



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

VILNIAUS UNIVERSITETO
PROGRAMOS *GEOLOGIJA* (621F60001)
VERTINIMO IŠVADOS

EVALUATION REPORT
OF *GEOLOGY* (621F60001)
STUDY PROGRAMME
VILNIUS UNIVERSITY

Grupės vadovas:
Team Leader:

Prof. Dr. Alvar Soesoo

Prof. Dr. James Andrew Graham Cooper

Grupės nariai:
Team members:

Prof. Dr. Jacek Puziewicz

Juozas Mockevičius

Justinas Staugaitis

Išvados parengtos anglų kalba
Report language - English

Vilnius
2014

DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	Geologija
Valstybinis kodas	621F60001
Studijų sritis	Fiziniai mokslai
Studijų kryptis	Geologija
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Antroji
Studijų forma (trukmė metais)	Nuolatinė (2)
Studijų programos apimtis kreditais	120
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Geologijos magistras
Studijų programos įregistravimo data	19-05-1997 Nr. 565

INFORMATION ON ASSESSED STUDY PROGRAMME

Name of the study programme	Geology
State code	621F60001
Study area	Physical Sciences
Study field	Geology
Kind of the study programme	University studies
Level of studies	Second
Study mode (length in years)	Full-time (2)
Scope of the study programme in credits	120
Degree and (or) professional qualifications awarded	Master of Geology
Date of registration of the study programme	19-05-1997 No. 565

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

CONTENTS

CONTENTS	3
I. INTRODUCTION.....	4
II. PROGRAMME ANALYSIS	5
1. Programme aims and learning outcomes.....	5
2. Curriculum design	6
3. Staff	7
4. Facilities and learning resources	8
5. Study process and student assessment.....	10
6. Programme management	11
III. RECOMMENDATIONS	12
IV. SUMMARY	12
V. GENERAL ASSESSMENT	15

I. INTRODUCTION

The external assessment of the study programme Geology (state code - 621F60001) was initiated by the Centre for Quality Assessment in Higher Education of Lithuania nominating the external assessment expert group formed by Professor Alvar Soesoo (Tallinn University of Technology, Estonia - team leader), Professor James Andrew Graham Cooper (University of Ulster, Northern Ireland, U.K.), Professor Jacek Puziewicz (University of Wrocław, Poland), Mr. Juozas Mockevičius (member of Lithuanian Union of Geologists and geological research enterprise „Grotą“), and student representative Justinas Staugaitis (Kaunas University of Technology).

The introductory meeting was organised on 24th February at the Centre for Quality Assurance in Higher Education, Vilnius. The evaluation of the study programme Geology (state code - 621F60001) made use of the following documents and presentations: Education in Lithuania; Assessment of External Study Programmes: Methodological Guidelines for Experts; Regulations for Master studies; Higher education and research reform in Lithuania; Description of Study Programme Accreditation Order; Higher education evaluation system in Lithuania; Methodological Guidelines: Visits, Final report, and other documents.

The basis for the evaluation of the study programme (hereafter, the programme) is the Self-Evaluation Report, compiled in 2013, its annexes and the site visit of the expert group to Vilnius University (hereafter, the University) on 25th February 2014. The visit incorporated all required meetings with different academic and public groups, including the administrative staff of the Faculty of Natural Science, staff responsible for preparing the self-assessment documents, teaching staff, students of the first and second years of study, graduates, and social partners. The expert group examined presented Master theses. The expert group also inspected various support services (classrooms, laboratories, library, computer facilities).

After discussions and preparation of conclusions and remarks, the expert group presented introductory general conclusions of the visit to the Faculty and Department members. After the visit, the group met on 27th February to discuss and agree on the content of the report and provide points for the assessed evaluation areas.

II. PROGRAMME ANALYSIS

1. Programme aims and learning outcomes

The main aim of the 2nd level study programme in Geology at the Vilnius University is to prepare the universal, highly qualified geologist who is flexible enough to be competitive in various areas of contemporary geosciences. This aim requires broad theoretical knowledge of Earth, its structure and dynamics, variable practical skills and strong general competences. The major aim results in a well-defined set of learning outcomes, comprising knowledge of planet-scale and local (Baltic State) geology (5 outcomes), understanding of geological processes (5 outcomes), practical knowledge on methods and techniques used in geological research (6 outcomes) and general competences in team work organisation, management and leadership (6 outcomes).

