STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Vilniaus universiteto

GENETIKOS PROGRAMOS (621C40001) VERTINIMO IŠVADOS

EVALUATION REPORT OF *GENETICS* (621C40001) STUDY PROGRAMME

at Vilnius University

Grupės vadovas: Team Leader:	Prof. dr. habil. Halina Gabrys
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Išvados parengtos anglų kalba
Report language - English

DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	***Genetika***
Valstybinis kodas	621C40001
Studijų sritis	Biomedicinos mokslai
Studijų kryptis	Genetika
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	Genetikos magistras
Studijų programos įregistravimo data	2009-08-31 , Nr.1-73

INFORMATION ON ASSESSED STUDY PROGRAMME

Name of the study programme	***Genetics***
State code	621C40001
Study area	Biomedical Sciences
Study field	Genetics
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 Genetics
Date of registration of the study programme	Order No. ISAK-1-73 of 31 August, 2009

CONTENTS

I. INTRODUCTION

The University of Vilnius, one of the oldest and most famous establishments of higher education in Eastern and Central Europe, was founded in 1579. Functioning for a long time as the only school of higher education in Lithuania, it was a preserver of cultural and scientific traditions, and has played a significant part in the cultural life not only of Lithuania, but the neighbouring countries as well. Today the University of Vilnius has 12 faculties, 7 institutes, 4 study and research centres, the oldest Library in Lithuania, 3 university hospitals, an Astronomical Observatory, a Botanical Garden, a Centre of Information Technology Development, and St. John's Church. More details about the structure of University of Vilnius could be found at: http://www.vu.lt/en/about-us.

The study programme leading to master degree in Genetics is run within the Faculty of Natural Sciences in close collaboration with Institute of Biotechnology and Institute of Biochemistry. Some specific disciplines are taught by lecturers from the industry (e.g., Thermo Fisher Scientific, Vilnius Division). Initially this study programme was developed in close collaboration with social partners, such as representatives of industry and professional societies (e.g., Society of Biotechnologists).

The self-assessment report (hereinafter – SER) was prepared by the group created by order No. 556 (2012-10-10) of the Dean of the Faculty of Natural Sciences. The group included 3 professors from the Department of Botany and Genetics: J.R. Lazutka (Chairman of the Committee,), D. Žvingila S. Jarmalaitė and G. Slapšytė, prof. I. Pašakinskienė from VU Botanical Gardens, prof. K. Sasnauskas representing the Institute of Biotechnology, doc. R. Prapiestienė, Vice-Dean of the FNS, representative of Faculty administration), prof. A. Lubys from Thermo Fisher Scientific, representative of social partners and R. Šiukšta representing students. All members of the group are also members of the Study Programme Committee.

Last time, Genetics Master Study Programme was accredited in August 2009 (Decree No. Nr.1-73); this accreditation is valid by the end of 2013.

Evaluation team

The team leader: Prof. in Plant Physiology Halina Gabryś, Dr. habil. Biology, Jagiellonian University, Krakow, Poland; team members: Prof. in Microbiology Indrikis Muiznieks, Dr. habil. Biology, University of Latvia, Riga; Prof. in Molecular Biology Kari Keinänen, Dr. Biochemistry, University of Helsinki, Helsinki, Finland; Prof. emeritus in Biology and Genetics Radim Brdicka, M.D., Dr. habil., Charles University, Prague, Czech Republic; Prof. in Genetics Ilona Miceikienė, Dr. Biology, University of Health Sciences, Kaunas, Lithuania; student, Mr. Tadas Juknius, University of Health Sciences, Kaunas, Lithuania.

The evaluation procedure

The SER of the Genetics Master Study Programme (hereinafter GM SP) was made available to the expert team in the end of January 2012. All members of the expert team examined the SER individually, preparing preliminary reports and indicating problem questions or discussion points. The experts obtained further information during the site visit on February 26th through interviews with Programme co-ordinators, Department heads, senior and junior members of the teaching staff, students, graduates and employers. After the visit, on February 28th the expert group held a meeting, discussed the contents of the evaluation report and

agreed upon the numerical evaluation of every section of the evaluation. The draft report was composed through electronic exchange of opinions within the expert team and forwarded to VU. After receipt of the comments from the VU the Evaluation Team members prepared final versions of their reports, which were integrated into one document by the team leader.

