



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Vilniaus Gedimino technikos universiteto
STUDIJŲ PROGRAMOS *ARCHITEKTŪROS INŽINERIJA*
(valstybinis kodas – 612H20004)
VERTINIMO IŠVADOS

EVALUATION REPORT of
ARCHITECTURAL ENGINEERING STUDY PROGRAMME
(state code – 612H20004)
at Vilnius Gediminas technical university

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Išvados parengtos anglų kalba
Report language – English

DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	<i>Architektūros inžinerija</i>
Valstybinis kodas	612H20004
Studijų sritis	Technologijos mokslai
Studijų kryptis	Statybos inžinerija
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Pirmoji
Studijų forma (trukmė metais)	Nuolatinė (4)
Studijų programos apimtis kreditais	240
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Statybos inžinerijos bakalauras
Studijų programos įregistravimo data	2012/08/09

INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	<i>Architectural Engineering</i>
State code	612H20004
Study area	Technological Sciences
Study field	Civil 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 of Construction Engineering
Date of registration of the study programme	08/09/2012

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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	Minutes of Study Programme Committee 2016-05-24
2	Questionnaire about teachers

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

This evaluation report is based on the Self-evaluation report submitted by Vilnius Gediminas Technical University (hereafter VGTU) and a visit to the university by the review team on 28th November 2016, during which relevant facilities were inspected, the students’ term and course papers along with some examination material were briefly reviewed, and discussions were held with the following groups:

- senior management and faculty administration,
- staff responsible for the preparation of SER,
- teaching staff of the study programme,
- students of the study programme, and
- social partners.

VGTU is a state institution of higher education and research, one of the largest higher education institutions in Lithuania. Its aim is to become leader in scientific engineering education and research in Lithuania.

There are nine faculties and one institute, all but one dealing with engineering, and a Faculty of Business Management. Three faculties offer programmes related to civil engineering: the Faculty of Environmental Engineering, the Faculty of Transport Engineering and the Faculty of Civil Engineering. The programme of Architectural Engineering is conducted by the Faculty of Civil Engineering, though some lecturers from the Faculty of Architecture are employed additionally.

According to the management interviewed, the Faculty of Architecture is the oldest as well as the main faculty to train architects in Lithuania. The faculty of Civil Engineering is the oldest of VGTU and focuses on civil engineering, while the Faculty of Environmental Engineering is focussed on urban construction.

The panel inquired about the relationship of the various faculties to each other, particularly as to the overlap of study fields. They were told that the structure has historical reasons and that there may be changes in future.

One central problem is the fact that the graduates of this programme need further study to qualify for certification as architects in Lithuania. This is a serious and far-reaching issue which may put the programme into danger of existence, but cannot be solved by the faculty or even the university on their own. However, the panel recommend that the faculty keep up the hard work to promote their programme and work towards formal certification.

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 28th November 2016.

1. **Prof. dr. Haldor Jochim (team leader)**, *Professor of Railway and Transport Planning, FH Aachen University of Applied Sciences, Germany.*
2. **Prof dr. Miroslav Premrov**, *Dean of Faculty of Civil Engineering, Transportation Engineering and Architecture, University of Maribor, Slovenia.*
3. **Assoc. Prof. dr. Tone Merete Muthanna**, *Associate Professor of Hydraulic and Environmental Engineering Dep., Norwegian University of Science and*

II. PROGRAMME ANALYSIS

2.1. Programme aims and learning outcomes

Architectural Engineering is an undergraduate programme with 240 credits, leading to the degree of *Bachelor of Construction Engineering*. It is offered in full-time mode only, with a study time of four years. Teaching language is Lithuanian. The Architectural Engineering programme was developed from a specialisation within the Construction Engineering programme and implemented in 2012. According to the SER, „the graduates of the [...] former *Architectural Engineering* specialisation of the Civil Engineering programme) work according to their abilities and aptitudes as well as professionalise in design businesses creating certain pieces of architecture or (and) structures of construction projects as well as doing organisational, technical and managerial work in private and public construction offices“ (p.9 SER). The detailed description of the 1st-cycle Architectural Engineering study programme's objectives and learning outcomes is available on the VGTU web site.

The learning outcomes of the programme are formulated on the basis of the description of study cycles and correspond to Level 6 of the Lithuanian Qualifications Framework according to the description of the structure of Lithuanian qualifications. For evidence, the panel studied the course descriptions as well as exam and final papers and interviewed alumni. The results are presented in the following paragraphs.