The programme aims and outcomes are clearly defined and well presented in the web pages. The aims take into account both the requirements of global and EU labour market as well as local needs in Lithuania, and they guarantee the broad and complex knowledge of graduates. The relative proportions of the course dealing with theoretical knowledge and practical skills necessary at Master level are well balanced. The broad spectrum of study subjects gives the graduates necessary background for various professional career paths, from prospection and exploitation enterprises, through governmental agencies dealing with natural resources and nature protection to the academic research.

The outcomes show that the imparted knowledge is modern and the graduates are acquainted with modern computational methods and software, including the geophysical software. The access to geochemical analytical laboratories and techniques of analysing and imaging the rocks and minerals in the micro-scale (SEM, Cathodoluminescence) is offered by the University or by cooperating research centres (Nature Research Centre), and provides the basic knowledge in modern analytical techniques, which is necessary for further career development in companies using this type of equipment.

The learning outcomes assure that the graduates are flexible, well educated in geology at the Master level and can proceed with various specialisation paths in their careers. Both the programme aims and learning outcomes are compatible with each other and fit the Master studies level.

The aims and outcomes received the highest possible rank and need no specific recommendations. However, in future years they should be continuously updated according to the changes in the labour market and evolution of the geosciences. The geological and mineralogical aspects of material science should be considered in future.

2. Curriculum design

The Master studies course is constructed as a solid framework of basic knowledge in the essential components of geology having in mind the lack of specialist lecturers in some subjects such as Petroleum Geology, Marine Geology. After the assessment in 2011 the structure of the programme and study credits system was reviewed and reorganized according to the “Description of general requirements for master studies” issued by the Ministry of Education and Science of Lithuanian Republic and according to the Vilnius University Study programme description (approved by Senate Commission of Vilnius University 2012.06.21, Nr. SK-2012-12-4) where the number of subjects taught per semester was reduced to 5. As a result, the Master Programme was slightly restructured according to the requirements concerning the number of credits per subject and the number of subjects per semester.

The course consists of compulsory subjects (32 credits), optional study subjects (25 credits), research work and professional practice (23 credits) and the Master thesis (40 credits). The Programme is constructed as full-time 2 year course of 120 credit points, i.e. 60 credits for each year. The wide range of optional subjects creates a good degree of choice for the students, but bearing in mind the relatively small number of students and high number of credits (just 7 credits less than for compulsory subjects) awarded to optional subjects, the ratio of these subjects is questionable. It could be problematic to guarantee high quality teaching performance and to have highly qualified teachers just for optional short courses. We noted good practice in the allocation of significant time for Research work and Professional practice as well as the importance given to the Master thesis preparation (practically starting from the first semester).

The curriculum and syllabus are relevant and appropriate to the level of the study programme and learning outcomes. However, some of the learning outcomes (for example, 1.1. “will understand the structure, composition and evaluation of the Earth”; 1.2. “will understand the

interaction of the deep and surface processes of the Earth”; 1.4. „assessment of natural resources, legal aspects; environmental protection“) seem too general and basic for the Master studies.

Some changes of the optional subjects in the Programme during year 2012-2013 seem quite superficial, for example: “Introduction to Oil Geology” transformed to “Oil and Gas Geology”, “Integrated Interpretation of Data by “Geographix” Software” transformed to “Integrated Interpretation of Data using PC Software” etc. Doubt about the degree to which real change has occurred is enhanced because teaching staff for the new courses are the same and the Petroleum Geology or Data Processing (substituting for „Mathematical treatment of geological information“) isn’t the basic field of the lecturers interest or their background.

The Curriculum and Study programme is being constantly improved taking into consideration feedback from social partners and students. The curriculum design meets legal requirements and the study subjects’ content and teaching methods are appropriate for the studies at the Master level.