II. PROGRAMME ANALYSIS

1. Programme aims and learning outcomes

The GM SP at Vilnius University is designed to produce graduates able to pursue successful careers in a wide range of professional areas, such as molecular, cell or developmental biology and biochemistry. According to evaluations made by Lithuanian Society of Biotechnologists, Lithuanian biotechnology industry will create about 100 new workplaces for geneticists by the end of 2015.

The Master Programme in Genetics aims to develop (SER, pages 5/6):

1) knowledge and understanding in the different fields of genetics – molecular genetics, human genetics, plant genetics;
2) research skills in laboratory and communication;
3) awareness of frontline issues and unsolved problems in genetics;
4) wide range of generic transferable skills, including but not limiting to ability for abstract and analytical thinking, ability to plan and manage time, ability to apply knowledge in practical situations, ability to work in a team, ability to design research projects.

Learning outcomes are used in the design of the programme. They are clearly specified and harmonised with study programme aims; achieved by teaching specific subject courses included in the curriculum. The programme learning outcomes fall into six broad areas: (1) knowledge and understanding, (2) ability to perform the research, (3) critical thinking and independent action, (4) communication, (5) personal effectiveness, and (6) practical skills. Progressive development of the outcome categories can be traced when comparing the SERs of the Bachelor and Master programmes in Genetics at the Vilnius University.

Only few of the course descriptions (e.g. Master thesis), which are annexed to the SER, reveal the input of taught subjects into the attainment of the programme learning outcomes belonging to the communication or personal effectiveness categories. More detailed elaboration of the transferable skill categories within the course descriptions of the Master Programme in Genetics may be recommended. The Evaluation Team would suggest considering possibilities of including additional learning outcome categories, which may lead to future activities in the role of employer, not only employee in the labour market.

The internet addresses which are provided within the SER (pages 11, 17, 19, 23), link to the course structure diagram and various study process regulations at the University, which is, by all means, an important information, but not sufficient to disseminate data about the aims and learning outcomes of the programme.

Master programmes in Genetics exist at numerous universities worldwide. The SER data provide good proof, that the GM SP at VU is designed to produce graduates able to pursue successful careers in a range of professional areas directly or indirectly linked to the modern biotechnology, medical and agricultural research, biotechnological and pharmaceutical companies and health service, for example in Genetic Counselling. More in depth analysis of the differences among the labour market needs for Bachelor and Master graduates in Genetics may be recommended. The data provided in the current versions of the SERs of both

(Bachelor and Master) programmes in Genetics do not reveal differences between the expected employment opportunities.

The employment survey of the GM SP graduates since 2008 demonstrates a good record: 84% of the graduates work according to their specialization, among them – ca. 25% in biotechnology companies, 50% continue education in Ph.D. studies, only one person is officially registered as unemployed.

The learning outcomes of the GM SP are regularly assessed, The Study Programme Committee (hereinafter SPC) include representatives of social partners and students. The SPC is responsible for the assessment and update of the BG SP learning outcomes.

The Programme structure is set up according to requirements laid down by the Minister of Education and Science. In order to apply to the Master Programme in Genetics at Vilnius University, the applicant must hold the Bachelor degree in Biomedical Sciences, Bioengineering or Bioinformatics. The input from the graduates of the Bachelor of Genetics Study Programme is expected next year.

The conferred degree grants the possibility of seeking Doctoral degree at the VU or at other universities.

The second cycle GM SP leads to the qualification Master in Genetics on the basis of acquisition of the learning outcomes that are compatible with the qualification offered. The name of the Master Programme in Genetics, its learning outcomes, content and the qualifications offered are compatible with each other.

2. Curriculum design

The structure of the programme is set up according to the requirements laid down by the Lithuanian Ministry of Education and Science. The curriculum design meets legal requirements, the content and methods are appropriate for students' achievement of the intended learning outcomes. The component subjects cover different genetic themes such as molecular genetics, plant genetics, human genetics. All of these courses are unique and have no analogues at the Bachelor Genetic programme studies. The curriculum structure ensures the appropriate sequencing of courses, with earlier courses providing the foundation for later ones, as Plant Genetics – Plant Biotechnology, ect.

