

Established by Regulation No 3 of 20 April 2022 of the Senate of Tallinn University of Technology (in force from: 01.08.2022, excluding Chapter 3 of the Regulations "Requirements and procedure for admission to doctoral studies" and subsection 28 (3), which shall enter into force upon adoption of the Regulations)

Amended by Regulation No 2 of 21 February 2023 of the Senate of Tallinn University of Technology (entry into force 22.02.2023)

In force from: 22.02.2023

## **Regulations of Tallinn University of Technology for Doctoral Studies**

The Regulation is established based on subsection 3 (6) of the Higher Education Act and clause 5 (3) 1) of the Tallinn University of Technology Act.

### **Chapter 1 GENERAL PROVISIONS**

#### **§ 1 Objective**

- (1) The Regulations for Doctoral Studies (hereinafter referred to as "the Regulations") regulate the organization of doctoral studies (hereinafter referred to as "doctoral studies"), including the requirements and procedure for admission to doctoral studies, the conditions and procedure for attestation of doctoral candidates, the requirements for doctoral theses and the requirements and procedure for the defence of doctoral theses, at Tallinn University of Technology (hereinafter referred to as "the university").
- (2) The provisions of the Academic Policies apply to matters concerning the general basis of the organization of studies, studying and academic performance, incl. accreditation of prior and experiential learning, violation of good academic practice, informing and counselling of students and disputing decisions concerning studies.

### **Chapter 2 DOCTORAL STUDIES**

#### **§ 2 General provisions**

- (1) The nominal duration of doctoral studies is 4 years, i.e. 48 months, corresponding to the estimated workload of studies of 6240 hours.
- (2) As a rule, the nominal duration of studies of a doctoral candidate corresponds to the nominal duration of the study programme and is calculated on a monthly basis from the month of matriculation.
- (3) A doctoral candidate's nominal duration of studies may be extended:
  - 1) by up to four years if this is provided for in the doctoral candidate's action plan;
  - 2) by the length of time spent away from doctoral studies due to taking care of an up to a three-year-old child (in the case of doctoral candidates with an employment contract, by the period of parental leave);
  - 3) by the period of leave for military or alternative service.
- (4) A doctoral candidate who wishes to extend the study period for the reasons specified in clauses (3) 2) and 3) shall submit a corresponding application and the underlying documentation via the study information system (SIS). The application shall be approved by the dean's office of the School where the doctoral study programme is taught.
- (5) The university does not require reimbursement of tuition fees in doctoral studies.
- (6) The structure of doctoral study programmes is established in the Curriculum Statute.
- (7) A doctoral candidate has the right to switch to another study programme by submitting a corresponding application and, if necessary, an APEL application for the transfer of courses by the

deadline provided in the academic calendar. The dean decides on switching a study programme within the School, the Vice-Rector for Research decides on switching a study programme between the Schools.

- (8) A doctoral thesis shall be supervised by a person with a doctoral degree or an equivalent qualification who meets the requirements set out in these Regulations. A doctoral thesis may have up to three supervisors – a principal supervisor and co-supervisors. The principal supervisor must have a contractual relationship with the university unless otherwise provided for in the cooperation agreements. No more than two supervisors can be appointed from one institution, incl. the university.

### **§ 3 Forms of doctoral studies**

- (1) Doctoral studies can be completed at the university as an early stage researcher, an industrial Ph.D. student, a doctoral student (hereinafter jointly referred to as “doctoral candidates”) or as an external student.
- (2) An early stage researcher is a doctoral candidate enrolled at the university for whom an early stage researcher position has been established in the structural unit of the supervisor or, by agreement, in another structural unit of the university or in a positively evaluated research and development institution (hereinafter referred to as “R&D institution”) and whose main responsibility is to carry out research related to the topic of his/her doctoral thesis.
- (3) An industrial Ph.D. student is a doctoral candidate enrolled at the university and employed by an organization carrying out R&D cooperation with the university (hereinafter referred to also as “industrial partner”) and whose work in the organization is directly linked to the topic of the doctoral thesis. An industrial Ph.D. student shall be supervised by an employee from the university and a person appointed by the organisation, who shall be responsible for the achievement of the organisation’s research and development objectives (co-supervisor or consultant).
- (4) A doctoral student shall complete a doctoral programme in the status of a student without having a doctoral thesis related employment relationship with the university or any other institution outside the university. A doctoral study agreement is concluded with a doctoral student upon matriculation.
- (5) An external student is a person who defends a doctoral thesis without having the status of a student. To defend a doctoral thesis as an external student, the person must hold a master’s degree or equivalent qualification and must have completed a doctoral study programme. A doctoral degree shall be defended in accordance with §§ 24 - 25 of the Regulations.

### **§ 4 Rights and obligations of the parties to doctoral studies**

- (1) The main task of a doctoral candidate is to carry out high-quality research and development in a field related to the thesis topic in accordance with the doctoral candidate’s action plan and to actively participate in the academic community. The rights and obligations of doctoral candidates upon completion of doctoral studies are established in these Regulations and in other legislation of the university and state.
- (2) The roles of other parties in organising and conducting doctoral studies are described in Annex 1 to the Regulations.

## **Chapter 3**

### **REQUIREMENTS AND PROCEDURE FOR ADMISSION TO DOCTORAL STUDIES**

#### **§ 5 General provisions**

- (1) Admission to doctoral studies takes place throughout the year, except for the admission of doctoral students, which takes place twice during the academic year: before the beginning of the autumn semester and the spring semester.
- (2) The Ph.D. positions shall be filled by competition.
- (3) Industrial Ph.D. positions may be filled without announcing a public competition if all the conditions established for industrial Ph.D. positions in the Regulations are met.
- (4) The Vice-Rector for Research may establish admission targets for early stage researcher positions in each speciality of doctoral study programmes if this is necessary in view of the university budget.