3. Staff

The teaching staff are well qualified both academically and by virtue of professional experience outside university. All the staff are educated to PhD level in geology and majority of staff are teaching in the field of their PhD research or a closely related field. All but one member of staff have several years of experience in professional posts outside university. There are 11 staff of whom 6 are full-time, 4 part-time and one assisting social partner. This is an adequate number of staff to deliver the programme. In addition, use is made of visiting foreign academics to contribute to the courses. For example, visitors from Estonia, Latvia, Sweden, Australia, Poland, Russia and the UK have contributed between 2011-2013.

The staff turnover seems to be low, indicating stability in teaching provision. During 2011/2012 2 lecturers (Bitinas and Žigaitė) left the department. At the same time G. Skridlaitė, A. Spiridonov and N. Dobrotin were employed to teach courses in microscopic and isotopic investigations of crystalline rocks, paleontology, and Earth’s geophysics, respectively and E. Rudnickaitė was appointed to a 50% teaching position. There is provision for 5-yearly review of appointments. The appointment of new staff as in 2013 suggests a high degree of efficiency and flexibility.

Each staff member has attended a reasonable number of conferences, both national and international (e.g. The 11th Colloquium on Baltic Sea Marine Geology, 2012; 3rd IGCP 591 Annual Meeting – Lund, Sweden, 2012; International Congress on Stratigraphy, Lisbon, Portugal, 2013) indicating a good level of institutional support for professional development of this type. All have spent significant periods abroad in other institutions which must also contribute strongly to self-development. For example, Kaminskas visited Cardiff University UK, Lazauskienė visited Madrid, Spain and Radzevičius is a regular visitor to University of Wroclaw (Poland). Most are also involved in international research projects. For example, Šinkūnas participated in the EU COST project ES0907 INTIMATE: ES0907 INTIMATE: INTegrating Ice core, MARine and TERrestrial records (60 000 to 8 000 years ago); Šliaupa participated in EU FP7 project Geology and mineral resources of Ghor Province, Afghanistan; and Kaminskas participated in the Lithuanian Research Council project, “Palaeogeographical changes in Lithuania throughout the Postglacial time under the Baltic Sea and land interaction”, Grant No LEK-03/210.

The teaching staff are engaged in research relevant to the subjects being taught. In all cases there is a clear link between teaching responsibilities and research output. The quality of the research outputs is satisfactory to good with most staff having published several international journal articles in the past 5 years. However, increase in international publications could make Departmental research even more visible in national and international level.

The staff have skills in Regional Geology, Palaeontology, Sedimentology, Quaternary Geology, Mineralogy, Petrology and Economic Geology.

4. Facilities and learning resources

For the implementation of the Second Cycle Study Programme Geology the Department of Geology and Mineralogy has 4 auditoriums, 4 laboratories, Geological museum in addition to possibilities to use several rooms at the Faculty level (a large faculty auditorium, Postgraduate room, Geo-environment auditorium, Geo-engineering auditorium, Geography auditorium and others). Several rooms have been renovated in the last few years, including Paleontology laboratory, Mineralogy laboratory, GIS laboratory, Cathodoluminescence laboratory. The physical provision for the programme is adequate.

The teaching and learning equipment is generally good, students have access to computer lab which is equipped with primarily necessary software (WINDOWS XP Pro (4 comp.) OS are installed. MS OFFICE'2003, 2007, MAPINFO 8.5, COREL 2012, SURFER 7.0, AUTOCAD 2012 Realise, STATISTICA for WINDOWS, SAS) and digital geographic information (maps and ortho-photos). MapInfo 8.5 version may have some limitations for geological GIS work in the future and it can be advised to update GIS software.

The Department has primary research equipment such as polarising and stereo-microscopes, thin section apparatus (under installation), grain size analyser and rock magnetic study susceptibility measurement equipment, but lacks in-house geochemical equipment (e.g. ICP-MS, X-ray fluorescence analyser). Master students are given access to geochemical and other research equipment on a collaborative basis at different departments and cooperation partners. The main research partner – Nature Research Centre – has modern SEM microscope with EDS microprobe and equipment for paleomagnetic investigations which can be used through the “Open Access Centre” system. The cost for this access is reasonable and has not limited research topics. The Department of Hydrogeology and Engineering Geology has operational ion chromatographs and induced plasma spectrometer (ICP), which are available to use, but they are presently underused or not used by Master students. The students mentioned the need for additional equipment, such as ICP-MS at the department.