The programme is of 120 ECTS credits. Compulsory subjects comprise 67 credits; research contributes 13 credits, the final thesis 30 credits, and 23 credits are available for elective courses some of which are directed towards practical training in professional activities. No more than 5 subjects per semester are planned in the curriculum. The scope of the programme is sufficient to ensure the intended learning outcomes, as the variety (11 compulsory and 8 elective) courses included into curriculum covers subjects needed to develop knowledge, research, awareness and transferable skills

Combined teaching and learning methods are used - lectures, seminars and consultations, problem based learning, investigative method (information search and filing, report arrangement and presentation) in small groups (up to 4 students), self-study. Students have opportunity to carry out experimental work at best research institutions of Lithuania such as Thermo Fisher Scientific, Institute of Biotechnology, ect. They also have opportunity to specialize in one of three important areas of genetics – molecular genetics, human genetics or plant genetics.

During the studies, students are required to do independent, individual research in genetics and to defend the Master thesis. Laboratories for preparation of Master thesis are freely selected by the students from the list provided by the Study Programme Committee.

The programme reflects current research areas in genetics. The structure of the programme is changed according to trends in the development of science of genetics and declared needs of the labour market. The new course „Genetic Processes“ was introduced in 2011 for students who had graduated their Bachelor studies in other universities and have slightly lower level of basic training in genetics.

Additional higher level skills in bioinformatics and genetic data management must be developed in future, as nowadays big files of primary data (next generation sequencing, microarrays, ect.) is generated and it is quite difficult to draw conclusions from these data without special knowledge.. For that purpose, Study Programme Committee is considering introduction of a new course (Next-Generation DNA Sequencing Informatics) in 2014-2015 when first graduates of the Bachelor degree programme in Genetics will enter Master studies (these students have a large bioinformatics course in their Bachelor studies). As the graduates already need such skills, it is recommended to start the new course as soon as possible, including bioinformatics as an elective course in the curriculum for those who did not have such course during bachelor studies.

During discussions with various target groups the evaluation team obtained contradictory information concerning balance between practical and theoretical courses. According to teachers the balance is good while students point to the necessity of more practical classes. It is impossible to evaluate that aspect from course descriptions because only bulk contact hours are given in SER, not separated into lectures and practical classes. Also, it is not clear how individual work is assessed. Plant genetics is seemed from curriculum and according to students’ opinion overrepresented whereas courses in Virology, Epigenetics and Bioinformatics would be desirable.

Good research and practical skills of graduates are the main strength of the programme. The students have opportunity to practice in the worldwide known Thermo Fisher Company, Biotechnology Institute, etc. Graduates are confident with most modern methods and techniques of genetic research so they have good perspectives for employment.

3. Staff

The legal requirements concerning staff are fulfilled. In total, 12 persons are affiliated with the Genetics MA programme: 7 professors, 2 associate professors and 3 lecturers/assistants (all holding PhD degree). 10 members of the teaching staff are permanent employees of Vilnius University, two members (one professor and one lecturer) are invited lecturers from industry (Thermo Fisher Scientific). As all teachers involved in the programme have at least the doctoral degree, the General Requirement for the Master's Study Programmes (No. V-826, June 3, 2010) set at the 80% level is fulfilled with a surplus.

The qualifications of the teaching staff are fully adequate to ensure learning outcomes of the Genetics Master’s programme. All members have more than 15 years professional experience (from 15 to 52) and, apart from the youngest lecturer, long pedagogical experience (from 7 to 48 years).

The number of teaching staff appears to be adequate although no direct numbers of students participating in the programme are given in the SER. From the number of master thesis in the last 2 years (30) the teacher to student ratio of about 1:3 can be inferred (when teachers employed at VU are taken into account). This ratio ensures a very good supervision of student efforts even if the majority of teachers participate in other programmes.

The teaching staff turnover at the Genetics MA VU is sufficient to assure regular review and renewing the programme. In the last 3 years 1 teacher has been replaced due to retirement and the next one will be replaced in September 2013, 2 courses have been cancelled and 2 new courses have been added, i.e. 2 new teachers introduced. According to SER the teaching staff of the programme is well balanced in terms of age. Analysis of the employment structure shows however that the average age is 52 (even without taking into account the oldest teacher because of his approaching retirement) and two youngest staff members are close to 40. Thus enrolment of younger staff is necessary to account for the development of the field. This necessity has been pointed out in the SER. PhD students do not participate in lecturing but work with master students in laboratories thereby balancing the age structure.

