



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Vilniaus universiteto
STUDIJŲ PROGRAMOS *EKOLOGIJA*
(valstybinis kodas – 621C18001)
VERTINIMO IŠVADOS

EVALUATION REPORT of
ECOLOGY STUDY PROGRAMME
(state code – 621C18001)
at Vilnius university

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Išvados parengtos anglų kalba
Report language – English

DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	<i>Ekologija</i>
Valstybinis kodas	621C18001
Studijų sritis	Biomedicinos mokslai
Studijų kryptis	Biologija
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	Ekologijos magistras
Studijų programos įregistravimo data	1997-05-19

INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	<i>Ecology</i>
State code	621C18001
Study area	Biomedical Sciences
Study field	Biology
Type of the study programme	University studies
Study cycle	Second
Study mode (length in years)	Full-time (2)
Volume of the study programme in credits	120
Degree and (or) professional qualifications awarded	Master in Ecology
Date of registration of the study programme	19-05-1997

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I. INTRODUCTION

1.1. Background of the evaluation process

The evaluation of on-going study programmes is based on the **Methodology for evaluation of Higher Education study programmes**, approved by Order No 1-01-162 of 20 December 2010 of the Director of the Centre for Quality Assessment in Higher Education (hereafter – SKVC).

The evaluation is intended to help higher education institutions to constantly improve their study programmes and to inform the public about the quality of studies.

The evaluation process consists of the main following stages: 1) *self-evaluation and self-evaluation report prepared by Higher Education Institution (hereafter – HEI)*; 2) *visit of the review team at the higher education institution*; 3) *production of the evaluation report by the review team and its publication*; 4) *follow-up activities*.

On the basis of external evaluation report of the study programme SKVC takes a decision to accredit study programme either for 6 years or for 3 years. If the programme evaluation is negative such a programme is not accredited.

The programme is **accredited for 6 years** if all evaluation areas are evaluated as “very good” (4 points) or “good” (3 points).

The programme is **accredited for 3 years** if none of the areas was evaluated as “unsatisfactory” (1 point) and at least one evaluation area was evaluated as “satisfactory” (2 points).

The programme is **not accredited** if at least one of evaluation areas was evaluated as "unsatisfactory" (1 point).

1.2. General

The Application documentation submitted by the HEI follows the outline recommended by the SKVC. Along with the self-evaluation report and annexes, the following additional documents have been provided by the HEI before, during and/or after the site-visit:

No.	Name of the document
1.	The Self Evaluation Team’s responses to 7 questions raised by Evaluation Committee prior to the visit (the self evaluation team responded to all questions)
2.	Visual material of the remote infrastructure prior to the visit (was made available among other evaluation materials)

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

Research trend of the Faculty of Natural Sciences at Vilnius University are: Human biological and socio-psychological knowledge and developments; Genomics, biomolecules and biotechnology; Ecosystem changes, protection, natural resources. Accordingly, the Faculty runs 15 second circle

programmes (Environmental Research and Management, Botany, Ecology, Geography and Landscape Management, Geology, Hydrogeology and Engineering Geology, Hydrometeorology, Cartography, Zoology, Biological diversity) of which 10 are tightly or loosely related to the research aim “ecosystem changes, protection, natural resources”. The postgraduate Programme of Ecology was implemented in 1997 and is supervised by the Ecology and Environment Sciences Centre.

1.4. The Review Team

The review team was completed according *Description of experts' recruitment*, approved by order No. 1-01-151 of Acting Director of the Centre for Quality Assessment in Higher Education. The Review Visit to HEI was conducted by the team on 19th October 2016.

1. **Prof. dr. Aleksandar Jovanovic (team leader)**, *Vice-rector for International relations, Professor of Faculty of Medicine, University of Pristina/K.MITROVICA, Serbia.*
2. **Prof dr. Judit Padisák**, *Director of Institute of Environmental Sciences, University of Pannonia, Hungary.*
3. **Prof. dr. Jacques van Alphen**, *Professor Emeritus at the Institute for Biodiversity and Ecosystem Dynamics, University of Amsterdam and the Netherlands Centre for Biodiversity, Netherlands.*
4. **Dr. Ramunė Leipuvienė**, *Product Manager at UAB Thermo Fisher Scientific, Lithuania.*
5. **Vaida Šidlauskaitė**, *Doctoral student at Lithuanian Sports University (Biology field), Lithuania.*