The student practice is adequate and is mainly related to thesis subjects. However, it was mentioned by students that they encourage the Department to increase the practical part in the programme (adding additional practical subjects, for example).

The Department of Geology and Mineralogy has adequate teaching collections of rocks, minerals and fossils. There are more than 4000 samples used in studying and teaching process. For study purposes students are allowed to use open exposition of rocks, minerals and fossils in the Museum of Geology.

Library provision is adequate, and is good with respect to electronic sources and databases. However, a sufficient quantity of respectable handbooks is not available for all study subjects in the study Programme. The situation has improved during recent years and some new textbooks published in Lithuanian (“Paleontology” by Prof. M. Kabailienė and Assoc. Prof. S. Radzevičius) in 2012. The handbook “Analysis of geological information” is under

preparation by Assoc. Prof. A. Brazauskas. Relevant English language textbooks are also available now.

5. Study process and student assessment

Admission requirements (based on the first degree in Geology) are well founded. They are well known to the Bachelor students of the Vilnius University (VU). However, the students who have the Bachelor degree not in Geology and not from VU are not well informed that there is a possibility to join Master study. This aspect of information should be improved.

The study programme is well organized. The learning outcomes can be achieved with the present organisation of the study process. Students and academic staff are able to explain learning outcomes and achievements.

The Master course students are encouraged to participate in exchange study programs (Erasmus), but the interest is low (3-4 students in average show interest each year). This is partly because of financial reasons (the ERASMUS students get little support during their study abroad), and partly because of small number of agreements with potential partners from other European universities. There are issues that need more attention, for example more university level exchange agreements with other EU universities can be made. Student mobility is important not only for improving English language but also to have a wider view. This also applies to teacher exchange. This study programme gives the opportunity to get social support and scholarship. The problem is in relatively low level of social support, which however cannot be improved (because of the state policy).

The assessment of student's performance (based on examinations and student's knowledge verification during lessons) is well organised. The small amount of enrolled students enables close contacts with staff members and enhances the clear and adequate student evaluation. The professional activity of the graduates, which are employed as geologists in various state organizations and private enterprises, fits well the programme structure and meets the expectations of programme providers.

Equipment and laboratory hours are sufficient and adequate. The social partners and Alumni believe that the study programme is well prepared, and there have been positive changes after the last evaluation (e.g. improved laboratory use, new teachers).

Some improvements are recommended: (1) the development of international teachers exchange programs in order to offer a broader spectrum of knowledge and to enable students to exercise their professional English language skills; (2) the access to geology-directed databases and journals (e.g. GeoscienceWorld & GeoRef) should be offered and used in the course of study.

6. Programme management

The programme management system of 2nd level (Master) study of Geology is a part of the quality management system at the Vilnius University. The members of the quality monitoring system are Rector, Senate, Dean and Faculty Council, and the system extends down to the departments, individual teachers and students. Important elements of the programme management are Quality Management Centre of the Vilnius University (student feedback) and Study Programme Committee of the Department of Geology and Mineralogy.

The responsibilities of the programme management are clearly defined at all levels. Semester based evaluation and analysis of the examination results and academic year based analysis of student's opinions are significant parts of the quality monitoring and management system. These analyses, together with the opinions of the Committee of Geology Study Programme, are the basis for corrections and improvements of the programme.

The internal quality monitoring is strengthened thanks to every-day contacts between students and staff, and regular contacts with employers and graduates. This enables fast opinion exchange and good, effective and efficient quality management. The regular contacts with employers, potential employers and graduates employed in various institutions and enterprises contribute to the programme management and enable its continuous improvements according to the need of Lithuanian and international labour market. The results of the last external evaluation of the programme, made by the Lithuanian Centre for Quality Assessment in Higher Education, were carefully analysed and used for programme improvement (e.g. the some of the courses, for example on geophysical data processing, were modified, and a new course on advanced microscopy of crystalline rocks and their isotope geology was introduced). In summary, the

programme management system is well organized, efficient and assures permanent monitoring and necessary improvements and corrections of the study programme.

