



CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

OVERVIEW REPORT FOR GENETICS STUDY FIELD

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I. INTRODUCTION

This report is based on the external quality evaluation of the Genetics study field in two Lithuanian Higher Education Institutions (HEIs): the Vilnius University and the Lithuanian University of Health Sciences.

The external evaluation was organised by the Centre for Quality Assessment in Higher Education (SKVC), Lithuania. Comprehensive external evaluation reports that include discovered strengths and weaknesses, as well as recommendations, were prepared for the Genetics study field for each evaluated HEI. Reports contain evaluation marks (separately for the first and second cycle). This overview focuses on the main findings of the external evaluation of the Genetics study field from a general point of view.

Based on the findings of the Genetics study field evaluation, the expert panel has decided to give a **positive** evaluation to the Vilnius University (first and second study cycle) and the Lithuanian University of Health Sciences (first cycle).

On the basis of the external evaluation report of the study field, SKVC took a decision to accredit the study field for 7 years.

II. STUDY FIELD OVERVIEW BY EVALUATION AREAS

This section of the Overview contains overall observations by the expert panel regarding the most positive aspects of the study field of Genetics in Lithuanian HEIs, as well as areas in need of improvement.

1. INTENDED AND ACHIEVED LEARNING OUTCOMES AND CURRICULUM

The Genetics study field at the Vilnius University (VU) encompasses a 1st cycle and a 2nd cycle Genetics study programmes; the Lithuanian University of Health Sciences (LSMU) in Kaunas offers the 1st cycle programme in Medical and Veterinary Genetics. The programmes conform with the missions of the universities and are designed to meet the needs of the society and labour market. The study aims are in line with the expected learning outcomes. They are structured to ensure a well-balanced development of student competencies.

Both institutions offer elective courses allowing students to personalise their studies. However, both the expert panel and the students suggest that the choice of electives has to become broader to adjust the curriculum to match the individual needs of students.

The study aims and learning outcomes reflect the areas of strength in education and research as well as the background of the visited HEIs. Both institutions carry out extensive cooperation with external partners and are involved in international and national research projects that are used to support student's education.

At both HEIs the Genetics study field has a very high reputation among students, alumni and employers.

2. LINKS BETWEEN SCIENCE (ART) AND STUDIES

The teaching staff conducting the Genetics study field at both HEIs is deeply involved in research, in most cases directly related to the study programmes. Professors and lecturers actively participate in numerous national and international scientific projects, which provides an opportunity to involve students in research activities. At the LSMU students are invited to scientific laboratories right from the programme start; at the VU the research laboratory work is mandatory for all students of the study field preparing the final thesis but interested individuals are also invited to the labs much earlier. In both institutions students are active partners in research, which is reflected in an impressive number of co-authorships in scientific publications and conference communications.

The latest achievements in genetic sciences and novel technological solutions are introduced in various educational forms, which considerably helps the graduates to become employed in a variety of institutions using the newest genetics technology. All the more reason that it would be advisable to make 'big data analysis', the basis of modern genomics, more visible in the Genetics study field curricula.

3. STUDENT ADMISSION AND SUPPORT

Admission to the 1st cycle study programmes at both HEIs is organised by the Lithuanian Association of Higher Education Institutions with a competitive score as the main criterion for admission. Admission to the VU 2nd cycle study programme takes place according to the VU internal procedure. The admission procedures and rules are straightforward and easily accessible from various sources. The average competitive score of students admitted to the 1st cycle Genetics study programmes shows a distinct rising trend at both institutions, which indicates that good students are willing to study these programmes.

Both evaluated HEIs have introduced effective processes of academic, social and personal support for students, including counselling services, and these are communicated to students effectively using multiple channels.

Strong connections are visible among the students, and between the students and the teaching staff. Students of the Genetics study field feel that they belong to a community.

Irrespective of numerous contracts signed by both universities with foreign institutions within and beyond the Erasmus program, international mobility of students is low and recently has dropped even more because of pandemic restrictions. As mobility is important for opening the students' horizons, it should be taken care of seriously. In particular, it would be good to rethink the system of lab placements so that students are not afraid of going abroad.