II. PROGRAMME ANALYSIS

2.1. Programme aims and learning outcomes

The postgraduate Programme of *Ecology* was implemented in 1997 by the Ecology and Environment Sciences Centre, Faculty of Natural Sciences, Vilnius University. The Programme aims and learning outcomes are clearly defined according to Dublin descriptors for the second cycle programmes and were approved by the Lithuanian Minister of Education and Science on 21 November 2011 and are publicly accessible. The Programme aims and the learning outcomes are ambitious and *per se* are largely in correspondence with the second cycle studies and the qualification offered. Though the Programme aims and learning outcomes meet the academic/professional requirements and labour market needs, doubts arise concerning fulfillments of these needs when compared to the content. The Programme content provides weak competence

for “Fundamental and applied research based on the latest ecological direction of knowledge and skills to apply them in research and solving practical... tasks” (SER, page 7) since teaching ecological theories and hypotheses that underlie the discipline are largely missing from course contents. The latter would be necessary “to make decisions in the absence of detailed and defined information” (SER, page 7). The Programme neither provides experience in ecological experimentation, nor in the methods of comparative research. On the other hand, and especially judged by the topics and contents of the diploma theses, the students gain good abilities in carrying out field- and observational studies therefore the Programme fulfills the minimum requirements and improvements are possible.

The number of admitted students varied between 8 and 17 (2011-2015) and suffered a dropout of 19%. Undergraduates of the Ecology BA programme taking part in discussions during the visit intend to continue MSc studies in programmes offered by other programmes of the Vilnius University, other Lithuanian universities or abroad. This indicates that the Programme is not preferred by the potential students. Input from other universities of Lithuania is small and mostly driven by personal and not by academic reasons. It is not clear how the Programme realizes the learning outcome “experience and knowledge ... professional activities” (SER, page 7). Social partners, especially from NGOs, found the graduates’ soft skills (managerial, project administration) are weak. Consequently, the Programme, despite its ambitious aims can only partly meet the partners’ needs either in the input- or the output side.

The name of the Programme and the offered qualification are compatible with each other. The title of the courses offered in the Programme appear appropriate to deepen knowledge acquired in the BA studies, if the necessary basics exist, but the course contents need thorough updating. Given the loose admission criteria (see 2.5 for details), the learning outcomes can hardly be achieved by some of the students, therefore they might remain unrealistic in these cases. As the number of students admitted from fields unrelated to Ecology is very small, the above note refers only to these exceptional cases.

2.2. Curriculum design

The curriculum design formally fulfils legal requirements, however, is quite rigid. By regulation, subjects that are stated by university and optional subjects (that are for deeper specialization) must include no more than 30 credits. In the present Programme these subjects are set as 0 credits, and the allowed 30 are spent on subjects of “qualitatively higher level than the corresponding knowledge of the first stage” (SER, page 11, Table 2). This arrangement does not allow the students to harmonize their studies with their future career plans (e.g. to select management oriented

courses). These 30 elective credits would be necessary to prepare students for doctoral studies (research) or practical activities (applied ecology) to attain the learning outcomes of the Programme.

Study subjects are spread evenly, and their number does not exceed the 5/semester; the corresponding credits are adjusted precisely.

Subjects, reading only the course titles, are consistent with the type and level of the studies supposing that all students have undergraduate knowledge in essential elements of Ecology. The panel would like to note that course titles in the SER table (pages 12-13) are inconsistent with those in the relevant appendix 1 (for example: Ecology of Restoration – Restoration ecology; Ecology of hydro systems – Hydroecology; The ecological status of the Baltic region – Baltic regions ecology, etc.). Course contents, in many cases, do not reflect the synthetic manner suggested by their titles. Ecology is the science that studies the *processes* in ecosystems (*e. g.*; interactions between different organisms, between organisms and the abiotic environment and the effect of these interactions on the distribution and abundance of species). The discipline is based on a rich body of theory. In the Programme, there is not much place for the study of processes or for teaching the theoretical basis of ecology.

Teaching methods also need modernization by decreasing the amount of lexical knowledge and increasing the share of group work and project methods.

More emphasis should be placed on teaching the different aspects of genetics and evolution, considering that the rapid changes in many environments, caused by climate change and other human influences necessitates the study of how organisms respond to such changes. Further, it is recommended to put more emphasis on the use of mathematical methods in ecology as well as providing knowledge of R-programming, which is essential for analyses of multivariate data sets. Many elements of the present Programme courses go into irrelevant details (*e.g.* in course Hydroecology item as Ichthyofauna of hydrosystems) for the majority of students while application of functional traits to assess habitat properties is missing. Crucial terms (*e.g.* disturbance, island biogeography, species-area relationships, dispersal limitation, functional groups) in modern ecology are also missing from course descriptions.

