius Gediminas Technical University on 16 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.), and the masters of Urban Planning and Engineering (621H27001), Road Safety Engineering (621H22001) 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 16/11/2016.

- 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 and the learning outcomes of the bachelor programme of Urban Engineering are clearly defined in the study programme documents which is easily accessible through the website of the University and available both in Lithuanian and English languages.

The programme learning outcomes have been revised in 2014 in order to be in compliance with the requirements of the Ministry of Education and Science and with the European qualification framework. It distinguishes five groups of learning outcomes: knowledge and its application, research skills, special skills, social skills and personal skills. The learning outcomes are systematically translated at the course unit level. Descriptors are available describing the course expected outcomes, the teaching and assessment methods. The descriptors however contain many repeated material and the Review Team further suggests considering more specific statements in order to make the assessment easier.

As most countries around the world, Lithuania needs to develop its urban space in a smart and sustainable way. The Self Evaluation Report mentions that ‘approximately 100 Lithuanian enterprises, which employ approximately 2-3 thousand engineers, operate in the field of urban planning and design, urban infrastructure and management’. As a matter of fact, the development of the above activities requires increasing the number of specialists in the field of urban engineering. The meetings with Alumni and social partners confirm a high market demand in urban engineering graduates both by private companies (consultancy, design offices, construction companies...) and public institutions at European, national or municipal levels.

The existence of a Study Programme Committee is considered very positive by the Review Team but many stakeholders are unaware of the reviewing process of the learning outcomes. The Review Team recommends a deeper involvement of all the stakeholders to continuously review the learning outcomes and increase their efficiency in the learning process.

The employers met during the site visit confirm maintaining frequent contacts with the department through placements, students’ guidance and or participation to the assessment of final theses. Moreover, employers feel very happy with the competences and skills of urban engineering graduates and their fast adaptation to the professional requirements.

No lack of consistency has been pointed out by the Review Team between the learning outcomes, level of studies and offered qualifications. The specificity of the programme is clearly reflected by its title.

2.2. Curriculum design

The curriculum design respects the European standards and guidelines. It meets the legal requirements of the Ministry of Education and Science, especially in terms of total volume of credits which is the same for full time and part time students. The number of credits per semester and the ratio between general and study field subjects are also in agreement with the legal requirements.

The only notable exception quoted by the Review Team is the number of credits allocated to the internships (12 ECTS) which is lower than the legal requirements (at least 15 ECTS) and the expectations expressed by the stakeholders who strongly recommend longer and more frequent placement periods for this field. This is indicated in the study plan while the SER informs that the practical placement consists of 15 credits, however this is not well indicated in the study plan.

The Review Team considers that the study subjects are spread evenly throughout the study programme duration. Their sequence evolves logically over the course of the programme, from general scientific and engineering subjects, placed in the first semesters, to more and more specialised modules. Introduction of a speciality course (Sustainable Urban Development) from the third semester, in order to motivate the students and initiate them into their future specialisation, is considered positively.

The study programme of Urban Engineering is a strong civil engineering programme with an urban focus. It mainly includes engineering knowledge and skills, but also some fundamentals of management and social sciences. From the meetings with students, graduates and employers, a common wish was formulated that the practical learning activities should be increased. A deeper and more effective involvement of the students in site and laboratory works is recommended. The fact that the programme is nurtured by real-life applications for the final thesis work is positively deemed by the Review Panel. However, major deficiencies in searching and citing the literature have been identified and the Review Panel recommends urgently implementing corrective measures.

Development of civil engineering subjects in urban specific environment, like the impact and monitoring do not appear explicitly in the study programme. The course “Law” placed in the 7th semester is considered too broad by the Review Team which recommends redirecting this course towards urbanistic policies and regulations. Moreover, recent international trends regarding sustainability or urban development are not sufficiently reflected in the courses references or in the students’ reports bibliography, predominantly referring to Lithuanian

literature. From the visit to the new library equipped with modern facilities, progress is expected regarding this issue.

The implementation of modules of “Speciality Foreign Languages” (English, German and French) during the 2nd semester is positive but rather limited and restricted to the first year of studies. Foreign language skills should be improved by offering more courses and study material in foreign languages (mainly English) and by requesting coursework and assignments in English. This is a repeated recommendation from the 2011 accreditation report; urgent measures need to be taken.

