

**BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS**  
**Doctoral School of Physical Sciences**  
**Quality Assurance Regulation and Procedures**  
**2019**

General principles and procedures pertaining to the quality assurance of doctoral programmes and obtainment of degrees are regulated by the Doctoral and Habilitation Procedures of BME (BME DHSZ), the Academic and Examination Regulations of BME (BME TVSZ) and the bylaws of the Doctoral School. The requirements described below partly overlap with, and partly go beyond the aforementioned regulations, not covering the obligatory quality assurance requirements set in the related laws.

The current quality assurance regulation of the Doctoral School of Physical Sciences (hereinafter: the Doctoral School) complies with the [recommendation](#) of the Hungarian Doctoral Council, establishing at places more stringent expectations than included therein. The quality assurance system of the Doctoral School is wide open to the professional and scientific public opinion and accessible on the [web pages of the Doctoral School](#).

***The Mission of the Doctoral School***

The Doctoral School of Physical Sciences shall assure elite education in science: assuring lecturer and researcher succession in the research areas covered at the school. The Doctoral School aims at releasing professionals with a system level knowledge on the internal relationships of physics, and apt to conduct high level research in their own field and publish their findings in internationally recognized channels. Furthermore, these professionals are capable of leading research projects, transferring up-to-date knowledge, and achieving and implementing innovative results.

***Priority quality targets***

<b>quality</b>	<b>indicator</b>	<b>target</b>
high scientific standard	publications connected to the thesis points of the PhD dissertation	scientific publications in highly regarded journals
promising research results in view of applications	external institutional relations	increasing the level of innovation
international embeddedness	number of dissertations written in English	majority of dissertations are compiled in English
widely applicable knowledge	position statistics	preparation for three career types: research institute, higher education, private sector
efficiency	rate of conferment of degrees	should significantly exceed national average figures

Quality Assurance applies to all elements of the doctoral programme and conferment of degree: (1) announcement of topics, (2) admission to the doctoral programme, (3) learning materials and research part of the programme, (4) monitoring throughout the program, (5) degree award procedure, and (6) follow-up of PhD students.

Supervision of key activities influencing quality shall be administered by the Doctoral School Council (DIT) in accordance with the procedures and quality assurance components detailed below.

### ***1. Announcement of Doctoral Topics***

(1) Once a year (January-February) the Doctoral School requests proposals for PhD topics from the organizational units participating in the training program and from the cooperating institutions. The Council of the Doctoral School (DIT) evaluates all topics and only approves announcement for those topics where the solid intellectual and infrastructural background is assured, and where the submission of a high level PhD dissertation can realistically be expected within 5 years. In the event the announcer of the topic reaches the legal limit of full time employment within 4 year from the beginning of the doctoral studies, the topic may only be announced on condition a reserve supervisor is also appointed.

Supervising activity at a research site external to the university shall only be allowed in institutions contracted with the Doctoral School, and where the student's employment relationship is settled and his/her rights and obligations are clearly defined.

(2) The announcers of the doctoral topic are highly expected to conduct active research activity: indicators of scientific publications completed over the preceding 5 years shall significantly exceed the publication requirements for the obtainment of degree at the Doctoral School (with the exception of the provisions on first author articles), *Evaluation of the previous supervisory activity of the topic announcers*<sup>1</sup> shall assure that the students may not come under the guidance of serially ineffective supervisors.

(3) Topics approved and selected for announcing by the DIT together with the supervisor data sheets shall be accessible on the [www.doktori.hu](http://www.doktori.hu) pages and the website of the Doctoral School. The Doctoral School provides regularly updated public information on the admission requirements and on the list of students admitted to the Doctoral School on the Doctoral School's website.

(4) An announcer of a topic becomes a supervisor, if a student applying for the announcer's topic has been admitted and enrolled in the Doctoral School. Each doctoral student shall be assigned one and only one supervisor, who has full responsibility for guiding and helping the academic and research work of the doctoral candidate working on the topic, and also the doctoral candidate's preparatory work for obtaining the degree. The dual supervision is only possible in the case of trainings carried out in the frame of international co-operations, or in the case of interdisciplinary research topics. A supervisor can only guide more than 4 student in *specifically justified cases*<sup>1</sup> with the permission of the EHBTD.

(5) The name(s) of the supervisor(s) shall be clearly indicated on the title page of the doctoral thesis. It should match the name(s) of supervisor(s) approved by the DIT, the information on the thesis book, and the data uploaded to the database hosted by the Hungarian Doctoral Council (i.e. the data uploaded to [www.doktori.hu](http://www.doktori.hu) website).

(6) In the event a student begins his/her doctoral procedure more than 7 years after s/he started his/her studies in a doctoral programme that was launched before September 1, 2016, s/he may only request that a supervisor be indicated on the dissertation *in specially justified cases*<sup>1</sup>. In the absence of a permission from the EHBTD, such candidates qualify as ones preparing individually.

