

## STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

# KLAIPĖDOS VALSTYBINĖ KOLEGIJA STUDIJŲ PROGRAMOS GEODEZIJA (valstybinis kodas – 653H14006) VERTINIMO IŠVADOS

# EVALUATION REPORT OF GEODESY (state code – 653H14006) STUDY PROGRAMME At KLAIPEDA STATE COLLEGE

- 1. Prof. Dr. Bernd Teichert (team leader), academic
- 2. Prof. Dr. Artu Ellmann, academic
- 3. Assoc. Prof. Eloina Coll Aliaga, academic
- 4. Ms Vytautė Juodkienė, academic
- 5. Mr Audrius Petkevičius, representative of social partners
- 6. Ms. Neringa Vaičiūnaitė, student representative

Evaluation Coordinator – Ms Kristina Selezniova

Išvados parengtos anglų kalba Report language - English

## DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	Geodezija
Valstybinis kodas	653H14006
Studijų sritis	Technologijos mokslai
Studijų kryptis	Bendroji inžinerija
Studijų programos rūšis	Koleginės studijos
Studijų pakopa	Pirmoji
Studijų forma (trukmė metais)	Nuolatinė (3), ištęstinė (4)
Studijų programos apimtis kreditais	180
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Matavimų inžinerijos profesinis bakalauras
Studijų programos įregistravimo data	2003 m. birželio 6 d., Nr. ISAK-796

## INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	Geodesy
State code	653H14006
Study area	Technological Sciences
Study field	General Engineering
Type of the study programme	College studies
Study cycle	First
Study mode (length in years)	Full-time (3), Part-time (4)
Volume of the study programme in credits	180
Degree and (or) professional qualifications awarded	Professional Bachelor in Measurement Engineering
Date of registration of the study programme	6 June, 2003, No. ISAK-796

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

Klaipeda State College was founded after the merger of Klaipeda College and the Klaipeda Business and Technology College in September 2009 and now is the third-largest college in Lithuania with strong academic reputation. Klaipeda State College focuses on study programmes that lead to a profession. The graduates of it obtain a Professional Bachelor degree. The studies are practice orientated; students are able to successfully apply their knowledge in a real working environment.

College is ternary – consists of three faculties: Social Sciences, Technologies and Health Sciences. The Faculty of Technologies provides programmes in different technical professions such as construction, mechanical engineering, geodesy, landscape design, informatics, food technology, road transport technologies, electric and automatic equipment and technical maintenance of automobile.

According to the Self-Evaluation Report (hereafter - SER), the Geodesy study programme is supervised by the Department of Geodesy and Landscape Management. The Geodesy study programme has been updated under project "Updating of Study Programmes in the Faculty of Technologies and the Faculty of Social Sciences at Klaipėda State University of Applied Sciences", No VP-2.2-ŠMM-07-K-01-068, in 2011. This is the first external evaluation of this study programme organized by SKVC.

## 1.3. The Review Team

The review team was assembled in accordance with the *Expert Selection Procedure*, approved by Order No 1-55 of 19 March 2007 of the Director of the Centre for Quality Assessment in Higher Education, as amended on 11 November 2011. The Review Visit to HEI was conducted by the team on 5<sup>Th</sup> May, 2016.

- Prof. dr. Bernd Teichert (team leader), former professor at the University of Applied Sciences, Dresden, Department of Surveying and Cartography; Research assistant (Physical Geodesy) at the Technical University of Berlin, Germany.
- 2. Prof. Dr. Artu Ellmann, professor at Tallinn University of Technology, Faculty of Civil Engineering, Department of Road Engineering, Chair of Geodesy, Estonia.
- 3. Assoc. Prof. Eloina Coll Aliaga, associate Professor in the Cartographic Engineering, Geodesy and Photogrammetry Department, Politechnic University of Valencia, Spain.
- 4. Ms Vytautė Juodkienė, Lecturer at Department of Geodesy at Kaunas College, Lithuania.
- 5. Mr. Audrius Petkevičius, CEO of LLC "Urbanistika", Lithuania.
- 6. Ms. Neringa Vaiciunaite, PhD student of Materials Engineering at Kaunas University of Technology, Lithuania.