2.3. Teaching staff

According to the Review Team, it can be confirmed that the programme is staffed by teachers, drawn from several departments in the Faculty of Environmental Engineering. The workload distribution meets the legal requirements, with professors taking 25%, associate professors 71% and assistants accounting for 4% of the teaching load. 129 teachers have been involved in urban engineering study programme, 86 (66.7%) of which had Ph.D. or habilitation degrees.

The overall teacher/students ratio of 1.01 has a positive effect on the students' training, as teachers are able to dedicate ample time to each student. As a result, both general and special skills of the students were greatly enhanced. However, to exploit the full teaching potential, the number of students needs to be increased.

Based on documentation, the Review Team reached the conclusion and confirms that during the period from 2012 to 2016, 129 teachers from 27 VGTU departments delivered courses in the programme. Teachers taught 49 different disciplines. The same discipline was delivered by two and sometimes by as many as three teachers. Teaching staff involved in the programme included nine professors (7%) and 62 associate professors (48%). The documentation clearly evidenced superior pedagogic, scientific and practical experience of the teachers, together with a good balance of research fields and interests.

The provided documents also clearly showed that the qualifications of the teachers of the study programme met the requirements indicated in Lithuanian legal acts. The Review Team is in line with the self-evaluation report that the level of the study programme might be enhanced by a larger number of professors in the field of study subjects.

In the opinion of the Review Team, the natural turnover of teachers in general has no negative effect on the study programme.

Based on the interviews with both students and staff, it can be confirmed that the composition of the teaching staff has been updated in terms of the qualifications in adherence to the changes made to the study programme and the study subjects' syllabus. Accordingly, the number of lecturers was increased by inviting production specialists to deliver lectures. The redistribution of the study subjects is also influenced by new department staff as well as the involvement of the doctoral students.

The European recommendations regarding gender are met. The balance between both male and female staff members was maintained with 48% male staff members and 52% female staff members.

It can also be confirmed that the international science education of teachers is accomplished continuously, as also established by the self-evaluation report. For example, during the analysed period, the teachers of the Department of Urban Engineering participated to 21 conferences and prepared 15 reports, 12 of which were published in conference proceedings.

The pedagogical experience of teachers in the study programme ranges from 2 to 49 years. The collected data shows that 50% of 129 teachers of the programme have up to 10 years of pedagogical experience, 28% have 11-20 years of pedagogical experience, and 22% have more than 20 years of pedagogical experience. Nevertheless, the Review Panel recommends developing training and workshops for the Teaching staff in order to enhance the coherence between learning outcomes, methods and assessment.

It must be noted that these statements are to some degree in contradiction with a full employment contract in combination with a career in science.

Scientific literature studies, presented in the study subjects' descriptions, align well with the specialisation and the long-term experience. This good balance supports teachers to masterfully convey knowledge and shape students' skills.

Based on the interviews with both faculty staff and administrative staff, it can be confirmed that the majority of teachers within the programme are recruited to their positions on the basis of a public competition. As part of the employment procedure, the faculty certification committee's assessment, the faculty council's decisions as well as the department staff's opinions are taken into consideration. The study programme committee members attend classes, and all issues of teaching quality and suggestions are being discussed at the department and dean's office meetings.

It can also be confirmed by the Review Team that the faculty and dean's office administration provides the teachers with possibilities to improve their qualifications: teachers participate in both international and national conferences, exchange programmes, and

traineeships at foreign universities. The teacher's English language skills are being improved by the maintenance of international relations, participation in international projects, publishing articles and research results in foreign publications. The Review Panel recommends further engaging the Faculty members in international projects in order to share the best practices related to the field.

The provided documents and the data of the analysis proved that 56.6% of the study programme teachers are less than 40 years old, 13.9% are 60 years old or older. However, almost all teachers that fall within the latter group are either professors or associate professors, long-term full-time employees at VGTU and have a profound research and science experience as well as a strong methodological background.

As is evident from the regulations and the provided documentation, the teachers' workload does not exceed the requirements posted in the legal acts. The teachers work 44 weeks per year, 40 of which make up the academic year. The full work load of a full-time teacher is 36 hours per week.

As part of the interviews, the following fact was discussed with the concerned parties. The teachers' academic work load in the last four years was 15,668.6 academic hours: the work load for professors was 791.0 academic hours (5%) of the total workload, associate professors' work load was 8,884.2 academic hours (57%). In order to safeguard an effective career development also of associate professors, sufficient time should be granted for scientific research.

