

Decision Regarding Assessment of the Life Sciences Study Programme Group at the Level of Doctoral Studies Tallinn University of Technology

21/08/2018

The Quality Assessment Council for Higher Education at the Estonian Quality Agency for Higher and Vocational Education decided to approve the report by the Assessment Committee and to conduct the next quality assessment of the Life Sciences study programme group at the level of doctoral studies at the Tallinn University of Technology in seven years

On the basis of subsection 10 (4) of the Universities Act and point 40.1 of the document ‘Quality Assessment of Study Programme Groups at the Level of Doctoral Studies’, authorised in points 3.7.3 and 3.7.1 of the Statutes of the Estonian Quality Agency for Higher and Vocational Education (hereinafter referred to as ‘EKKA’), the EKKA Quality Assessment Council for Higher Education (hereinafter referred to as ‘the Council’) affirms the following:

1. On 24.03.2017 the Tallinn University of Technology and EKKA agreed upon a time frame to conduct a quality assessment of the study programme group.
2. The Director of EKKA, by her order on 15.02.2018, approved the following membership of the quality assessment committee for the Life Sciences study programme group at the level of doctoral studies at the Estonian University of Life Sciences, Tallinn University, Tallinn University of Technology and the University of Tartu (hereinafter referred to as ‘the Committee’):

Rik Leemans (Chair)	Professor, Wageningen University, Netherlands
Laurent Counillon	Professor, University of Nice-Sophia Antipolis, France
Markus Dettenhofer	Executive Director, Central European Institute of Technology, Czech Republic
Kari Keinänen	Professor, University of Helsinki, Finland
Owen Lewis	Professor, University of Oxford, UK
Hynek Roubik	PhD student, Czech University of Life Sciences Prague, Czech Republic
Andrus Tasa	CEO, Tartu Biotechnology Park, Estonia

3. The Tallinn University of Technology submitted the following doctoral programme for evaluation under the Life Sciences study programme group:

Chemistry and Gene Technology

4. The Tallinn University of Technology submitted a self-evaluation report to the EKKA Bureau on 9.01.2018 and the assessment coordinator forwarded it to the Committee on 12.02.2018.
5. An assessment visit was made to the Tallinn University of Technology on 12.04.2018.
6. The Committee sent its draft assessment report to the EKKA Bureau on 25.06.2018, EKKA forwarded it to the Tallinn University of Technology for its comments on 29.06.2018 and the University delivered its response on 9.07.2018.
7. The Committee submitted its final assessment report to the EKKA Bureau on 20.07.2018. That assessment report is an integral part of the decision, and is available on the EKKA website.
8. The Secretary of the Council forwarded the Committee's final assessment report along with the University's self-evaluation report to the Council members on 2.08.2018.
9. The Council with 9 members present discussed these received documents in its session on 21.08.2018 and, based on the assessment report, decided to point out the following strengths, areas for improvement, and recommendations regarding the Life Sciences study programme group at the level of doctoral studies at the Tallinn University of Technology.

The Committee pointed out the following common areas for improvement and recommendations regarding the Life Sciences study programme group at the University of Tartu, the Estonian University of Life Sciences, Tallinn University of Technology and Tallinn University:

- 1) Given that European Union funding is decreasing in the coming years and universities need more stable and sustainable funding, they should be more active in lobbying to increase their research and development funds to 1% of GDP.
- 2) Universities and their doctoral programmes need to increase their capabilities to ensure the critical mass of externally funded projects and also a higher success rate in applying for H2020, InterREG and ERC grants. Proactive activities by university grant offices would help to achieve this.
- 3) Despite the recent rise in stipends for doctoral students, they are still very low, leading to discontinuations of studies, decreased motivation and increased stress. Universities should engage in more vigorous lobbying to increase their PhD students' national stipends to at least EUR 1,200. If this fails, universities should find ways to ensure this income level for their doctoral students.
- 4) Although the dropout rates are high by European standards, a thorough analysis of their causes is lacking. It is necessary to develop a better system for monitoring doctoral students' successes and failures. Each doctoral student dropping out should be interviewed focusing on motivation, financial situation and gender-specific problems, among other things.
- 5) Supervisors should guide doctoral students better through realistic and effective research and publication planning, with a view to submitting their doctoral theses in a timely manner and with appropriate length.
- 6) The minimum criterion of three published peer-viewed scientific papers (a prerequisite for the defence of a doctoral thesis) should be reviewed and more flexible rules established; for example, by placing more value on papers published in ISI Web-of-Science Q2 or Q1 journals.
- 7) The annual evaluations of doctoral students should be focused more on content. At the moment, they mainly focus is on quantitative indicators (credits, conferences), but less on the content of research. These evaluations should also include presentations of research results as

well as further research and publication plans, and discussions of these issues between the student, the supervisor and the evaluation committee. In this way, a strategy for doctoral research should be formed, the performance of which must be assessed during subsequent evaluations. The Committee recommends continuing these evaluations even after the doctoral student has completed the nominal study period (as is done, for example, at Tallinn University).

