

# **BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS**

## **Doctoral School of Electrical Engineering**

### **Operational Regulations 2019**

#### **§1**

These regulations are in accordance with Act CCIV of 2011 on National Higher Education on doctoral schools, the order of doctoral procedures and habilitation 387/2012 (XII.19.) Government Decree, and the Hungarian Accreditation Committee (MAB) for doctoral training and made on the basis of the decisions<sup>1</sup> on obtaining the degree, in accordance with the BME Doctoral and Habilitation Regulations (DHSZ) and BME Study and Examination Regulations (TVSZ) with the relevant points.<sup>2</sup>

Quality Assurance Regulations and Procedure describing the quality assurance system and the training program of the Doctoral School, which includes professional materials for doctoral training, is available on the doctoral school website: <https://www.vik.bme.hu/page/91/>

#### **The establishment, members and organization of a doctoral school**

#### **§ 2**

PhD training has been ongoing since 1993 in the Doctoral School of Electrical Engineering (hereinafter: Doctoral School) Its final accreditation - in accordance with national regulations - was made on 22 February 2002 by the Hungarian Accreditation Committee (MAB). The Doctoral School operates within the Faculty of Electrical Engineering and Informatics (hereinafter: Faculty)

#### **§ 3**

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<sup>1</sup> CCIV 2011 Act on National Higher Education; 387/2012. (XII.19.) Government Decree; MAB decisions

<sup>2</sup> <http://doktori.bme.hu/szabalyzatok.htm>

(1) The core members of the Doctoral School and their content shall be in accordance with the law and should also be met the following requirements:

(a) A core member shall be:

- a full-time university professor at BME, or
- has concluded a cooperation agreement with the doctoral school in a research institute employed as a full time Doctor or Science (DSc), or
- a full-time Doctor or Science (DSc) employed in the BME-MTA research group participating in the doctoral training, or
- BME Professor Emeritus.

b) All core members must have a title/degree of DSc

(2) A new core member shall be appointed by the doctoral school on the basis of the proposal of the core members and with the approval of the University Habilitation Committee and Doctoral Council

(hereinafter: EHBDT).

(3) The scope of core members shall be accredited or periodically reviewed by the MAB.

#### §4

The head of the doctoral school should be employed full-time at the University as a civil servant, and as a university professor, a member of the doctoral school concerned, with high academic recognition, and with DSc degree / title and shall be appointed by the Rector. The term of the mandate is a maximum of three years, as required by law that can be repeated indefinitely up to the age of 70.

#### § 5

(1) According to the doctoral and habilitation regulations of our university, the program of doctoral schools and the procedure of the doctoral degree are conducted by the University Habilitation Committee and Doctoral Council (EHBDT).

(2) The operative body supervising the doctoral program is the Doctoral School Council (DIT) for each doctoral school in the discipline, with the tasks and authority described in § 12 of the DHSZ. The training

program of the doctoral school includes the sample curriculum, the subjects of the complex exam and the examination rules. If the Training Program at BME DHSZ are not laid down or the conditions are stricter in the relevant legislation, the DIT may grant an exemption from the condition in exceptional cases.

(3) The doctoral body, within the remit of the EHBDT, shall be the Habilitation Committee and the Doctoral Council (HBDT), organized for each doctoral school with the tasks and authority under § 6 of DHSZ.

(4) The members of the Habilitation Committee and Doctoral Council of Electrical Engineering Sciences (HBDT) are highly qualified professionals in the field: two - thirds of the members are university professors or have the title of Doctor of Science.

(5) The summary of members' professional work of the Doctoral School of Electrical Engineering - core members, DIT and HBDT –is available on [www.doktori.hu](http://www.doktori.hu) as well as on the website of the university and the doctoral school.

(6) The tasks of DIT and HBDT and their decision-making process are regulated by § 6 and § 12. If an urgent decision is to be made and an immediate session is not possible or the subject does not justify convening a meeting, then an online public vote listed in Annex 1 is also possible to obtain the opinion of the voting members of the board.

## §6

According to §4 and § 5, mandates are terminated:

- a) at the end of the mandate,
- b) by revocation in accordance with the same procedure as the mandate,
- c) by resignation of the trustee,
- d) by permanent impediment or death of the trustee.

## Operation of the Doctoral School

## § 7

The operation of the Doctoral School is led by the head of the Doctoral School with the administrative support of the Dean 's Office of the Faculty.

