



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

**ŽEMAITIJOS KOLEGIJOS
GEODEZIJOS IR ŽEMĖTVARKOS (653H14001)
VERTINIMO IŠVADOS**

**EVALUATION REPORT
OF *GEODESY AND LAND MANAGEMENT* (653H14001)
STUDY PROGRAMME
AT ŽEMAITIJA COLLEGE**

Grupės vadovas: Erik Stubkjaer
Team Leader:

Grupės nariai: Martien Molenaar
Team members:
Mercedes Farjas
Andrius Jurelionis
Vytautas Urbonavičius

Išvados parengtos anglų kalba
Report language - English

DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	Geodezija ir žemėtvarka
Valstybinis kodas	653H14001
Studijų sritis	Technologijos mokslai
Studijų kryptis	Bendroji inžinerija
Studijų programos rūšis	Koleginės studijos
Studijų pakopa	Pirmoji
Studijų forma (trukmė metais)	Nuolatinė (3), iššęstinė (4)
Studijų programos apimtis kreditais	180
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Matavimų inžinerijos profesinis bakalauras
Studijų programos įregistravimo data	2002-08-30, Nr. 1515

INFORMATION ON ASSESSED STUDY PROGRAMME

Name of the study programme	Geodesy and Land Management
State code	653H14001
Study area	Technology Sciences
Study field	General Engineering
Kind of the study programme	College studies
Level of studies	First
Study mode (length in years)	Full-time (3), part time (4)
Scope of the study programme in credits	180
Degree and (or) professional qualifications awarded	Professional Bachelor of Measurements Engineering
Date of registration of the study programme	2002-08-30, Order No. 1515

© Studijų kokybės vertinimo centras
The Centre for Quality Assessment in Higher Education

CONTENTS

CONTENTS	3
I. INTRODUCTION	4
II. PROGRAMME ANALYSIS	4
1. Programme aims and learning outcomes.....	4
2. Curriculum design.....	5
3. Staff	6
4. Facilities and learning resources.....	7
5. Study process and student assessment	8
6. Programme management	9
III. RECOMMENDATIONS	10
IV. SUMMARY	10

I. INTRODUCTION

The program „Geodesy and Land Management“ belongs to the Geodesy and Land Management Department of Rietavas Faculty, Zemaitija College. The College has three Faculties in three cities and the program that is evaluated is located in Rietavas. The department as well as Zemaitija College was founded in 2002. The college has 15 accredited study programs. There were 951 students studying in the college on 01.10.2012.

The program has 180 ECTS, 3 years for full-time studies and 4,5 years for part-time studies.

The qualification of professional bachelor of Measurement Engineering is provided.

The study program was started because of the interest of stakeholders. There was lack of geodesy specialists and land managers in Žemaitija. Graduates are employed in this sectors working in this region as well as other cities in Lithuania and foreign countries. Approximately 80% of the graduates are declared to be working in the field, construction companies, and land management field.

The self-analysis group emphasizes the practical experience of the graduates of the program.

II. PROGRAMME ANALYSIS

1. Program aims and learning outcomes

The aim of the program is to produce graduates which are able to organize and carry out geodetic measurements, to apply the measurement information to the solution of engineering and other applied problems, to process land management documents, and to combine the skills of technological sciences with the basics of business. The aims and related learning outcomes are clear.

Self-Analysis Summary Report lacks description of the background as well as rationale of the need for the program including national and international references. However, discussion of the review team with staff, students, alumni and employers revealed importance of the study program for the local community. The review team agrees to this concern, while adding a concern for future needs regarding geoinformation and cadaster/land management.

Program aims and learning outcomes are consistent with the type and level of studies and the level of qualifications offered. Yet, achievement of some learning outcomes presented in the Self-Analysis Summary Report seems hard to evaluate. Most of all this issue

concerns transferable skills, e.g. the only subject (module) that evaluates achievement of learning outcome No. 15 (to perceive intellectual and moral attitudes: creativity, motivation, and responsibility) is Sociology. Learning outcomes are well formulated as far as 3-4 credit courses are concerned, but compared to that, the central courses with often 6, 8-9, and even 15 credits appear as underspecified. Review of the learning outcomes in relation to study subjects (modules) is needed.