- (5) The Vice-Rector for Research establishes admission limits for doctoral student positions by doctoral study programme for each academic year. The Research Administration Office monitors fulfilment of the limits on an ongoing basis and, if necessary, the limits established for study programmes shall be increased or reduced by a decision of the Vice-Rector for Research.
- (6) Extraordinary matters related to admission to doctoral studies shall be resolved by the Vice-Rector for Research.

#### **§ 6 Applying for creation of a Ph.D. position**

- (1) To create a Ph.D. position, the supervisor meeting the requirements set out in the Regulations shall submit an application together with a description of the topic of the doctoral thesis in English via the university's Help Center. In the case of several topics, a separate application must be submitted for each topic. If there is more than one supervisor on a topic, the application shall be submitted by the principal supervisor.
- (2) A supervisor can submit applications on an ongoing basis. A programme director may set deadlines for the submission of applications, taking into account the admission targets and limits and their even distribution over the year.
- (3) A prerequisite for creating an early stage researcher position is that the supervisor and the structural unit (department) of the supervisor or, by agreement, another structural unit of the university or a R&D institution will create an early stage researcher position upon his/her admission and ensure the income necessary for carrying out research in accordance with the provisions of the Regulations.
- (4) A prerequisite for creating an industrial Ph.D. position is the interest and willingness of the organization, who is a partner in an industrial doctoral project, to contribute to research and development in cooperation with the university, for which a corresponding agreement will be or has been concluded or a joint project will be prepared.
- (5) To apply for creation of an industrial Ph.D. position, the supervisor shall submit the following via the Help Center along with an application and the description of the topic of the thesis:
  - 1) a draft cooperation agreement for industrial doctoral studies or other research and development;
  - 2) confirmation of the industrial partner that the industrial Ph.D. candidate has a valid employment contract or an employment contract will be entered into with him/her and that the applicant's work at the institution is closely related to the future doctoral thesis;
  - 3) the application documents of the prospective industrial Ph.D. student specified in subsection 8 (5) of the Regulations.
- (6) To apply for creation of a doctoral student position, the supervisor shall submit the following via the Help Center along with an application for creating a doctoral student position:
  - 1) a research plan prepared in cooperation with the applicant and a schedule for carrying out the research;
  - 2) the application documents of the applicant specified in subsection 8 (5) of the Regulations.

#### **§ 7 Creating a Ph.D. position**

- (1) Applications for creating a Ph.D. position shall be approved by the head of department (in the case of an RD institution, its representative). By approving an early stage researcher position, the head of department confirms, among other things, that an early stage researcher position will be created and the required income will be guaranteed for the early stage researcher.
- (2) The programme director shall verify that all the required application documents have been submitted and that the supervisor meets the established threshold and that the topic of the doctoral thesis is topical, original and corresponds to the content and objectives of the doctoral study programme.
- (3) The threshold is based on the following:
  - 1) number of the supervisor's articles published in the last 5 years based on the Scopus database ( $\geq 10$ );
  - 2) number of citations of the articles of the last 5 years based on the Scopus database (percentage of cited articles  $\geq 50\%$ ; self-citations are not taken into account) and
  - 3) the efficiency of supervision so far:  $\geq 50\%$  of the doctoral candidates supervised and exmatriculated by that date have been admitted to defence (data based on the study information system SIS). The number of students exmatriculated due to discontinuation of studies in the first year of doctoral studies are not taken into account.

- (4) In case of a first-time supervisor, the data set out in clauses (3) 1) and 2) shall be taken into account.
- (5) Based on the terms of application for creating a position, the supervisor's compliance with the threshold and the established admission targets or limits, the programme director shall make one of the following decisions:
  - 1) to approve the doctoral thesis topic and the supervisor and open a position for admission;
  - 2) not to create a position, in which case the programme director shall give the supervisor a reasoned explanation or set out additional requirements for opening the position.
- (6) If the supervisor applying for the creation of a Ph.D. position does not fully comply with the established threshold, the programme director has the right to exercise discretionary power upon making a decision on opening a position to the extent of 25% of the number of students admitted the previous year, taking into account the circumstances relevant to the programme, the objectives set and considering legitimate interests. Exercising of discretionary power shall result in one of the decisions listed in subsection (5).

## **§ 8 Applying for doctoral studies**

- (1) Persons who hold a master's degree or an equal qualification have the right to apply for doctoral studies.
- (2) A candidate from a foreign country applying for a doctoral student position must have a valid Estonian residence permit or right of residence and a permanent legal income in accordance with the provisions of the Aliens Act.
- (3) A public competition is announced based on doctoral thesis topics for early stage researcher and industrial Ph.D. positions where there is no definite candidate. An applicant can apply for one competition at a time.
- (4) Notices of the competitions by topics, including the names of the supervisors, shall be published on the websites of the Schools and doctoral studies websites, international websites and in the online environment for applying for doctoral studies.
- (5) The documents required for application are the following:
  - 1) an application;
  - 2) a curriculum vitae, incl. data on education and research and development activities;
  - 3) a copy of an education certificate and a diploma supplement;
  - 4) a copy of the passport, identity card or residence permit card;
  - 5) a motivation letter in English;
  - 6) other documents required by the supervisor to determine eligibility of the applicant. Additional documents may be requested during the competition period.
- (6) Applicants who do not have Estonian citizenship, a long-term resident's residence permit or permanent right of residence must prove their English language skills with at least a B2 level certificate.
- (7) If an education certificate acquired in a foreign country is submitted, the university has the right to request assessment of compliance of the qualification from the Estonian ENIC/NARIC Centre.
- (8) An applicant can submit the documents required for application without an education certificate of the previous cycle and submit it together with the diploma supplement not later than by the time of matriculation.
- (9) Application documents shall be submitted electronically via the online application environment. If necessary, the applicant who has received the admission decision, shall submit his/her education certificates on paper to the Research Administration Office in accordance with the instructions received from the Research Administration Office.