The faculty has defined five fields of skills and competencies: knowledge and their application, abilities to conduct research, specific abilities, social abilities and personal abilities. Eleven sub-competencies are assigned to those fields, ranging from *Knowledge of information technologies [...]* to the *ability to work independently and creatively and to demonstrate self-improvement* (p.7 SER). The definition of competencies on p. 7 matches the description in Table 2

of Annex 8.3 of the SER. In the same annex, Table 3 shows the conformity of study results with skills. Though the skills in this table are not grouped in the same way as those in Table 2, they are sufficient for giving evidence.

Graduates from the course held in its previous form as a specialisation within civil engineering are employed in adequate jobs in their field. The faculty and graduates inquired say that many of them attended a two-year architectural course after graduation in order to gain certification as architects. It remains open whether they would have found adequate jobs without certification as well. The alumni interviewed – graduates of the preceding course, which was a specialisation within civil engineering – generally have a positive view of the competences they were given the chance to acquire. They work in jobs where they can aptly use those competences, even though they complained about the necessity to gain certification for working as architects in Lithuania only by means of another two years of study. They feel that the additional effort did not fully materialise in terms of additional competences. It was also pointed out that the certification problems exist in Lithuania only and do not extend to other countries.

About half of the students tend to proceed from BSc to MSc (currently 8 out of 20).

For proof that the programme aims and learning outcomes are based on the academic and/or professional requirements and public needs, the faculty has conducted research on universities all over the world which offer similar courses. The learning outcomes were grouped into three categories: general university education subjects (A), subjects of the field of study (B) and specific subjects (C). With only few exceptions the shares of these categories are of similar proportions, VGTU being in line with the overwhelming majority of the universities examined. As there are few universities that offer comparable courses in the vicinity the faculty undertook a worldwide survey, identifying 33 universities with similar programmes. Though not all findings might be transferable to Lithuania there is some evidence that the study programme follows a concept recognised by universities in other countries.

The SER cites “the practical activity of the graduates from the Department and official responses of companies/employers regarding their training” (SER p.12). The panel were able to confirm this self-evaluation through the interviews held with employers.

The faculty maintains that there is parity between course units on art (architecture) and engineering; the study plan (Table 1 of Annex 8.3) gives evidence that this is broadly the case. Thus, the graduates of the study programme have a unique set of skills, which distinguishes them from civil engineers and architects. The title of the study programme, its aims and objectives and the associated learning outcomes are coherent and therefore compatible with each other and with the qualification offered.

According to the programme management and the SER authors there is no structural collaboration with the Faculty of Architecture apart from invitations to some of their lecturers. Instead, the architectural part of the study programme is conducted by the lecturers the Faculty employ themselves (about 50% of teaching staff). If the supervisor of a thesis or coursework is from architecture the consultant is from structures and vice versa, to support the general content division of 50% aesthetics and 50% structures. From the point of view of the panel, the non-collaboration with the Faculty of architecture may be a missed opportunity, but is assessed neither in a positive nor a negative manner as to the quality of the programme. The 50/50 approach is unambiguously supported.

From the point of view of some of the students, the workload in the programme is high; they suggest the extension to a five-year programme. The panel, however, do not recommend this. Instead, some of the more scientific contents could be transferred to the Master course, thus relieving the workload of the Bachelor programme and simultaneously improving the scientific level of the Master course.

On inquiry about the decreasing number of students in the programme, the panel were told that, since 2008, the government has reduced the number of state-funded places. As it is expensive for students to pay for themselves (2,500 EUR/year in technical programmes), only 10-15% are in non-state funded places (350 in total in Lithuania, compared with 1,400 state-funded places at VGTU alone). Hence this is a general problem for all courses, not a particular one for this programme only. The dropout rate of 25 percent can be explained by the phenomenon of students not being able to study and earn the money for study fees simultaneously, if they are not on a state-funded place.

The panel inquired about the naming of the degree in ‘Construction Engineering’, which turned out to be a translation problem from Lithuanian into English. The panel recommend using the internationally common degree of ‘Civil Engineering’, in order to avoid possible confusion of Construction Engineering with Structural Engineering.

2.2. Curriculum design

The structure of the curriculum conforms to the ECTS system, meets legal requirements and the programme fully complies with the General Requirements of Lithuanian regulations for Higher Education. The total workload of 240 ECTS is allocated nearly equally between the 8 semesters of the study programme.

