

Tallinn University of Technology
Faculty of Information Technology

Guidelines for Doctoral Thesis Opponents and Committee Members

General requirements for Doctoral Thesis

A doctoral thesis in Tallinn University of Technology (TUT) is an independent scientific work that demonstrates the candidate's ability to conduct independent research. The scientific quality and amount of work should be approximately comparable to that of Nordic universities (Finland, Sweden, Norway, Denmark).

According to the quality insurance treaty of Estonian universities, a doctoral thesis has to be based on at least 3 peer-reviewed research papers (published or accepted for publication), which are also attached as appendences to the printed copy.

A doctoral thesis can be written as an independent monograph or as a summary of published papers.

General procedure

A doctoral student, who wishes to defend his/her thesis first gets an approval from the supervisor and submits the thesis to the Dean of the IT Faculty. The thesis will be then assessed by the Quality Assurance Committee of the IT Faculty consisting of 5 members. After the Quality Assurance Committee has approved the work, the Dean appoints opponents, defense committee and sets the tentative time and place for the defense.

The Opponents are requested to send their brief assessment of the quality of work to the Dean at **least one month after receiving the manuscript**. If both opponents agree that the quality of the work is sufficient for awarding the PhD degree, the thesis will be printed and published at least one month prior to the defense.

Role of the opponents

According to the regulation of TUT, two external opponents are appointed by the Faculty. Usually both opponents are from outside of Estonia although the regulations require only one foreign opponent. The opponent of the thesis is an internationally recognized expert in the area of the topic of the thesis. The opponents should not have conflict of interest with the candidate, they are independent unbiased experts.

The role of the opponents is to scrutinize the scientific work of the candidate to demonstrate that the candidate meets the quality criteria of the PhD degree. In

particular, the Opponent should assess:

- Significance of the problem, clearness of the problem statement
- Candidate's mastery of his/her field of research including knowledge of the literature, excising research methods, technical skills for conducting the research
- Quality and significance of the results
- Candidate's ability of critical thinking, including interpreting the results and drawing conclusions upon the results, assessment of his/her own quality of work and work process, ability to interpret the work in a wider context
- Representation of the work, both in writing and orally.

As most of the publications in IT faculty are joint publications, it is also important to find out, what has been the candidate's personal contribution and level of independence in the thesis' work.

During the public defense the opponents are requested to conduct an academic dispute with the candidate. The dispute should clarify candidate's ability to explain and critically assess his/her work, knowledge of the discipline, possibly also in a wider context, and independent thinking.

The communication prior to defense between the candidate and the opponent is not regulated as long as it assures unbiased judgment of opponents. It is not forbidden to submit some questions in advance (e.g. if they need additional analysis, checking facts or are simply too demanding to be answered without preparation), although this option is seldom used.

Role of Defense Committee Members

The Defense Committee is appointed by the Dean and consists of at least 5 members. Usually the two opponents are part of the Defense Committee. Traditionally, at least one Defense Committee member is from outside of TUT.

The role of the Defense Committee is to make a decision about awarding the PhD degree to the candidate. While the main responsibility of examining the PhD candidate is on the two opponents, all Defense Committee members are free to raise concerns, ask clarifying questions, require more details or anything else that would help the with the judgment.

Defense procedure

Defense of a Doctoral thesis is a public event in Estonia. Its place and time will be announced on the university's website one month prior to the defense. The final version of the thesis will be available in the TUT library online at least one month prior to the defense.

In certain occasions the Dean can approve closed defense with only pre-registered participants (e.g. if the thesis contains classified material).

The defense procedure is lead by the Chairman of the Defense Committee. The language of the defense has always been English but the tradition is that the Chairman will first start in Estonian and asks the permission from the Defense Committee to conduct the defense in English.

In the beginning the candidate will give a presentation of his/her work, which normally takes about half an hour. The candidate is advised to keep it on a rather general level to be understandable to the whole audience.

The defense procedure will then continue with the dispute between the opponents and the candidate. It is up to the two opponents to decide in which order they want to examine the candidate or do they do it intermittently. There is no fixed length of the dispute but it is recommended that it takes at least 45 minutes to permit examining the candidate with a sufficient scrutiny. It is up to the opponents to decide if they want to have the dispute standing or sitting. Usually the candidate is standing.

After the dispute between the candidate and the opponents, the rest of the members of the Defense Committee examine the candidate. While the main responsibility of examining the candidate is on the opponents, Defense Committee members clarify matters that are left uncovered by the opponents or not covered in sufficient depth according to the their opinion. The time for examining the candidate is not limited but it is usually expected that every Defense Committee member will ask at least one question from the candidate.

After the Defense Committee has finished examining the candidate, questions and comments from the audience are taken.

The decision to award the Doctoral degree is made by the Defense Committee by secret majority voting immediately after the public defense and on a short closed meeting.

The duration of the defense is not limited but if it takes more than 4 hours, the Chairman will announce an interval. Usually the defense does not take more than 2 hours.

The dress code of the defense is business formal.