Active teachers are asked to enhance their professional qualifications in accordance with the Regulations of Qualification Enhancement of the Academic Personnel at Vilnius University (approved by the Vilnius University Senate Commission on 3 July 2008). The activities performed to fulfil this requirement include long- and short-term visits to universities and research centres of different countries as well as participation in national and international conferences, workshops and seminars. Competence and performance of the teachers are verified through evaluation carried out every five years in accordance with the procedure laid down by the University, in compliance with the Law on Higher Education and Research (30 April 2009 No XI-242). A person who fails the performance evaluation shall be dismissed from the position. A higher position of a teaching staff member can be obtained by way of an open competition for a five-year term of tenure.

All teachers engaged in Master study programme are researchers in the area of the courses they teach. This is confirmed by numerous publications, with a fair number of papers published in high rank international journals important in the field. Several professors and lecturers are active participants of national and international scientific programmes, such as Framework programme 7, COST and EURECA. This provides good opportunity to involve students in national and international research activities as reflected by 15 papers published with student co-authors and 13 presentations with student participants at scientific conferences since 2009.

4. Facilities and learning resources

There are 28 auditoriums at the Faculty of Natural Sciences, where study programme is implemented. Two auditoriums are for 100 students, two – for 65 students, three for 50 students, five for 40 students. The capacity of the remaining auditoriums is lower. Most auditoriums are equipped with multimedia. There are 13 teaching laboratories at the FNS. Lecture halls are quite old and sometimes do not meet needs of the teaching staff and students. The situation will be improved in new research and teaching facilities – Life Sciences Centre (planned for 2015 year).

During practices students are trained at well equipped scientific laboratories that meet highest international standards. During the last 5 years more than ~ 2,9 million EUR were invested into new research and teaching equipment of the FNS. About ~7,3 million EUR were invested into infrastructure of Institute of Biotechnology and Institute of Biochemistry, where most of the students are preparing their theses.

The library of FNS has a reading hall for 40 students. Library working hours are from I-V 9.00-18.00; the library is closed on Saturdays and Sundays. University has access to important data base for e books (~700 000). From any computer connected to the university computer network it is possible to access all e-resources available at the Vilnius University Library. All dormitories of University of Vilnius are connected to University computer network, so students living in dormitories have possibility to access these resources directly from their room computers. New printed resources (textbooks, etc.) are added each year to library stock. There are enough hard copy books in the field of genetics; moreover, teaching materials on CDs are prepared by lecturers and available in the library. New facilities will be available after renovation of the library which is planned to start this year (more space, electronic subscriber system, etc.).

The facilities for lectures, laboratory work and especially practices are enough in quantity, size and equipped modernly. Some laboratories meet highest international standards. There is enough amount of proper learning resources – textbooks, CD and e-books, ect.

5. Study process and student assessment

The applicants to GM SP must hold a Bachelor degree in Biomedical Sciences, Bioengineering or Bioinformatics (before 2010, the requirements for applicants were to hold a Bachelor degree in Molecular Biology, Biology or Biochemistry)

In 2008, 17 state-funded students were selected from among 47 applicants. In 2009, 11 state-funded students were selected from among 50 applicants and 2 self-funded students were selected from among 8 applicants. In 2011, 23 state-funded and 2012, 11 state-funded students were selected from among 61 applicants. Increase in admission rates in 2010-2011 could be explained by additional funding from EU Structural funds. Dropout rates among students of the programme are relatively small and usually do not exceed 1-2 students per two years of studies.

The study programme ensures attainment of theoretical and practical skills in genetics. Students declare that they acquire sufficient skills for laboratory work. The learning outcomes are clear for students.

Students are invited to research seminars organized by faculty members or staff of research laboratories. They are also encouraged to apply for scientific internships. Some students are involved as junior staff in realization of research projects funded by the national authorities. Two students were awarded research support grants during 2011-2012. Students of the programme declare keen interest in scientific work; some of them prepare their Master thesis in Thermo Fisher Scientific company and have a job at the same time.