In some cases the demand for changes from students cannot be implemented in the programme because of financial reasons, but it is necessary to find solutions compromising the demands (e.g. more field practice) and possibilities. The programme management also could be improved by more extensive contacts with social partners (employers) and graduates.

III. RECOMMENDATIONS

1. Avoid just theoretical rearrangements of the Curriculum design and review the balance between compulsory and optional subjects, ensure research and practical exercises can take place;
2. Encourage more and support students in international mobility, evaluate possibility for creation of favourable conditions for students (some lecturers as well) to improve foreign language skills;
3. Extend and tighten research and study cooperation and sharing equipment with the Department of Hydrogeology and Engineering Geology;
4. Encourage the staff to make more use of visiting academics to deliver lectures and seminars;
5. Encourage both teachers and students to participate more in international and local projects;
6. Create better laboratory support for sample preparation (crushing, cutting, polishing and other facilities) and basic research (high quality modern polarized light microscopes, binoculars etc);
7. Assess the possibility and react to include more practical (as a subject or work) in the programme.

IV. SUMMARY

The overall impression of the *Geology* Master programme is positive. As this programme is the only *Geology* Master programme in Lithuania it is important that the programme provides a high

education standard, is sustainable and meets international quality requirements and labour market needs.

Most students interviewed during the visit took part in the discussion in a very active way, and appeared open minded, critical, and capable, which is the mark of a successful academic training. Moreover, all the social partners confirmed that they could trust the competences of the students they employed.

The programme aims and outcomes are clearly defined and well presented. The aims take into account both the requirements of global and EU labour market and local needs in Lithuania, and they guarantee the broad and complex knowledge of graduates.

The learning outcomes assure that the graduates are flexible, well educated in geology at the Master level and can proceed with various specialisation paths in their careers. Both the programme aims and learning outcomes are compatible with each other and fit the Master studies level.

The Curriculum and Study programme is being constantly improved taking into consideration feedback from social partners and students. Some changes of the optional subjects in the Programme during year 2012-2013 sound declarative, for example: “Introduction to Oil Geology” transformed to “Oil and Gas Geology”, “Integrated Interpretation of Data by “Geographix” Software” transformed to “Integrated Interpretation of Data using PC Software”. The curriculum design generally meets legal requirements, the contents and teaching methods are appropriate for the achievement of intended learning outcomes.

The teaching staff are all well qualified both academically and by virtue of professional experience outside academia. All the staff are educated to PhD level in geology and most are teaching in the field of their PhD research or a closely related field. Each staff member has attended a reasonable number of conferences, both national and international. The teaching staff are engaged in research relevant to the subjects being taught. In all cases there is a clear link between teaching responsibilities and research output.

The Department has primary research equipment, but lacks in-house geochemical equipment. The Master students are given access to geochemical and other research equipment in different departments and cooperation partners. The teaching and learning equipment is generally good,

students have access to computer lab which is equipped with primarily necessary software. Several rooms have been renovated in the last few years. The student practice is adequate and is mainly related to thesis subject. However, it was mentioned by students that they encourage the Department to increase the practical part of the programme. Library provision is adequate, and is good with respect to electronic sources and databases.

Admission requirements and organization of study process are well prepared, but must be improved in few aspects, for instance to better inform other faculties and other universities about the *Geology* study programme and learning/educational possibilities. The study programme is well organized; students and academic staff are able to explain learning outcomes and achievements.

The programme management system is a part of the quality management system at the Vilnius University. The responsibilities of the programme management are clearly defined at all levels. Semester-based evaluation and analysis of the examination results and academic year-based analysis of student's opinions are significant parts of the quality monitoring and management system. In some cases the demand for changes from students cannot be implemented in the programme because of financial reasons, but the finding solutions compromising the demands (e.g. more field practice) and possibilities is necessary.

