STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Vilniaus universiteto
STUDIJŲ PROGRAMOS *BIOLOGIJA*
(valstybinis kodas – 612C10001*)*
VERTINIMO IŠVADOS

EVALUATION REPORT of
BIOLOGY STUDY PROGRAMME
(*state code* – 612C10001)
at Vilnius university

1. **Prof. dr. Aleksandar Jovanovic (team leader),** *academic,*
2. **Prof dr. Judit Padisák,** *academic,*
3. **Prof. dr. Jacques van Alphen,** *academic,*
4. **Dr. Ramunė Leipuvienė,** *representative of social partners',*
5. **Vaida Šidlauskaitė,** *students' representative*.

Evaluation coordinator –

Natalja Bogdanova

Išvados parengtos anglų kalba
Report language – English

DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	***Biologija***
Valstybinis kodas	612C10001
Studijų sritis	Biomedicinos mokslai
Studijų kryptis	Biologija
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Pirmoji
Studijų forma (trukmė metais)	nuolatinė (4)
Studijų programos apimtis kreditais	240
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Biologijos bakalauras
Studijų programos įregistravimo data	1997-05-19

INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	***Biology***
State code	612C10001
Study area	Biomedical Sciences
Study field	Biology
Type of the study programme	University studies
Study cycle	First
Study mode (length in years)	Full-time (4)
Volume of the study programme in credits	240
Degree and (or) professional qualifications awarded	Bachelor in Biology
Date of registration of the study programme	19-05-1997

CONTENTS

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.	Topics of thesis works offered for Biology BSc students
2.	Hirsch index of the academic staff

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

The Bachelor study programme of Biology (the Programme) is taught in the Faculty of Natural Sciences at Vilnius University. In the provision of the Programme are involved departments of Biochemistry and Molecular Biology, Botany and Genetics, Geography and Land Management, Microbiology and Biotechnology, Neurobiology and Biophysics, Zoology, Geology and

Mineralogy, Centre of Ecology and Environmental studies, also the faculties of Chemistry, Physics, Mathematics and Informatics.

Since the beginning of 2016 the teaching of Programme has moved to the brand new facilities of Joint Life Sciences Centre of Vilnius University.

There is close collaboration between the Faculty of Natural Sciences and the Nature Research Center. Many students of the Programme perform research activities under the supervision of scientists from the Center.

The Programme went through the external assessment in 2013. The overall assessment of the programme was positive and the accreditation was given for 3 years.

The international evaluation panel visited the Life Sciences Centre on the 20 October, 2016. The panel had meetings with the administration of the Faculty and the representatives of a group responsible for the Self Evaluation Report, teachers, students, graduates and social partners. Also, the panel had the possibility to review the final theses of the graduates and visit the facilities used for practical work and studies, as well as the Scholarly Communication and Information Centre of VU.

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 *20th 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 purpose of the Biology study programme is well defined and clear – "to train well-educated and open-minded biologists having basic skills of organizational, creative, and scientific work in biology, ecology, zoology, botany and related fields", who are able to "carry out independent research, analyze and explain phenomena related to scientific problems in contemporary biology and ecology", as stated in Self-Evaluation Report (p. 7). The expected learning outcomes conform to the legal requirements of the qualification VI as specified in the Qualifications Framework of the Republic of Lithuania and are publicly accessible. Social partners, students and teaching staff have possibility to express their feedback regularly and promote the revision of learning outcomes and modification of study programme.

Biology is a rich discipline integrating several fields of sciences and the content of the Programme reflects this diversity – it does cover sufficiently the fields of botany, zoology, ecology, genetics, physiology, molecular biology, microbiology. Thus, the name, the content and learning outcomes the Programme are compatible with each other. The learning outcomes are revised as new information emerges from students, teaching staff, delegated legislation, social partners or other sources, and adjusted at least on yearly basis. The graduates of the Programme are qualified for the Bachelor degree in biology. After graduation, the majority of students continue their studies for a higher degree. Usually, they choose Master programmes at VU (*Botany, Ecology, Medical biology, Microbiology, Molecular biology, Zoology, Genetics*), as well at other Lithuanian universities or abroad. The graduates, usually after the Master studies, are welcome in the departments and divisions of the Ministry of Environment, in various agencies, directorates of the protected areas, private enterprises.