#### **II. PROGRAMME ANALYSIS**

#### 2.1. Programme aims and learning outcomes

The Geodesy study programme prepares competent specialists to solve tasks related to engineering geodesy, cadastral surveys, territorial planning, cartography and application of geographic information system (SER, p. 5). The aim of the study programme and connections between learning outcomes and study subjects are consistent. Klaipeda State College's provide information about learning outcomes in their webpage: <u>http://www.kvk.lt/studiju-programos/technologiju-fakultetas/geodezija.html</u> but yet, it is not accessible in English. The programme name is appropriate. The programme aims and learning outcomes are consistent with the level of studies and the level of qualifications offered.

The programme learning outcomes have been developed in the framework of the Tuning-AHELO project. These are divided into generic skills, basic and engineering sciences, engineering analysis, engineering design and engineering practice. The use of active verbs in the formulations of learning outcomes made it easy for the evaluation team to determine the success of the students in their acquisition. Learning outcomes are updated every 2<sup>nd</sup> year (SER, p.8) and the subject contents are reviewed annually taking into account the changes in the labour market, innovation and amendments to the geodesy–related legislation.

The review team was also informed that definition of aims and learning outcomes of the study programme will be revised by 01.06.2016 to correspond to the general engineering study field descriptor following EUR-ACE framework standards for the accreditation of engineering programmes.

During the meeting with senior administration, the review team was informed that Klaipeda State College's has a strategic plan for 2016-2018 years period for study programme. The college senior administration reviews the programme annually. Students, teachers, social partners and the programme committee are involved into the update of the study plan. The employers are very satisfied with the graduates and they also expressed the need of more graduates from the Geodesy programme and the regional importance of the study programme. Therefore it can be concluded that the programme aims and learning outcomes are based on the academic and professional requirements, public needs and the needs of the labour market.

One of the most important evidences for reaching the learning outcomes is the quality of final theses. Some interviewed social partners happened to be co-supervisors of the final thesis. In their opinion the quality of final theses has improved in the last three years. During the visit, the review

team examined some final thesis, concluding that the titles are in conformity to the study programme aims. All the presented final theses were written in Lithuanian with short English summary, comprising also references to foreign literature. Topics and length of the theses were appropriate and the review team agreed on the marks given.

#### 2.2. Curriculum design

The 180 credits study programme of Geodesy has been developed in accordance with the Law on Higher Education and Research of the Republic of Lithuania. The full-time study takes three years to graduate (6 semesters of 30 credits each), four years is allocated for part-time studies (21-24 credits are requested to fulfil each term). Information provided in SER (table 4, p. 10) shows the compliance of the study programme with the legislation. The compulsory college subjects make a total of 147 credits (including 93 credits of study field subjects, 30 credits are allocated for internships and 12 credits for the Final Thesis (in general – 150 credits are allocated to study field subjects; SER, p. 11). The review team has not observed any irregularities in this context.

There are three alternative specialisations: Applied Geodesy/Land Management/Geographic Information Systems. In the meeting with graduates and students, the review team was informed that the land management specialization is rarely selected by students because the other two are more attractive for them.

The volume of study subjects seem to be spread evenly, their themes seem to be not repetitive and the content of the subjects is consistent with the type and level of the studies and they are appropriate for the achievement of the intended learning outcomes. The content of subjects and the study methods used are presented in subject descriptions (Annex 1) and they are appropriate for the programme of Geodesy.

The review team also observed that the teaching staff is very motivated to develop and modernize the programme continuously. Many of the changes in the programme appear to be made at an ad hoc base through mutual discussion among the teaching staff. The content of the programme reflects the latest achievements in science and technology sufficiently. The interviewed social partners expressed the need that the remote sensing and data modelling subjects to be included into the next revision of curricula.

### 2.3. Teaching staff

The qualification of teaching staff of the programme meets the legal requirements. All teachers in the study programme have at least 3 years of practical professional experience in the field of the subject taught (SER, p.18). Teachers of the Geodesy study programme have experience in

pedagogical activities: up to 5 years – 5.5 %; from 5 to 10 years – 27.8 %, from 11 to 20 - 27.8 %, from 21 to 30 - 11.1 %, 30 and more – 27.8 %. There are two teachers that have the doctoral degree in science and 15 teachers have the Master's or equivalent degree. Two of them are currently pursuing studies toward PhD degree (SER, p.18)

There is a sufficient number of staff members, altogether 18 of which 14 are a full-time basis and 4 carry out activities in companies providing surveying services. The average age of the programme teaching staff in the programme is approximately 47 years and the ration of teachers and students in the Geodesy study programme is one teacher per 12.48 students on average. (SER, p.18). The turnover of teachers implementing the study programme was insignificant in the reporting period, thus it has no negative impact on implementation of the study programme.