## **§ 9 Activities related to admission and matriculation**

- (1) The supervisor evaluates the documents submitted for application and conducts an interview with the applicant. The supervisor makes a proposal to the programme director to admit an applicant considering the applicant's academic skills, previous performance and motivation.
- (2) If several persons with similar qualifications have applied for one position by way of a public competition, the supervisor shall form a ranking of the applicants. An applicant, who complies with the requirements set out in subsection 8 (1) of the Regulations and is first in the ranking, is admitted.

If the applicant who is placed first in the ranking declines the position offered, the applicant placed second in the ranking is admitted.

- (3) Applicants admitted by a decision of the doctoral programme director will be sent a corresponding notice together with the deadline for accepting the position via the online environment for applying for doctoral studies.
- (4) Applicants who meet the application requirements and have accepted the position on time shall be matriculated in doctoral studies by the Vice-Rector for Research. When matriculating a doctoral candidate, the Vice-Rector for Research shall appoint a supervisor and, if necessary, up to two co-supervisors for the doctoral thesis. The Vice-Rector for Research has the right to replace the supervisor(s) of the doctoral thesis on the dean's proposal.
- (5) Matriculation is the basis for concluding an employment contract with an early stage researcher, an industrial Ph.D. agreement with an industrial Ph.D. student or a doctoral study agreement with a doctoral student.

#### **§ 10 Appeal of admission decisions**

Decisions and acts related to admission may be disputed by filing an appeal to the dean of the relevant School within three days from notification of the decision or performance of the act. An applicant shall be notified of the decision within three working days as of filing of the appeal.

### **Chapter 4 FUNDING OF DOCTORAL CANDIDATES**

#### **§ 11 Funding of doctoral candidates matriculated before the 2022/2023 academic year**

- (1) Granting and payment of doctoral allowance
  - 1) A doctoral candidate matriculated before the 2022/2023 academic year has the right to receive doctoral allowance in order to encourage engagement in doctoral study and research and to cover expenses related to the acquisition of education in accordance with the terms and conditions provided for in the wording of the Study Allowances and Study Loans Act in force at the time of his/her matriculation.
  - 2) A doctoral allowance is granted to a doctoral candidate who:
    1. has been matriculated before the 2022/2023 academic year and has not exceeded the nominal duration of studies of the study programme;
    2. is a citizen of the Republic of Estonia or resides in Estonia on the basis of a long-term or temporary residence permit or has a permanent or temporary right of residence; and
    3. has passed attestation under the terms and conditions specified in the Regulations
  - 3) A doctoral candidate does not have the right to receive a doctoral allowance during the time he/she receives a study allowance from the government of a foreign country, an international or inter-governmental organisation or a representation of a cooperation programme.
  - 4) A doctoral allowance is granted to doctoral candidates, who meet the requirements specified in subsection (2) and have submitted the data required for granting the allowance, by a dean's order for twelve calendar months starting from September, or for a corresponding number of study months if the nominal duration doctoral candidate's study programme ends in the middle of the calendar year.
  - 5) A doctoral candidate matriculated in part-time doctoral study who meets the requirements set out in subsection (2) shall be granted a doctoral allowance in the amount of 50 per cent of the amount of the national doctoral allowance.
  - 6) A doctoral allowance shall be paid by the last date of each month to the bank account indicated by the doctoral candidate in the study information system of the university.
  - 7) If a doctoral candidate goes on academic leave after he/she has been granted doctoral allowance, payment of the doctoral allowance shall be terminated in the following month.
  - 8) If a doctoral allowance is granted to a student by mistake, the university has the right to terminate payment of the allowance when the mistake is discovered.
  - 9) If it becomes evident that a doctoral candidate has provided false information to the university, the university shall terminate payment of the allowance and has the right to reclaim the unduly paid doctoral allowance.

- (2) The structural unit of the principal supervisor or, by agreement, another structural unit of the university is obliged to provide additional remuneration for each doctoral candidate who is matriculated in full-time doctoral study in the academic years from 2016/2017 to 2021/2022 and who is not an industrial Ph.D. student so that the doctoral candidate's net monthly income would be at least 1,100 euros.
- (3) Additional remuneration can be paid either:
- 1) in the form of a tax-free scholarship to support teaching and research in compliance with the Basis for Awarding and the Procedure for Payment of Scholarships established at the university,
  - 2) a salary or
  - 3) a combination of a scholarship and salary.

#### **§ 12 Funding of early stage researchers**

- (1) Early stage researchers matriculated in the 2022/2023 academic year or later shall be paid the minimum salary at least in the amount of the gross monthly salary established by the Ministry of Education and Research in the funding agreement proportionally to the workload.
- (2) The salary costs shall be covered as follows:
- 1) up to 75% of the minimum salary labour costs by the early stage researcher salary support fund during the nominal duration of studies proportionally to the doctoral candidate's workload. The salary of an early stage researcher shall not be covered by the support fund after the end of the nominal duration of studies;
  - 2) at least 25% of the minimum salary labour costs by the structural unit of the principal supervisor or, by agreement, another structural unit during the nominal duration of studies and thereafter 100% of the abovementioned minimum salary.
  - 3) The proportion of the minimum salary covered by the early stage researcher salary support fund and the structural unit shall be paid on a monthly basis.
- (3) In the case of projects aimed at the development of doctoral studies requiring own contribution, the salary of the early stage researcher may be covered by the support fund to the extent of the own contribution, taking into account the provisions set out in clauses (2) 1)-3)

#### **§ 13 Funding of industrial Ph.D. students**

- (1) The salary of an industrial Ph.D. student shall be paid by the company or institution who is the partner to the industrial Ph.D. project and with whom the Ph.D. student has concluded an employment contract.
- (2) Industrial Ph.D. students matriculated before the 2022/2023 academic year shall also be granted national doctoral allowance in accordance with subsection 11 (1) of the Regulations.
- (3) An industrial Ph.D. student may be paid tax-free scholarship from the funds of the supervisor's structural unit to support teaching and research in compliance with the Basis for Awarding and the Procedure for Payment of Scholarships established at the university.