## § 8

- (1) Each year the Doctoral School requests proposals for topics and announces PhD topics. The topics and the acceptance of supervisors are decided by DIT. The topics are announced on the website of the doctoral school and on [www.doktori.hu](http://www.doktori.hu).
- (2) The supervisor must have at least 2 years of professional experience from the date of obtaining the doctoral degree (PhD) A supervisor is allowed to undertake a maximum of 4 doctoral students. These conditions may be granted by DIT only with the consent of the EHBBDT exemption.
- (3) Each doctoral student has only one supervisor who directs and assists the doctoral student with full responsibility working on the topic, studies, research work, and preparing for the obtainment of the doctoral degree. Dual supervision is only possible in case of international collaborative training, either interdisciplinary or industrial and only in case of a prior consent of DIT and EHBBDT.
- (4) The supervisor is a full-time employee of BME or Professor Emeritus, or may be a full-time employee of an institution that has a cooperation agreement on doctoral training with BME. In addition to the external supervisor, the DIT appoints a consultant who assists the supervisor on behalf of BME in supervising the student's professional progress.
- (5) On the request of the student concerned, the doctoral thesis or the supervisor / consultant can be changed. In case of such change, DIT asks for the opinion of the superior of the supervisor.
- (6) Only university lecturers with an academic degree may be appointed for lecturers of the doctoral school that DIT finds suitable and shall be invited to hold doctoral courses for a specific period. A doctoral instructor may be a full - time employee of a foreign research institution, university, company or other institution (external instructor) for the purposes of doctoral training concluded in a written cooperation agreement with BME.

(1) The entrance examination for the topics announced is organized by the Dean's Office of the Faculty according to § 8. The Admissions Committee (FB) is appointed by DIT.

(2) The condition for participation in the entrance examination is to ensure a supervisor statement on behalf of the host unit (department or external institution). The formal requirements of admission are at least a good-quality diploma as well as a certificate of English language skills.

(3) FB expects the candidate to be prepared during the admission interview as well as good result at previous studies, good language skills and previous professional and scientific activities. The score is between 0-100 points. The condition of being admitted is at least 60 points.

(4) On the basis of the report of the FB, the DIT shall propose to the Dean of the Faculty for admission, as well as the to award state scholarships. Admission decisions are made by the Dean of the Faculty.

## **§ 10**

In the case of individual PhD students, the doctoral degree procedure is based on a student request, the application for the complex exam and its acceptance (387/2012. (XII.19.) Government Decree, § 12).

(2) The condition for the acceptance of the application is discipline compliance, the formal fulfillment of the publication and language requirements for the doctoral degree (at the time of application thesis points are not necessary yet. At this point there is no content evaluation, only the expected numerical indicators are to be met).

(3) On admission, the doctoral school recognizes the specified minimum credits for admission to the complex examination as well as giving approval for any additional credit to be obtained based on the student's previous knowledge and competence.

(4) The work of individual students is not supervised by a supervisor, but a consultant is appointed by DIT. (BME DHSZ § 14 4).

(5) The complex exam belongs to the first semester of the research and dissertation phase.

## § 11

(1) The academic performance and progress of students shall be assessed annually by the DIT based on doctoral student work reports. The work report that shall be submitted every semester. The form that can be downloaded from the website of the doctoral school includes the indicators of results of the study and research (including publications on PhD topics, conference and seminar presentations). Research credits proposed by the supervisor shall be approved by DIT every six months. To determine the credits, DIT may request the opinion of the relevant department (the department of the supervisor / consultant).

(2) Having evaluated the presentation and the professional report of the two semesters, DIT approves of the research credits based on the recommendation of the supervisor.

(3) State-funded students inadequately progressing in their studies or research and who do not receive 2/3 of the credits in a curriculum for a given semester may be enlisted to fee-paying training by the dean of the faculty based on the proposal of DIT (BME DHSZ § 13 8).

(4) The student status of a doctoral student is terminated if he / she does not obtain at least 15 credits (BME TVSZ § 186 2).

## §12

The Dean's Office of the Faculty of Electrical Engineering and Informatics is fully responsible for the registration system, administration as well as informing students based on the relevant paragraphs of §§ 11-12 of the DHSZ.

## Obtaining a doctoral degree

### § 13

(1) The organization conducting the doctoral degree procedure is the Habilitation Committee and Doctoral Council of Electrical Engineering Sciences. Based on the HBDT proposal, the doctoral degree is awarded by EHBDT. The requirement for a doctoral degree is to obtain the leaving certificate of minimum 240 credits, the submission of the dissertation within three years after the complex exam; and the successful public defense organized by HBDT (the three - year deadline may be extended by a maximum of one year in exceptional cases, under the authority of DIT).

(2) Before submitting the doctoral dissertation an internal defense must be organized a (also known as home defense).The purpose of the internal defense is the correction and improvement of the dissertation and thesis points, as well as being prepared for the public defense. The dissertation is evaluated by at least one doctoral reviewer. The internal defense is not yet part of the evaluation process (the dissertation may still be modified after the internal defense. Therefore, the reviewer(s) are not subject to a conflict of interest rule.