Considering complexity of biology science, the Programme is distinct from the other Bachelor study programmes provided at the same Faculty of Natural Sciences, which tend to a greater specialization (*Biophysics, Ecology, Genetics, Microbiology and Biotechnology, Molecular Biology*). In support of the wide profile of the Programme, the evaluation panel argue that early specialization should be avoided for a well based education. Following the Bologna process recommendations, the specialization of studies should begin at the Master's level only. However, the administration of the Faculty defended their strategy of having a multitude of closely related programmes by explaining that high competition between Lithuanian Universities forces them to have many programmes to attract more students and funding accordingly. This trend should be critically reconsidered, as universities are competing for an ever decreasing number of students and this practice leads to overspecialization in early years of the studies, and increases teaching load for

the academic staff at the expense of their research activity. Therefore, it acts against the quality of the high education in general and the competitiveness of Lithuania in EU funding programmes.

2.2. Curriculum design

The Programme meets the legal requirements for the first-cycle study programmes. The scope of the Programme covers the classical fields of biology, most heavily focusing on botany and zoology. It appears that for teaching botany and zoology the classical methods are used with emphasis on the structure and classification of various groups of organisms. Consequently, this involves a lot of learning by heart. Instead, teaching on the methods for classification (i.e. cladistics and phylogeny reconstruction) would be preferable, but this is weakly represented in the Programme.

Starting from the third year, courses on other biology-related fields are taught: genetics, biochemistry, ecology, physiology, molecular biology, microbiology, evolution. During the visit, students indicated that some topics in zoology and botany courses overlap with those in genetics and therefore provide some redundant information. The content of courses in classical biology should be compared to the more specialized courses in order to remove the overlap in the content. Judging from the course unit description it is difficult to assess how well the courses reflect the latest achievements in science and teach about new technologies; the compulsory reading material, though, seems to be up to date. The majority of chosen thesis topics belong to fields of classical zoology and botany, mostly faunistics and floristics, while the full list of topics offered to the students covers a much broader area of biology. Students explained this contradiction: they have to choose thesis topics sooner than they have courses in other than classical fields of biology. This, again, highlights the necessity to change the programme design. Inclusion of a course of general biology in the first semester is strongly advised. Ideally, the first year should teach the basics of all the subdisciplines in biology, including a course in evolutionary biology. The trips to different departments to introduce their research activity might also be helpful.

In addition to courses in different fields of biology, the learning outcomes of the Programme are also supported by general training in chemistry, biological physics, mathematics and statistics, English and Latin languages. However, according to the students, supporting courses like mathematics, chemistry, studies of languages are not sufficiently adapted to biology and their use in biology is not well explained. The content of the general courses must be more integrated and more related to the area of the Programme.

During the previous evaluation, the SKVC evaluation panel recommended updating the Programme's curriculum, including wider aspects of biology rather than just classical areas. Consequently, the Programme has been updated, as stated in SER (p. 16): „In accordance with final

recommendations of experts, Molecular biology was given the status of a compulsory course; Physics has been replaced by Biological physics; a renewed version of Genetics has been introduced, with greater concern about genomics; list of alternative courses was expanded including Environmental law, Basics of entrepreneurship, Neurobiology, Lithuanian language culture, Bioethics, Plant communication". The introduced changes improved the Programme, but still not enough to fully meet the purpose of the initial recommendation – to better prepare the students for higher degrees, and the modern labour market. Current evaluation panel also find that the curriculum concentrates too much on classical and descriptive studies, and think that the Programme would benefit by giving more attention to experimental and comparative studies and training the students more in independent thinking and other skills required to do good science, than in asking for fact learning by heart.