Teaching staff's CVs and academic activities it is obvious reveal that the qualification of the teaching staff is adequate to ensure the programme success although (aiming at furthering internationalisation of the study programme) the teaching staff should improve their English language level.

Teachers of the Geodesy study programme have prepared and published 94 applied research articles and supervised preparation and presentation of 53 scientific articles and reports of students (SER, p.21). For instance, they prepared two articles in ISI Web of Science, 30 articles were approved in databases of the Research Council of Lithuania, seven articles were published in conference material ISI Proceedings. The teaching staff of the programme is involved in research directly related to the study programme being reviewed, however, the majority of their research publications is disseminated only in Lithuania. Teachers need to increase their international visibility.

There is a good participation in internships and exchange with foreign partners (SER page 22) For instance within 2010-2015 ten study programme teachers visited or participated in traineeships in foreign HEI's e.g. in Denmark, Germany, Latvia, Poland, Turkey, Spain, Estonia, Belgium (altogether 23 outbound teachers) (SER Table 10). In the reporting period, 8 teachers of foreign universities delivered lectures, conducted practical classes under the ERASMUS exchange programme for the study programme students.

The interview with students confirmed the image of qualified and dedicated teaching staff. The students found them very supportive. It was evident that there is a very strong element of personal contact between teachers and students. Students are satisfied about consultation with teachers and their availability.

According to the *Procedure for Determination of Workload Standards and Remuneration of Teachers*, the distribution of the teachers' annual workload by teacher categories is shown in the table 13 (SER, p.23). It can be seen that the proportion of the teacher's contact work, non-contact work, R&D and organisational activities is constantly changing and depends on the teacher's position (assistant, lecturer, associate professor, professor) and the proportion is sufficient to meet the aim and learning outcomes of the programme.

At the moment HEI support for teachers professional development is good. The department should continue systematic improvement of teacher's qualifications by taking part in research and development, seminars and conferences and in continuing education. Also aiming at internationalisation of the studies the study programme teachers need to improve the level of professional English language. Publishing in peer reviewed international journals is strongly encouraged too.

#### 2.4. Facilities and learning resources

The Geodesy study programme lectures and exercises take place in 14 classrooms two of which are for stream lectures (the total area of 351.5 m2 and 349 work stations) and 5 laboratories and a library (SER, p.24). The teaching and learning equipment (laboratory and computer equipment, consumables) is up-to-date as well as adequate both in size and quality. The building is adapted for disabled people (a device attached to the stairs). The library has a room with computer adapted for the blind persons.

The maximum number of students in classrooms and labs is regulated by occupancy norms that ensure safe learning environment suitable for efficient teaching and learning. The students have access to a sufficient number of computers equipped with the latest software. The college regularly updates its computers and surveying equipment and software. But specialised software (remote sensing, photogrammetry) still need improvement. During the visit the review team checked the software and relevant surveying equipment in the laboratory, confirming appropriateness of software and equipment used to teach study field subjects. In the interview with senior administration and social partner, the review team was informed that the college share some equipment with social partners.

SER accurately describes the process that all students have to do for internships (SER, p.25). The final internship of the Geodesy study programme is done at private companies, state enterprises and organisations related with the programme's subjects. Interviews with the students and social partners confirmed the good relationship with the college and the good internships process.

Most of the library books are available at open funds where books are arranged by subjects. For implementation of the Geodesy study programme, teachers prepare the methodological material and it is accessible by Moodle (text books, task for practical and independents works, study guides and reference books). The application of innovative teaching methods in the educational process is verified.

In order to buy the new equipment, the senior administration makes a list, discuss the importance of this equipment and buy it from their budget. They have a certain criteria (number of students, activities and etc.) to identify which study programme is entitled for extra funding and what is needed for a study process. A portion of funds comes from projects, other portion comes from state budget, and the rest comes from their own earnings.

#### 2.5. Study process and students' performance assessment

The admission requirements are clear and well-founded. A competitive score to admit the students is calculated following the General Provisions on the Joint Admission of Students to First-Cycle and Integrated Studies at Lithuanian Higher Education Institutions. Students are admitted to the Geodesy study programme in accordance with the college Statute and the college Study Regulations and are ranked according to the competitive score established in the college Rules on Admission of Students.