Each of 8 semesters includes no more than 7 study subjects, which means that formal regulations are met. The bachelor thesis is split in three parts (3+6+6 ECTS) over two consecutive semesters. Compulsory general-education subjects (languages, Economics, Law and Management,

Study of Europe and Culture Studies) total 24 ECTS, which is more than usual in engineering courses and reflects the claims of architects to be more than technicians.

The course consequently provides engineering and architectural competences in equal measure in all semesters throughout the course. There is a tendency to proceed from generic to special competences in the course of the study, which reflects usual practice.

There is a relatively high share of mathematics and, especially, physics in the programme. The panel learnt that the physics lessons relate mainly to building physics and find this appropriate. The value of chemistry and electrical engineering / electronics for the programme is not obvious but the faculty maintain these subjects as part of a tradition of a broad education of scientific foundations.

Knowledge of a foreign language is delivered by two modules of 3 credits each. There is a choice of three languages (English, French and German) with the modules building upon one another, so that 6 CP of language training is provided.

The writing of the Bachelor thesis serves the integration of knowledge with practice and the building of research skills. The analysis of the theses provided to the panel showed that the competence level and the professional levels to be recommended for graduates are fully achieved.

The sequence of the subjects provides students with a solid background in generic competences, natural sciences and general civil engineering and prepares those who may want to continue for their studies at post-graduate level.

The panel favour the introduction of urban planning as a subject, since this is an essential part of architecture as well as a specialisation of civil engineering; it should therefore not be denied to students with the ambition to become architectural engineers. Some alumni also expressed their wish for the programme to be extended that way. The panel sees this as more important than the previously commented chemistry and electrical engineering / electronics part of the programme.

The choice of a topic for the thesis early in the course is unusual in an international context. The faculty explained that this is organised in continual dialogue with the students: they start with a broad idea, which is later narrowed down to a specialised topic.

Practice work includes a 3-point-laboratory module in geodesy and 12 points of design practice. The design practice entails the artistic-engineering part and the structural-engineering part in equal measure.

Overall, the panel appreciate the unique approach of the both the Bachelor and the Master programme to structural design as part of building as a system, bridging structural engineering and architecture. The scope of the Bachelor programme thus provides the breadth and the depth needed to achieve the learning outcomes.

Evidence that the latest achievements in science and technology are taken into account is usually provided by participation of students in research projects. In architecture, though, science is often replaced by extensive project work about architectural design. This combination of structural and design concepts applied on practical assignments is seen favourably by the panel. ‘Real-life’ projects are also conducted.

2.3. Teaching staff

The composition of the teaching staff in the study programme of Architectural Engineering fully complies with the requirements set by Lithuanian regulations for first-cycle study programmes, i.e. more than half of the study field subjects is taught by teachers who have a doctorate. According to Annex 8.6 of the SER, 39 of 58 teachers have a doctorate, hence fulfilling the requirement.

Five teaching staff of the Faculty of Architecture, of which two are civil engineers, deliver lectures within the programme and supervise final works of both MSc and BSc students (about 20 students in total yearly). The main part of the teaching is, however, conducted by the faculty’s own staff.

During their theses students have two supervisors: one architect and one civil engineer. It seems that teachers therefore have rather high workloads with the supervision of final theses, while at the same time teaching and doing research. As some social partners already give lectures and participate in conducting final theses, the panel recommends that this strategy should be extended further if possible.

The teacher-student’s ratio is 1:4.8, according to the SER (Table 4.1 on p.16 SER), but that figure does not take into account that some of the teachers are employed part-time and others may teach several courses, thus sharing their time between more students than the figure suggests. Notwithstanding this criticism, the programme is supported by an adequate number of teachers, including both academics and practitioners in order to deliver the intended learning outcomes. The number of teachers increased in line with the rise in student numbers during the period analysed (Table 4.1 on p.16 SER). However, as the panel were told, the number of students cannot be expected to grow further in the near future, according to the political and economic circumstances in Lithuania. For this reason a further increase in the number of teachers will not be feasible.

Overall, the composition of staff presents a strong advantage for the programme, as professional as well as academic experience varies widely between 4 years and 45 years, showing a large spectre and a well-balanced distribution (Annex 8.6). A fair number of teachers also have practical work experience in the fields that suit the programme’s disciplines. The teaching staff represent a rich variety of ages, academic and contextual backgrounds, which is a valuable asset

especially for a programme combining engineering and cultural/artistic competences. During the site visit the panel confirmed this assessment by seeing competent and exceptionally highly motivated teachers.