There are unrealistic requirements in some courses, *e.g.* in the course Hydroecology the possible most detailed handbook in limnology (Wetzel 2001: Limnology: Lake and River Ecosystems, Academic Press, San Diego, California) with its 1006 pages is listed as compulsory reading.

It is a positive feature of the Vilnius University regulations that it allows for setting individual study processes on request (“Upon the completion of the first semester, as provided by

the *Regulations for Studies of Vilnius University*, all students have an opportunity to study according to their individual study plans. For that purpose, their applications, including sound motivation, shall be submitted to the Dean's office and approved by the Dean." – SER pages 29-30), though, according to the interviews, it is not used by the students of the Ecology MSc.

In view of the above, the content and methods of the subjects are only partly appropriate for the achievement of the intended learning outcomes and the scope of the Programme is only partly sufficient to ensure learning outcomes. The content of the Programme weakly reflects the latest achievements in science.

2.3. Teaching staff

The Programme is provided by 11 lecturers (2 professors, 5 assoc. professors, 4 doctoral lecturers) fulfilling the General Requirements and to the Regulation of Study Programmes of Vilnius University. Members of the teaching staff have the necessary qualification that would enable to ensure learning outcomes and 11 qualified ecologists are sufficient to run an MSc programme in Ecology. Staff turnover took place in the last 5 years; however, age distribution is upside-down: four teachers in the age cohort 55-64 and only one in 25-34, which means that the Study Programme Committee will have to deal with recruitment in the near future.

The teaching and administrative load of the teaching staff is far too high driving the achievement of the intended learning outcomes into jeopardy since if the teachers do not have sufficient time for research they might have only very limited time to introduce students to modern ecological research. Upon a question by the Panel, the SER team estimated the annual time available for research as only 190 hours that is certainly hardly sufficient for professional development of the teaching staff. According to interviews with the teaching staff, dealing with administrative issues of projects (writing applications, management, reporting... etc.) is not part of their workload calculation, though without such kind of activity the necessary intellectual and material background of modern ecological research cannot be established and maintained.

The publication activity of the teaching staff is low keeping in mind that the present Programme is a second cycle, master study. During the last 5 years they (all-together) published only 19 papers in journals registered in the Web of Science database, but only 9 of them can be considered as belonging to science of Ecology (and of this 9 only two are first authored). Another observation that can be deduced from this publication list is that research collaboration (except beaver and small mammal research) of teachers involved in this Programme is quite weak: they largely publish with colleagues from other institutions in Lithuania. This, in itself, is an indication of good collaboration within Lithuania but, on the other hand, shows that the teaching staff of the

Programme did not develop a characteristic research profile that would be unique in the country or even internationally. Co-authorship of the publications indicates that the level of international collaboration is very low.

In summary, the publications of the teaching staff fall only for a small part in the field of the Programme. Publication activity is rather low in terms of quality measures. Involvement of students in research is very limited; none of the students present at the interviews took part in research projects of the teachers, though scarce examples are provided in the SER. These observations provide another reason why learning outcomes can only partially be reached by the present Programme and organization.

2.4. Facilities and learning resources

The premises are more than adequate in size and quality. Apart of the new laboratories equipped with modern technical infrastructure, the Faculty hosts classical collections, among them the largest herbarium of Lithuania. In view of recent development of molecular genetics, such collections are especially suitable for evolutionary ecology research. However, the leader of the Herbarium could not provide any paper reporting on use of the herbarium materials for such research. Consequently, though the material resources are excellent, their use is not as intensive as ought to be.

The teaching and learning equipment are adequate in size and quality. The Panel has no information on availability of consumables; students complained that they themselves had to cover the costs of the research for their theses. Library facilities are excellent except that the Web of Science (WoS) database (the internationally most widely used for calculation of journals' excellency) was not accessible from a computer resident in the library; however, a later trial (December, 2016) approved the accessibility of the WoS.

The evaluation Panel considered the observed drawbacks (Herbarium, consumables) consequential upon the quite recent moves and evaluated the facilities as exceptionally good.

As could be seen in photo images provided to the Panel prior to the visit, the arrangement, premises and facilities at the Puvociai village for field practices are sufficient.