During the last five years the intake of students has decreased twice. The number of admitted students decreased constantly. To sum up, 193 full – time students were admitted to Geodesy study programme in 2010–2015. The highest number of students (41) were admitted in 2010 and the lowest number of students (21) were admitted in 2015. The five year annual average in 32 full – time students per year (SER p. 29, table 16). 4 part – time students were admitted to Geodesy study programme during 2010 -2012 year period. In general about 25-30 % of the admitted students have interrupted their studies, most of them in the first year of studies. The average rate of admitted and graduated full–time Geodesy programme students is 62.92 %. The average proportion of admitted and graduated part–time students is 29 % (SER p. 30). The management is monitoring drop-out rates. Also, group tutors organise meetings to discuss this problem.

The students are satisfied with study process and their study programme in general. Every year fulltime students are provided with two weeks for self-studies and one week after the finals for academic support of students. Also, they are satisfied with coordination of practical work and possibilities to work and study at the same time, and perform final practice in the enterprise. They feel satisfied about laboratories, computer classes, online study resources and flexible schedule of lectures. In general, they would like to have longer practice in the enterprises.

Even though the geodesy students said that they are motivated, but the average performance of fulltime and part-time students (SER p. 30, table 18) is rather low even in the last years of study. The averages is 6 (satisfactory) to 7 (highly satisfactory) at the last year of their studies and from 5 (sufficient) to 6 (satisfactory) at the first year of their studies. More attention should be payed to motivate the students for higher achievements.

Students are active participants of national and international science conferences. 39 students (supervised by teachers') prepared 31 articles and delivered reports at various national and practical conferences in 2010-2015. Presentations and reports are delivered annually at national student conference "Business and Technology Insights". Two students published articles in international scientific journal "Formation of Urban Green Areas" (SER p. 31). Also, students are involved in profession-oriented competitions and other contests.

Mobility for students is constantly promoted. Number of students participating Erasmus mobility programme has increased twice during the last year. 9 students were participating mobility programs during 2011–2015 year period (SER p. 35, table 20). Three students from Turkey arrived for studies under ERASMUS+ exchange programme to study in 2013–2014. Two students of the Geodesy study programme did a three-month internship at Suleiman Demirel University in Turkey in 2011. One student did a three-month internship at a Norwegian company in 2012. Also 1 student studied at University of Warmia and Mazury in 2014-2015 and 5 students did internships at a Danish company and Turkish universities and companies.

There is a good support for students from teachers, students union and college staff. Students are consulted on academic and career issues. All the information about lectures, schedules and consulting hours of lecturers, study programme and its changes is published on the college website. Students are participating in improvement of their study programme and give a feedback to administration. Also, they can reach their teacher easily and be consulted about study issues. Part-time students were highly satisfied with flexible schedule and teachers' support. The system for assessing achievements of students of the Geodesy study programme is clear and publicly available. The criteria of students' achievements assessment and description of an examination are well defined.

Graduates have the possibility to seek recognition of learning outcomes if they want to study university second cycle study programmes. Students who complete additional studies (adjustment courses) can enter into second-cycle Master's studies at the following universities: Aleksandras Stulginskis University - Land Management, Vilnius Gediminas Technical University – Geodesy.

Professional activities of the majority of graduates meet the programme providers' expectations. The analysis of employment of graduates in 2010-2015 shows that on average 83 % of graduates were employed in the first year after graduation, including as much as about 63 % of them employed according to the acquired speciality (SER p. 36, tables 21-22). The rate of employment of graduates of the Geodesy study programme according to their speciality reaches 62.6 % of all employed graduates (SER p. 37). The site visit confirmed that almost all part–time students are working and studying at the same time.

#### 2.6. Programme management

The programme is supervised by the Department of Geodesy and Landscape Management and the Study Programme Committee. The Study Programme Committee drafts, improves and revises study programmes. The coordinator of the study programme participates in the development and updating of the study programme. Responsibilities for decisions and monitoring of the implementation of the programme are clearly allocated, well-defined and detailed (SER p. 37). The quality of studies is an integral part of the college quality management system which is based on requirements of the ISO 9001 standard.