Between 2012 and 2016, 16 foreign lecturers spent some time at the faculty (SER, Annex 8.9). The panel consider this a significant number. They came with Erasmus grants for short-term lectureships. The faculty conveyed that acquiring teachers for long-term lectureships is difficult in Lithuania due to lack of financial and academic attraction.

Annex 8.9 shows that incoming and outgoing lecturers are fairly balanced, both with respect to their numbers and their geographical spread.

The turnover of teachers working in the programme is low. Only three teachers have left in the past four years (p.17 SER), which speaks for a high degree of stability and continuity of teaching.

The panel were told that there is a schedule of reciprocal visits of lecturers' classes, which should provide for each lecturer being visited by a colleague at least once per year. The pedagogical competence of the teachers is improved by annual eight-hour seminars each lecturer should attend. Attendance and the commitment to self-improvement are honoured by a small financial award for lecturers. This system appears to lead to good results, but, as these visits are informal with no records available the panel recommend that peer evaluation should also be included in binding formal documents (this issue is addressed in Chapter 2.6).

The fact that two large research projects were conducted at the faculty provides evidence for commitment into research. It appears plausible that the needs of those projects may have absorbed the research capacity of the faculty.

Publications have been frequent; a high share of them has been published in *Technika*, which appears to be the domestic publishing instrument of VGTU and whose significance in science seems to vary between sciences. On the other hand, a full-professor degree requires the authorship of five SCI papers, two of which in foreign journals.

2.4. Facilities and learning resources

The facilities and learning resources of the Bachelor programme are identical to those of the Master programme in the same faculty. Therefore, the assessment of advantages and disadvantages is very similar in both cases, which is reflected in the text of this chapter.

The SER provides overall figures for material resources in terms of premise area and classroom places. It also mentions the availability of computers and printers for students and its VPN service for working at home. The panel found everything mentioned in place and also a plotter. That means the essential requirements are fulfilled. As to space, there is one 313 m² room

for project work, and several general classrooms. There are more rooms in other buildings, so that the overall supply of working space is good. However, it remained unclear how attractive and widely used by the students the dislocated rooms are. With a view on the Bachelor programme, one might assume that there is mainly design work, which requires atelier space. The current arrangement seems to be sufficient, but from the point of view of the panel it will be desirable if there were at least one more atelier room in the civil-engineering building.

The panel looked at the teaching material, with a special focus on the material of the creative part of the course. It found that books on the specialities of the subject are available either in the library or in the Moodle system.

The quality of the library was also evaluated by the panel. From the SER of another programme it had been known that it is among the most modern in Lithuania, with long opening hours, owning paper as well as electronic literature and providing students with workplaces as well as books to take home for study. For research, there is a modern electronic search system linking several Lithuanian libraries. The reading room visited by the panel is fairly small, but there are more reading rooms in other buildings, so that the library facilities appear to be satisfactory. The computer rooms are adequately equipped and available. On a less positive note, the panel were informed that licences for the software needed for coursework have not always been available or functioning in the library.

2.5. Study process and students' performance assessment

Admission requirements are set following the admission procedure approved by the Association of Lithuanian Higher Education Institutions for joint admission organisation (LAMA BPO) and are appropriate for the type and orientation of the study programme. It follows a specified competitive-score system, which weights the grades in core subjects of mathematics, natural sciences and language/literature and thus derives a competitive score for the applicants.

The weight of mathematics and physics ($0.4 + 0.2 = 0.6$) is high, which is reasonable for an engineering programme. Architectural Engineering is however a blend of engineering and architecture, which could put the adequate weighting of subjects in doubt. The danger of admitting students who are unfit for the arts-related part of architecture may be met by the current drawing test in addition to the science requirements, though the faculty says that its weight is not sufficient (p.24 SER). This still leaves the potential problem of students being rejected for failing the necessary score in maths and physics, though they might be talented in building and architecture.

The number of students admitted to the programme has been fluctuating between 12 and 27 students, with no general trend. The competitive score varied, but with a downward trend. From 2012 to 2015 between 16% to 28% of applicants were admitted.