#### **§ 14 Funding of doctoral students**

A doctoral student may be paid tax-free scholarship from the funds of the supervisor's structural unit to support teaching and research in compliance with the Basis for Awarding and the Procedure for Payment of Scholarships established at the university.

### **Chapter 5**

#### **SUBMITTING AN INDIVIDUAL STUDY PLAN AND PREPARING A DOCTORAL CANDIDATE'S ACTION PLAN**

#### **§ 15 Submitting an individual study plan**

- (1) The general principles regarding an individual study plan and its submission are laid down in the Academic Policies.
- (2) A doctoral candidate shall submit an individual study plan in case he/she wishes to declare courses for the following semester.

- (3) A doctoral candidate may select all the master's or doctoral courses taught at the university for his/her individual study plan. All courses not included in the study programme can be included in the professional proficiency module.

#### **§ 16 A doctoral candidate's action plan**

- (1) A doctoral candidate, in cooperation with his or her supervisor, shall draw up the doctoral candidate's action plan (hereinafter action plan) in the study information system (SIS).
- (2) An action plan consists of the following parts:
- 1) main information on the doctoral thesis: the topic of the doctoral thesis in Estonian and in English; the field and specialty classification according to the Common European Research Classification Scheme (CERCS) and an annotation of the doctoral thesis where the doctoral candidate provides a brief description of the topic, purpose and expected results of the research;
  - 2) a research plan, which must cover the entire period of doctoral studies, and an overview of the literature;
  - 3) a report on the implementation of the action plan, which shall include the supervisor's assessment of the report and the activities planned for the next period.
- (3) A doctoral candidate shall enter the main information on his/her doctoral thesis within one month from the date of matriculation.
- (4) A doctoral candidate shall submit the research plan and overview of the literature, on the basis of which the first attestation is carried out, no later than two weeks before the date of the first attestation.
- (5) A doctoral candidate shall submit a report on implementation of the action plan no later than two weeks before the date of attestation. In a report on implementation of the action plan, the doctoral candidate shall:
- 1) describe the research carried out during the reporting period and the activities planned for the next period;
  - 2) submit a list of papers published or accepted for publication;
  - 3) indicate the health or other justifiable reasons, which are the basis of the decision of the attestation committee to extend the doctoral candidate's nominal duration of studies.
- (6) The supervisor shall enter an assessment of the report on the implementation of the action plan within one week of the submission of the report.

### **Chapter 6 ATTESTATION**

#### **§ 17 General provisions**

- (1) Attestation is the assessment of a doctoral candidate's academic progress in studies and scientific research by the attestation committee.
- (2) Attestations take place twice an academic year: before the beginning of the autumn semester and before the beginning of the spring semester as follows:
- 1) the first-year doctoral candidates are attested one semester after admission and two semesters after admission;
  - 2) the subsequent attestations take place, as a rule, once an academic year by the deadline indicated in the academic calendar. Attestation can be conducted after a shorter period based on the results of a semester on a reasoned proposal of the doctoral candidate's supervisor or the programme director or based on the decision of the attestation committee.
- (3) If doctoral studies have been suspended based on a doctoral candidate's application in the cases specified in clauses 2 (3) 2) and 3) of the Regulations, the doctoral candidate is not attested in the period.

#### **§ 18 Documents to be submitted for attestation**

- (1) At least two weeks before the date of attestation, the doctoral candidate shall submit in SIS a report on the implementation of the action plan in the appropriate form.
- (2) At least one week before the date of attestation, the principal supervisor shall provide an assessment of the report on the implementation of the doctoral candidate's action plan in SIS.

### **§ 19 Attestation committee**

(1) An attestation committee is formed by the dean based on the study programme or field of study. At least one member of the attestation committee must be from outside of the School and have experience in supervision of doctoral candidates.

(2) The dean shall determine the time of attestation by an order at least one month before the planned attestation. The chairman of the attestation committee shall establish the rules of procedure of the attestation committee.

(3) Participation of the doctoral candidate at the meeting of the attestation committee is mandatory. The chairman of the attestation committee may grant permission on the basis of the doctoral candidate's reasoned request not to attend the meeting of the attestation committee.

(4) The committee assesses completion of a doctoral study programme cumulatively as percentage.

(5) The committee assesses a doctoral candidate's academic progress based on the following principles:

1) upon attestation of the first-year doctoral candidates in the first semester, the student's motivation and capability to carry out research shall be assessed along with academic performance. It is important to assess cooperation between the doctoral candidate and the supervisor. The doctoral candidate has prepared a research plan and has an overview of the scientific literature in his/her field;

2) upon attestation of the first-year doctoral candidates, the doctoral candidate shall present his/her vision of the strategy and the methodology applied in preparing the thesis. The research question and objectives shall be formulated and the scientific novelty, the methodology and the expected results shall be pointed out;

3) by the end of the second year the volume of a doctoral candidate's research shall be sufficient for publishing at least one research paper. A doctoral candidate preparing a doctoral thesis as creative research shall submit a selection of creative work reflecting the creative research; is able to place the selected creative work in an international context by pointing out similarities and differences compared to other authors and the innovative direction in his/her research and shall analyse the selected creative work from the point of view of society and the user;

4) by the end of the third year, the doctoral candidate has completed 75% of the volume of research. A doctoral candidate preparing a doctoral thesis based on research publications must have published one research paper and submitted another research paper for publication or have another paper accepted for publication. The volume of research shall be sufficient to prepare a third publication. The attestation committee has the right, after assessing the level of published papers, to make a reasoned proposal to the Vice-Rector for Research to allow preparation of a doctoral thesis based on two research publications.

A doctoral candidate preparing a doctoral thesis as creative research has prepared a strategy and methodology for analysing his/her work, the doctoral candidate shall submit the preliminary results of the analyses, a draft structure of the analytical textual part and an overview of the creative work related to and supporting the textual part.