Learning outcomes of the program were not publicly available at the time of evaluation. However, Self-Analysis Summary Report was presented in the www.zemko.lt. Discussion with the employers revealed that the study program meets requirements of the local stakeholders, yet they were not familiar with the formulation of the learning outcomes and the concept itself. It would be beneficial to present learning outcomes in a way that is more accessible for students and employers.

2. Curriculum design

Section 2.2. Paragraph 28 of the SER describes how the curriculum complies with the type and level of the studies. The expert Team found this to be correct.

Section 2.2. Paragraphs 29 and 30 and table 6 of the SER describe the structure of the curriculum and its internal logic and consistency. The expert Team found this to be correct. Curriculum design is well prepared and the courses do not overlap.

Section 2.2. Paragraphs 30 – 34 of the SER describe how the curriculum complies with the type and level of the studies. The expert Team found this to be correct.

Section 2.2. Paragraphs 30 – 37 of the SER describe how the content and methods of the modules in the curriculum prepare students to achieve the intended learning outcomes. The expert Team found this to be correct.

Graduates of the program find full employment with companies and organizations, mainly in the home region of this College. Therefore the program provides for the needs of the (local) market.

The content of the program has been stable for a long time though and there it represents a rather traditional of the professional field, which hardly reflect the fact that since the previous review the College has invested in GPS technologies, new land surveying equipment and some software like GeoMap.

Internationally we see that this professional field develops fast in the direction of geoinformation processing, and the management and use of spatial data. These developments have not been reflected in the curriculum. The review team advises the introduction of new

modules and a specialization on geoinformation management into the program. This will prepare students for the modern practice of professionals in this domain. Moreover, staff contribution to and participation in national seminars and/or internships on the mentioned issues should be supported by the management.

During discussions with lecturing staff, students and alumni the expert team noticed only little awareness of important international (and especially European) developments. Many of these developments like INSPIRE, OGC are of great importance for the present and future developments of the land surveying and cadastral profession. In this context, a relevant knowledge of foreign languages, especially English, is needed. The review team thus suggest language teachers be directed to apply in their education newsletters and papers, provided on the Internet by the international scientific and professional associations

Graduates recommended deepening the knowledge of law. The complexity of the present legislation calls for better instruction, among others on how to consolidate amendments and establish current legislation.

3. Staff

The *Geodesy and Land Management* degree course is given by a total of 32 full and part time teaching staff, 5 of whom have Ph.Ds. All the staff satisfies the legal requirements as regards professional and teaching qualifications. Teachers sign a five-year contract and have at least 3 years teaching experience in their specialization.

Between 2007 and 2012 the course had an average of 332 full-time and 422 part-time students, with a total of 754 students annually. The teacher/student ratio for both student groups is considered adequate to ensure learning outcomes.

The structure of teaching staff by age groups (2007-2012) is considered adequate: the existing distribution shows a mean age of 49, with the mode in the 50-54 age group and uniform distribution throughout the remaining groups.

The relationships among teachers, students and the administration involved in the course is considered a strong point, as are relations with local business companies and other organizations. During the visit, there was clear evidence of high motivation and commitment to the Centre's aims and extracurricular activities. The professional orientation of teaching activities is excellent.

The teaching load of the staff is in accordance with legal requirements. The staff is highly motivated and takes part in both teaching and professional refresher courses. Between

2007 and 2012, 32 teachers from the *Geodesy and Land Management* program spent 892 hours in teacher training courses and 6860 in practical training courses.

Teacher mobility on both the domestic and international levels is among the aspects recommended for analysis. *Zemaitija College* is in second place in the ranking of the *Erasmus Activity Report of the Education Exchanges Support Foundation, 09-06-2011*. However, only two members of the *Geodesy and Land Management* staff took part in international mobility programs between 2007 and 2012. The International partner network of *Zemaitija College* includes 35 different organizations. The program has the necessary structure to carry out international staff mobility schemes, although some means should be considered for promoting the study of foreign languages. Teacher mobility within Lithuania, e.g. in terms of internships, should also be actively encouraged.

Another aspect that could be improved is the number of papers read at conferences by teaching staff (12 in five years) and also the number of papers published in scientific journals (4 in five years).

4. Facilities and learning resources

The number of lecture rooms, laboratories and work stations is adequate to ensure learning outcomes. There is sufficient audiovisual and other equipment.