All of the courses during the first three years are compulsory with the exception of the course paper that should be prepared during the 6th semester; none of the courses are optional. The panel found that the structure of the Curriculum is rather rigid. This prevents the students from selecting specific fields of biology that they would like most and deepening their knowledge in this particular area. Consequently, the observed rigidity of the Programme design contradicts to the expected learning outcome "firm understanding of biological principles" (SER, p. 7).

The students confirmed that they are not happy with such inflexible arrangement of the courses. They expressed a wish to organize their studies by freely picking the courses they find useful for the future, like they found in foreign universities during the Erasmus exchange studies. The Programme structure changes could start from English language studies. As proficiency in English varies a lot among the young population, more advanced students may benefit more from reading scientific literature on a biological courses independently instead of spending many hours in English classes for intermediate knowledge. However, currently this is not possible because the study plan of the Programme has English as a compulsory course.

The students have the possibility to select optional courses only during the 4th year of study. In total, there are 4 optional courses. They are grouped into 4 groups by linking 2 to 4 courses together, and the students are required to choose one course from the group. Thus, the breadth of selection of each of the four courses is limited to 4 options at most. During the visit, students complained about the drawback of this system and expressed a wish to have more freedom to choose courses from a longer list.

The Curriculum includes laboratory work, field practices, course project, professional practice as well as preparation of Bachelor thesis that train the students on the biological research methods, analysis of obtained results and their presentation. Yet, students indicated that the content

of the courses pays more attention to learning facts than to practical skills. During the examinations, the students are tested mostly for memorized information but their critical thinking is not considered.

2.3. Teaching staff

The composition of the staff meets legal requirements. The Programme is implemented by 10 full professors, 14 associate professors, 15 lecturers with a doctoral degree and 6 doctoral students serving as assistant lecturers. The turnover of academic staff is low, and this might explain why only 13 teachers out of 47 are younger than 45 years.

According to the SER (p. 19), 82 % of the course units in the study field are taught by researchers. As research enhances education and helps to maintain teachers' knowledge of current advances in the field, having majority of staff involved in the active research is a very positive sign. Teachers are evaluated for their research activity in periods of 5 years by counting their international (cited by „Thomson Reuters „Web of Science" database) and national peer-reviewed scientific publications. The analysis of the working hours distribution reveals that teachers have only 190 hours annually (14% of total work hours) devoted to research. The rest of the time is devoted to student contact hours, out-of-class academic hours, qualification improvement, managerial and organisational activities. During the visit, teachers expressed to be under high time pressure in order to be productive in research; this was also evident in the report on their scientific output.

The majority of teachers are involved in supervising practical work of students. The supervision of students in the laboratory can be considered as research too, when the results of such a work contribute to a scientific publication. The students told the evaluation panel about some cases when student's work had been published in a scientific journal. However, the teachers should engage the students more into works that could be published. This way both the students and the teachers would get a publication, in addition, the student would gain the skills of writing a research article. However, this is only possible when the staff members have at least 30% of their working hours available for research related work.

For the classroom work, the teachers use a combination of lectures, seminars, practices and laboratory work, which varies from the course and the teachers. They have a possibility to use the benefits of Moodle system, called the Virtual Learning System of the VU (https://vma.esec.vu.lt), but the usage of it seems to be sparse and the advantage of Moodle is embraced by few teachers only.

The students confirmed that they are very happy to have inspiring personalities among their teachers. The student's opinion is collected regularly and imposes an important vote on teachers' evaluation. However, according to the students, there are still some teachers who use old-fashioned teaching methods, their lectures are boring.

Currently, training of the teachers is rather sporadic as the limited number of teachers can participate in courses organized by Vilnius University. Therefore, more support is needed to improve their teaching skills and modernize teaching methods (e.g. a course in writing scientific grant proposals).

The staff has the possibility to take part in academic mobility through Erasmus+ exchange program. The panel noticed that the mobility is somewhat minimal – according to SER, p. 22, only 3-6 academic exchange trips a year. The Faculty could consider increasing the international contacts to foster and broaden teachers' professional experience.