The attestation committee assesses whether it is realistic to graduate within the nominal duration of study and determines the expected date of defence;

5) a fourth-year doctoral candidate is attested if the terms and conditions for defending a doctoral thesis are met: all publications on which the doctoral thesis is based have been published or accepted for publication, courses have been passed, the manuscript of the doctoral thesis or, in case of a doctoral thesis prepared as creative research, the manuscript of the textual part presenting and interpreting the relevant creative works has been submitted to the supervisor. The attestation committee determines the date of the defence.

(6) The dean may establish additional principles for assessment in compliance with the provisions of subsection (5) of this section.

### **§ 20 Result of attestation**

(1) The attestation result is either positive ("passed") or negative ("not passed").

(2) A doctoral candidate who fails to pass an attestation shall be exmatriculated on the grounds of inadequate academic performance.

(3) The attestation committee may give positive assessment to a doctoral candidate, who fails to meet the terms and conditions specified in subsection 19 (5) of the Regulations, only once within a year exceeding the nominal duration of the study programme.



(4) If the doctoral candidate's action plan provides for a longer study period than the nominal duration of the study programme, the doctoral candidate passes attestation until the end of his/her study period if the doctoral candidate has completed his/her annual action plan.

(5) The attestation decision shall be documented as a decision of the attestation committee and shall be entered in SIS within two weeks after the meeting of the attestation committee.

## **Chapter 7**

### **REQUIREMENTS FOR A DOCTORAL THESIS**

#### **§ 21 Doctoral thesis**

(1) A doctoral thesis is an independent research paper that presents a novel solution to a significant problem in the research area of a doctoral study programme.

(2) A doctoral thesis shall be written either:

- 1) based on research papers;
- 2) as a monograph;
- 3) as creative research.

(3) As a rule, a doctoral thesis written based on research papers consists of three research papers and a summary binding the papers into a single whole and complying with the structure of a research paper. The doctoral candidate must be the lead author of at least one of the research papers.

(4) A research paper means a peer-reviewed research paper published in a journal indexed in the Scopus and/or Web of Science database(s).

(5) Research papers need not have been published in print, but in this case, there shall be an official confirmation on their acceptance for publication.

(6) On the proposal of the attestation committee based on a well-considered decision of the Vice-Rector for Research, a doctoral thesis prepared based on research papers may consist of two research papers if the published research papers are internationally outstanding, i.e. the papers have been published in Q1 or Q2 journals in the field and the doctoral candidate is the lead author of at least one of the papers.

(7) Based on the dean's decision, one research paper may be replaced by:

- 1) a patent granted in a country that has an examination system or under an international treaty;
- 2) a patent application if a favourable written opinion of the patent office who carried out the search with regard to patentability of the invention has been attached thereto, or
- 3) another applied solution (e.g. an engineering or software solution) that has been reviewed positively by two independent internationally recognized experts holding a Ph.D. degree who have been selected by the programme director of the doctoral studies.

(8) A doctoral thesis prepared as a monograph shall be published by an internationally recognized publishing house. A monograph may be published also in the collection of the university's dissertations based on the decision of the Vice-Rector for Research, in which case the doctoral candidate shall be the lead author of at least one of the research papers published in the field of the doctoral thesis in a journal specified in subsection (4) of this section.

(9) A doctoral thesis prepared as creative research consists of an extensive creative project or a series of related creative projects and a descriptive analysis to explain the projects. The published descriptive text of the thesis shall include the research question, objectives, scientific novelty, methodology and findings related with the creative research. A creative research shall be peer-reviewed by two independent internationally recognized experts selected by the programme director of doctoral studies. Preparing a doctoral thesis as creative research shall be agreed upon starting the Ph.D. thesis project. A doctoral thesis can be prepared as creative research in the field of Architecture and Building of the study programme of Engineering.

#### **§ 22 Writing a doctoral thesis**

(1) A doctoral thesis shall be written in English. A thesis may also be written in another language in justified cases and by the dean's decision.

(2) A doctoral thesis shall be prepared on the template, which is available on the university intranet and on the library's website together with user manuals.

(3) The front and back covers shall be added by the university's Press House (hereinafter referred to as "Press House").

(4) As a rule, the structure of a doctoral thesis is as follows;

- 1) title pages;
- 2) Contents;
- 3) List of Publications;
- 4) Author's Contribution to the Publications;
- 5) Introduction;
- 6) if necessary, Abbreviations, Terms, Symbols;
- 7) body text of the thesis;
- 8) List of Figures;
- 9) List of Tables;
- 10) References;
- 11) Acknowledgements;
- 12) Abstract in Estonian and English;
- 13) Graphical Abstract;
- 14) Appendix;
- 15) curriculum vitae in English and Estonian.

(5) The order of the doctoral thesis components can be changed in the structure if this is justified, taking into account the traditions in that particular field of science.

(6) A doctoral thesis has two title pages. The first title page together with the information on its reverse side shall be written in the language of the thesis, the second title page shall be written in another language (in case the thesis is in a foreign language, the title page shall be in Estonian).

(7) The Press House shall mark the serial number of doctoral theses defended at the university on the title page.