EU funding was used to renew the facilities and equipment. A big effort was made to acquire funds for investment in teaching aids for the program, including hardware, software and specialized laboratory apparatus. The most up-to-date topographic and geodesic devices are available (theodolites, levels, GNSS equipment and range finders) and the laboratory is adequately equipped with electronic and electrical engineering devices. The Graphical Engineering equipment has been improved using low-cost license material and free software. Although the present equipment could be described as adequate, we recommend an analysis be made of possible needs in the field of Geographical Information Systems.

A plan is drawn up annually, based on consultations with teachers, regarding future needs in hardware, software, laboratory equipment, teaching aids and library funding.

The library has sufficient resources and updating procedures to ensure learning outcomes. The use of foreign language bibliographic material could be augmented.

Teachers prepare adequate teaching materials for the requirements of the subjects they teach.

Members of the local community take part in the social activities held on the premises of the Centre.

5. Study process and student assessment

Admission is competitive. The competition score of the applicants to the study program of Geodesy and Land Management was calculated by summing up the grades for mathematics (the lever coefficient: 0,4), Lithuanian (the lever coefficient: 0,2), chemistry or physics (the lever coefficient: 0,2) in school leaving exams and the annual grade of one academic subject, i.e. a foreign language (the lever coefficient: 0,2), recalculated, i.e. multiplied by the lever coefficient and by assessing the additional scores. The entrance scores average (2007 - 2012) approximately 8.1 and are based on highest scores of approximately 13.6 and significant lows – for example 2.4 in the full- time admissions of 2008.

It is very worrying to see that the number of students has been decreasing every year. From 93 in 2007 until 49 in 2012. Reasons vary but it is significant that the study program has been negatively affected by the decrease in the number of secondary comprehensive school leavers, and the price of the study programs in the study area of technological sciences.

Classroom work (lectures, seminars, practical, laboratory works) are evenly distributed – theoretical lectures are followed by practical classes. But students sometimes miss the link between theory and practice. Graduates recommended that theory should always be supported by practical tasks.

The equipment in the laboratories is modern and didactically well positioned – it reflects the intensive cooperation with regional companies, not only by the students. Study workload is evenly distributed over the years and semesters.

Good communication between students and teachers are declared. Students are able to select the topics for their final thesis.

Students are involved in applied research activities and some have presented their work at conferences. Students of the program have also been involved in improvement projects at College level. The students have access to good sports, health and cultural facilities (choir, dance and sports groups). The access of students to computer classes after the study time seems to be limited, although there is an interest in the area.

Arrangements are in place for Erasmus exchange but take up is minimal from students on the course. Many staff members are still weak in foreign language skills, but this situation is improving fast. Since 2006 the number of outgoing students is very low - 6 and just 1 student came from abroad.

Sports facilities are good and students have free access to physical education classes. A particular issue is the high drop-out rates in first year. To this end an orientation program is in place. Students are assigned tutors. There is significant staff/student consultation.

Students with special needs can avail of financial assistance. To reduce the difficulties of student employment, the College holds Career Days with the participation of enterprises, institutions, and organizations. Hostel accommodation is available to all students if required.

The students are informed of the assessment regulations at the beginning of the semester. A clear 10 point scale is used for assessment. The final grade is based on a cumulative grade. Typically end of semester examinations are weighted at a minimum of 60%. Feedback on coursework assessment is provided and students can check results online as the semester progresses. The graduates declare that the evaluations of the final thesis were adequate. But at the college level there is no organized regular student survey. And students didn't get feedback about the survey results.

By the survey results 59% of the graduates work in accordance with the completed study program, 21% of the respondents work in the position requiring higher education; 8% continue in Master studies. Graduates recommended providing more knowledge of law.

6. Program management

The management of the study program is executed by the Vice-Director for Academic Affairs, Dean of the Rietavas faculty as well as Heads of the Departments. Information and data on the implementation of the program are regularly analyzed by the College Quality Committee which consists of: Director, Vice-Director for Academic Affairs, Vice-Director for Infrastructure, Chief Accountant, Faculty Deans and a student delegated by the Student Union. However, there is no Study Program Committee at Rietavas Faculty and there are no Geodesy and Land Management students involved in the work of the Committee. Current quality control of the program would be more efficient if a Study Program Committee would be established at Rietavas Faculty.