(3) The content of the internal defense, the opinions on the amendment of the dissertation in particular, shall be recorded in the minutes. A part of the minutes shall include the statement that the results of the candidate's thesis points (or thesis points to be improved) are the achievements on his/her own recognized by the research community The reference opinion shall be annexed to the minutes. In case of a full revision of the dissertation or of major revision of the thesis points, the internal defense shall be repeated.

(4) The doctoral dissertation presenting its own results containing scientific statements should be assigned to the thesis points and a co-author resigning statement shall be attached to it determined by the doctoral school. The resigning statement refers to the scientific results stated in the thesis points.

(5) When examining the fulfillment of the conditions for obtaining a degree, only publications may be taken into account to which thesis points are assigned, but there may also be thesis points which does not include a published or accepted publication.

(6) The condition for sending the doctoral dissertation to the reviewers is the fulfillment of (published or accepted for publication) publications requirements of the doctoral school. An additional condition for initiating the review procedure is meeting language requirements.

(7) In case a doctoral student, participating in the doctoral program starting after 1 September 2016, does not submit a doctoral dissertation within three years followed by the complex examination (the three - year deadline may be extended for a maximum of one year in extraordinary cases, within the competence of DIT,) can only obtain the doctoral degree by repeating his studies or as an individual student without having a supervisor (Section 14 (4) of the BME DHSZ).

(8) The dissertation sent to the reviewers cannot be modified afterwards. In case the Review Committee objects to certain statements that are professionally inadequate or does not accept thesis points, the minutes of the Committee shall include the relevant part attached to the dissertation (also in electronic form), and the defended dissertation will be published with this addition (library, repository).

(9) The members of the Review Committee shall receive the opinions of the opponents after the delivery of both reviews as well as the candidate's answers to the reviews in electronic form no later than one week before the defense. When the public defense is announced, the dissertation and the thesis booklet are made public and are accessible on [www.doktori.hu](http://www.doktori.hu)

(10) The current publication and language requirements for the doctoral degree are included in Annex 2. If there is a change in the requirements, the candidate has a choice within 2 years which list of requirements he/she will apply.

### **Final provisions**



## §14

(1) Where these regulations are not stipulated in the legislation and in the regulations of BME, or stricter requirement is supported, modifications shall be applied based to the extent permitted by higher regulation. The authorization (submitted in writing, detailed justification upon request) may be given by DIT in case of doctoral training and by HBDT in case of doctoral degree procedure.

(2) These regulations were discussed and approved by BME EHBDDT on 28 November 2019.

The Regulations shall take effect immediately.

Budapest, October 30, 2019

Prof. Dr. József Bíró,

Doctor of Science

Head of the Doctoral School of Electrical Engineering

## **Annex 1:**

### **Electronic voting in doctoral matters (DIT, HBDT)**

#### **Doctoral School of Electrical Engineering**

If an urgent decision is required that does not allow time for an immediate in person board meeting or the subject does not justify the convening of a meeting, it is also possible to obtain the opinion of the voting members on a public vote electronically in the cases listed below.

The head of the board shall decide on the order, start and end dates of the voting. The proposal for a decision and a statement of reasons shall be sent to all members electronically, including the closing date for voting (year, month, day, hour) and the place of voting indicating the exact web address. Electronic voting is not possible or the electronic voting may not be evaluated if any member of the board requests - not later than deadline for the closing of the voting -the in person discussion on the proposal for the decision.

Formal conditions for electronic voting and decision-making:

- voting participants during the decision-making process is credibly identifiable;
- written documentation substantiating the decision is sent electronically to the members of the council at least 3 working days before the closing date of the vote;
- the votes shall not be public until the close of the vote;
- the proposal for a decision is adopted if at least two-thirds of the members of the Board are present in the vote and was supported by more than half of the members present.

Electronic voting is possible in the following DIT and HBDT cases:

- announcement of doctoral topics
- appointment of a doctoral Admissions Committee
- acceptance of the report of the Doctoral Admissions Committee

- acceptance of a list and waiting list for state scholarships
- acceptance of work plans and reports
- acceptance of the topics of complex exam subjects
- assigning complex exam subjects to students, appointing exam committees
- proposals for co - operation on doctoral training (co – operation after sending the document in advance)
- modification in the composition of the Commission
- completion of an unsuccessful graduation procedure if the 2-year deadline is exceeded

The votes shall be aggregated by the administrator of the Dean's Office and the chairman of the board and one of his appointed members. The members of the board shall be informed of the outcome of the vote within 24 hours after the close of the vote

The addition to electronic voting was approved by the EHBDT meeting on 29 November 2018.