2.4. Facilities and learning resources

Since the beginning of 2016 the Programme has moved to the brand new facilities of Joint Life Sciences Centre (JLSC) in Sauletekis alley. The new premises are more than adequate both in size and quality for teaching of the Programme. All rooms employed for studies are equipped with the multimedia equipment, are spacious and meet legal hygienic standards. Though, SER (p. 26) indicates that teaching laboratories still do not have enough consumables and another teaching material. However, compared to recent investments made into infrastructure, these issues are minor and should be solved easily. The lack of consumables might be due to the fact that they were still in movement at the moment of preparing of the SER.

There is ample space for individual and group work of students in the JLSC building. In addition, students can study in the Scholarly Communication and Information Centre (SCIC) of VU, which is in the building next to the JLSC. SCIC library has freely accessible hardcopies and digital catalogues of professional reading material that is constantly updated. Students can also access the electronic resources of SCIC from their dormitory rooms. Teachers have possibility to provide the course summaries and/or lecture texts by means of the Virtual Learning System of VU, and most teachers use it. Students expressed their wish that the Virtual Learning System was used even more intensively.

The Faculty of Natural Sciences works in close collaboration with the Nature Research Center. Many students of the Programme perform professional practice, as well as prepare graduation theses under the supervision of the Nature Research Center scientists. After the Faculty moved to JLSC building they became neighbors to the institutes of Biochemistry and

Biotechnology. The Programme should use more intensively the advantage of the neighborhood to develop new diversified possibilities for student professional practice and theses works.

Students expressed their wish for collaboration with foreign business companies to perform professional practice abroad.

The Programme uses several premises for the botanical and zoological field practices. They are located remotely, in Puvociai village. The field stations are adapted for both studying and accommodation of 30-40 people. The students confirmed to the panel that the summer field practices is the best activity they had during the studies.

2.5. Study process and students' performance assessment

The admission requirements for entering the Programme are well described, publicly available and are in accordance with the University rules. Every year 47-50 students are accepted. The majority of them choose the Programme as the first priority, the other students enter the Programme after failing to enter their first priorities (studies in medicine or genetics). The drop-out of students during the first two years reaches 26-36% mainly due to students' own decision and free will (83%), which include: family reasons, inability to harmonize studies and work, inability to renew studies after academic leave, choosing of another higher education institution, etc. (SER, p. 28). It appears that students who do not choose Biology as a priority drop out more frequently due to lack of motivation; some other students find studies in biology very hard.

The Faculty offers studies abroad through the exchange programme Erasmus, usually for the third and fourth year students. In the previous years, the number of participants in Erasmus was quite low: 1 or 2 students a year in 2012-2015. However, this changed recently and in 2015/2016 study year 9 students (making ~15% of total 3rd and 4th year students) studied in different foreign academic institutions. The situation improved due to increased flexibility of organization of Erasmus programmes at the Faculty. From now, the administration of the Faculty count the credits earned during exchange studies without requiring that foreign courses match precisely the courses of the Programme. Students greatly appreciate this change.

The acceptance of credits earned for courses other than through Erasmus or crediting the soft (transversal) skills of the students (like proficiency in English) has not been put into place yet. The mechanism for recognition of prior learning should be established.

The academic progress of students throughout the course is assessed differently depending on the course and teacher: continuously, include mid-term or just final assessment. The final mark is usually based on the marks for the participation in seminars, individual or group project, and final examination. Students have indicated that the assessment focuses mostly on the reproduction of

learnt facts. Thus, the panel strongly recommends that this trend to be changed. Instead, students' ability to apply the acquired knowledge for problems solving as well as their critical thinking competency should be evaluated.

Some similar problems were evident during the review of the bachelor theses. Theses often have no research question and do not include a discussion part. This, however, cannot be said about all of the works; there were better examples among theses. The good practice must be spread across the entire Programme to uniform the requirements for final theses. Every thesis must contain a clear research question or hypotheses and follow the logical path from the research aims throughout methods, results, discussion and to conclusions. In the discussion part students should get a chance to demonstrate their critical thinking enabling them to compare and evaluate the results of research and, consequently, lead to conclusions.