Students in Genetics are encouraged to apply for Erasmus mobility placements. For these activities, two Departments of Central Administration are responsible: Career Centre, and Office of International Relations. During the last five years (2008-2012), 11 students from 64 have used the opportunity to go abroad, to University of Aarhus – 4 students, University of Helsinki – 3 students, University of Kuopio – 2 students, Oslo University – 1 student and

Copenhagen University – 1 student). This number consists about 17 % of all participants and the result is good enough but in order to reach a target set for Bologna Process countries it should be increased up to 20 %. In 2020, at least 20 % of those graduating in the European Higher Education Area should have had a study or training period abroad.

As declared by students, the reason of the limited interest in the mobility programmes is an inadequate offer of study areas and/or laboratories which do not correspond to their interests. Furthermore, some study subjects do not match foreign university programmes. Another reason is the possibility to do effective research in the friendly atmosphere of home university.

All students are provided with academic or social support according to the Law on Higher Education and Research (30 April 2009 No XI-242). Students have possibility to live in dormitories, to obtain scholarships or grants, as well as other social support. On the other hand, they complained about the lack of lunch facilities and early closure of the library.

The graduate attributes listed in Section 2 are met through a teaching and learning framework that is appropriate to the level and content of the course. Main teaching and learning activities include lectures, seminars, practical training, laboratory training, discussion groups/project groups, presentations, and project work. Laboratory reports, essays, tests and/or written examinations are provided with oral or written feedback.

According to a follow-up analysis included in the SER, the unemployment rate among graduates of the programme is very low (<2%), and most graduates (84%) are either continuing their studies or working according to their specialty. 12 responders are living abroad, and the rest – in Lithuania. 11 graduates work in Lithuanian companies or institutions and 19 graduates work in international or foreign companies/institutions.

6. Programme management

The study programme committee (SPC) is the major organ responsible for the management, monitoring and quality control of the programme. SPC is appointed by the Faculty Council and approved by the Senate. According to the self-evaluation report, SPC includes four professors from the Department of Botany and Genetics, one professor from Instutute of Biotechnology, one professor from Botanical Gardens of Vilnius University, one representative of social partners (Thermo Fisher Scientific), and one student member. In addition, the Vice-Dean of the Faculty represents the Faculty administration in the SPC and takes care of the daily management of the programme. SPC has a broad basis and conforms well to the requirement that it "must include representatives of social partners and the students". The general responsibilities and the roles of the teachers, department, SPC, and the Faculty Council in the planning of the content and in choosing the assessment methods used in the courses are described: teachers subject their proposals first to departmental and then to SPC approval. Changes to be introduced to the programme need a final approval by the Faculty Council. SPC can also, by its own initiative, suggest changes to the contents and teachers. Overall, the responsibilities for decisions and monitoring the implementation of the programme are allocated in a clear manner.

The SPC is mainly responsible for the quality control of the programme, and for this purpose, it collects and analyzes feedback from student surveys and evaluations. Also, in preparation for the ongoing external evaluation, the material has been collected, analyzed and processed

in a "Self-evaluation Report" by the self-evaluation group which is essentially identical to the SPC.

Previously, the programme has been subjected to an external evaluation (by a national reviewer team) in 2005, which resulted in full accreditation. The 2005 evaluation recommended to strengthen and modernize teaching and research laboratories used by the programme, and to improve practical training of the students. The curriculum now includes a fair amount of laboratory practice and substantial investments have been made to update the research and teaching infrastructure. Moreover, moving to entirely new facilities expected in 2015 will improve the situation further. Feedback is also collected internally based on on-line student surveys of the courses and - in a more informal way - on direct feedback and suggestions from teachers, departments and students. One problem mentioned in the self-evaluation report is the low participation rate in the student surveys. Discussions with teaching staff and with students suggested that direct feedback from students is more common.

The quality control measures and evaluations managed and analyzed by the SPC involve the teachers and the students, and appear to be generally sufficient. The involvement of employers, alumni in the internal evaluations is less well defined. However, discussions with the administration, teaching staff, the students, and with representatives of the key industrial partner, Thermo Fisher Scientific, left a very positive impression of the management of the programme. Overall, external and internal evaluations are used efficiently as a tool for the continuous improvement of the programme.

