

## **The terms and conditions and procedure for awarding a doctoral degree in the School of Science**

The procedure for doctoral studies and defence of doctoral theses at TTÜ has been laid down in the Academic Policies, Regulations on Completion of Studies and the supplementary guidelines. This document specifies the terms and conditions, the procedure for awarding a doctoral degree and the requirements for doctoral theses in the School of Science.

### **1. Requirements for doctoral theses**

1.1. A doctoral thesis is an independent research paper that presents a novel solution to a significant problem in the research area of the respective doctoral curriculum.

1.2. A doctoral thesis is:

- a paper presented as a dissertation or a series of publications forming a single collection supplied with a summary article, to which copies of the publications clarifying the main statements of the paper shall be added;
- a peer-reviewed monograph published in international press or accepted for publication, discussing a problem in its entirety.

1.3. As a rule, the prerequisite of a doctoral thesis is the publication of at least three research publications. The main positions of a doctoral thesis must have appeared as category 1.1, 1.2 or 3.1 research publications (according to the Estonian Research Information System ETIS) in an international peer-reviewed journal (research collection) with an international editorial board and international review panel. An article may be still in press at the moment of the defence if the article has been accepted for publication by the editorial board and the degree candidate has a document to certify it.

1.4 One and the same publication may be used at several defences if the part written by each author has been clearly indicated. The relevant decision shall be made by the dean.

1.5 A patent shall be deemed equivalent to a research publication if so decided by the dean.

1.6 As a rule, a doctoral thesis shall be written in English. The procedure for writing and publishing doctoral theses shall be established by the Rector. The mandatory minimum number of copies of a doctoral thesis to be published is 40.

### **2. The procedure for applying for a doctoral degree**

2.1. A degree candidate shall submit the thesis he or she wishes to defend to the head of the department where the research was carried out. The head of the department shall appoint a pre-reviewer of the thesis, who is, as a rule, an employee or cooperation partner of the department. The pre-reviewer's task is to determine whether the content, volume and level of the thesis comply with the requirements for doctoral thesis. A doctoral thesis prepared outside of TTÜ shall be submitted to the dean, who shall organise its preliminary review.

2.2. A degree candidate shall submit a defence application in the study information system ÕIS and the supervisor of the doctoral thesis shall approve it.

2.3. A degree candidate shall submit to the dean the following documents (the documents must be sent to the secretary of the school council by e-mail):

- the doctoral thesis prepared for publication i.e. the body part of the the thesis and the articles in separate attachments (the defender must inform the secretary of the school council of any restrictions on publication);
- the supervisors' written opinion on the thesis;
- the preliminary review of compliance of the doctoral thesis.

2.4. Within one month as of the submission of the doctoral thesis at the latest, the dean shall decide whether to permit the thesis for defence, return a thesis that fails to meet the requirements or to require that the thesis be supplemented or rewritten. The dean refers the doctoral thesis to the school council for discussion, if necessary. If the preconditions for eligibility to defend the doctoral thesis have been fulfilled, (the curriculum has been completed, the doctoral thesis complies with the requirements), the dean shall approve the defence application. A defence application approved by the dean confirms that the doctoral thesis is admitted for defence.

2.5. At least one month before the defence, the head of the department shall make a proposal to the dean on appointing the members of the defence committee and at least two opponents. The opponents shall be recognised specialists in their field from outside TTÜ and shall have a doctoral degree or an equivalent qualification. One of the opponents shall come from outside of the Republic of Estonia.

2.6. A defence committee shall be formed separately for each degree candidate. The committee shall include at least five members with a doctoral degree or an equivalent qualification. At least two members of the defence committee shall come from outside TTÜ, and one of these two from outside the Republic of Estonia. The defence committee may include the opponents, but not the supervisor(s) of the doctoral thesis.

2.7 Any conflict of interest must be avoided upon selection of the members of the defence committee and opponents. For the purposes of this procedure, a conflict of interest means also:

- co-authoring of a member of the defence committee or an opponent in the publications of the doctoral thesis;
- existence of joint publications of the opponent and the defender or supervisor published in the last five years.

2.8 The dean shall, by an order, appoint the opponents, form the defence committee and appoint the chairman of the committee and determine the time and place of the defence of the doctoral thesis.

2.9 The time and place of the defence of the doctoral thesis shall be announced at least one month before the defence on the TTÜ website with a link to the summary of the doctoral thesis and a reference to the full text.

2.10 A doctoral thesis shall be published in print at least two weeks before the defence. If copies of publications are published as part of the printed thesis, the author of the thesis shall obtain the required authorisation from the copyright holder (publisher) for reprinting.

2.11. The opponents' written opinions must be available for the chairman of the defence committee before the defence.

### **3. Defence of a doctoral thesis**

3.1 The following shall be submitted to the defence committee in order to conduct the defence:

- the doctoral thesis;
- the defence application approved by the dean;
- the opponents' written opinions;
- the supervisor's opinion on the doctoral thesis if the supervisor is not participating in the defence committee meeting;
- the defender may submit additional materials to the defence committee.

3.2 A doctoral thesis may be defended at any agreed time, usually at a public meeting of the defence committee. A closed meeting shall be announced by the chairman of the defence committee pursuant to the dean's decision.

3.3 A doctoral thesis can be defended only if the degree candidate, at least five members of the defence committee, including the chairman of the committee, and at least one opponent are present. The opinion of the other opponent may be presented in writing.

3.4 A degree candidate shall make sure that there is sufficient number of printed copies of the doctoral thesis (depending on the expected number of people in the audience, but not less than 20 copies) for those present.

3.5 The defence procedure includes:

- introduction of the documents submitted for defence;
- presentation by the degree candidate - up to 20 min.,
- an academic discussion between the degree candidate and the opponents - up to 2 hours;
- answering questions of the members of the defence committee;
- a general discussion (all those present may ask questions and give their opinions, introduction of opinions presented in writing);
- hearing the supervisor's opinion;
- making a decision and drawing up a defence record.

3.6. The chairman of the defence committee shall determine the language in which the defence is conducted. As a rule, it is the language in which the doctoral thesis was written.

### **4. Adopting a decision**

4.1. A defence committee has a quorum if at least five members of the defence committee participate in the meeting.

4.2. The defence committee shall decide, in a closed meeting by a secret ballot, whether to award a doctoral degree to the degree candidate or return the doctoral thesis to its author. A doctoral degree is awarded if more than fifty per cent of the members of the defence committee who participated in the meeting vote in favour. No grades are given.

4.3. The defence documentation (including records of the defence meeting) and one copy of the doctoral thesis shall be submitted to the dean's office of the school and will be the basis for issuing a doctoral diploma. The degree candidate has the right to receive a copy of the records of the defence meeting.

4.4 A doctoral thesis shall be permanently preserved in the TTÜ library.

## **5. Doctoral diplomas**

Doctoral diplomas shall be handed over by the TTÜ Rector once a year at the TTÜ anniversary ceremony. In extraordinary cases, the graduation documents may be handed over at another time based on the graduate's application and with the permission of the dean.

## **6. Disputing the results of doctoral degree defence**

The procedure for disputing the results of thesis defence has been laid down in the Regulations on Completion of Studies, according to which the results of thesis defence can be disputed by filing an appeal to the Vice-Rector for Research.