The topics of the theses, which were presented to the panel, were surprisingly repetitive. Mostly they are descriptive studies in the fields of botany or zoology and, therefore, do not reflect the diversity of biology science. Though the students may select their topics from the list offered by other departments of the faculty, they do not do so. Reasons must be analyzed and topics diversified subsequently, providing also options to perform experimental and comparative studies.

After the studies, the majority of graduates continue their studies for a Master degree. The knowledge in basics of biology is satisfying and good enough to continue the studies in more specialized programmes of the biology field provided in different national universities, as well as abroad.

2.6. Programme management

The management, composed of the Study Programme Committee, the Faculty Council and the Senate of Vilnius University are responsible for the different aspects of the Programme's quality (SER, p. 34). The quality is monitored by collecting and analyzing the internal and external feedback from students, graduates, different units of the Faculty, academic staff, social partners, conclusions of external evaluation. The Study Programme Committee, which is composed of the academic staff, student and employers representatives, is responsible for the improvement of the Programme. The Faculty Council and Senate approve changes which concern changing of the title, the scope of the Programme, qualification degree.

At the end of each semester the students are asked to provide their feedback through the form of questionnaire on the taken courses and the teaching staff. Also, the annual feedback is collected from the social partners. The Study Programme Committee proposes modifications to the Programme on the base of those collected comments.

The graduates expressed to the panel their positive opinion about the recent changes in the Programme: following the request from students, the improved versions of Mathematics and Biological statistics were implemented; some new courses – Latin language and Geographical information systems – were introduced. Several years ago the social partners contributed to the addition of new course – the Basics of entrepreneurship. Two representatives of social partners are active members of the study committee, 9 scientists from the social partners participate in teaching. It is expected, that this practice would ensure the proper adjustment of the Programme to the ongoing changes in scientific, social and commercial environment. But for now, the partners point out that graduates of the Programme miss the practical skills in project writing and management, have little knowledge in Lithuanian and European legislation of environmental issues. Employers also expressed their wish to have the aquatic science specialization in the Programme. These requests are not yet met by the Programme's management.

As already mentioned above, the Curriculum was updated once following the recommendations of the previous SKVC evaluation panel. However, more improvement is necessary to modernize the current classical content giving more attention to the experimental and comparative studies which is on the top of the contemporary biology science.

During the visit, the disproportion between teachers workload and the requirement for research needed for a successful accreditation was evident (this issue is discussed in the part 2.3. of this report). The Programme management should critically revise the workload of teachers to bring in a better balance between teaching and research. Previous SKVC evaluation panel has brought that problem out as well. They recommended decreasing teaching overload; however, the problem remains yet unsolved. In this light, the panel kindly reminds the Programme management of Article 64 of the Law on higher Education and Research that states: "Every five years teaching staff members may be released for a period not longer than one year from their pedagogical work to conduct research and to improve their scientific and pedagogical qualification" and suggest that maximum use of this possibility is made.

III. RECOMMENDATIONS

1. During the 4th year students have a possibility to select optional courses from small groups of courses. So, the grouping system does not allow the real freedom to choose courses from a longer list of different courses and has to be changed.

2. The acceptance of credits earned for courses other than through Erasmus or crediting the special skills of the students (like proficiency in English) has not been put into place yet. The mechanism for recognition of prior learning should be established.

3. Study progress assessment currently focuses on the reproduction of learnt facts. This trend has to be changed and instead students should be evaluated on how well they can apply the acquired knowledge to solving different problems, to think critically.

4. Uniformed requirements for graduation theses should be implemented: every thesis must contain a clear research question or hypothesis and a discussion part, in which the students should get a chance to demonstrate critical thinking, compare and evaluate the results, and lead to conclusions.

5. The teaching staff should be able to devote at least 30% of their time to research activities. Young staff members, who are in the most creative part of their life and must build a career, should be allowed more time for research (40%).

6. Modernization of the Curriculum is needed to give more attention to the experimental and comparative studies.

7. Thesis topics must better reflect the diversity of the science of biology instead of focusing on largely descriptive studies in the fields of botany or zoology.