2.5. Study process and students' performance assessment

One of the most serious Achilles' heels of the Programme is formulation of admission criteria. According to the publicly accessible (website) admission criteria, all students with bachelor degrees from biomedical, physical and technological fields can apply for the Programme (*"Priimami visų biomedicinos, fizinių bei technologijos mokslų sričių visų kryptių bakalaurai"*, <http://www.vu.lt/kviecia/component/k2/item/289-ekologija#priemimo-sqlygos-ir-reikalavimai>).

Applying students are ranked by a well defined cumulative performance index at bachelor final exam, thesis and scientific project or research work assessment in accordance with the Diploma Supplement. It is not a prerequisite to possess some basic undergraduate knowledge in Ecology or even in Biology. Consequently, students with undergraduate diplomas such as Dental technology, Beauty therapy, Preparation of Food Products for Marketing and Logistics, Solid State Physics and Technology, Mathematical and Theoretical Physics, Technomatematics, Multimedia Computing, Acoustics and Vibration, Shipbuilding, Automobile Transport Engineering, Rock Mechanics, Machinery Maintenance, Astrophysics... (taken from the List of Branches of the Study Fields, approved by order of the Minister of Education and Sciences of the Republic of Lithuania No. V-222, 19.02.2010) etc. may successfully apply to Ecology MSc. It is unrealistic to suppose that these students, however excellent they are, possess the necessary basic knowledge in Biology/Ecology/Environmental sciences, and there are no compulsory bridging courses. This practice makes impossible to fulfill the most important Programme aim: deepening ecological knowledge gained during the undergraduate studies. Students reported on serious problems of some students entering with undergraduate diplomas in Natural Sciences, Chemistry, Mathematics and Computer Science, Medicine and Physics. Teachers try to adapt to this situation by posing control questions during their lectures and, in case needed, they explain the necessary basic knowledge, which, on the other hand, makes the “deepening course” repetitive for students entering with solid knowledge in ecology. As a consequence, the organisation of the study process cannot ensure *in all cases* an adequate provision of the Programme and therefore the achievement of the learning outcomes.

Involvement of students in the research projects of the academic staff is moderate: none of the students present at the interviews participated or reported in such activity, though the SER mentions individual cases of students’ participation at scientific events.

Opportunities to take part in Erasmus programs are good and students actively use these possibilities. The Vilnius University offers a number of measures for social support such as special grants for academic excellence, social grants, professional psychological assistance, and participation in sport or artistic activities are also provided.

Currently, Vilnius University applies a 10-grade system for assessing students’ performance and criteria are formulated clearly. However, according to the students, rating is heavily knowledge based, the obtained skills and competences play a minor part in the final scores. Didactic methods of group-work and project-oriented teaching are practically lacking.

Based on the information provided in the SER, it is hard to judge how much the professional activity of graduates meets the expectations of the Programme providers. In the period 2011-2013

altogether 31 students were admitted and calculating with a 15% drop-out rate 26 ought to complete their MSc studies. According to the SER, only 5 students got a job related to Biology, Botany, Zoology and related profession, there is information on other 10 working as primary and secondary school teachers, chemistry and other physical science technicians, travel consultants and clerks, policy and administration professionals, advertising and marketing specialists. This means that only a minority of the graduates is working at fields related closely to their qualification.

2.6. Programme management

The Programme is run by the Centre of Ecology, which was not raised to departmental level as recommended by the previous evaluation in 2010. The Study Programme Committee (SPC; largely the same as the Self Evaluation Team) was composed largely of the same participants who are responsible for implementing the necessary updates. Though the responsibilities of the SPC are clearly regulated in the relevant documents of the Vilnius University, neither the Faculty nor the SPC appeared to have influence on the strategic development of the Programme. At present, 13 MSc programmes are run by the Faculty of which 9 (Environmental Research and Management, Biophysics, Botany, Ecology, Genetics, Microbiology and Biotechnology, Molecular Biology, Neurobiology, Zoology, Biological diversity) belonging to the field of Biology or Environmental sciences and are, therefore, related to Ecology. The system is optimized to admission of as high number of students as possible instead of focussing on quality issues. As a consequence, many programmes with small number of students are run and this practice overloads the staff with teaching, leaving a minor fraction of the work for science. Apart of this condition, the SPC regularly analyses the advance of the Programme, for example new courses (Restoration ecology, Ecotoxicology and Invasion ecology) were introduced in the recent past.