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 sufficient and suitable to deliver the programme.

The students are trained to perform experiments in the laboratories. The laboratory equipment and measurement instruments are exceptionally good and relevant for the study process. The equipment is maintained operational and sometimes renewed. The lab sessions are often demonstrative only and the Review Team encourage increasing the number of hands-on sessions. The safety conditions in laboratories should 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 sessions should include assignments on risk analysis.

The students are trained to use specialised software as well. The list of software is sufficient for the study process. The programmes are up-to-date and useful for the urban engineering market. A better attention should be given however 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 Urban Engineering bachelor programme is restricted to students who hold a secondary education certificate. There is no entrance exam and all applicants are rated by competitive points obtained by weighting the secondary education exams marks. General admission is organised in accordance to general admission requirements of particular year by the Association of Lithuanian Higher Schools for General Admission (LAMA BPO) – authorised by the Ministry of Education and Science of the Republic of Lithuania. The exams and their weighting factor which are taken into consideration during the admission are: Lithuanian language (20%), mathematics (40%), physics (20%) and foreign language (20%).

Considering the number of applications (425 in 2011, 150 in 2015 for full-time studies), there is a high degree of interest for the study programme. The number of students who chose this study programme for full-time studies as first priority during the same period decreased accordingly – from 43 to 18. Competition score for 2014 and 2015 is just above 5 out of 10. Decreased interest and competition score indicate that the admission procedure should be improved through the strengthening of measures to promote the programme and its role in the future Lithuanian economy. It is recommended to involve all the stakeholders since they are sharing this concern.

The programme is available for full-time studies and until 2014 students was also available to part-time studies. The exam sessions is scheduled appropriately with a 2 day compulsory gap between two exams. The class schedule could be reconsidered to maximise the learning experience. Drop-out rates for full-time students are high and for 2015 with more than 50%. Drop-out rates for part-time students are acceptable with retention rates varying from 60% to 70%. Supportive measures to decrease the drop-out rates should be considered. Student surveys are collected and used. Participation of students should however be improved.

The students have the opportunity to participate in Lithuanian young researchers' conference "Science - the future of Lithuania" and to the local annual seminar organised by Department of Roads. There are various artistic activities which are organised by the University. According to the students, there is lack of information about research possibilities during the studies. Student coursework relies mostly on local scientific papers. Most of the bachelor thesis are driven by the industry and are project oriented. Link to research and analytical skills could be initiated. The average mark of graduates is stable about 7.5 for full-time students.

Student mobility is encouraged by VGTU International Relations Office. Students share their experience gained in Erasmus+ exchange with students from the same study group. Numbers shows tendency of decreasing number of outgoing students. From 2011 to 2015, the

number of outgoing students decreased from 7 to 4 students. It is recommended to urgently analyse the current barriers, propose and implement appropriate solutions.

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.

The average percentage of graduates who get an employment is satisfactory and reaches 82%; 88% of them are working according to their speciality. The employers have indicated satisfaction with the approach and are satisfied with the graduate attributes.

2.6. Programme management

The bachelor in Urban Engineering is run by VGTU Department of Urban Development (Faculty of Environmental Engineering). The programme is managed by a study programme committee with student and social partner representatives. Considering the collaboration with other departments, it is recommended to extend the study programme committee to representatives from these departments. It is also recommended to better involve the teaching staff in the management of the programme and quality processes. Further approval by Faculty study committee, Faculty and University Council is required for the changes to be implemented, which is usual.

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 but their effectiveness should be better substantiated by evidence in the self-evaluation report. Moreover, the Review Team recommends paying a better attention on its quality as it currently contains many mistakes or misrepresentations.

The bachelor in Urban Engineering has been accredited by SKVC for 6 years in 2011 but VGTU has requested to anticipate the external review process to synchronise all civil engineering programme accreditation. The Review Panel regrets that the recommendations have not been properly analysed and only a few improvements have been implemented. 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. In terms of programme management, the Review Panel recommends to systematically collect information and data on the programme and review it periodically within the study programme committee involving all the stakeholders including the teaching staff.
2. In the same regard, the Review Panel recommends to pay a better attention the recommendations of the accreditation report and to design a subsequent action plan.
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 review 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. 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.
6. 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.
7. 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.
8. When examining the final theses, the Review Panel noticed major deficiencies in citations to the literature and recommends strengthening urgently expectations in this regard.
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. In terms of research, the Review Panel recommends better engaging the Faculty members in international projects in order to share the best practices related to the field.
11. 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 four year full-time (six year part-time) programme leading to a Bachelor of Urban Engineering is a strong civil engineering programme with an urban focus. The programme 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 Bachelor in Urban Engineering is supervised by VGTU Department of Urban Development (Faculty of Environmental Engineering). It is managed by a study programme committee.