### **Publication requirements for obtaining a PhD degree**

This guide has been written with the aim of

- offering some guidelines to doctoral students submitting their doctoral dissertation to check whether their publication activities has formally met all minimum requirements,
- helping the members of the Doctoral Committee when deciding over the quality of publications of a doctoral candidate prior to launching the doctoral procedure,
- providing assistance to the reviewers of PhD dissertations when evaluating the candidate's publication activity

Fulfilling all formal conditions does not automatically guarantee the start of the official procedure for achieving the doctoral degree. Meeting all minimum requirements is a necessary but not sufficient condition for securing the doctoral degree. The Doctoral Committee (HBDT) carefully examines the quality of the publications and the nature of the new scientific results as well as the candidate's contributions (e.g. percentage of authorship) to the published results. When evaluating the candidate's publication performance, not only the quantity but the quality plays a crucial role, as well.

The list of publications can be found in the “Guide for PhD Applicants and Habilitation Applicants to provide data on publications ”(<https://www.vik.bme.hu/doktorandusz/112.html>) The list has to be prepared specified in the MTMT2 publication database which will include the score recommended by the repository. Any dissenting opinion of the candidate may be given (scoring). In the meantime, the candidate will enter the scores based on following table in the saved file and will indicate the total score at the end.

### **Minimum requirements**

Receiving a submitted dissertation, HBDT checks the minimum requirements based on the publication database.

The purpose of minimum requirements is twofold: on the one hand, to provide support for candidates to determine what is the least amount of publishing activity that is worth submitting a doctoral dissertation; on the other hand, it provides an informative threshold level

for proposers, during which they may not propose a review evaluation phase (Section 19 (5) of the BME DHS Act). In the decision to award a doctoral degree, in addition to the extent (quantity) of publishing activity, its quality also plays a decisive role. The applicant may check the minimum requirements (and, on the basis of the application, HBDT) on the basis of the submitted (uploaded) data in the repository.

If the minimum requirements are not met, the submitted doctoral dissertation is rejected by HBDT on the grounds of “formally incomplete” (Section 19 (5) of the BME DHSz).

The minimum requirements refer to public materials in this sense. An application based on a complete or part of an encrypted material shall be subject to a special procedure.

### **Minimum publication requirements**

**minimum 4** publications

**minimum 2** publications in English language

**minimum 2** publications in English language should be peer-reviewed journal articles and have appeared (or have been accepted to appear)

**minimum 1** should be written with 50% participation

**minimum 1** should be written as the first, last or correspondent author

**minimum 1** of these journals should be indexed by *Web of Science* or *Scopus* database

The minimum score to be achieved is 12.

#### Publication scores

Type of publication	Score	
<u>Book</u>	Book in a foreign language	8
	Part of a book or a chapter in a book in a foreign language	6
	Book in Hungarian language	5
	Part of a book or a chapter in a book in Hungarian language	3

	Article in an edited book (at least 10 pages)	4
	Printed (or electronically published) lecture notes (at least 25 pages)	3
<b><u>Journal article</u></b>		
<b>Peer-reviewed</b>	in a foreign language appeared abroad	6
	in a foreign language appeared in Hungary	4
	in Hungarian	2
<b>Not peer-reviewed</b>	in a foreign language appeared abroad	3
	in a foreign language appeared in Hungary	2
	in Hungarian	1
<b><u>Conference lecture</u></b>		
	Lecture in foreign language appeared in the publication of an international conference	3
	Lecture in foreign language appeared in the publication of a domestic conference	2
	Conference lecture appeared in a Hungarian publication	1
<b><u>Patent</u></b>		
	Foreign patent	2
	Hungarian patent	2
<b><u>Other</u></b>		
	Published review (published assessment of a publication written by another author)	1
	Electronic publication (publication on a website of a periodical or publishing company that can be searched by Google scholar, eg.: BME technical report – publications appeared on personal websites is not to be assessed)	1

Co-authors can either make a statement in the 'Joint disclaimer' form or in a separate document about the percentage of authorship they have in the publication. The points will be calculated proportionally to the

candidate's participation in the publication. When calculating the scores, the supervisor is not to be taken into account as a co-author.

'Joint disclaimer' is usually signed only in special and justified cases. According to the general practice, the authorship is divided equally among the co-authors (e.g. if co-authors do not make any statements or the number of co-authors is more than two, the score shall be divided equally among the number of authors).

In case of contradicting 'Joint disclaimers', the HBDT must inform EHBDT (University Habilitation Committee and Doctoral Council) which then will conduct an investigation into the matter.

For an article which has not yet appeared but its acceptance is confirmed by written notification, half of the points are awarded if modifications are still requested by the editor, if not then the full score is given.

Neither Thesis work, nor TDK (BSc or MSc Scientific Student Work) can be taken into account at the assessment. Any lecture given at BME doctoral conference can only be counted if its full script (at least 2 pages) has appeared as a publication in a proceeding with ISBN number and is also available on the website.

This guide applies for the assessment of all doctoral dissertations submitted in the framework of the 4-year doctoral program.

This guide is required when evaluating dissertations submitted for the new 4-year doctoral program.