(8) In case a doctoral thesis

- 1) has been written based on an agreement or a joint study programme at Tallinn University of Technology and at another university or in cooperation with a R&D institution, reference to the other university or R&D institution shall be made in the author's declaration on the reverse side of the title page and the doctoral thesis shall be written as agreed in the agreement;
  - 2) has been prepared or printed by using foreign or domestic funding measures, the logo of the donor shall be printed on the reverse side of the title page.
- (9) Two ISSN numbers (International Standard Serial Number) and two ISBN numbers (International Standard Book Number – an international standard number assigned to a concrete book, whereas separate numbers are assigned to printed and electronic publications) shall be marked on the reverse side of the title page of a doctoral thesis. ISSN and ISBN numbers shall be issued by the Press House

### **§ 23 Publishing a doctoral thesis**

(1) Unless otherwise laid down in the Regulations, doctoral theses shall be published electronically in the digital collection of the library and in print by agreement of the head of the department. [entry into force 22.02.2023]

(2) An author's contract shall be concluded between the author of a doctoral thesis and the university for use of the doctoral thesis (hereinafter referred to as "author's contract"). By an author's contract the author grants the university the right to publish the doctoral thesis electronically and to print the doctoral thesis at the request of the author if this has been agreed with the head of the department. The text of an author's contract is available on the website of the digital collection of the library. [entry into force 22.02.2023]

(3) Access to a doctoral thesis may be restricted if, according to the terms and conditions of a contract concerning the doctoral thesis topic, the doctoral thesis contains a state secret, trade secret or any other classified information. The dean decides on restricting access to the doctoral thesis on the basis of a reasoned request of the author of the doctoral thesis. If a doctoral thesis contains a state secret, the person arranging personal data and state secret protection shall be involved in the decision-making process.

(4) The library shall preserve the doctoral thesis permanently. A doctoral thesis with restricted access (except doctoral theses containing a state secret classified as secret or top secret) shall be supplied with a notation "For internal use only". If a doctoral thesis with restricted access is published also in print, the thesis shall be preserved in the closed storage facility of the library intended for such purpose and is subject to the provisions of the Procedure for Classification of Information as Internal. Doctoral theses containing a state secret classified as secret or top secret shall not be preserved at the university. [entry into force 22.02.2023]

(5) Not later than one month before the defence of a doctoral thesis, the author of the doctoral thesis shall submit to the Press House via the Help Center the manuscript of the doctoral thesis and the scientific publications in separate files. If a doctoral thesis is to be printed, a written order signed by the head of the department must also be submitted. [entry into force 22.02.2023]

(6) After receipt of the documents listed in subsection (5) and editing of the manuscript of the doctoral thesis, the Press House shall send the author's contract form to the doctoral student for signing, publish the electronic version of the doctoral thesis in the digital collection of the library and enter the required metadata. In the case of a doctoral thesis with restricted access, only the abstract of the doctoral thesis is published electronically. A doctoral thesis containing a state secret classified as secret or top secret shall not be submitted to the library. If a doctoral thesis is printed, the Press House shall submit three copies to the library of Tallinn University of Technology and four copies to the National Library of Estonia on the basis provided for in the Legal Deposit Copy Act. [entry into force 22.02.2023]

(7) In order to publish information related to the defence of a doctoral thesis on the university's websites, the doctoral candidate shall submit to the Research Administration Office a popular science summary (the maximum of 3000 characters) of the doctoral thesis (in the form of research news) in plain language in Estonian, which can be replaced by a 3-minute science video. The Research Administration Office shall arrange communication of information on the defence of the doctoral thesis on the university's website with reference to the doctoral thesis or, in case of a doctoral thesis with restricted access, to its abstract. If a doctoral thesis contains a state secret, the person arranging personal data and state secret protection shall decide upon publication of the information related to the defence of the particular doctoral thesis on a case-by-case basis.

(8) If a defence of a doctoral thesis is cancelled, the structural unit organising the defence shall promptly notify the Press House and the Research Administration Office thereof and dissemination of information on the doctoral thesis will be immediately terminated.

(9) The library shall add the doctoral thesis record in the electronic catalogue ESTER and after successful defence of a doctoral thesis shall add a link to the electronic version of the doctoral thesis in the record unless otherwise laid down in the Regulations.

## **Chapter 8**

### **DEFENDING AND AWARDED A DOCTORAL DEGREE**

#### **§ 24 Eligibility of a doctoral thesis for defence**

(1) A doctoral candidate shall submit to the dean a defence application approved by the supervisor, the doctoral thesis ready for publication and other documents required by the dean.

(2) Within two months as of the submission of the doctoral thesis at the latest, the dean shall decide whether

- 1) the doctoral thesis is eligible for defence;
- 2) to return the doctoral thesis if the thesis does not meet the requirements set out in the Regulations;
- 3) the student is required to supplement or rewrite the doctoral thesis.

(3) Eligibility for defence shall be formalised not later than 1 month before the defence by a dean's order by which the dean:

- 1) approves the time and place of the defence;
- 2) appoints at least two opponents with a doctoral degree or an equivalent qualification from outside the university for a doctoral thesis; one of the opponents shall come from outside the Republic of Estonia, and
- 3) forms the defence committee, which shall include at least five members with a doctoral degree or an equivalent qualification. A defence committee may include the opponent(s), but not the supervisor(s).

At least two members of the defence committee shall come from outside the university, and one of these two from outside the Republic of Estonia.

### **§ 25 Defence of a doctoral thesis**

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

- 1) the doctoral thesis,
- 2) the opponents' written opinions;
- 3) the supervisor's opinion on the doctoral candidate and his/her doctoral thesis, if the supervisor is not participating in the defence committee meeting.

(2) A doctoral thesis shall be defended at a public meeting of the defence committee. The work of the defence committee shall be organised by the chairman of the committee. In justified cases, the chairman of the defence committee announces, based on the dean's decision, a closed meeting (with registered participants). The terms and conditions of a closed defence and the restrictions on access to the doctoral thesis shall be taken into consideration upon the publication of the doctoral thesis and entry into contracts with the members of the defence committee.

(3) A doctoral thesis defence is carried out if the following persons participate in the defence:

- 1) the doctoral candidate;
- 2) five members of the defence committee, incl. the chairman of the defence committee;
- 3) at least one opponent.

(4) With the consent of the dean, members of the defence committee and opponents can participate at a defence of a doctoral thesis by using a means of real-time two-way video image and sound communication (Skype, video conferencing, etc.).