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<sup>1</sup> See: *Annex 1* – Additional interpretations

(7) In the event a student fails to submit a doctoral dissertation within three years of the complex examination in a doctoral programme starting after September 1, 2016, s/he can only obtain a degree by repeating his studies, or as an individual preparer - without the indication of a supervisor (Section 14 (4) of the BME DHSZ). The three-year deadline can be extended by not more than one year in cases deserving special consideration – under the authority of the DIT.

## ***2. Admission to the Doctoral Programmes***

(1) Admission to doctoral programmes is only possible via applying for the application announced country-wide on the [www.doktori.hu](http://www.doktori.hu) web site, after a successful hearing before the Admission Committee. The Doctoral School issues a call for application every year (in March), which contains topic announcements and the formal and content requirement for admission to the doctoral programme.

(2) Preconditions for participating in the entrance examination shall include providing a proof in writing of the readiness to accept the student both on the part of the supervisor and the receiving unit (department or external institution). The formal requirements for the admission shall include a degree certificate of at least “good” qualification and a certification of English language proficiency.

(3) The aim of the admission hearing (June) is to verify the required readiness of the student and make recommendation on the ranked admission. The entrance exam takes place before the Admission Committee appointed by the DIT. The professional habitus scores available at the entrance exam partly honour the proficiency in the selected topic.

(4) The admission process is controlled by several persons and colleges of the Doctoral School and Faculty: The DIT shall make recommendation to the Dean of the Faculty on the admission and for the awarding of state funded scholarships based on the proposal from the Admission Committee. The decisions on admission are made by the Dean of the Faculty.

## ***3. Learning Material and Research Part of the Programme***

(1) The DIT shall decide on the acceptance of units of the doctoral programme or on the renewal of syllabus. The curriculum shall be revised at least every three years.

(2) The lecturers of the Doctoral School shall only be lecturers or researchers holding a degree in sciences, who are deemed appropriate and invited by the DIT to hold doctoral courses for a given period. Lecturers of the Doctoral School are listed in the database of the Hungarian Doctoral Council (ODT), and those holding courses in multiple doctoral schools declare the share of work therein on the datasheet of the ODT.

(3) The publication requirements for the announcements of doctoral topic and the obtainment of degree contain the expectations towards the research work and the expected level of autonomy. The PhD students shall give a presentation of their research achievements at least once a year, possibly in a foreign language forum. The Doctoral School shall ensure that the students visit foreign a university/institute during their programme, where researches related to the students' topic are conducted.

(4) A regularly updated public information on the curriculum, subjects and lecturers of the Doctoral School, as well as its research directions are provided on the Doctoral School's website.

#### **4. Monitoring During the Programme**

- (1) The progress and academic performance of students shall be evaluated by the DIT in each academic year based on the PhD students' work reports. The work reports shall be submitted semi-annually and include the aggregated academic and research performance indicators in a form available for download from the website of the Doctoral School. The research credits proposed by the supervisor shall be approved semi-annually by the DIT. To establish the credits, the DIT may seek out the opinion of the doctoral topic owner (i.e. the department of the supervisor/consultant).
- (2) The competence of students and their activities at the consultations is honoured with a *consultation credit* by the supervisor in every semester. The progress in time in the doctoral topic shall be recognized with specific *research credit*.
- (3) *Publication credits* may be conferred for the publication of novel results in international journals or presenting them at an international conference, including the preparatory work (i.e. acceptance/publication is not required). The students shall compile an article independently to be published in the Doctoral School's self-edited publication to show their achievements during the first year.
- (4) By proposing credits for publication activities, the supervisor indicates to the DIT that by acquiring all publication credit points by the end of the fourth semester, the student meets the condition for being admitted to the complex examination, and similarly, by the end of the eight semester, the minimum requirement for degree obtainment is met.
- (5) As part of the annual evaluation of research performance, the results achieved during the reporting period shall be presented in a lecture form delivered on a PhD professional day. The research credits proposed by the supervisor shall be approved by the DIT based on the lecture and the professional report on the two semesters' achievements.

#### **5. Degree Award Procedure**

- (1) Provisions of degree award procedure are described in detail in Sections 15 to 23 of the BME DHSZ. The procedure is conducted by the Habilitation Committee and Doctoral Council of Physics (HBDT), whose members are highly qualified experts of the given branch of science: two thirds of the members are university professors, and those external members who are not appointed university professors are members or doctors of the HAS.
- (2) Requirements for the doctoral degree include obtainment of leaving certificate and the submission of the doctoral thesis within three years of the complex examination, as well as the successful defence of the doctoral thesis in a public disputation organized by the HBDT. The three-year deadline can - in cases deserving special consideration - be extended under the authority of the DIT by a maximum of one year.
- (3) The doctoral thesis shall be submitted for disputation at the workplace before submission. The purpose of the workplace disputation is to make corrections to the dissertation and the thesis points and to help the student prepare for the public disputation. Minutes shall be drawn up on the disputation in which research community of direct colleagues confirm that achievements in the thesis points are the candidate's independent results.
- (4) The scientific publications containing the candidate's own results presented in the doctoral dissertation shall be assigned to thesis points, and a co-authors' waiver on the publications shall be requested in the format specified by the Doctoral School.

