Decision Regarding Assessment of the Computer Science and Information Technology Study Programme Group at the Level of Doctoral Studies University of Tartu

20/06/2018

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 Computer Science and Information Technology study programme group at the level of doctoral studies at the University of Tartu in seven years

On the basis of subsection 10 (4) of the Universities Act and point 40.1 of the '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 19.04.2017, the University of Tartu 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 12.02.2018, approved the following composition of the quality assessment committee for the Computer Science and Information Technology and Mathematics and Statistics study programme group at the level of doctoral studies at the Tallinn University of Technology, Tallinn University and University of Tartu (hereinafter referred to as 'the Committee'):

Ernst W. Mayr (chair)	Professor Emeritus, Department of Informatics, TUM, Munich (Germany)
Juha Kalevi Kinnunen	Professor, Head of the Department, Mathematics, Aalto University (Finland)
Dick H.J. Epema	Professor of Computer Science, Delft University of Technology (Holland)
Sasu Tarkoma	Professor, Head of Department, Department of Computer Science, University of Helsinki (Finland)
Tõnu Pekk	*Tuleva Tulundusühistu*, member of the board, head of the

	Task Force on Funding Research and Higher Education 2016–2017 (Estonia)
Josip Maric	Doctoral student, University Of Montpellier (France)

3. The University of Tartu submitted the following doctoral programme for evaluation under the Computer Science and Information Technology study programme group:

Computer Science

4. The University of Tartu submitted a self-evaluation report to the EKKA Bureau on 12.12.2017, and the assessment coordinator forwarded it to the Committee on 18.01.2018.

5. An assessment visit was made to the University of Tartu on 13.03.2018.

6. The Committee sent its draft assessment report to the EKKA Bureau on 29.04.2018, and EKKA forwarded it to the University of Tartu for its comments on 7.05.2018 and the University delivered its response on 16.05.2018.

7. The Committee submitted its final assessment report to the EKKA Bureau on 25.05.2018. The assessment report is an integral part of the decision. The report 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 6.06.2018.

9. The Council with 9 members present discussed these received documents in its session on 20.06.2018 and, based on the assessment report, decided to point out the following strengths, areas for improvement, and recommendations regarding the Computer Science and Information Technology study programme group at the level of doctoral studies at the University of Tartu.

The Committee pointed out the following observations and recommendations for the Computer Science and Information Technology study programme groups at the Tallinn University of Technology, Tallinn University and University of Tartu, and for the Mathematics and Statistics study programme group at the University of Tartu:

1) The Committee is under the impression that a doctoral degree in IT is not much valued in Estonia, and thus, it is challenging to enrol the best talents to those study programmes. Universities should make more joint efforts to promote the benefits arising from doctoral programmes to the general public, and give concrete examples.
2) It is advisable that universities focus even more on internationalisation by increasing the two-directional mobility of students and teaching staff and benchmarking their performance targets against foreign universities.
3) Although skills-based, as well as theoretical subjects, deserve their place in the study programme, it is advisable to reduce the proportion of subject courses somewhat and redesign teaching and learning to meet individual needs better. Year-long subject courses will only be justified if otherwise promising doctoral students have no prior knowledge necessary to start research work.
4) It is advisable to bear in mind the industry's rapid development, advancing the connections with enterprises and putting more focus on applied research.
5) Advanced subject courses should be offered in such subjects as machine learning and data analysis to ensure scientific developments in IT and data statistics.

6) Keeping in mind that the Universities have adequate supervising capacity, it is advisable to increase the number of doctoral students.
7) In order to promote industrial doctorate programmes, it is also advisable to initiate the creation of a tax exemption model for employers who recruit doctoral students.

Strengths, areas for improvement and recommendations regarding the Computer Science study programme

Strengths

1) Content of the doctoral programme is usually updated once every one or two years to reflect the most relevant themes, such as data processing or quantum computing.
2) An industrial component in the doctoral programme facilitates academy-industry contacts, ensuring that the topics of doctoral theses are relevant in the industry's context and providing an opportunity to acquire additional funding.
3) Centralised admission to the doctoral programme is functioning well.
4) In the Institute of Computer Science, the students' need for a higher income has been understood, and steps have been taken to increase doctoral allowance so that the doctoral students would be able to study full time and graduate within the prescribed term.
5) The international teaching staff is actively involved in teaching at the Institute of Computer Science.
6) There is close cooperation between supervisors and doctoral students.
7) The lecturers are scientists with an international background who have shown excellent results in their research work.
8) Annual evaluation of doctoral students is conducted based on clear and transparent principles.
9) The working environment is stimulating and encourages project-based cooperation under the doctoral programme in Estonia as well as internationally.
10) A high proportion of international doctoral students (51%) corresponds to the University of Tartu strategy 2009–2015 to enrol at least 10% of doctoral students of the programme from outside Estonia.
11) International visibility of doctoral students is encouraged (conferences, summer schools, projects, international mobility, and other).

Areas for improvement and recommendations

1) It is advisable for the University to continue promoting and marketing the doctoral programme in Estonia and internationally (including through strategic partnerships) to attract top talents.
2) The subject courses offered under the doctoral programme should be analysed to ensure they are relevant and can be concluded in an optimum way.
3) Various forms of collaboration with enterprises should be tested, to analyse associated risks and benefits.
4) What could be organised more systematically, is the sharing of best practices, taking the feedback from doctoral students into account, and developing innovative approaches for implementing the study programme.
5) The overall load of teaching and supervising is high and distributed unevenly – this needs to be solved.
6) It is advisable to offer more opportunities for teaching staff to develop their supervising skills.

7) Duration of study is long in international comparison. The preferences of doctoral students concerning their study plans could be taken into account more flexibly.
8) Teaching load, which currently seems to vary too much from one student to another, should be formalised. It can be, for example, be fixed in the contract concluded with the doctoral student.
9) It is recommended to increase the share of female doctoral students.

10. Point 40 of the '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 outlined in the assessment report, and 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 presented 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 Computer Science and Information Technology study programme group at the level of doctoral studies at the University of Tartu in seven years.

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

12. The Council proposes that the University of Tartu will submit an action plan to EKKA concerning the areas for improvement and recommendations pointed out in the report no later than 20.06.2019.

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 legal 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 under the procedure provided for in the Code of Administrative Court Procedure.

Eve Eisenschmidt
Chair of the Council

Hillar Bauman
Secretary of the Council