Electronic questionnaires are distributed among students twice a year (at the end of each semester) and monitor opinions both concerning individual courses and general satisfaction. There are indications of use of this material though students did not think they have much effect since some problems regularly reappear. Experience of graduate students (alumni) is not used to improve the Programme as they are not invited to assess Programme performance. Involvement of social partners seems very weak. They are invited as external thesis reviewers, but (opposite to as stated in the SER) do not take part in the SPC. This is a particularly questionable feature of Programme management since both the alumni and the social partners mentioned quite similar weaknesses, which will need distinguished attention when the Programme is revised according to this evaluation report.

III. RECOMMENDATIONS

1. In agreement with the previous evaluation, the Panel recommend that the Centre for Ecology should be raised to the status of a regular department of Vilnius University. Such a change of status might be expected to impact positively on the relationships with other departments and faculties, leadership and the management of all programmes currently delivered by the Centre.
2. Both courses and course contents must be updated at a way that makes possible to reach learning aims and learning outcomes. This should include teaching ecological theories underlining the discipline, providing appropriately high level of ecological mathematics and statistics (multivariate methods, R-programming), science theory, practices in different kinds of ecological research (observational, experimental, modelling), competence- and skill oriented courses directed towards environmental legislation both in Lithuania and the EU, along with theoretical and practical knowledge on project application, reporting and management.
3. Credits allowed for elective courses should be increased in order to allow students to better fit their studies to own career plans. Course contents must include items that correspond to the present state-of-art of ecology by allocating more time for teaching general principles of a process-oriented ecology instead of details that are irrelevant for the majority of the students.
4. The fragmented character of the environment related MSc programmes by the Vilnius University allocates an unrealistically high teaching effort on the teachers therefore acts against fund-raising and research. In context of this situation, a consistent system should be introduced to measure scientific success of teachers regarding both quality of publications and their impact. Additionally, involvement of students in on-going research must be substantially increased. This note is especially relevant for young teachers being in their most creative age.
5. Learning resources of the Programme are excellent, but continuous care is needed for supplying the existing technical infrastructure by the necessary consumables and to ensure periodic maintenance/repair.
6. Admission criteria must be clearly and precisely formulated and compulsory bridging courses have to be defined. In lack of introduction of such criteria the Programme aims are either unreachable (for students having no or hardly any basic knowledge in ecology) or repetitive (for those who have). The SPC should understand this recommendation as a must.
7. As to teaching and assessment methods, group-work and project-oriented teaching methods should be introduced and used intensively, and evaluation methods should focus more on gained competences and skills instead on lexical knowledge.
8. The Programme is quite clearly regulated by different universal documents of the Vilnius

University but their application is questionable. More effort is needed to translate regulatory measures to this particular Programme. While the SPC seems to have a number of duties, the rights to really own the Programme are much less developed.

9. Experience of the alumni and the social partners must be much more intensively incorporated to the Programme updates, as well as students' opinions must be more intensively used for improvement.

IV. SUMMARY

In view of the recent global (climate change, worldwide invasions) and local (different kinds of human impact) threats, it is essential to train ecologists who are able to understand and predict abundance and distribution of biota along with the underlying processes. Therefore, relevance of an Ecology MSc cannot be questioned. The VU *Ecology* MSc is formulated according to the Lithuanian regulations and fulfils criteria in all aspects of the requested numbers. The Programme aims and learning outcomes are clearly formulated and are publicly accessible.

The curriculum formally fulfils legal requirements; however, it is quite rigid allowing almost no room for electives that may adjust studies to the career expectation of the students. The Programme is implemented in a quite traditional way corresponding to state-of-art of ecology in the past and therefore needs thorough revision concerning both the courses taught and their contents to make them conform to the expected aims and outcomes. At present the content of the Programme weakly reflects the latest achievements in science. As a positive feature, the VU regulation allows for setting individual study plans.

The Programme is run by an adequate number of teachers, who have the required teaching experience and qualification. Staff turnover was apparently attended, however, the present age distribution calls for dealing with the recruitment in the near future. The teaching and administrative load of the teaching staff is far too high, driving the achievement of the intended learning outcomes into jeopardy. Under the above pressure, the publication activity of the teaching staff is critically low, additionally activities for project writing, -management and -reporting are not acknowledged by the present workload calculation system. This condition seriously threatens success of the Vilnius University and prevents the acquisition of research grants offered by the EU. Additionally, an internationally accepted, quality oriented scientific assessment system based on journal rankings and citation records is missing and should be made in place.