The university has a common electronic course evaluation system. All courses are evaluated by students and the results are analysed. Students confirmed that they are satisfied with the organisation of elective subjects, internships, classwork, timetables and examinations. They think that the administration take their opinion on the organisation of the study process into consideration. One of the examples of change is that the students can now choose psychology instead of philosophy.

A feedback process with employers, programme alumni and representatives of the business sector helped actualize aims, intended learning outcomes and verified the quality of the Geodesy study programme. Social partners introduce the technical novelties, consult students and teachers, and lend the equipment. In the meeting with teachers, they confirmed the existence of constant control over the programme implementation and working under the programme directly cooperates with stakeholders. In the meeting with the alumni and the social partners, the review team was informed that both (alumni and social partner) expressed their opinion about study subjects, but in an informal way. They should be more involved in a formal way, for example through questionnaires. In the previous evaluation, conducted by two domestic experts in 2011, the recommendation 6.6. "In the annexes of updated programme description to present subject's description in English or other foreign language" has not been taken into account and still do not have English descriptions. Actually, the SER appendixes had English version during this external evaluation. Senior administration also promised to upload them to the Internet soon.

## **III. RECOMMENDATIONS**

- 1. Programme aims and learning outcomes should be more publically accessible in English.
- 2. In the annexes of the updated programme the descriptions of the all subjects should be written in English.
- 3. It is suggested that the speciality of Land Management is made more attractive or, alternatively, discussed to be removed from the programme.
- 4. In order to improve their international contacts and facilitate students' mobility the teaching staff English skills should be improved.
- 5. The international impact of teacher's research should be increased. Publishing in peer reviewed international journals is strongly encouraged.
- 6. Involvement of alumni and the social partners should be formalized way for expressing their opinion about study subjects, for example through questionnaires.
- 7. The average performance of full-time and part-time students is rather low, so more attention should be payed to motivate the students for higher achievements.

#### **IV. SUMMARY**

The programme aims and learning outcomes of the Geodesy study programme are in accordance with national and international regulations. The study programme feedback is acquired from graduates, employers and geodetic associations. The name of the programme, its learning outcomes, content and the qualifications offered are compatible with each other, but information should be more accessible in English. Also, the definition of aims and learning outcomes of the study programme should be revised according to the general engineering study field descriptor following EUR-ACE framework standards for the accreditation of engineering programmes. The review team was informed that it will be done till 1<sup>st</sup> of June 2016 according to the general engineering study field descriptor that is following EUR-ACE framework. One of the most important evidences for reaching the learning outcomes is the quality of final theses. The topics of the final theses meet the expectations of the reviewing team, review team agreed on theses assessment.

The Curriculum Design is well balanced and covers the most important areas of the field and the credits and their respective distribution is fully in accordance with the regulations. The study subjects comprise courses distributed in a logical sequence during semesters. The content of the subjects seems to be consistent with the type and level of the studies. However, it is suggested that the Land Management speciality to be made more attractive or, alternatively, to be removed from the programme.

The teaching staff meets the legal and qualification requirements and the adequate number of the teachers ensure learning outcomes and the turnover of the teaching staff. There is a good teachers/students ratio that strengthens the special abilities and obtainable knowledge of the students. Professional development of the teaching staff is organized by the Department. However, teachers should more actively participate in the local and international research projects and also improve their English skills.

The facilities and learning resources are adequate in number, size and quality and fully meet the study requirements. All necessary modern equipment is mainly available, but specialised software (remote sensing, photogrammetry) still need improvement. Students are satisfied about their study practice. There is a flexible schedule and there are enough instruments available. The library provides a rich variety of books, textbooks, periodical publications and databases and the electronic catalogues that are also accessible from home. The virtual long-distance studying system Moodle is also used.

The admission requirements to the programme are analytically and clearly explained. Although programme administration faced with drop-outs problem, the management has taken observation and drop-out rates were discussed and analysed. The average performance of full-time and part-time students is rather low, so more attention should be payed to motivate the students for higher achievements. The students are satisfied with study process and their study programme in general. Students quite actively participate in student mobility programmes and applied research activities. The assessment system of students' performance is clear and well explained. Professional activities of the majority of graduates meet the programme providers' expectations.