Some students from the Bachelor course proceeded to the relevant Master course (8 out of 20 in the previous cohort). The SER explicitly mentions the option to proceed from the Bachelor course to the Master course (p.9 SER). There have been only three Master graduates in the current course as yet, but some students are currently studying the Master course.

The study process serves the aims and objectives of the programme. There is a blend of academics and practitioners in the teaching staff. The involvement of specialists as guest lecturers is, however, negligible, with the exception of foreign professors. The panel recommends attracting social partners for teaching to a greater extent.

The faculty has not been able to calculate the dropout ratio yet as the programme started only in 2012. From the interviews with students it could be derived that dropout is not so much of a problem for students on state-funded places, which is the rule for this programme.

Students have opportunities to participate in research in several ways: by taking part in the annual VGTU conference "Science – the Future of Lithuania", the Smart City competition, by practice in the training laboratory of the Department of Reinforced Concrete and Masonry, and by several competitions related to construction. Students, though, reported that they have little time to participate in the various contests due to the requirements of their studies. In students' interviews it became apparent that several of them were not aware of the local conferences organised by VGTU.

On average between 5% and 10% of all students go abroad using the ERASMUS scheme each year. Teachers maintain, however, that students often go abroad for work. As they often work parallel to their studies, the panel do not regard this as a satisfactory way of gaining foreign academic experience; it may additionally lead to less study effort.

There are no incoming students. The panel recommend at least one programme to be held fully in English, in order to provide an opportunity to overcome this problem. A first successful attempt in that direction has been the International Summer School with California Polytechnic State University, attended by 30 foreign plus 12 local students.

Support for the students within their studies is provided by several means. There is a system of tutorials, which the students say is popular and well-organised. For fresh students there are introductory meetings at the faculty and the library and a "senior-year student-curator" for each group of first-year students.

At least once per semester, the faculty organise "meetings with the student representatives of all academic groups and teachers to discuss the quality of studies and drawbacks of the study process" (p. 26 SER). Students' Representatives are also active in organising the dialogue between

students, teachers and administration. The Moodle platform is used for information and consultation, though students reported that some members of the teaching staff do not use it.

The Integration and Career Office at the university assists students in finding jobs, managing connections etc. As the Career Office do not have either specialists for the profession nor the power to interfere with the certification problem, the panel presume their use is moderate.

Further social support is provided by several scholarships and grants given by the VGTU as well as external stakeholders. Additionally, there are scholarships for taking part in cultural, sports and other public activities and for high academic achievements. Rooms in dormitories are provided for students from outside Vilnius.

The SER explains the general setup of the assessment scheme. There is a mixture of continuous assessment and assessment by exams. The variety of assessment and exam methods is explained in the course descriptions, which the students appeared to be acquainted with.

As for the professional activities of the graduates, the SER states that, according to a survey undertaken among graduates in 2011, more than 70% of them work in architectural design, and about 25% work in construction design. That can be taken as evidence for the programme fulfilling its objectives, though interpretation must be done with care due to the still rather small sample.

The employers the panel met unequivocally lauded the competences of the graduates. The graduates themselves appeared to be satisfied with their professional success. Both groups regret the requirement for additional certification as architects.

2.6. Programme management

The programme management for the Bachelor programme is organised by the same people and along the same lines as that of the Master programme in the same faculty. Consequently, the texts in the SERs are almost entirely identical, and during the site visit no relevant distinctions were made between the programmes. Therefore, the assessment of the quality of the programme management is almost identical for both programmes too, which is reflected in the text of this chapter.

The Study Programme Committee, Faculty Studies Committee and Faculty Council are the organisations in charge of the programme management. The Studies Committee considers and submits the newly prepared or improved study programmes and courses. “The execution of the study programme, as well as the continuous control and monitoring of the process, is carried out by the Study Programme Committee” (p.30 SER). All committees are staffed with teachers, students’ representatives and other stakeholders.

There is not much information about what data are used in the process of programme management and how they are collected. The students did not know their representatives in the relevant committees; neither did they know the competences of those committees. Therefore, it

remained unclear how the feedback to students, teachers and stakeholders not represented in the relevant committees is organised. Apparently, students' representatives are not involved in the Study Programme Committee, which is seen as unfortunate. There is no formal system for students to give a feedback about teaching during a semester; from meeting with students it was apparent that just one teacher does this informally. Students would appreciate the opportunity to give feedback during semesters, since it would strengthen their overall motivation to give feedback more actively. A formal quality control system for student feedback would be advisable to look into.