In conclusion, the Geology programme meets educational and specific national and international requirements and is sustainable.

V. GENERAL ASSESSMENT

The study programme Geology (state code – 621F60001) at Vilnius University 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	4
2.	Curriculum design	3
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)	3
	Total:	19

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

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

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

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

Grupės vadovas:
Team Leader:

Prof. Dr. Alvar Soesoo

Grupės nariai:
Team members:

Prof. Dr. James Andrew Graham Cooper

Prof. Dr. Jacek Puziewicz

Juozas Mockevičius

Justinas Staugaitis

**VILNIAUS UNIVERSITETO ANTROSIOS PAKOPOS STUDIJŲ PROGRAMOS
GEOLOGIJA (VALSTYBINIS KODAS – 621F60001) 2014-04-17 EKSPERTINIO
VERTINIMO IŠVADŲ NR. SV4-171 IŠRAŠAS**

<...>

V. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus universiteto studijų programa *Geologija* (valstybinis kodas – 621F60001) vertinama **teigiamai**.

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

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

2 - Patenkinamai (tenkina minimalius reikalavimus, reikia tobulinti)

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

4 - Labai gerai (sritis yra išskirtinė)

<...>

IV. SANTRAUKA

Bendras įspūdis apie Geologijos magistro programą yra teigiamas. Kadangi tai vienintelė Geologijos magistro programa Lietuvoje, svarbu, kad ji užtikrintų aukštus išsilavinimo standartus, būtų tvari ir atitiktų tarptautinius kokybės reikalavimus bei darbo rinkos poreikius.

Dauguma susitikimų metu apklaustų studentų labai aktyviai dalyvavo diskusijose ir pasirodė esantys plačių pažiūrų, kritiški ir gabūs, o tai – sėkmingo akademinio mokymo požymis. Be to, visi socialiniai partneriai patvirtino, kad jie galėjo pasitikėti įdarbintų studentų kompetencija.

Programos tikslai ir studijų rezultatai aiškiai apibrėžti ir tinkamai pateikti. Tikslai paremti tiek pasaulinės ir ES darbo rinkos reikalavimais, tiek Lietuvos vietos poreikiais, jie garantuoja, kad absolventai įgytų plačių ir sudėtinių žinių.

Studijų rezultatai užtikrina, kad absolventai būtų lankstūs, gerai išsilavinę geologijos srityje magistro lygiu ir vėliau galėtų rinktis įvairias specializacijas, siekdami karjeros. Programos tikslai ir studijų rezultatai dera tarpusavyje ir yra tinkami magistro lygio studijoms.

Studijų turinys ir studijų programa nuolat tobulinami, atsižvelgiant į socialinių partnerių ir studentų grįžtamąjį ryšį. Kai kurie 2012–2013 m. studijų programos pasirenkamųjų dalykų pokyčiai atrodo gana deklaratyvūs, pavyzdžiui: „Naftos geologijos įvadas“ pakeistas į „Naftos ir dujų geologiją“, „Geographix“ programinės įrangos duomenų kompleksinis interpretavimas“ pakeistas į „Duomenų kompleksinį interpretavimą naudojant kompiuterinę programinę įrangą“. Bendrai studijų programos sandara atitinka įstatymais numatytus reikalavimus, turinys ir mokymo metodai yra tinkami numatytiems studijų rezultatams pasiekti.

Visi dėstytojai yra aukštos kvalifikacijos tiek akademinė, tiek profesinės patirties už akademinės aplinkos ribų prasme. Visi dėstytojai turi geologijos daktaro laipsnį ir dauguma jų dėsto temas iš tų sričių, iš kurių rašė daktaro disertaciją, arba kitų labai artimų temų. Kiekvienas personalo narys yra dalyvavęs pakankamai nacionalinių ir tarptautinių konferencijų. Dėstytojai atlieka mokslinius tyrimus, susijusius su jų dėstomais studijų dalykais. Visais atvejais egzistuoja aiškus ryšys tarp dėstymo atsakomybės ir mokslinių tyrimų rezultatų.