III. RECOMMENDATIONS

1. The Evaluation Team would suggest considering possibilities of including additional learning outcome categories, which may lead to the future activities in the role of employer, not only employee in the labour market.
2. More in depth analysis of the differences among the labour market needs for Bachelor and Master graduates in Genetics may be recommended. The data provided in the current versions of the SERs of both (Bachelor and Master) programmes in Genetics do not reveal differences between the expected employment opportunities.
3. To obtain a better balance between different courses and to optimize their content, it is recommended to reduce courses in Plant Genetics, add courses in, Virology, Epigenetics and Bioinformatics.
4. Achievement assessment of self study hours should be made clearer.
5. Prolonging of library opening hours is recommended to improve the conditions of self study for students.
6. Adherence to laboratory safety measures should be controlled more carefully during students' laboratory/practical work.
7. The collection of feedback from students and alumni should be improved for the continuous improvement of the programme.

IV. SUMMARY

The Master's Study Programme in Genetics is designed to produce graduates able to pursue successful careers in a wide range of professional areas, such as molecular, cell or developmental biology and biochemistry. According to evaluations made by Lithuanian Society of Biotechnologists, Lithuanian biotechnology industry will create about 100 new workplaces for geneticists by the end of 2015. The genetic programme has a very high reputation among bachelor students.

Learning outcomes used in the design of the programme are clearly specified and harmonised with study programme aims. They are achieved by teaching specific subject courses included in the curriculum. The Evaluation Team would suggest considering possibilities of including additional learning outcome categories, which may lead to the future activities in the role of employer, not only employee in the labour market. More in depth analysis of the differences among the labour market needs for Bachelor and Master graduates in Genetics may be recommended.

The curricular structure ensures the appropriate sequencing of courses, although several additional courses are required, especially Bioinformatics and Genetic data management. Good research and practical skills of graduates are the main strength of the programme. The students have opportunity to practice in the worldwide known Thermo Fisher Company, Biotechnology Institute, etc. Graduates are confident with most modern methods and techniques of genetic research so they have good perspectives for employment.

The teaching staff is deeply involved in research, in most cases directly related to the study programme. Professors and lecturers are active participants of national and international scientific programmes, such as Framework programme 7, COST, EURECA. This provides opportunity to involve students in national and international research activities

The facilities for lectures, laboratory work and especially practices are enough in quantity, size and equipped modernly. Some laboratories meet highest international standards. There is enough amount of proper learning resources – textbooks, CD and e-books, ect.

The programme appears to be run and administered in a professional manner. The responsibilities for decisions and monitoring the implementation of the programme are clearly allocated. Also a very warm and family-like atmosphere, as observed by teachers and students alike during the site visit, speaks for good management and general satisfaction.

Internal evaluations are used as a tool for the continuous improvement of the programme, but broader participation of all stakeholders in the process would be desirable and it would improve the efficiency of the evaluation processes.

V. GENERAL ASSESSMENT

The study programme *Genetics* (state code – 621C40001) 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	3
2.	Curriculum design	3
3.	Staff	4
4.	Material resources	4
5.	Study process and assessment (student admission, study process student support, achievement assessment)	3
6.	Programme management (programme administration, internal quality assurance)	4
	Total:	**21**

*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. Halina Gabrys

Grupės nariai:
Team members: Prof. Indrikis Muiznieks

Prof. Kari Keinänen

Prof. Radim Brdicka

Prof. Ilona Miceikienė

Tadas Juknius

Studijų kokybės vertinimo centras

Santraukos vertimas iš anglų kalbos

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V. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus universiteto studijų programa *Genetika* (valstybinis kodas – 621C40001) vertinama **teigiamai**.

Eil. Nr.	Vertinimo sritis	Srities įvertinimas, balais*
1.	Programos tikslai ir numatomi studijų rezultatai	3
2.	Programos sandara	3
3.	Personalas	4
4.	Materialieji ištekliai	4
5.	Studijų eiga ir jos vertinimas	3
6.	Programos vadyba	4
	Iš viso:	**21**

* 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

Genetikos magistro studijų programa sukurta ruošti absolventus, galinčius daryti sėkmingą karjerą plačioje profesinių sričių įvairovėje, būtent molekulinės, ląstelių ar vystymosi biologijos ir biochemijos. Lietuvos biotechnologų asociacijos duomenimis, iki 2015 metų Lietuvos biotechnologijų pramonėje genetikams bus sukurta apie 100 naujų darbo vietų. Genetikos programa studentų bakalaurų tarpe yra įgijusi labai gerą reputaciją.