The review team observed that the outcomes of previous evaluation were carefully considered by the program management group and the program was improved accordingly. Strengths, weaknesses and actions for improvement were clearly stated in the Self-Assessment Report.

Stakeholders are involved in the study program management and teachers have the ability to present with ideas for study program changes. Nevertheless, the review team was not able to identify documented and practiced procedures for feedback from students and employers. There is no annual assessment system at the College for receiving feedback from students and alumni. This field should be improved and used to formulate and explicit plan for improvement

of the program as well as strategy for its development. Higher student involvement in the quality assurance system of the program should be encouraged.

III. RECOMMENDATIONS

1. The review team advises the introduction of new modules and a specialization on geoinformation management into the program. (See Section 2 of this report)
2. The review team recommends deepening the knowledge of law. The complexity of the present legislation calls for better instruction, among others on how to consolidate amendments and establish current legislation. (See Section 2 of this report)
3. The review team recommends an analysis be made of possible needs in the field of Geographical Information Systems. (See Section 4 of this report)
4. Management ought to support staff contribution to and participation in national seminars and/or internships on the above mentioned issues (See Section 2 of this report)
5. The review team recommends the request of yearly feedback from students and alumni on the program. The feedback should be used to formulate a strategy for the development of the programme, and an explicit plan for implementation of new elements in the programme. (See Section 6 of this report)

IV. SUMMARY

An external assessment of the *Geodesy and Land Management* study program at the Zemaitija College took place in 2006. The Centre for Quality Assessment in Higher Education prompted the Zemaitija College to prepare a Self-Assessment Report (SAR), dated Rietavas, 2012, and established an international review team to visit the College. The visit by the review team took place the 21. May, 2013. Together with the SAR and its annexes, the visit provides the basis for this report. The following sub-section introduces an international and European perspective to the domain of the study program. The closing section of the Introduction briefly states the role of the institution, as perceived by the review team.

Geodetic surveyors are responsible for several products and services that are of fundamental value for the production, delivery and use of modern spatial data:

- They establish and maintain the reference coordinate frameworks for the spatial data
- They establish and maintain geodetic networks
- They establish and maintain gravity networks for the definition of height
- They provide topographic data in the form of spatial databases and maps

- They perform cadastral surveying of real property objects for establishing and updating the real estate cadaster;
- They perform various other technical measurements for the construction industry, building processes, deformation monitoring etc..
- They assess the quality of spatial data in the context of data delivery as well as in the assessment of relevant needs

The challenge for professionals and academia is to identify the potential of new technology (instruments, satellites, computers, internet, etc.) for the professional domain, to demonstrate its applicability towards the benefit of society, and to assist in the implementation of new tools and practices.

Several of these geodetic services relating to the maintenance of geodetic reference frameworks refer to the shape of the earth over larger regions and have therefor always been performed in international projects and thus require international cooperation. But also on the topics of topographic and cadastral information provision we see an increasing need for international coordination and standardization, in the European context, but also in a more global context.

A number of international organizations frame this endeavor, for example the International Association of Geodesy, the International Federation of Surveyors (FIG), the International Society for Photogrammetry and Remote Sensing (ISPRS), the International Cartographic Association (ICA), the Open Geospatial Consortium (OGC), and others.

From a European perspective, the following deserve mentioning:

- The Association of Geographic Information Laboratories in Europe (AGILE),
- EuroGeographics, the membership association of the European cadaster, land registry and national mapping authorities
- EuroSDR - a European Spatial Data Research Network, which links members of the above-mentioned EuroGeographics with academia for the purpose of applied research in spatial data provision, management and delivery.
- EULIS, the European Land Information Service, ELRA, the European Land Registry Association, and the Permanent Committee for Cadaster (PCC), which together with EuroGeographics have drafted an agreement on a common vision on cooperation on European Cadaster and Land Registry.
- INSPIRE, which through the INSPIRE directive and implementation measures aims to create a European Union (EU) spatial data infrastructure, and

- the United Nations Economic Commission for Europe (UNECE), having prepared among others the UNECE Guidelines on Land Administration

Finally, especially staff and students engaged in mobility arrangements may benefit from mutual comparison of state of the art, as presented through the FIG's Cadastral Template, INSPIRE's 'State-of-play' reports, and - where available - the UNECE Land Administration Review reports.