Katedra turi svarbiausią mokslinių tyrimų įrangą, tačiau trūksta vidinės geocheminės įrangos. Magistro studijų studentai turi prieigą prie geocheminės ir kitos mokslinių tyrimų įrangos kitose katedrose ir bendradarbiaujančių partnerių patalpose. Dėstymo ir mokymosi įranga apskritai yra gera, studentai turi prieigą prie kompiuterių laboratorijos, kurioje yra pagrindinė būtina programinė įranga. Per pastaruosius kelerius metus buvo atnaujintos kelios auditorijos. Studentų atliekama praktika yra adekvati ir daugiausia susijusi su jų baigiamojo darbo tema. Tačiau studentai minėjo, kad jie katedrai išreiškė pageidavimą padidinti studijų programos praktinių

užsiėmimų skaičių. Bibliotekos ištekliai yra adekvatūs, joje yra pakankamai elektroninių šaltinių ir duomenų bazių.

Priėmimo reikalavimai ir studijų proceso organizavimas geras, tačiau jį reikėtų tobulinti keliais aspektais: pavyzdžiui, reikėtų geriau informuoti kitus fakultetus ir kitus universitetus apie Geologijos studijų programą ir mokymosi, švietimo galimybes. Studijų programa yra gerai organizuojama, studentai ir akademinis personalas geba paaiškinti studijų rezultatus ir pasiekimus.

Programos vadybos sistema yra Vilniaus universiteto kokybės valdymo sistemos dalis. Programos vadybos atsakomybės aiškiai nustatytos kiekviename lygmenyje. Semestro vertinimai bei egzaminų rezultatų analizė ir studentų nuomonių analizė per akademinis metus yra svarbios kokybės stebėsenos ir vadybos sistemos sudedamosios dalys. Kai kuriais atvejais studentų pageidaujami pokyčiai studijų programoje negali būti įgyvendinami dėl finansinių priežasčių, tačiau būtina rasti kompromisinius sprendimus prašymams patenkinti (pvz., skirti daugiau praktikos lauke) ir galimybėms rasti.

Taigi, Geologijos studijų programa atitinka švietimo ir specifinius nacionalinius bei tarptautinius reikalavimus ir yra tvari.

III. REKOMENDACIJOS

1. Reikėtų ne tik teoriškai pertvarkyti studijų programos turinį, bet ir persvarstyti privalomųjų bei pasirenkamųjų dalykų balansą, derėtų užtikrinti, kad vyktų moksliniai tyrimai ir praktiniai užsiėmimai.
2. Skatinti ir remti studentų tarptautinį judumą, įvertinti galimybę sukurti palankias sąlygas studentams (taip pat ir kai kuriems dėstytojams), siekiant gerinti jų užsienio kalbų įgūdžius.
3. Išplėsti ir sugriežtinti bendradarbiavimą su Hidrogeologijos ir inžinerinės geologijos katedra mokslinių tyrimų bei studijų srityse, taip pat įrangos mainus.
4. Skatinti personalą pasisemti daugiau žinių iš akademikų, atvykstančių dėstyti paskaitų ir vesti seminarų.
5. Skatinti dėstytojus ir studentus aktyviau dalyvauti tarptautiniuose ir vietos projektuose.

6. Sukurti laboratorijų aplinką, kuri būtų labiau pritaikyta mėginiams paruošti (turėtų būti smulkinimo, pjovimo, šlifavimo ir kitų patalpų) ir pagrindiniams moksliniams tyrimams atlikti (turėtų būti aukštos kokybės modernių poliarizuotų šviesos mikroskopų, žiūronų ir kt.).
7. Įvertinti galimybes ir priimti sprendimą į studijų programą įtraukti daugiau praktinio pobūdžio dalykų ar darbų.

<...>

Paslaugos teikėja patvirtina, jog yra susipažinusi su Lietuvos Respublikos baudžiamojo kodekso¹ 235 straipsnio, numatančio atsakomybę už melagingą ar žinomai neteisingai atliktą vertimą, reikalavimais.

Vertėjos rekvizitai (vardas, pavardė, parašas)

¹ Žin., 2002, Nr.37-1341.