However, the Review Team has identified major deficiencies in terms of programme management where the systematic review and upgrade is not yet properly implemented or supported by action plans. The Review Team also 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. Training the students to searching and citing the international literature must be improved. Further actions should be taken to make the programme more visible. Safety conditions in the laboratories require a better attention.

V. GENERAL ASSESSMENT

The study programme *Urban Engineering* (state code – 612H27001) 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	2
	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:

Prof. Philippe Bouillard (team leader)

Grupės nariai:
Team members:

Prof. Alfred Strauss

Prof. Tõnu Meidla

Prof. Juan Martinez

Dr. Mindaugas Gikys

Mr. Simonas Bulota

<...>

V. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus Gedimino technikos universiteto studijų programa *Miestų inžinerija* (valstybinis kodas – 612H27001) 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	2
	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

Ši ketverius metus dėstoma nuolatinė studijų (šešerius metus – iššęstinių studijų) programa, kurią baigus suteikiamas miestų inžinerijos bakalauro laipsnis, yra stipri su miestais susijusi civilinės inžinerijos programa. Programa atitinka tikslus ir 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. Miestų inžinerijos bakalauro studijų programą prižiūri VGTU Miestų statybos katedra (Aplinkos inžinerijos fakultetas). Jai vadovauja studijų programos komitetas.

Vertinimo grupė nustatė pagrindinius programos vadybos trūkumus. Kol kas nėra tinkamai įgyvendinama sisteminė pertvarka ir programa nėra atnaujinama, šioms veiksmams įgyvendinti taip pat nesudaryti veiksmų planai. Vertinimo grupė pasiūlė įgyvendinti kitus galimus patobulinimus. Bendradarbiaujant su visais socialiniais dalininkais daugiau dėmesio reikėtų

skirti studijų rezultatų įgyvendinimui ir vertinimui, 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 labiau mokyti studentus, kaip ieškoti užsienio literatūros ir ją cituoti.

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III. REKOMENDACIJOS

1. Kalbant apie programos vadybą, vertinimo grupė rekomenduoja sistemiškai rinkti informaciją ir duomenis apie programą, ją periodiškai peržiūrėti studijų programos komitete dalyvaujant visiems socialiniams dalininkams, įskaitant ir dėstantįjį personalą.
2. Vertinimo grupė taip pat rekomenduoja daugiau dėmesio skirti akreditavimo išvadose pateiktoms rekomendacijoms ir atsižvelgiant į jas sudaryti veiksmų planą.
3. Nepaisant to, kad studijų rezultatai pateikti, 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. 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.
6. Nagrinėdama internacionalizacijos klausimą vertinimo grupė pastebėjo, kad siūlomos „Erasmus+“ mainų programos atitinka studentų poreikius, tačiau jose dalyvauja nedaug studentų. Rekomenduojama išanalizuoti esamas kliūtis ir pasiūlyti bei įgyvendinti atitinkamus sprendimus.
7. Vertinimo grupė norėtų pakartotinai rekomenduoti gerinti studentų anglų kalbos žinias ir organizuoti jiems kursus, mokymosi užsiėmimus, suteikti mokomąją medžiagą ir užduoti rašyti kursinius darbus anglų kalba.
8. Nagrinėdama baigiamuosius darbus vertinimo grupė pastebėjo, jog yra trūkumų cituojant literatūros šaltinius ir rekomenduoja didinti lūkesčius šioje srityje.
9. Dėl sumažėjusio studentų skaičiaus vertinimo grupė rekomenduoja kartu su visais socialiniais dalininkais didinti pastangas, kad programa būtų labiau viešinama.
10. Įvertinusi mokslinius tyrimus vertinimo grupė rekomenduoja į mokslinių tyrimų projektus labiau įtraukti fakulteto narius, kad būtų pasidalyta šios srities gerąja praktika.
11. Laboratorijose reikėtų gerinti saugumo sąlygas aiškiai atskiriant atitinkamas riboto patekimo erdves ir mokyti studentus rizikos analizės.

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