(5) The doctoral dissertation can be forwarded to the referees (opponents) on condition the publications assigned to the thesis points fulfils the detailed publication requirements established by Doctoral School in the bylaws of the Doctoral School (publicly available both in the database of [www.doktori.hu](http://www.doktori.hu) and on the Doctoral School's website). An additional condition for the initiation of the critique procedure shall be the fulfilment of the language requirements. The identity of the referees shall be not be public until the critiques have been completed.

(6) A dissertation delivered to the referees cannot be amended afterwards. In the event that the Thesis Committee objects incorrect statements or does not accept thesis points, the relevant part of the minutes drawn up by the Committee shall be attached to the dissertation (also in electronic form), and the defended dissertation shall be made public (library, repository) with this addition.

(7) In the event that the degree requirements change, then within 2 years of the decision adopted about the change, the previous or the new requirements shall be applied at the discretion of the applicant.

## ***6. Tracking the Students Who Obtained a Degree***

(1) Using the monitoring procedure introduced in 2007, the Doctoral School continuously monitors the career of students who obtained a degree, and makes the results public on the Doctoral School's website. The survey based on interviews with supervisors <sup>2</sup>covers all students having obtained a degree.

(2) The Doctoral School shall make public the statistical data pertaining to the programme and obtainment of degree (student headcounts, average time to obtaining a degree, rate of degree obtainment, etc.).

## ***7. Quality Assurance Principles***

The purpose of the Regulation is to implement the following quality assurance principles:

### *Professional control*

Control by the scientific public opinion must be enforced throughout the entire process of the doctoral programmes and obtainment of degree.

### *Publicity*

The main phases of quality assurance system shall be widely publicised to the professional and scientific public opinion.

### *Feedback*

The lecturers, supervisors and members of the various colleges of the Doctoral School taking part in the doctoral programmes shall receive continuous feedback on the quality of their activities, and shall have the opportunity to feedback on their experiences.

### *Individual responsibility*

The tasks and responsibilities of those having various roles in the doctoral programmes must be absolutely clear.

### *Documentation*

All decisions pertaining to the doctoral programme and the obtainment of degree shall be appropriately documented. Running the quality assurance system should only impose minimal administrative load on the lecturers and researchers involved in the doctoral program and the degree award procedure.

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<sup>2</sup> See: Annex 2 - Monitoring data sheet

## 8. Final clauses

In exceptional cases, where the requirements in the present Regulation are not established in regulations or in the regulations of BME, or are stricter, the requirements can be amended to the lowest acceptable level established in the higher level regulation. The permission shall be granted (on a substantiated written request) by the DIT (for doctoral trainings) or the HBDT (for degree award procedures). The decision on the request shall be protocolled.

Budapest, November 28, 2019

György Mihály  
Head of the Doctoral School of Physical Sciences

### Annexes:

1. *Additional interpretations*
2. *Monitoring data sheet*

### *Annex 1*

## **Additional interpretations**

### Assessment of previous supervisory activities

for doctoral programmes starting before September 1, 2016

<b>Successful</b>	<b>In process</b>	<b>Unsuccessful</b>
leaving certificate: within 4 years, start: leaving cert + within 2 years, degree award: within 8 years.	leaving certificate: within 4 years, start: leaving cert + within 2 years, degree award: 8 years have not yet passed	unsuccessful and not in process (or failed defence).

For doctoral programmes starting after September 1, 2016

<b>Successful</b>	<b>In process</b>	<b>Unsuccessful</b>
complex examination: within 4 active semesters leaving certificate: within 8 active semesters, thesis submission: within 3 years* of the complex examination.	complex examination: within 4 active semesters leaving certificate: within 8 active semesters, thesis submission: 3 years* of the complex examination have not yet passed.	unsuccessful, not in process (failed defence).

\*4 years in cases deserving special considerations,  
Section 53 (4) of the NHEA

**Specifically justified cases:**

Where the requirements imposed by the Doctoral and Habilitation Procedures of BME (BME DHSZ) are more stringent than or non-existent in the legislation, EHBDT may exceptionally authorize exemption from the requirement in whole or in part or, in the case of existing statutory requirement, the amendment of requirements for the level established by legislation. EHBDT permission can only be granted on the grounds of the detailed and reasoned proposal of the disciplinary college (HBDT, DIT) (for more details, see: Section 40 of BME DHSZ).