Responsibilities for the implementation of the study programme are clearly described and appropriately allocated. The quality of studies is an integral part of the college quality management system which is based on requirements of the ISO 9001 standard. The university has a common electronic course evaluation system. All courses are evaluated by students and the results are analysed. Teaching staff confirmed the existence of constant control over the programme implementation and working under the programme directly cooperates with stakeholders. In the meeting with the alumni and the social partners, the review team was informed that both (alumni and social partner) expressed their opinion about study subjects, but in an informal way, so they should be more involved in a formal way for expressing their opinion about study subjects, for example through questionnaires.

### V. GENERAL ASSESSMENT

The study programme *Geodesy* (state code – 653H14006) at Klaipeda State College is given **positive** evaluation.

Study programme assessment in points by evaluation areas.

No.	<b>Evaluation Area</b>	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	3
5.	Study process and students' performance assessment	3
6.	Programme management	3
	Total:	18

\*1 (unsatisfactory) - there are essential shortcomings that must be eliminated;

2 (satisfactory) - meets the established minimum requirements, needs improvement;

3 (good) - the field develops systematically, has distinctive features;

4 (very good) - the field is exceptionally good.

Grupės vadovas: Team leader:	Prof. Dr. Bernd Teichert	
Grupės nariai: Team members:	Prof. Dr. Artu Ellmann	
	Assoc. Prof. Eloina Coll Aliaga	
	Ms Vytautė Juodkienė	
	Mr. Audrius Petkevičius	
	Ms Neringa Vaičiūnaitė	

## KLAIPĖDOS VALSTYBINĖS KOLEGIJOS PIRMOSIOS PAKOPOS STUDIJŲ PROGRAMOS *GEODEZIJA* (VALSTYBINIS KODAS – *653H14006*) 2016-07-07 EKSPERTINIO VERTINIMO IŠVADŲ NR. SV4-163 IŠRAŠAS

<...>

#### V. APIBENDRINAMASIS ĮVERTINIMAS

Klaipėdos valstybinės kolegijos studijų programa *Geodezija* (valstybinis kodas – 653H14006) vertinama **teigiamai**.

Eil. Nr.	Vertinimo sritis	Srities įvertinimas, balais*
1.	Programos tikslai ir numatomi studijų rezultatai	3
2.	Programos sandara	3
3.	Personalas	3
4.	Materialieji ištekliai	3
5.	Studijų eiga ir jos vertinimas	3
6.	Programos vadyba	3
	Iš viso	: 18

\* 1 – Nepatenkinamai (yra esminių trūkumų, kuriuos būtina pašalinti)

2 - Patenkinamai (tenkina minimalius reikalavimus, reikia tobulinti)

3 - Gerai (sistemiškai plėtojama sritis, turi savitų bruožų)

4 - Labai gerai (sritis yra išskirtinė)

<...>

### **IV. SANTRAUKA**

Studijų programos *Geodezija* tikslai ir numatomi studijų rezultatai atitinka nacionalinius ir tarptautinius teisės aktus. Absolventai, darbdaviai ir geodezininkų asociacijos teikia grįžtamąjį ryšį apie šią programą. Programos pavadinimas, numatomi studijų rezultatai, programos turinys ir suteikiama kvalifikacija dera tarpusavyje, bet turėtų būti labiau prieinama informacija anglų kalba. Be to, šios studijų programos tikslų ir numatomų studijų rezultatų apibūdinimą reikėtų persvarstyti atsižvelgiant į bendrosios inžinerijos studijų krypties aprašą, parengtą pagal EUR-ACE gairėse nustatytus inžinerinių studijų programų akreditavimo standartus. Vertinimo grupei buvo pranešta, kad tai bus atlikta iki 2016 m. birželio 1 d. Vienas iš svarbiausių įrodymų, kad numatomi studijų rezultatai pasiekti, yra baigiamųjų darbų kokybė. Baigiamųjų darbų temos atitinka vertinimo grupės lūkesčius; vertinimo grupė sutinka su pristatytų baigiamųjų darbų įvertinimais.

Programos sandara gerai subalansuota ir apima svarbiausias programos krypties sritis, kreditai ir jų paskirstymas atitinka visus teisės aktus. Studijų dalykai nuosekliai paskirstyti per semestrus. Dalykų turinys, atrodo, atitinka studijų pakopą ir rūšį. Tačiau *Žemės tvarkymo* specialybę rekomenduojama padaryti patrauklesnę arba aptarti jos pašalinimo iš šios programos klausimą.