Programoje numatyti studijų rezultatai aiškiai išskirti bei atitinka studijų programos tikslus. Rezultatai pasiekiami, mokant specialių dalykų, įtrauktų į programos turinį. Ekspertų grupė siūlytų apsvarstyti galimybes papildyti programą papildomomis mokymosi rezultatų kategorijomis, kurios paskatintų būsimą veiklą, susijusią su darbdavio vaidmeniu, o ne tik su darbuotojo vaidmeniu darbo rinkoje. Rekomenduotume atlikti gilesnę analizę, siekiant išsiaiškinti genetikos bakalauro ir genetikos magistro absolventų poreikį darbo rinkoje.

Programos sandara užtikrina reikiamą dėstomų dalykų seką, tačiau reikalingi kai kurie papildomi dalykai, tokie kaip bioinformatika bei genetinių duomenų vadyba. Stiprioji studijų programos vieta yra geri absolventų tyrimų ir praktiniai įgūdžiai. Studentai turi galimybę atlikti praktiką visame pasaulyje žinomoje „Thermo Fisher“ kompanijoje, Biotechnologijų institute, ir t.t. Absolventai gali didžiuotis pačiais moderniausiais genetinių tyrimų metodais ir technologijomis, tad jie tikrai turi geras įsidarbinimo perspektyvas.

Dėstytojai aktyviai užsiima tyrimais, dažniausiai tiesiogiai susijusiais su studijų programa. Profesoriai ir lektoriai aktyviai dalyvauja nacionalinėse ir tarptautinėse mokslinėse programose, tokiose, kaip Struktūrinė programa 7, COST, EURECA. Tai suteikia puikias

galimybes įtraukti studentus į su nacionaliniais ir tarptautinio lygmens moksliniais tyrimais susijusią veiklą.

Paskaitų auditorijos, laboratorinių užsiėmimų patalpos ir ypač praktinių užsiėmimų auditorijos yra pakankamo dydžio, jų pakanka ir yra šiuolaikiškai įrengtos. Kai kurios laboratorijos atitinka aukščiausius tarptautinius standartus. Visiškai pakanka tinkamų metodinių išteklių: vadovėlių, kompaktinių diskų ir elektroninių knygų bei kt. priemonių.

Programa vykdoma ir administruojama labai profesionaliai. Aiškiai išdėstyta atsakomybė už sprendimus bei programos įgyvendinimo stebėjimą. Labai šilta ir šeimyniška atmosfera, vyraujanti tarp studentų ir dėstytojų, kaip buvo pastebėta lankymosi metu, įrodo, jog puikiai dirbama ir jaučiamas bendras pasitenkinimas.

Programos nuolatiniam tobulinimui naudojamas vidinis vertinimas, tačiau pageidautina, jog visi dalyviai ir socialiniai partneriai dar aktyviau įsitrauktų į programos įgyvendinimą, tokiu būdu dar patobulindami vertinimo procesų efektyvumą.

III. REKOMENDACIJOS

1. Vertinimo komisija siūlytų apsvarstyti galimybes papildyti programą papildomomis mokymosi rezultatų kategorijomis, kurios paskatintų būsimą veiklą, susijusią su darbdavio vaidmeniu, o ne tik su darbuotojo vaidmeniu darbo rinkoje.
2. Rekomenduotume atlikti gilesnę analizę, siekiant išsiaiškinti genetikos bakalauro ir genetikos magistro absolventų poreikį darbo rinkoje. Savianalizės suvestinėse pateikti abiejų genetikos studijų programų (bakalauro ir magistro) duomenys neatskleidžia skirtumų tarp įsidarbinimo galimybių lūkesčių.
3. Siekiant geresnio balanso tarp skirtingų mokymo kursų ir optimizuojant jų turinį, rekomenduojama susiaurinti augalų genetikos mokymo kursą bei išplėsti virologijos, epigenetikos ir bioinformatikos paskaitų skaičių.
4. Aiškesnis turėtų būti ir savarankiško mokymosi valandų pasiekimų įvertinimas.
5. Studentų savarankiško mokymosi sąlygų pagerinimui rekomenduojama prailginti bibliotekos darbo valandas.
6. Studentų laboratorinių/praktinių užsiėmimų metu reikėtų kruopščiau kontroliuoti laboratorinio darbo saugos taisyklių laikymąsi.
7. Nuolatiniam programos tobulinimui reikalinga gauti grįžtamąjį ryšį iš studentų ir absolventų.

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