As a result of the constructions in the past several years, the teaching environment is excellent both in size and quality. Arrangement and facilities for field practices are sufficient. Care is needed to supply the existing technical infrastructure with the necessary consumables and to utilize them for research. This should include the travel costs of students to the study sites for the MSc thesis work.

Mechanisms of internal and external quality assurance are sufficiently regulated at university and faculty level. Currently, Vilnius University applies a 10-grade system for assessing students' performance and criteria are formulated clearly. Opportunities to take part in Erasmus programs are good and students actively use these possibilities. Vilnius University offers a number of measures for social support.

Admission criteria should be reconsidered so that they guarantee that each admitted student has at least basic knowledge in ecology. Compulsory bridging courses may help to equilibrate knowledge and competences of students. Without such a regulation it is impossible to fulfill the most important Programme aim: deepening ecological knowledge gained during the undergraduate studies. Or, alternatively, the Programme becomes repetitive for students with good basic knowledge in ecology.

Involvement of students in research is rather weak and teaching methods must use more intensively group-work and project-oriented approach on expense of the knowledge-based evaluation.

Recommendations of the previous evaluation committee were largely neglected.

The Programme is run by the Centre of Ecology, which was not raised to departmental level as recommended by the previous evaluation. Though the responsibilities of the SPC are clearly regulated in the relevant documents of the Vilnius University, neither the Faculty nor the SPC appeared to have influence on the strategic development of the Programme. The system appears to be geared to the aim of maximizing the number of entering students instead of improving quality. The SPC regularly analyses the advance of the Programme and introduced a number of changes but some problems regularly reappear. Experience of graduate students (alumni) is not used to improve the Programme as they are not invited to assess Programme performance. Involvement of social partners seems very weak.

V. GENERAL ASSESSMENT

The study programme *Ecology* (state code – 621C18001) Vilnius University is given **positive** evaluation.

Study programme assessment in points by evaluation areas.

No.	Evaluation Area	Evaluation of an area in points*
1.	Programme aims and learning outcomes	2
2.	Curriculum design	2
3.	Teaching staff	2
4.	Facilities and learning resources	4
5.	Study process and students' performance assessment	2
6.	Programme management	2
	Total:	14

*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. Aleksandar Jovanovic

Grupės nariai:

Team members:

Prof. dr. Judit Padisák

Prof. dr. Jacques van Alphen

Ramunė Leipuvienė

Vaida Šidlauskaitė

**VILNIAUS UNIVERSITETO ANTROSIOS PAKOPOS STUDIJŲ PROGRAMOS
EKOLOGIJA (VALSTYBINIS KODAS – 621C18001) 2017-02-09 EKSPERTINIO
VERTINIMO IŠVADŲ NR. SV4-41 IŠRAŠAS**

<...>

V. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus universiteto studijų programa *Ekologija* (valstybinis kodas – 621C18001) vertinama teigiamai.

Eil. Nr.	Vertinimo sritis	Srities įvertinimas, balais*
1.	Programos tikslai ir numatomi studijų rezultatai	2
2.	Programos sandara	2
3.	Personalas	2
4.	Materialieji ištekliai	4
5.	Studijų eiga ir jos vertinimas	2
6.	Programos vadyba	2
Iš viso:		14

* 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

Šiandien, kai vis daugiau kalbama apie globalines grėsmes (klimato kaitą, rūšių biologinę invaziją) ir vietos grėsmes (kylančias dėl įvairios žmonių veiklos), svarbu parengti ekologijos specialistus, gerai išmanančius įvairių organizmų rūšių pasiskirstymą ir visumą, gebančius numatyti aplinkos pokyčius ir suvokiančius esminius aplinkoje vykstančius procesus. Todėl abejonų apie magistrantūros studijų programos *Ekologija* aktualumą nekyla. Vilniaus universitete dėstoma magistrantūros studijų programa *Ekologija* atitinka visus Lietuvos teisės aktų reikalavimus. Studijų programos rezultatai ir tikslai aiškiai suformuluoti ir viešai skelbiami.