The review team finds that the Zemaitija College through the mentioned study program performs an important role in the region by offering a local facility for developing skills of young persons, and for providing graduates with expertise in geodesy, etc. for the region and for Lithuania.

The study program appears to us to have a very traditional structure, focusing mainly on land surveying measurements and data processing. Important international developments as mentioned above e.g. INSPIRE and spatial information processing and management, was weakly represented, and a question regarding a topic like 3D city modeling was incompletely replied.

Program aims and learning outcomes

Staff, students, alumni and employers describe in common the importance of the study program for the local community. The review team agrees to this concern, while adding a concern for future needs regarding geoinformation and cadaster/land management.

Learning outcomes are well formulated as far as 3-4 credit courses are concerned, but compared to that, the central courses with often 6, 8-9, and even 15 credits appear as underspecified.

Curriculum design

The trend of the market and the trend of new technology are not addressed in terms of a plan for the introduction of new or modified subjects in the curriculum. Students are happy with practical exercises and internship, which could point towards the need of a better integration between lecturing of theory and practice.

Teaching staff

Staffs meet the needed requirements. A few are involved in international mobility and mention effects of external inspiration towards the study program. Staff contribution to and participation in national seminars and/or internships on geoinformation issues, etc. should be supported by the management.

Facilities and learning resources

Staffs have diligently employed opportunities for renewal of equipment, with the result that equipment meets present needs

Study process and students' performance assessment

Communication between students and teachers is considered good. Students are able to select the topics for their final thesis, but the review team notes that the topics selected appear narrow and that scientific analysis and reflection could be improved. The Moodle system was only announced.

Program management

The internal quality assurance system of the study program is not sufficiently developed. The internal communication may be adequate, but the review team was not able to identify documented and practiced procedures for student and employer feedback.

The review team advice the College:

- to modernize the study program. More attention should be given to geographical information systems and to geoinformation management, a specialization should be established in this domain. Also, deepening the knowledge of law is a concern, including how to consolidate amendments and establish current legislation.
- to contribute towards and participate in national seminars and internships on geographical information systems and spatial information management, including INSPIRE-related issues
- to request yearly feedback from students and alumni on the program. The feedback should be used to formulate a strategy for the development of the programme, and an explicit plan for implementation of new elements in the programme.

V. GENERAL ASSESSMENT

The study programme *Geodesy and Land Management* (state code – 653H14001) at Žemaitija College is given **positive** evaluation.

Study programme assessment in points by fields of assessment.

No.	Evaluation Area	Evaluation Area in Points*
1.	Programme aims and learning outcomes	2
2.	Curriculum design	2
3.	Staff	3
4.	Material resources	3
5.	Study process and assessment (student admission, study process student support, achievement assessment)	3
6.	Programme management (programme administration, internal quality assurance)	2
	Total:	15

*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:

Erik Stubkjaer

Team Leader:

Grupės nariai:

Martien Molenaar

Team members:

Mercedes Farjas

Andrius Jurelionis

Vytautas Urbonavičius

<...>

V. APIBENDRINAMASIS ĮVERTINIMAS

Žemaitijos kolegijos studijų programa *Geodezija ir žemėtvarka* (valstybinis kodas – 653H14001) vertinama **teigiamai**.

Nr.	Vertinimo sritis	Srities įvertinimas balais*
1.	Programos tikslai ir numatomi studijų rezultatai	2
2.	Programos sandara	2
3.	Personalas	3
4.	Materialieji ištekliai	3
5.	Studijų eiga ir jos vertinimas	3
6.	Programos vadyba	2
	Viso:	15

* 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

Žemaitijos kolegijos studijų programos „Geodezija ir žemėtvarka“ išorinio vertinimo ataskaita buvo pateikta 2006 m. Studijų kokybės vertinimo centras skatino Žemaitijos kolegiją Rietave parengti 2012 m. savianalizės suvestinę (SS) ir subūrė tarptautinę vertinimo grupę, kuri patikrintų kolegiją. 2013 m. gegužės 21 d. tikrinimo grupė apsilankė kolegijoje. Ši ataskaita parengta pagal savianalizės suvestinę bei jos priedus ir apsilankymo metu gautą informaciją. Tolesnėje pastraipoje pristatoma tarptautinė ir Europos studijų programos srities perspektyva. Paskutinėje įvado dalyje trumpai pristatomas institucijos vaidmuo, kaip jį suprato vertinimo grupė.