8. Pedagogical training of teachers currently is quite sporadic. More opportunities and support should be provided to improve and modernize teaching skills of the staff.

9. The academic mobility of the staff through Erasmus+ exchange program should be increased in order to foster teachers' professional experience and promote the progress of the programme.

IV. SUMMARY

The study programme *Biology* provides first cycle education focusing on the classical fields of biology, mainly botany and zoology, with the emphasis on the structure and classification of various groups of organisms. From the third year courses on other biology-related courses are taught: genetics, biochemistry, ecology, physiology, molecular biology, microbiology, evolution.

The programme appears rather rigid, with curriculum mostly composed of compulsory courses with too few possibilities for elective studies.

The sequence of different biological disciplines results in theses focus on classical descriptive topics of faunistics and floristics, with a minute share of other aspects of biology. However, thesis topics should be diversified to provide also options to perform experimental and comparative studies, to reflect the diversity of biology science.

The majority of the course units of the Programme are taught by researchers, their scientific output is evaluated in periods of 5 years. However teachers are heavily loaded with teaching hours leaving only 190 hours annually (14% of total work hours) for research. Teachers should be enabled to engage more in research activities by a better balance between the teaching and research hours.

The facilities and environment for studies are excellent, though study resources are not always sufficient.

The assessment of the students is focused currently on the reproduction of learnt facts. Instead, students should be evaluated on how well they can apply the acquired knowledge to solving different problems, to think critically.

Many biology students perform professional practice, as well as prepare graduation theses under the supervision of the Nature Research Center scientists. The majority of study programme students continue their studies for the Master degree. The knowledge in basics of biology is satisfying and good enough to continue the studies in more specialized programmes of the biology field provided in different national and foreign universities. More flexibility is allowed if student is entering Erasmus exchange programme; students have good chances to enroll in this mobility programme.

V. GENERAL ASSESSMENT

The study programme ***Biology*** (state code – 612C10001) 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	3
2.	Curriculum design	2
3.	Teaching staff	3
4.	Facilities and learning resources	4
5.	Study process and students' performance assessment	2
6.	Programme management	2
	Total:	**16**

*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

Vertimas iš anglų kalbos

VILNIAUS UNIVERSITETO PIRMOSIOS PAKOPOS STUDIJŲ PROGRAMOS *BIOLOGIJA* (VALSTYBINIS KODAS – 612C10001) 2017-02-09 EKSPERTINIO VERTINIMO IŠVADŲ NR. SV4-39 IŠRAŠAS

<...>

V. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus universiteto studijų programa *Biologija* (valstybinis kodas – 612C10001) vertinama **teigiamai**.

Eil. Nr.	Vertinimo sritis	Srities įvertinimas, balais*
1.	Programos tikslai ir numatomi studijų rezultatai	3
2.	Programos sandara	2
3.	Personalas	3
4.	Materialieji ištekliai	4
5.	Studijų eiga ir jos vertinimas	2
6.	Programos vadyba	2
	Iš viso:	**16**

* 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

Pirmos pakopos studijų programa *Biologija* apima klasikines biologijos sritis – botaniką ir zoologiją, skiriant daugiausiai dėmesio įvairų organizmų grupių struktūrai ir jų klasifikacijai. Nuo trečio kurso dėstomi kiti su biologija susiję dalykai: genetika, biochemija, ekologija, fiziologija, molekulinė biologija, mikrobiologija, evoliucija.

Studijų programos sandara gana nelanksti – dauguma dalykų yra privalomi ir tik keli dalykai pasirenkami.

Nuosekliai dėstant įvairius biologijos dalykus studentai rengiami baigiamajam darbui, kuris dažniausiai apima klasikines aprašomojo pobūdžio temas, susijusias su fauna ir flora, tačiau temų, skirtų kitiems biologijos aspektams, yra labai mažai. Baigiamųjų darbų temos turėtų būti įvairesnės, kad studentai turėtų galimybę atlikti eksperimentines ir palyginamąsias studijas, atspindint biologijos mokslo įvairovę.