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PhD Thesis pre-assessment form for opponents

Opponent's name:

Name of the candidate:

Title of the Thesis:

Please grade the quality of the thesis 5-excellent 1-poor

Significance of the topic

Novelty of the work

Clarity of problem statement

Knowledge of existing literature

Choice of methods and technical soundness

Thoroughness of the results

Soundness of conclusions

Candidate's independent contribution

Please indicate if you find this thesis acceptable for defense: YES/NO

Please enter any free text to justify your assessment (optional for YES). In case of NO please justify your conclusion and suggest improvements

I hereby confirm that I have no conflict of interest in examining the above PhD thesis.

Time and place

Signature

Please return this form to the Faculty latest one month after receiving the thesis

Regulations of completion of studies at Tallinn University of Technology

Chapter 5 □ DOCTORAL STUDIES

§ 17. Supervisor and subject of a doctoral thesis

- (1) A doctoral thesis is generally supervised by a TUT employee with a doctoral degree or an equivalent qualification.
- (2) If necessary, a doctoral thesis can have several supervisors. At least one of the supervisors shall be a TUT employee, unless otherwise specified in the contracts entered into.
- (3) The subject of a doctoral thesis and the schedule of writing the thesis shall be specified in the doctoral student's activity plan, whose format and preparation procedure shall be established by the Rector with respective instructions.

§ 18. Doctoral theses requirements

- (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.
- (2) A doctoral thesis can be one of the following choices:
 - 1) a paper presented as a dissertation or a series of publications forming a single collection equipped with a summary article (ETIS classification 1.1, 1.2 or 3.1), to which copies of publications clarifying the main statements of the paper are added;
 - 2) a pre-reviewed monograph published in international press or accepted for publication, discussing a problem in its entirety.
- (3) The main opinions of the doctoral thesis referred to in § 18 (2) 1) shall have been published as research publications, unless restricted by law or a contract. Generally, a doctoral thesis presupposes the publication of at least three research publications.
- (4) It is not mandatory for research publications or monographs to have been published in print. In this case, there shall be an official confirmation on their acceptance for publication.
- (5) A patent shall be deemed equal to a research publication if so decided by the dean.
- (6) A doctoral thesis shall be prepared in English; on the basis of the dean's written decision, the thesis may also be written in another language. The procedure for writing the doctoral thesis shall be established by the Rector. □ □

§ 19. Eligibility for defence

- (1) A doctoral student who wishes to defend his/her doctoral thesis shall submit the following to the dean of the particular faculty:

- 1) a defence application approved by the supervisor;
- 2) the doctoral thesis, which is ready for publication.

(2) Within one month as of the submission of the doctoral thesis at the latest, the dean shall decide if:

- 1) the submitted thesis is fit for defence;
- 2) a thesis that fails to meet the requirements should be returned;
- 3) the student should be required to add to or rewrite the thesis.

(3) If the preconditions for defending the doctoral thesis have been fulfilled, the dean shall permit the thesis for defence by approving the defence application.

(4) The time and place of the defence of the doctoral thesis shall be announced at least one month before the defence on the TUT website with a reference to the accessible full text. The doctoral thesis shall be published as a TUT publication at least two weeks before the defence.

(5) The procedure for publishing doctoral theses shall be established by the Rector.

§ 20. Opposition

(1) The dean shall assign at least two opponents from outside the TUT for a doctoral thesis; one of the opponents shall come from outside the Republic of Estonia.

(2) The opponents shall have a doctoral degree or an equivalent qualification.

§ 21. Defence committee

(1) A separate defence committee shall be formed for the defence of each doctoral thesis.

(2) A committee shall include at least five members with a doctoral degree or an equivalent qualification. The defence committee may include the opponent(s), but not the supervisor(s). At least two members of the defence committee shall come from outside TUT, and one of these two from outside the Republic of Estonia.

§ 22. Doctoral thesis defence

(1) The following shall be submitted to the defence committee in order to carry out the defence:

- 1) the doctoral thesis;
- 2) the defence application approved by the dean;

3) the opponent's written opinion, if the opponent is not participating in the defence committee meeting;

4) the supervisor's opinion on the graduate and his/her doctoral thesis, if the supervisor is not participating in the defence committee meeting.

(2) The graduate may submit additional materials to the defence committee.

(3) A doctoral thesis is generally defended at a public meeting of the defence committee. A closed meeting (with registered participants) shall be announced by the chairman of the defence committee pursuant to the dean's decision.

(4) The decision for a closed defence (with registered participants) shall be made by the dean. The terms and conditions of a closed defence shall be taken into consideration upon the publication of the doctoral thesis and entry into contracts with the opponents.

(5) A doctoral thesis defence shall be carried out if the following are present:

1) the graduate;

2) five members of the defence committee, including the chairman of the committee;

3) at least one opponent.

(6) The working language of the defence committee meeting shall be determined by the chairman of the defence committee; generally, the working language is the language of the thesis.

(7) The defence process shall consist of the following main stages:

1) introduction of the documents submitted for defence;

2) the graduate's presentation;

3) an academic discussion between the graduate and the opponents;

4) answering questions from the members of the defence committee;

5) a general discussion;

6) hearing the supervisor's opinion;

7) making a decision and drawing up a defence record.

(8) Awarding a doctoral degree to the doctoral student shall be decided by the defence committee in a closed meeting with a secret ballot.

(9) The doctoral thesis shall be permanently preserved in the TUT Library.