Geodezininkai yra atsakingi už kelis produktus ir paslaugas, kurie yra itin vertingi moderniems erdviniam duomenims gauti, teikti ir naudoti:

- Sukuria ir palaiko informacijos koordinuojamas erdvinių duomenų sistemas;
- Kuria ir palaiko geodezinius tinklus;
- Kuria ir palaiko gravitacijos tinklus aukščiui nustatyti;
- Teikia topografinius duomenis, būtent erdvines duomenų bazines ir žemėlapius;

- Atlieka kadastrinius nekilnojamojo turto objektų matavimus nekilnojamojo turto kadastrui kurti bei atnaujinti;
- Atlieka daug įvairių kitų techninių matavimų statybos pramonei, statybos procesams, deformacijos stebėsenai ir kt.
- Vertina erdvinių duomenų kokybę duomenų teikimo kontekste, taip pat ir vertina atitinkamus poreikius.

Profesionalų ir akademinės visuomenės iššūkis – nustatyti naujų technologijų potencialą (prieštaisus, palydovus, kompiuterius, internetą ir kt.) profesionalioms sritims, atskleisti, kaip jos pritaikomos visuomenės labui ir padėti naudoti naujas priemones bei praktikas.

Keletas šių geodezinių paslaugų, susijusių su geodezinių nuorodų sistemų palaikymu, rodo žemės paviršių didesniuose teritorijose ir todėl nuolat buvo naudojamos tarptautiniuose projektuose, todėl tam reikia palaikyti tarptautinį bendradarbiavimą. Tačiau, kalbant apie topografinės ir kadastrinės informacijos teikimą, manome, kad vis didėja poreikis jį koordinuoti bei standartizuoti tarptautiniu mastu, Europos kontekste ir labiau globaliniame kontekste.

Daugelis tarptautinių organizacijų turi tokių pačių siekių, pavyzdžiui, Tarptautinė geodezijos asociacija, Tarptautinė matininkų federacija (FIG), Tarptautinė fotogrametrijos ir nuotolinių tyrimų sąjunga (ISPRS), Tarptautinė kartografijos asociacija (ICA), Atvirasis geoerdvinis konsorciumas (OGC) ir kitos.

Vertėtų paminėti šias Europos organizacijas:

- Europos geografinės informacijos laboratorijų asociacija (AGILE);
- „EuroGeographics“ – Europos kadastrų, žemės registro ir nacionalinių kartografavimo asociacijos narė;
- „EuroSDR“ – Europos erdvinių duomenų tyrimo tinklas, jungiantis pirmiau minėtos asociacijos „EuroGeographics“ narius su akademinė visuomene, siekiant atlikti taikomuosius tyrimus teikiant, valdant ir pristatant erdvinius duomenis.
- EULIS – Europos žemės informacijos tarnyba, ELRA – Europos žemės registro asociacija ir Nuolatinis kadastro komitetas (NKK), kurie, kartu su „EuroGeographics“, parengė sutarties projektą dėl bendros Europos kadastrų ir žemės registro organizacijų bendradarbiavimo vizijos.
- INSPIRE, kuri, vadovaudamasi INSPIRE direktyva ir įgyvendinimo priemonėmis, siekia sukurti Europos Sąjungos (ES) erdvinių duomenų infrastruktūrą;

- Jungtinių Tautų Europos ekonominės komisijos (JTEEK), be visų kitų parengė UNECE gaires dėl žemės administravimo.

Galiausiai, būtent judrumo programose dalyvaujantis personalas ir studentai gali gauti naudos iš modernaus FIG pristatomo kadastrinio modelio, INSPIRE esamos situacijos ataskaitos ir (jei susiję) UNECE Žemės administravimo apžvalgos ataskaitos tarpusavio palyginimo.

Vertinimo grupė nustatė, kad Žemaitijos kolegija siūlydama minėtą studijų programą atlieka svarbų vaidmenį regione teikdama galimybes vietos jaunimui tobulinti savo įgūdžius ir suteikdama absolventams kompetenciją geodezijos ir kitose srityje šiame regione ir visoje Lietuvoje.