As to the pedagogical competence of the teachers, the current system of reciprocal visits by peers and annual seminars appears to lead to good results, but, as these visits are informal with no records available, the panel strongly recommend that peer evaluation should also be included in binding formal documents (see also Chapter 2.3).

Alumni keep contact with the university informally through personal connections with teaching staff and common projects. Furthermore, they receive annual surveys from the faculty via e-mail.

On a more positive note, VGTU regularly carries out three types of student surveys (p.30 SER):

- “1. A survey of all university students on subjects taught and the teachers who conducted the lectures.
2. A first-year undergraduate student opinion survey on the choice of the studies at the University.
3. A first-year graduate student opinion survey on the quality of the undergraduate studies.”

The third type of survey covers alumni, who work for about 80 organisations overall. Social partners of the department are also involved in the work of the Study Programme Committee and the Faculty Studies Committee (SER, p. 8), though their contribution is not anchored in official documents as well. That means stakeholders are involved in a satisfactory though not yet ideal way.

It can be assumed that the data gained from the surveys mentioned are the main source for internal and external evaluation, used by the committees mentioned above.

Quality assurance is regulated by a variety of organisations, papers and regulations; some of them were given to the panel after the site visit. The requirements as to the documentation of the QA processes are thus fulfilled, at least minimally.

III. RECOMMENDATIONS

1.
The panel recommend using the internationally common degree of 'Civil Engineering' in translations into English, in order to avoid confusion of Construction Engineering with Structural Engineering.
2.
The panel recommend transferring some of the more scientific contents from the Bachelor course to the Master course, thus relieving the workload of the Bachelor course and simultaneously improving the scientific level of the Master course.
3.
The introduction of urban planning as a subject is recommended, since this is an essential part of architecture and a specialisation of civil engineering.
4.
Attendance and the commitment to self-improvement are honoured by a small financial award for lecturers. Since these visits are informal with no records available the panel recommend that peer evaluation should also be included in binding formal documents.
5.
Considering what architects usually regard as necessary for their practical work, the present room situation should be improved.
6.
It is recommended that more foreign lecturers and social partners are attracted for teaching.

7.

Students should be better informed and motivated to take part in local conferences organised by VGTU.

8.

There should be better feedback of the evaluation results to the students and better involvement of the students in the quality process.

IV. SUMMARY

The panel laud the passion the faculty and its teaching staff have displayed for conducting the programme.

The programme occupies a relevant market niche, bridging architectural and civil-engineering competences and educating internationally attractive graduates. It offers good prospects on the job market, especially with the additional qualification as architects. The alumni interviewed – graduates of the preceding course, which was a specialisation within civil engineering – also have a positive view of the competences they were given the chance to acquire. The employers the accreditation team met also unequivocally lauded the competences of the graduates. The graduates themselves appeared to be satisfied with their professional success. Both groups regret the requirement for additional certification as architects.

The panel favour the introduction of urban planning as a subject, as this is an essential part of architecture and a specialisation within civil engineering; it should therefore not be denied to students with the ambition to become architectural engineers. The extension of the programme in this direction was supported by some of the alumni as well.

Organisational improvements, such as intensifying the relationship with the Faculty of Architecture, might further improve the recognition and the publicity of the programme.

The motivation of the teaching staff was found to be exceptionally high. The current system of peer visits works well informally with no records available; the panel recommend that peer evaluation should be included in binding formal documents.

Though the requirements as to the documentation of the QA processes are fulfilled, there should be better feedback of the evaluation results to the students and improved involvement of the student in the quality process. The faculty is recommended to try harder to motivate students to take part in committees.

V. GENERAL ASSESSMENT

The study programme *Architectural engineering* (state code – 612H20004) 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	4
3.	Teaching staff	4
4.	Facilities and learning resources	3
5.	Study process and students' performance assessment	3
6.	Programme management	2
	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. dr. Haldor Jochim

Grupės nariai:

Team members:

Prof. dr. Miroslav Premrov

Assoc. Prof. dr. Tone Merete Muthanna

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Ignas Gaižiūnas

**VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETO PIRMOSIOS PAKOPOS
STUDIJŲ PROGRAMOS ARCHITEKTŪROS INŽINERIJA (VALSTYBINIS KODAS –
612H20004) 2017-03-14 EKSPERTINIO VERTINIMO IŠVADŲ NR. SV4-51 IŠRAŠAS**

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V. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus Gedimino technikos universiteto studijų programa *Architektūros inžinerija* (valstybinis kodas – 612H20004) vertinama **teigiamai**.