Studijų programos sandara formaliai atitinka teisinius reikalavimus, tačiau studentams siūlomas gana ribotas pasirenkamų dalykų skaičius, nesuteikiant studentams galimybės pritaikyti studijas prie jų karjeros lūkesčių. Studijų programa dėstoma pagal tradicinę metodologiją, kuri buvo naudojama ir aktuali praeityje. Todėl studijų programą, jos dalykus ir turinį reikia išsamiai peržiūrėti, kad jie atitiktų numatytus studijų rezultatus ir tikslus. Kalbant apie studijų programos turinį, pažymėtina, kad per menkai pristatomi naujausi mokslo laimėjimai. Pagirtina, kad Vilniaus universiteto taisyklėse numatyta galimybė studentams sudaryti individualių studijų planus.

Studijų programą dėsto pakankamas skaičius dėstytojų. Jie turi reikiamą pedagoginę patirtį ir tinkamą kvalifikaciją. Vyksta dėstytojų kaita, tačiau atsižvelgiant į dėstytojų amžių, artimiausiu metu reikės priimti naujų darbuotojų. Dėstytojų pedagoginio ir administracinio darbo krūvis per didelis, dėl to yra sunku pasiekti numatytus studijų rezultatus. Dėl didelio darbo krūvio dėstytojais parengia labai mažai publikacijų. Pagal dabartinę dėstytojų krūvio skaičiavimo sistemą

neatsižvelgiama į papildomas veiklas susijusias su projektų rašymu, valdymu bei ataskaitų rengimu. Tokia padėtis kelia grėsmę sėkmingai Vilniaus universiteto veiklai ir užkertą kelią gauti ES dotacijas moksliniams tyrimams vykdyti. Reikia įdiegti kokybišką tarptautiniu mastu pripažintą sistemą, pagal kurią dėstytojų mokslinė veikla, susijusi su publikacijų skelbimu, būtų vertinama atsižvelgiant į mokslo žurnalų reitingus ir cituojamumo rodiklius.

Per pastaruosius metus išplėtojus studijų programai skirtą infrastruktūrą, studijų patalpos yra kokybiškos ir jų pakanka. Taip pat pakanka praktikos vietų ir įrangos. Reikia papildyti esamą techninę infrastruktūrą reikiamomis priemonėmis ir jas panaudoti mokslinėje tiriamojoje veikloje. Studentų kelionės išlaidos vykstant į magistro baigiamojo darbo rengimo vietas turi būti padengtos.

Vidinė ir išorinė kokybės užtikrinimo sistema gerai valdoma universiteto ir fakulteto lygmeniu. Šiuo metu universitetas taiko 10 balų studentų pasiekimų vertinimo sistemą. Vertinimo kriterijai aiškiai suformuluoti. Studentai turi galimybę dalyvauti mainų programoje „Erasmus“ ir noriai naudojami šia galimybe. Vilniaus universitetas teikia įvairią socialinę pagalbą.

Reikia peržiūrėti studentų priėmimo kriterijus, kad būtų užtikrinta, jog kiekvienas į šią studijų programą priimtas studentas būtų įgijęs pagrindines ekologijos žinias. Privalomosios išlyginamosios studijos padėtų užpildyti studentų žinių ir kompetencijos spragas. Be šio reikalavimo neįmanoma pasiekti pagrindinio studijų programos tikslo – gilinti ekologijos žinias, įgytas pirmoje studijų pakopoje. Kita vertus, studentai, kurių pagrindinės ekologijos žinios geros, yra priversti pakartotinai mokytis kai kuriuos dalykus.

Studentai per mažai dalyvauja mokslinėje tiriamojoje veikloje. Reikia pasitelkti dėstytojų metodus, kuriuos taikant studentai būtų skatinami dalyvauti grupiniame darbe ir projektų vykdyme. Reikia vertinti įgytas kompetencijas ir gebėjimus, o ne vien tik teorines žinias.

Į ankstesnės ekspertų grupės rekomendacijas beveik neatsižvelgta.

Studijų programą vykdo Ekologijos centras, kurio statusas nebuvo pakeltas iki fakulteto lygmens, kaip rekomendavo ekspertų grupė per ankstesnį vertinimą. Nors Studijų programos komiteto funkcijos aiškiai apibrėžtos atitinkamuose Vilniaus universiteto dokumentuose, akivaizdu, kad nei fakultetas, nei Studijų programos komitetas neturi įtakos strategiškai plėtojant programą. Vadybos sistema pagrįsta tuo, kad būtų pritraukta nuo daugiau studentų, o ne siekiu gerinti studijų programos kokybę. Studijų programos komitetas nuolat ieško būdų, kaip tobulinti studijų programą ir yra pateikęs nemažai pasiūlymų. Tačiau reguliariai iškyla vis tos pačios problemos. Siekiant pagerinti studijų programą, nepakankamai atsižvelgiama į absolventų (alumnių) patirtį, nes jie nedalyvauja vertinant studijų programą. Socialinių partnerių dalyvavimas taip pat menkas.