Daugumą studijų programos dalykų dėsto mokslininkai, kurių indėlis į mokslą vertinamas kas 5 metus. Kadangi dėstytojų pedagoginio darbo krūvis labai didelis, mokslinei tiriamajai veiklai jie skiria tik 190 valandų per metus (14 % viso darbo valandų). Dėstytojai turėtų būti labiau skatinami dalyvauti mokslinėje tiriamojoje veikloje. Tam reikia užtikrinti geresnę pusiausvyrą tarp pedagoginio ir mokslinio tiriamojo darbo.

Studijų programai skirta įranga ir aplinka yra labai gera, tačiau studijoms skirtų išteklių ne visada pakanka.

Studentai vertinami pagal tai, kaip sugeba atsiminti išmoktus faktus. Tačiau studentų pasiekimus reikėtų vertinti atsižvelgiant į tai, kaip jie geba pritaikyti įgytas žinias spręsdami problemas ir ar jie moka kritiškai mąstyti.

Dauguma biologijos studentų atlieka profesinę praktiką ir rašo baigiamąjį darbą vadovaujami Gamtos tyrimų centro mokslininkų. Baigę bakalauro studijas daugelis studentų tęsia studijas magistrantūroje. Jų biologijos pagrindų žinios yra pakankamai geros, kad jie galėtų rinktis labiau specializuotas biologijos krypties studijas kituose šalies ar užsienio universitetuose. Perkeliant mainų programoje „Erasmus“ dalyvaujančių studentų kreditus, rodoma daugiau lankstumo. Studentams sudaromos geros sąlygos dalyvauti šioje judumo programoje.

<…>

III. REKOMENDACIJOS

1. Ketvirto kurso studentams siūlomi sugrupuoti pasirenkami dalykai. Dėl šios grupavimo sistemos varžoma studentų laisvė pasirinkti daugiau įvairesnių dalykų. Todėl šią sistemą reikia keisti.
2. Nėra įskaitomi kitų dalykų, kurie nepriklauso programai „Erasmus“, kreditai. Taip pat nesuteikiami kreditai už studentų specialius gebėjimus (pavyzdžiui, anglų kalbos mokėjimą). Reikėtų nustatyti taisykles, pagal kurias būtų pripažinti ankstesnio mokymosi rezultatai.
3. Studentų pasiekimai vertinami tik pagal tai, kiek studentai geba atsiminti išmoktus faktus. Tokią sistemą būtina keisti, vertinant studentų pasiekimus pagal tai, kaip jie sugeba pritaikyti įgytas žinias spręsdami problemas ir ar jie moka kritiškai mąstyti.
4. Reikia nustatyti bendrus baigiamojo darbo reikalavimus: baigiamuosiuose darbuose turi būti keliami aiškūs tiriamo dalyko klausimai arba hipotezės. Juose taip pat turi būti diskusijai ir išvadoms skirtos dalys, kuriose studentai parodytų kritinio mąstymo gebėjimus, palygintų ir vertintų tyrimų rezultatus bei pateiktų logines išvadas.
5. Dėstytojai turėtų skirti ne mažiau kaip 30 % savo laiko mokslinei tiriamajai veiklai. Karjeros siekiantiems jauniems dėstytojams, jų karjeros kūrybiškiausiu metu, suteikti galimybę daugiau laiko skirti moksliniams tyrimams (40 %).
6. Reikia tobulinti mokymo programą – daugiau dėmesio skirti eksperimentinėms ir palyginamosioms studijoms.
7. Baigiamojo darbo temos turi apimti biologijos mokslo įvairovę, o ne vien tik būti orientuotos į botanikos ir zoologijos sričių aprašomąsias studijas.
8. Dėstytojų pedagoginiai gebėjimai ugdomi nenuosekliai. Reikia suteikti daugiau galimybių ir padėti dėstytojams tobulinti pedagoginius gebėjimus.
9. Daugiau dėstytojų turi dalyvauti mainų programoje „Erasmus+“, kad įgytų profesinės patirties ir prisidėtų prie studijų programos gerinimo.

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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)