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

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IV. SANTRAUKA

Ekspertų grupė giria fakulteto ir dėstytojų atsidavimą vykdant šią programą.

Studijų programa užima atitinkamą nišą rinkoje, sujungdama architektūros ir statybos inžinerijos gebėjimus ir rengdama tarptautiniu mastu patrauklius absolventus. Ji siūlo geras perspektyvas darbo rinkoje, ypač turint papildomą architekto kvalifikaciją. Apklausti alumnai, t. y. ankstesnės laidos – statybos inžinerijos specializacijos – absolventai teigiamai vertina gebėjimus, kuriuos turėjo galimybę įgyti. Darbdaviai, su kuriais susitiko ekspertai, taip pat vienareikšmiškai gyrė absolventų gebėjimus. Patys absolventai patenkinti savo profesine sėkme. Abi grupės išreiškė apgailestavimą dėl papildomo architektų sertifikavimo.

Ekspertų grupė pritaria urbanistinio planavimo dalyko įtraukimui į programą, nes tai yra esminis architektūros elementas ir statybos inžinerijos specializacija. Todėl nereikėtų neleisti jo studijuoti studentams, siekiantiems tapti inžinieriais architektais. Programos plėtojimui šia kryptimi taip pat pritarė keli absolventai.

Organizacinių dalykų gerinimas, pavyzdžiui, ryšių su Architektūros fakultetu stiprinimas, gali dar labiau pagerinti studijų programos pripažinimą ir viešumą.

Dėstytojai ypač motyvuoti. Dabartinė lankymosi kolegų dėstomose paskaitose sistema puikiai veikia, tačiau šie vizitai nėra oficialūs ir nėra fiksuojami, todėl ekspertų grupė rekomenduoja kolegų vertinimą įtraukti į privalomuosius formalius dokumentus.

Nors kokybės užtikrinimo procesų dokumentavimo reikalavimų laikomasi, reikėtų geriau informuoti studentus apie vertinimo rezultatus ir labiau juos įtraukti į kokybės užtikrinimo procesą.

Fakultetui rekomenduojama dėti didesnes pastangas motyvuojant studentus dalyvauti komitetų veikloje.

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III. REKOMENDACIJOS

1. Ekspertų grupė rekomenduoja vertimuose į anglų kalbą naudoti tarptautiniu mastu įprastą laipsnio pavadinimą „Civil Engineering“, norint išvengti statybos inžinerijos painiojimo su struktūrine inžinerija.
2. Ekspertai rekomenduoja perkelti tam tikrą labiau mokslinio turinio dalį iš bakalauro studijų programos į magistrantūros studijų programą, taip sumažinant bakalauro studijų programos krūvį ir pakeliant magistrantūros studijų programos mokslinį lygį.
3. Rekomenduojama įtraukti urbanistinio planavimo dalyką, nes tai yra esminė architektūros dalis ir statybos inžinerijos specializacija.
4. Už dalyvavimą profesinio tobulinimosi kursuose ir įsipareigojimą tobulintis dėstytojams skiriamos nedidelės finansinės premijos. Kadangi šie vizitai į kolegų dėstomas paskaitas yra neoficialūs ir nėra fiksuojami, ekspertų grupė rekomenduoja kolegų vertinimą įtraukti į privalomuosius formalius dokumentus.
5. Atsižvelgiant į tai, ko architektams paprastai reikia praktiniam darbui, dabartinę patalpų situaciją reikėtų gerinti.
6. Rekomenduojama pritraukti daugiau užsienio dėstytojų ir socialinių partnerių dėstyti paskaitas.
7. Studentai turėtų būti geriau informuojami ir motyvuojami dalyvauti VGTU organizuojamose vietos konferencijose.
8. Reikėtų geriau informuoti studentus apie vertinimo rezultatus ir labiau juos įtraukti į kokybės užtikrinimo procesą.

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Paslaugos teikėjas patvirtina, jog yra susipažinęs su Lietuvos Respublikos baudžiamojo kodekso 235 straipsnio, numatančio atsakomybę už melagingą ar žinomai neteisingai atliktą vertimą, reikalavimais.

Vertėjos rekvizitai (vardas, pavardė, parašas)