Dėstytojai atitinka teisės aktų ir kvalifikacijos reikalavimus, o pakankamas jų skaičius užtikrina numatomų studijų rezultatų įgyvendinimą ir dėstytojų kaitą. Geras dėstytojų ir studentų santykis padeda stiprinti studentų specialiuosius gebėjimus ir perduoti jiems žinias. Geodezijos ir kraštotvarkos katedra organizuoja dėstytojų profesinį tobulinimą. Tačiau dėstytojai turėtų aktyviau dalyvauti vietiniuose ir tarptautiniuose mokslinių tyrimų projektuose ir tobulinti anglų kalbos įgūdžius.

Materialieji ištekliai yra tinkami ir jų pakanka; jie atitinka visus teisės aktų reikalavimus. Iš esmės yra visa reikalinga šiuolaikinė įranga, bet speciali programinė įranga (nuotolinio matavimo, fotogrametrinė) dar tobulintina. Studentai yra patenkinti savo studijų praktika. Tvarkaraštis lankstus, yra pakankamai instrumentų. Bibliotekoje gausu įvairių knygų, vadovėlių, periodinių leidinių, duomenų bazių ir elektroninių katalogų, kuriais galima naudotis būnant namuose. Be to, naudojama virtuali nuotolinio mokymosi sistema *Moodle*.

Priėmimo į šią studijų programą reikalavimai yra aiškiai apibrėžti. Nors programos administracija susidūrė su nubyrėjimo problema, vadovybė ėmėsi stebėsenos ir išnagrinėjo bei aptarė nubyrėjimo lygį. Nuolatinių ir ištęstinių studijų studentų studijų rezultatų vidurkis labai žemas, taigi reikėtų skirti daugiau dėmesio studentų skatinimui siekti geresnių rezultatų. Studentai yra patenkinti studijų eiga ir šia studijų programa apskritai. Studentai gana aktyviai dalyvauja studentų judumo programose ir mokslo taikomojoje veikloje. Studentų rezultatų vertinimo sistema skaidri ir gerai išaiškinta. Daugelio absolventų profesinė veikla atitinka programos teikėjų lūkesčius.

Atsakomybė už šios studijų programos įgyvendinimą aiškiai aprašyta ir tinkamai paskirstyta. Studijų kokybė yra neatskiriama kolegijos kokybės valdymo sistemos dalis, pagrįsta ISO 9001 standarto reikalavimais. Universitetas turi bendrą elektroninę dalykų vertinimo sistemą. Visus dalykus vertina studentai, rezultatai analizuojami. Dėstytojai patvirtino, kad vykdoma nuolatinė programos įgyvendinimo kontrolė, programos klausimais tiesiogiai bendradarbiaujama su socialiniais dalininkais. Per susitikimą su absolventais ir socialiniais partneriais vertinimo grupei buvo pranešta, kad ir vieni, ir kiti (absolventai ir socialiniai partneriai) yra išreiškę savo nuomonę apie studijų dalykus, bet neformaliai, taigi jų dalyvavimas reiškiant nuomonę turėtų būti labiau formalizuotas, pavyzdžiui, pateikiant jiems klausimynus.

## **III. REKOMENDACIJOS**

- 1. Studijų programos *Geodezija* tikslai ir numatomi studijų rezultatai turėtų būti labiau prieinami anglų kalba.
- 2. Atnaujintos šios studijų programos prieduose visų dalykų aprašai turėtų būti pateikti anglų kalba.
- 3. Žemės tvarkymo specialybę rekomenduojama padaryti patrauklesne arba aptarti jos pašalinimo iš šios programos klausimą.
- Siekiant pagerinti dėstytojų tarptautinius ryšius ir palengvinti studentų judumą, reikėtų gerinti dėstytojų anglų kalbos įgūdžius.
- 5. Reikėtų didinti dėstytojų mokslinių tyrimų tarptautinį poveikį. Primygtinai rekomenduojama skelbti publikacijas tarptautiniuose recenzuojamuose žurnaluose.
- Reikėtų formalizuoti alumnų ir socialinių partnerių dalyvavimą išreiškiant nuomonę apie studijų dalykus, pavyzdžiui, pateikiant jiems klausimynus.
- 7. Nuolatinių ir ištęstinių studijų studentų studijų rezultatų vidurkis gana žemas, taigi daugiau dėmesio reikėtų skirti studentų skatinimui siekti aukštesnių rezultatų.

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