4. TEACHING AND LEARNING, STUDENT PERFORMANCE AND GRADUATE EMPLOYMENT

The expert panel found the monitoring of student study progress very well organised. Feedback to students is provided according to well-defined procedures. Students feel well-informed in general; they get additional information on the study programmes.

The structure of genetics studies enables the VU students to develop important competencies, analytical thinking and communication, which are crucial to success in the labour market. This is another strength of the evaluated programme. Nevertheless, from graduates' and employers' points of view, more practical knowledge of modern analysis methods, big data analysis skills, as well as project writing and management skills would be desirable, particularly for the 2nd cycle graduates. More focus on soft skills competencies, such as planning and communication, was also suggested by social partners at LSMU.

Only a few students of the Medical and Veterinary Genetics programme opt for veterinary genetics. Apart from changing the non-optimal timing for students to choose their internships, the expert panel suggests closer collaboration with veterinary genetics social partners and focus on better graduate employment in the veterinary genetics field.

Both HEIs are fully adapted, in terms of both infrastructure and study process, to educate students with disabilities and/or special educational needs.

5. TEACHING STAFF

Both programmes have a competent teaching staff, well suited for the programmes they teach. The high ratio of teaching staff per student enables an individualised approach to teaching.

A particular strength of the Genetics study field is the involvement of students in research work, practically from the beginning of their studies. This is made possible due to extra time and effort devoted by the teachers, for whom it implies much work, which is not necessarily included in teachers' evaluation. Another important merit of the teaching staff is their special care for resources. In particular, professors and lecturers of both institutions are very successful in obtaining national and international grants, which means funding is indispensable for introducing students to research work.

6. LEARNING FACILITIES AND RESOURCES

The facilities for lectures, laboratory work and practices are sufficient in quantity, size and modern equipment. The laboratories meet the highest international standards and highest safety standards. During internships, students are also trained at modern equipped scientific laboratories that meet the highest international standards. Libraries offer a variety of learning resources, including databases relevant to the field of genetics, numerous scientific journals and e-books. It is worth stressing that the library at Vilnius University operates 24 hours 7 days a week. The challenge for both HEIs will be to keep these learning facilities and resources at their current high level.

7. STUDY QUALITY MANAGEMENT AND PUBLIC INFORMATION

The programmes are run and administered in a professional manner. The responsibilities for decisions and monitoring the implementation of the programme are clearly allocated. Also, an enthusiastic and family-like atmosphere, as observed by teachers and students alike during the site visit speaks for good management and general satisfaction. The VU students and other stakeholders are involved in the continuous improvement of the programmes, however, quality guidelines and decisions of the Study Programme Committee *e.g.* on study content changes could be communicated more clearly and publicly. At LSMU, the social partners are poorly represented in this evaluation area, especially in the field of veterinary diagnostics.

III. RECOMMENDATIONS

MAIN STRATEGIC RECOMMENDATIONS FOR THE IMPROVEMENT IN GENETICS STUDY FIELD

Strategic recommendations at an institutional level (for Higher Education Institutions):

- Modern technologies, *i.e.* big data generation and analysis, omics technologies, should be better represented, particularly in the second cycle programme at Vilnius University. A high-performance server would be essential to improve the teaching of big data bioinformatics.
- Students should have more choices in elective courses.
- International mobility of students needs to be reinstated and institutional support should involve identification and removal of any formal hindrances.
- More emphasis should be laid upon the use of scientific English in the 2nd cycle theses and during the courses of the VU *Genetics* programme.
- The veterinary component of the *Medical and Veterinary Genetics* programme needs more attention including better organisation, coordination and closer collaboration with social partners representing veterinary genetics.
- There is a clear need for an additional 2nd cycle study in genetics, at the Lithuanian University of Health Sciences.

Strategic recommendations at the national level (for the Ministry of Education, Science and Sport):

- The expert team recommends facilitating and supporting the international mobility of students as an important part of the modern, high-quality study process.

Recommendations on the evaluation process for SKVC:

- An additional 5th member of the panel representing academic staff would be beneficial for the efficient and high-quality work of the experts' team.
- It would greatly facilitate experts' work if Self-Evaluation Reports focused on units/members of academic staff taking direct part in the evaluated programme rather than presenting data which refer to the whole university.