- 8) Continuation of the activities of doctoral schools is at risk due to a likely decrease in European Union funding. Universities should develop a strategy to ensure that their doctoral schools continue to function. Universities also need to encourage all their doctoral programmes and doctoral students to participate in the activities of these schools.
- 9) Doctoral students see positions at universities as their main career prospects. However, this is not possible due to the limited number of such positions. Also, a doctoral degree has not been sufficiently valued in society at large. Doctoral students should be better informed about career opportunities outside of the universities. For example, career counselling seminars could be conducted within the framework of doctoral schools, with the participation of government and non-governmental institutions and the private sector, as well as to use internship opportunities. Universities should better introduce the value of doctorates and the high-level skills that it represents to various societal sectors.
- 10) Although some universities already support the creation of spin-off companies, doctoral students need to be better informed and trained by using the existing success stories.
- 11) The number of funding sources for research projects should be increased. Although there are not many large companies in Estonia, possibilities for funding research projects by larger and smaller companies, government authorities and non-governmental organisations should be explored (including international possibilities).

CHEMISTRY AND GENE TECHNOLOGY

Strengths

- 1) The ratio of supervisors to doctoral students (3 doctoral students per supervisor on average) is very good by both Estonian and international standards.
- 2) Laboratories are active, productive and sufficient. The infrastructure is of an excellent quality.
- 3) Cooperation with companies has been well developed. The implementation of an industrial doctorate allows, inter alia, for the strengthening of relationships with companies.
- 4) Doctoral students are well integrated in research. The teaching and supervising of bachelor and master degree students provides doctoral students with valuable additional experience.
- 5) Supervisors and lecturers are active researchers. Their research is of high quality.
- 6) The University supports the development of supervision skills for its teaching staff.
- 7) The relationship between supervisors and doctoral students is stimulatingly dynamic. Doctoral students are satisfied with the content and organisation of their studies.
- 8) The internationalisation level is good. The doctoral students can complete a sufficient quantity of their studies abroad, and the necessary funding is available.
- 9) The programme has a clear structure and content, as well as an organisation of studies that facilitates successful completion of studies.

Areas for development and recommendations

- 1) The University is advised to continue strengthening the activities of its laboratories by recruiting postdoctoral fellows from abroad. This would also help to enhance the academic experiences of doctoral students and potentially their scientific impact.

- 2) Cooperation with research-based enterprises and employers needs to be developed, both at the student and supervisor levels. A greater cooperation with industry is especially important in order to promote entrepreneurship skills and strengthen the acquisition of soft skills in the programme. Funds should be budgeted for doctoral students' internships in companies. Enhanced international networking needs attention, which would strengthen the profiles of University institutes and allow for joint grant applications and for inviting more guest lecturers.
 - 3) The University has realised that sustainability of the infrastructure is a major challenge. It is advisable to set up an infrastructure planning committee at the university level.
 - 4) As the University has been aiming for greater levels of internationalisation, it is necessary to continuously implement a tenure system, to conduct regular seminars with the participation of lecturers from abroad and to expand international cooperation, which is currently insufficient considering the level of the University's research. Broader international networking would also help graduates to find new jobs and enable them to participate more successfully in EU research programmes.
 - 5) Career planning needs to be improved, as most doctoral students see their future only in academic research. The study programme should enable students to acquire more general competencies. Practical trainings at companies and government authorities should be introduced, which would give doctoral students a wider perspective on opportunities outside the university and increase the societal impact of the programme.
 - 6) There is little competition for doctoral student places, and the number of international students is small. To attract doctoral students from outside the Tallinn University of Technology and Estonia, recruitment activities should be more active. The international profile of the programme could be improved by increasing the number of courses offered in English.
 - 7) More active recruitment of younger and foreign teaching staff is needed in order to ensure the sustainability of the programme.
- 10.** Point 40 of the document 'Quality Assessment of Study Programme Groups at the Level of Doctoral Studies' establishes that the Quality Assessment Council shall approve an assessment report within three months after receipt of the report. The Council shall weigh the strengths, areas for improvement, and recommendations pointed out in the assessment report, and then shall decide whether to conduct the next quality assessment of that study programme group in seven, five or three years.
- 11.** The Council weighed the strengths, areas for improvement, and recommendations referred to in point 9 of this document and found that the study programme, the teaching conducted under these programmes, and development activities regarding teaching and learning conform to the requirements, and

DECIDED

to approve the assessment report and to conduct the next quality assessment of the Life Sciences study programme group at the level of doctoral studies at the Tallinn University of Technology in seven years.

The decision was adopted by 9 votes in favour and 0 against.

- 12.** The Council proposes that the Tallinn University of Technology submit an action plan to EKKA with regard to the areas for improvement and recommendations pointed out in the report no later than 21.08.2019.

13. A person who finds that his or her rights have been violated or his or her freedoms restricted by this decision may file a challenge with the EKKA Quality Assessment Council within 30 days after the person filing the challenge became or should have become aware of the contested finding.

The Council shall forward the challenge to its Appeals Committee who shall provide an unbiased opinion in writing regarding the validity of the challenge to the Council, within five days after receipt of the challenge. The Council shall resolve the challenge within ten days of its receipt, taking into account the reasoned opinion of the Appeals Committee. If the challenge needs to be investigated further, the deadline for its review by the Council may be extended by a maximum of thirty days.

A judicial challenge to this decision is possible within 30 days after its delivery, by filing an action with the Tallinn courthouse of the Tallinn Administrative Court pursuant to the procedure provided for in the Code of Administrative Court Procedure.

Eve Eisenschmidt
Chair of the Council

Hillar Bauman
Secretary of the Council