Mūsų manymu, studijų programos struktūra yra labai įprasta, daugiausia dėmesio joje skiriama žemėtvarkai ir duomenų dorojimui. Kaip pirmiau minėta, svarbi tarptautinė plėtra, pvz., INSPIRE ir erdvinės informacijos dorojimas bei valdymas, buvo gana silpnai atspindėta, o klausimas dėl trimačio miestų modeliavimo buvo nevisiškai atsakytas.

Personalas, studentai, buvę studentai ir darbdaviai bendrai apibūdino studijų programos svarbą vietos bendruomenei. Vertinimo grupė sutinka su šia nuomone, dar paminėdama susirūpinimą dėl geoinformacijos ir kadastro / žemėtvarkos valdymo.

3-4 kreditų dalykų studijų rezultatai yra gerai suformuluoti, o pagrindinių studijų dalykų, teikiančių 6, 8-9 ar net 15 kreditų, studijų rezultatai nėra pakankamai suformuluoti.

Rinkos tendencijos ir naujų technologijų tendencijos nėra įtrauktos į naujų ar pakeistų temų įtraukimo į studijų modelį planą. Studentai patenkinti praktinėmis užduotimis ir praktika, kuri išduoda, kad yra poreikis geriau integruoti dėstomą teoriją su praktika.

Personalas atitinka keliamus reikalavimus. Keletas personalo narių dalyvauja tarptautiniuose judrumo projektuose ar mini išorinės inspiracijos poveikį studijų programai. Vadovybė turėtų remti personalo dalyvavimą nacionaliniuose seminaruose ir (arba) stažuotėse geoinformacijos temomis ir kt.

Personalas rūpestingai pasinaudojo galimybėmis atnaujinti įrangą, todėl ji atitinka esamus poreikius.

Bendravimas tarp studentų ir dėstytojų yra geras. Studentai gali rinktis savo baigiamojo darbo temas, tačiau vertinimo grupė pastebėjo, kad pasirinktos temos yra siauros ir, kad mokslinė analizė bei tyrimai galėtų būti gerinami. Apie “Moodle” sistemą buvo tik pranešta.

Studijų programos vidinė kokybės užtikrinimo sistema nepakankamai išplėta. Vidinė komunikacija gali būti adekvati, bet vertinimo grupė negalėjo nustatyti dokumentuotų ir įgyvendinamų studentų ir darbdavių grįžtamojo ryšio procedūrų.

Vertinimo grupė kolegijai rekomenduoja:

- Modernizuoti studijų programą. Daugiau dėmesio skirti geografinėms informacinėms sistemoms ir geoinformacijos valdymui, šiai sričiai patariama sukurti specializaciją. Taip pat svarbu gilinti teises žinias, įskaitant žinias, kaip konsoliduoti pakeitimus ir sukurti dabartinius įstatymus;
- Prisidėti prie nacionalinių seminarų bei stažuočių apie geografines informacines sistemas ir erdvinės informacijos valdymą, ir dalyvauti juose, įskaitant klausimą, susijusį su INSPIRE;
- Kasmet reikalauti studentų ir buvusių studentų atsiliepimų apie programą. Atsiliepimai turi būti naudojami programos plėtros strategijai formuoti ir konkrečiam planui, kaip programoje įgyvendinti naujus elementus, kurti.

III. REKOMENDACIJOS

1. Vertinimo grupė pataria programai pritaikyti naujus modelius ir geoinformacijos valdymo specializaciją (žr. šių išvadų 2 dalį).

2. Vertinimo grupė rekomenduoja gilinti teises žinias. Reikia geriau išaiškinti sudėtingus galiojančius įstatymus, taip pat ir kaip konsoliduoti pakeitimus bei sukurti dabartinius įstatymus (žr. šių išvadų 2 dalį).

3. Vertinimo grupė rekomenduoja analizuoti galimą Geografinių informacinių sistemų poreikį (žr. šių išvadų 4 dalį).

4. Vadovybė turėtų palaikyti personalo indėlį ir dalyvavimą nacionaliniuose seminaruose ir (arba) stažuotėse pirmiau minėtomis temomis (žr. šių išvadų 2 dalį).

5. Vertinimo grupė rekomenduoja kasmet reikalauti studentų ir buvusių studentų atsiliepimų apie programą. Atsiliepimai turi būti naudojami programos plėtros strategijai formuoti ir konkrečiam planui, kaip programoje įgyvendinti naujus elementus, kurti (žr. šių išvadų 6 dalį).

<...>