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III. REKOMENDACIJOS

1. Per ankstesnį vertinimą ekspertų grupė rekomendavo, kad Ekologijos centro statusas būtų pakeltas iki Vilniaus universiteto fakulteto lygmens. Toks statuso pakeitimas būtų palankus santykiams su kitas padaliniais ir fakultetais bei Gyvybės mokslų centre dėstomos studijų programos vadovybei.
2. Reikia peržiūrėti dalykus ir jų turinį, kad būtų pasiekti numatyti studijų rezultatai ir tikslai. Į programą reikia įtraukti ekologijos teoriją, aukštąją ekologinę matematiką ir statistiką (daugiamatės analizės metodus, R programavimo kalbą), mokslo teoriją, įvairių ekologinių tyrimų (stebimųjų, eksperimentinių, modeliavimo) praktiką, dalykus, skirtus kompetencijų ir gebėjimų ugdymui Lietuvos ir ES aplinkos teisės aktų srityje, taip pat dalykus, suteikiančius teorinių ir praktinių žinių projektų taikymo, informacijos teikimo ir valdymo srityje.
3. Reikia padidinti kreditus už pasirenkamuosius dalykus, kad studentai galėtų pasirinkti studijas labiau atitinkančias jų karjeros planus. Dalykų turinys turi apimti šiuolaikinės ekologijos aspektus, skiriant daugiau laiko pagrindiniams ekologinių procesų veiksniams nagrinėti, užuot pateikiant faktus ir duomenis, kurie daugeliui studentų nėra reikšmingi.

4. Dėl fragmentiško aplinkos studijų krypties magistrantūros studijų programų Vilniaus universitete pobūdžio iš dėstytojų reikalaujama skirti labai daug laiko pedagoginiam darbui. Todėl nepakankamai plėtojama mokslinių tyrimų veikla ir negaunama jai reikalingų lėšų. Reikia įdiegti nuoseklią sistemą, pagal kurią dėstytojų mokslinė veikla būtų vertinama atsižvelgiant į jų skelbiamų publikacijų kokybę ir cituojamumo rodiklį. Taip pat būtina studentus labiau įtraukti į vykdomus mokslinius tyrimus. Ši rekomendacija ypač svarbi jauniems dėstytojams, kurie pasiekę savo didžiausio kūrybiškumo amžių.
5. Materialieji ištekliai labai geri, tačiau reikia užtikrinti, kad techninė infrastruktūra būtų nuolat aprūpinta reikiamomis priemonėmis ir įranga, kurios turi būti nuolat prižiūrimos.
6. Studentų priėmimo kriterijai turi būti aiškiai suformuluoti. Turi būti numatytos privalomos išlyginamosios studijos. Nesant šių kriterijų, neįmanoma pasiekti studijų programos tikslų (nes studentai, pabaigę kitų kryptių pirmosios pakopos studijas, arba nėra įgiję pagrindinių ekologijos žinių, arba jų žinios yra ribotos) arba išvengti pakartotinio mokymosi (tai aktualu tiems studentams, kurie yra įgiję pagrindinių ekologijos žinių). Studijų programos komitetas turi rimtai atsižvelgti į šią rekomendaciją.
7. Dėstant studijų programą ir vertinant studentų pasiekimus, reikia pasitelkti dėstytojų metodus, kuriuos taikant studentai būtų skatinami dalyvauti grupiniame darbe ir projektų vykdyme. Reikia vertinti įgytas kompetencijas ir gebėjimus, o ne vien tik teorines žinias.
8. Studijų programa vykdoma vadovaujantis Vilniaus universiteto dokumentų reikalavimais, tačiau kyla abejonių dėl šių reikalavimų vykdymo. Reikia labiau užtikrinti, kad studijų programa vykdytų šiuos reikalavimus. Nors Studijų programos komitetui pavesta atlikti tam tikras funkcijas, jis neturi didelės įtakos studijų programos valdyme.
9. Tobulinant studijų programą būtina atsižvelgti į alumnų (absolventų) patirtį ir pasitelkti socialinius partnerius. Taip pat svarbu labiau atsižvelgti į studentų nuomonę.

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

Vertėjos rekvizitai (vardas, pavardė, parašas)