(5) The defence process consists of the following main stages:

- 1) introduction of the documents submitted for defence;
- 2) presentation by the doctoral candidate;
- 3) an academic discussion between the doctoral candidate and the opponents;
- 4) answering questions of 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, whereto the opponents' written opinions must be annexed.

### **§ 26 Awarding a doctoral degree and promotion**

(1) The defence committee shall decide on awarding a doctoral degree in a closed meeting by a secret ballot or by an electronic secret ballot.

(2) The name of the doctoral degree awarded to a person who has defended his/her doctoral thesis is Doctor of Philosophy (Ph.D.) to which the title of the study programme or speciality is added in brackets.

(3) A doctoral certificate shall be issued based on an order of the Vice-Rector for Research on graduation and awarding a degree. The order shall be prepared by the dean's office.

(4) The date of issue of a doctoral certificate shall be the date of defending the doctoral thesis.

(5) The doctoral certificates shall be handed over once a year at the university anniversary ceremony or, at the doctoral candidate's request, at another time in the dean's office.

## **Chapter 9 EXMATRICULATION**

### **§ 27 Reasons for exmatriculation**

(1) The exmatriculation of a doctoral candidate takes place similarly to other students either:

- 1) upon the completion of a study programme in full;
- 2) upon a student's personal request on the basis of his/her application;
- 3) at the initiative of the university.

(2) For exmatriculation at one's own request, a corresponding application must be submitted in SIS.

(3) A doctoral candidate is exmatriculated at the initiative of the university:

- 1) due to inadequate academic performance if the doctoral candidate has not passed attestation;
  - 2) due to non-attendance if the doctoral candidate has not met the requirements set out in subsection 16 (3) of the Regulations;
  - 3) in case of closing of the study programme if the doctoral candidate has not submitted an application for transfer to another study programme by the prescribed deadline;
  - 4) due to contemptible behaviour or violation of the restrictions for preventing the spread of an infectious disease, in which case the provisions of the Academic Policies shall apply;
  - 5) due to death on the basis of a document certifying death of the student.
- (4) The doctoral candidate shall be notified of exmatriculation for the reasons specified in clauses (3) 1)-4) via the study information system.

## **Chapter 10**

### **IMPLEMENTING PROVISIONS**

#### **§ 28 Implementation of the Regulation**

- (1) The nominal duration of studies and workload of doctoral candidates matriculated before the 2022/2023 academic year shall be calculated as follows:
  - 1) the semester limit (hereinafter referred to as "SEL") allocated for the nominal duration of studies upon matriculation shall be reduced by one after each semester of participation in studies. SEL is not reduced during academic leave.
  - 2) A doctoral candidate is enrolled in full-time or part-time studies. In full-time studies, a doctoral candidate is required to accumulate, by the end of each academic year, at least 75% of the of the study load subject to completion under the doctoral study programme. In part-time studies, a doctoral candidate is required to accumulate, by the end of each academic year, 50 -75% of the of the study load subject to completion under the doctoral study programme. At the attestation carried out at the end of an academic year, the workload of the doctoral candidate for the next academic year shall be determined.
- (2) Doctoral candidates matriculated before the 2022/2023 academic year can apply for academic leave in the cases and pursuant to the procedure provided in the Academic Policies. While on academic leave, a doctoral candidate may complete the study programme without restrictions.
- (3) Until the end of 2023/2024 academic year, the following wording of section 21 of the Regulations applies to doctoral candidates matriculated before 1 January 2021:
  - 1) A doctoral thesis is an independent research paper that presents a novel solution to a significant problem in the research area of a doctoral study programme.
  - 2) A doctoral thesis shall be written either:
    1. as a dissertation, to which publications clarifying the main views (ETIS category 1.1, 1.2 or 3.1) shall be appended;
    2. as a series of publications forming a single collection supplied with a summary article (ETIS category 1.1, 1.2 or 3.1), to which copies of the publications shall be appended;
    3. a peer-reviewed monograph published in international press or accepted for publication, discussing a problem in its entirety (ETIS category 2.1).
  - 3) The main views of a doctoral thesis referred to in subclauses 1 and 2 of clause 2) must have been published as at least three research publications where it is not restricted by law or a contract.
  - 4) The research publications or monographs need not have been published in print, but in this case, there shall be an official confirmation on their acceptance for publication.
  - 5) By a dean's decision, the following shall be deemed to be equivalent to a research publication:
    1. a patent;
    2. a patent application if a favourable written opinion of the patent office who carried out the search with regard to patentability of the invention has been attached thereto.

#### **§ 29 Repeal of university legislation**

- (1) The Admission Requirements established by Regulation No 13 of 21.11.2017 of the University Board are repealed.
- (2) The Industrial Doctorate Statute established by resolution No 50 of 21.11.2017 of the University Board is repealed.

- (3) The Procedure of Admission to Doctoral Studies approved by Rector's directive No 19 of 30.04.2019 is repealed.
- (4) The Guidelines for Drawing up a Doctoral Candidate's Action Plan approved by Rector's directive No 52 of 15.02.2011 are repealed.
- (5) The Requirements for and Procedure of Publishing Doctoral Theses approved by Rector's directive No 52 of 06.11.2020 are repealed.
- (6) The Basis for Awarding and the Procedure for Payment of Doctoral Allowance approved by Rector's directive No 184 of 22.12.2016 (amended by directive No 53 of 25.11.2019) are repealed.

### **§ 30 Entry into force of the Regulation**

The Regulation shall enter into force on 1 August 2022, excluding Chapter 3 of the Regulation "Requirements and procedure for admission to doctoral studies" and subsection 28 (3), which shall enter into force upon adoption of the Regulation.

**Roles of the parties to doctoral studies in organizing and conducting doctoral studies**

ROLE	ACTIVITIES		
	<b>ADMISSION</b> <b>Goal:</b> to recruit the best candidates for doctoral studies both from Estonia and abroad, both from the academic and private sectors, who are provided with a high level of academic supervision and the resources required for research.	<b>CONDUCTING DOCTORAL STUDIES</b> <b>Goal:</b> to involve doctoral candidates in research groups where there are good conditions for conducting research and where they receive a high-level supervision, enabling them to complete their doctoral studies within the nominal duration of studies.	<b>GRADUATING FROM DOCTORAL STUDY</b> <b>Goal:</b> the doctoral theses defended at the university shall meet high internationally recognized standards
<b>RESEARCH ADMINISTRATION OFFICE</b>	Prepares the general requirements and procedure for admission	Prepares the general legislation governing the organization of doctoral studies	Prepares the general requirements for graduating from doctoral studies
	Is responsible for creating a support system: IT solutions that support the processes, counselling of the academic support structure, provision of training	Is responsible for creating a support system: IT solutions that support the activities (e.g. a monitoring system, a feedback system), counselling of the academic support structure, provision of training	Ensures that information on doctoral theses is published on the university's website
	Ensures that information on the admission to doctoral studies is available on the university website in both Estonian and English	Ensures that information on the organization of doctoral studies is available on the university website in both Estonian and English	
	Opens competitions for admission in the application environment	Analyses indicators related to doctoral studies and makes recommendations for improvements	
	Checks whether the applicants meet the qualification requirements upon matriculation	Organises trainings for supervisors in cooperation with the Schools and programme directors	
	Prepares matriculation orders		

<b>SCHOOL</b>	Ensures that information on the School's doctoral study programmes is available on the School's website in both Estonian and English	If necessary, prepares detailed regulations for the organisation of doctoral studies in the School	If necessary, prepares a detailed procedure for the defence of doctoral theses
	Ensures that the topics of the doctoral theses in the competition are announced on the School's website in both Estonian and English and the corresponding information is actively disseminated both in Estonia and abroad	Is responsible for the quality of the study programme and teaching	Allows the doctoral theses that meet the requirements to be defended
	Prepares a procedure for marketing and communication activities related to Ph.D. positions		Forms the defence committee
	Ensures counselling of the programme directors, supervisors and applicants	Is responsible for organising periodic attestations of doctoral candidates	Ensures counselling of the programme directors, supervisors and doctoral candidates
		Ensures that the School has the administrative support required for study programme management.	
		Ensures counselling of the programme directors, supervisors and doctoral candidates	
<b>PROGRAMME DIRECTOR</b>	Is responsible for meeting the goals set for admission to doctoral studies in his/her programme	Leads study programme development activities	Ensures that the requirements established at the university and/or the School are complied with in the doctoral thesis defence process
	Informs the supervisors about the requirements, deadlines and other issues related to admission	In cooperation with the Department or School, organises an introductory seminar for beginning doctoral candidates and regular doctoral seminars	
	Coordinates and contributes to marketing and communication activities;	Carries out attestations of doctoral candidates	
	Monitors compliance with admission targets and limits set for the programme	Conducts external and internal evaluations of the study programme	
	Approves the topics of the doctoral theses to be opened for admission, ensuring that the	Monitors the performance and graduation efficiency of doctoral candidates.	



	scientific level of the supervisor and the efficiency of his/her previous supervision meet the requirements established by the university and that the topic of the doctoral thesis is topical, original and corresponds to the content and objectives of the study programme	Summarises and analyses the indicators of doctoral studies in his/her study programme and makes recommendations for improvement	
	Approves the doctoral candidate selected by the supervisor, making sure that the candidate meets all the terms and conditions of the competition.	Regularly collects and analyses feedback from all parties. If problems arise, ensures that the situation is resolved in an unbiased manner involving all the parties	
		Coordinates the work of the programme advisory board.	
<b>DEPARTMENT</b>	Confirms that the supervisor is an active researcher and has the skills, competence and financial resources required for supervision in order to achieve the goal that the doctoral candidate defends his/her doctoral thesis within the nominal duration of studies.	Provides the necessary environment (both academic and social) and resources for research, as well as ensures that the lecturers are highly qualified	If necessary, participates in the search for members of the defence committee and opponents
	Provides the necessary academic and social environment for research	Ensures that all doctoral candidates have access to the data, equipment, etc. required for research	Organises defences of doctoral theses in cooperation with the dean's office
		Ensures that a doctoral candidate is not overburdened by teaching or assigned tasks not related to the doctoral thesis	
		Ensures that doctoral candidates are members of research groups	
		Participates in the attestation of doctoral candidates	
<b>SUPERVISOR</b>	Makes use of all the possibilities to find the best candidates in compliance with the procedure and best practices applied at the School	Ensures that a doctoral candidate prepares an action plan for each period of attestation, incl. (1) the planned objectives/activities together with the deadlines and (2) an action plan report and monitors the fulfilment of	Ensures that the doctoral thesis submitted for defence meets all the quality requirements and terms and conditions set by the university

		the action plan, achievement of the objectives and adherence to deadlines	
	Reviews the application documents of all the applicants and provides reasoned feedback to all applicants	In cooperation with the doctoral candidate, prepares the individual study plan necessary for the individual development of the doctoral candidate. Is able to recommend subject courses.	Gives recommendations regarding the composition of the defence committee and opponents
	Conducts interviews with the selected candidates to determine their qualifications and motivation	Ensures availability of the infrastructure, materials and supplies and financial resources required for writing a doctoral thesis.	
	Submits the candidate or the ranking of candidates for approval to the programme director	If necessary, helps the doctoral candidate to find a co-supervisor or involve experts in writing a research article	
		Is able to give practical advice on applying for scholarships and grants	
		Recommends international conferences and seminars where to participate and scientific journals where to publish	
		Supervises the doctoral candidate on a regular basis, taking into account his/her academic development and his/her longer career plans	
		Evaluates the doctoral candidate's progress in each period of assessment, both by giving grades and by providing a descriptive assessment	
		Develops his/her supervision skills, participates in trainings for supervisors	
		Recommends and helps the doctoral candidate to involve bachelor's and master's students in research	